



Product Catalog 2011 - 2012

Embedded Computing

**Comprehensive Embedded Boards & Modules
with Design-in Services**

- Computer On Modules
- MIO Extension Single Board Computers
- PC/104 CPU Modules
- 3.5" Single Board Computers
- EPIC/ EBX/ 5.25" Single Board Computers
- Industrial Motherboards
- Industrial Storage Modules
- Embedded Wireless Modules
- Embedded Touch Modules
- Embedded Software Services

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

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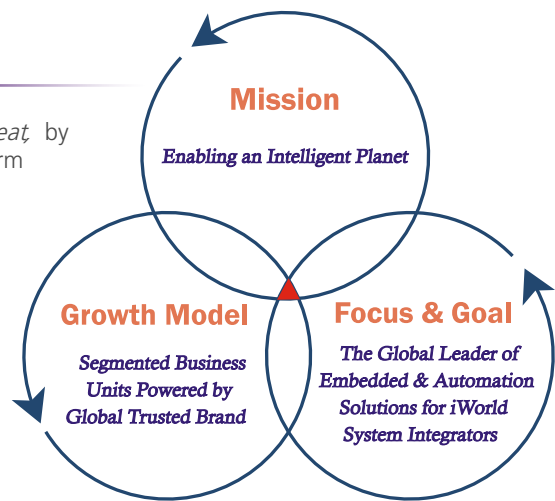
About Advantech

Enabling an Intelligent Planet

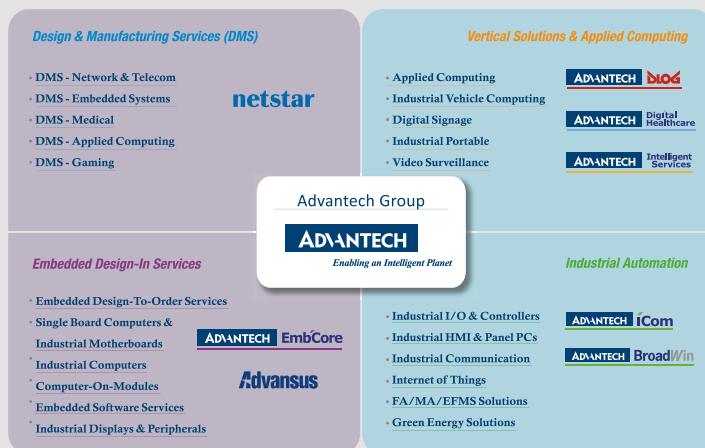
Founded in 1983, Advantech is a leader in providing trusted innovative embedded & automation products and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, and global logistics support; all backed by industry-leading front and back office e-business solutions. We cooperate closely with our partners to help provide complete solutions for a wide array of applications across a diverse range of industries. Advantech has always been an innovator in the development and manufacturing of high-quality, high-performance computing platforms, and our mission is to empower these innovations by offering trustworthy ePlatform products and services. With Advantech, there is no limit to the applications and innovations our products make possible.

Advantech's Good-to-Great 3-Circle Principle

The Advantech 3-Circle Principle is based on the book *Good to Great* by Jim Collins. According to the author, a company looking for long-term success should clearly address these three fundamental principles, and commit to their continuing solid execution. Advantech is fully committed to this approach and has defined the Advantech "Good to Great 3-Circle Principle" as a means of adhering to it:



Advantech Corporate Structure and Growth Engines



Advantech Corporate Structure & Growth Engines

• Industrial Automation:

Industrial Automation targets industrial-oriented fields, building solutions for machine automation, factory automation, green energy, building automation and environmental monitoring applications. Industrial Automation product offerings range from HMI devices, Data Acquisition & Control cards, Remote I/O Modules and Embedded Automation Computers to Programmable Automation Controllers, Automation Software and a wide range of Industrial Communication solutions. In order to provide customers with fully integrated solutions, IAG has built domain-focused teams for selected vertical applications.

• Vertical Solutions & Applied Computing:

Advantech's iService & Applied Computing invests in developing vertically-driven, application-specific platforms and service-ready solutions for use in many sectors: industrial portable computing, in-vehicle, fleet management, medical/healthcare, hospitality, retail, enterprise, campus, home, and public spaces. Enjoy the convenience, safety, work efficiency and enhanced quality that smart applications deliver and experience the best in interactive and innovative technologies and services.

• Embedded Design-In Services:

Embedded Design-In Services provides a full range of embedded boards, systems, peripheral modules and innovative embedded software services with leading technologies to customers. With a range of specialist design-in services backed by our internal and global resources, Advantech is committed to working closely with embedded customers to ensure design success by helping them explore business opportunities through Embedded Design-In Services.

• Design & Manufacturing Services (DMS):

Advantech Integrated DMS StarFleet Model provides OEMs and premier key accounts with customer-focused design and manufacturing services, winning together through worldwide partnership and collaboration. DMS provides hardware and software integrated solutions. Through Advantech Premier Design & Manufacturing Services, our customers get reliable, open-standard solutions from the leading innovator in development and manufacturing – plus dedicated resources and support to back them up.

Timely Support at Your Convenience

Advantech has over 12 regional toll-free hotlines, and offices throughout 64 cities in 22 countries, with nearly 5,000 employees to provide efficient, professional services for customer care, product selection, technical support, and order handling. Through our call centers and online stores, customers worldwide enjoy the convenience of Advantech's multi-service channels to reduce business turnaround time. Together with the four customer service centers, in Taiwan, China, the Netherlands, and the United States, our global service network offers an extensive spectrum of services that includes warehousing, logistics, peripheral certification, sourcing & purchasing, and RMA & support services.



World-Class Recognition

Advantech is an authorized alliance partner of both Intel and Microsoft. Our customers find the technologies we use inside our products to be widely compatible with other products in the global marketplace. In 2008, Interbrand, the world renowned brand consulting firm, once again recognized Advantech as one of the Top 10 Taiwanese Global Brands. Advantech appreciates this recognition of our efforts to build a trusted, global brand; it also symbolizes a promise we give to our business partners, which is to do our best to keep building a trustworthy brand that is recognized everywhere in the world.

Model Corporate Citizen

Advantech is committed to being a model corporate citizen by helping to preserve the environment and by giving back to society. Our environmental program focuses on reducing, reusing, and recycling materials used in our manufacturing operations. Advantech's environmental compliance effort includes the following:

- ISO 9001 Certification
- ISO 14001 Certification
- ISO 13485 Certification
- OHSAS 18001 Certification
- TL9000 Quality Management System
- RoHS Directive Compliance
- WEEE Directive Compliance
- Authorized Sony Green Partner



Advantech in Brief

Advantech Co., Ltd. (TAIEX: 2395) - Founded in 1983, Advantech is a leader in providing trusted, innovative products, services, and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, embedded systems, automation products, and global logistics support. We cooperate closely with our partners to help provide complete solutions for a wide array of applications across a diverse range of industries. Our mission is to enable an intelligent planet with Automation and Embedded Computing products and solutions that empower the development of smarter working and living. With Advantech, there is no limit to the applications and innovations our products make possible. (Corporate Website: www.advantech.com).

About Advantech Embedded Computing

Worldwide Leadership in Embedded Design and Services

Founded in 1983, Advantech has provided leadership for innovative Embedded Computing products and services for over 25 years. With comprehensive product ranges, customer-centric design services, and an extensive global network, Advantech is your most trustworthy partner to empower numerous innovations in intelligent embedded computing. Advantech is dedicated to helping customers develop reliable & innovative embedded computing. We not only provide the latest embedded hardware computing, we also think about how to provide more value to embedded developers via a variety of embedded design-in and software services.

Embedded Design-in Services



Embedded Boards

A full spectrum of embedded boards in multiple form factors from computer on modules, single board computers, to industrial motherboards, continuously developing innovative form factors to meet customers changing needs.

Peripheral Modules

Industrial peripheral products such as storage, wireless and touch modules, along with Advantech's software turn-key solutions, provide innovative choices for industrial PC applications.

Embedded Software Services

Professional Services include Embedded BIOS services, OS customization services and software API & utilities to reduce project complexity, lower development cost and speed time to market.

Design-in Services

Streamlined embedded design-in services can fulfill electronic engineering demands at the design-in phase and bring benefits which can shorten the design and integration cycle, minimizing uncertainty and risk.

Embedded Boards and Modules

Comprehensive High-Performance Embedded Computing

Advantech is continuously developing and delivering cutting edge solutions based on the latest platforms with proven high performance, reliability, longevity and excellent design quality to help customers speed time-to-market.



Computer On Modules

Advantech COM products with design-in services permit embedded integrators to focus on application solutions that save development time and ensure product time-to-market.

- COM-Express Basic Module
- COM-Express Compact Module
- COM-Ultra Module
- ETX/XTX Module
- Qseven Module



New

MIO Extension Single Board Computers

Advantech MIO Extension SBC series provides a complete platform range with flexible MIOe expansion to help keep domain knowhow and make system integration easier.

- MIO Extension SBC
- PICO-ITX



PC/104 CPU Modules

Advantech PC/104 series are designed with low power, wide-temperature & anti-vibration resistance for ruggedized environment demands.

- PC/104 CPU Module
- PC/104-Plus CPU Module



3.5" Single Board Computers

Advantech 3.5" SBC series are fanless, wide-temperature designs, compact but with rich I/O for easy expansion and flexibility.

- 3.5" SBC



EPIC/ EBX/ 5.25" Single Board Computers

EBX & EPIC SBC provide multiple I/O, stacking PC/104-Plus expansion, and extended temperature options.

- EPIC SBC
- EBX SBC
- 5.25" SBC



Industrial Motherboards

With a complete range of industrial motherboards to offer, Advantech industrial motherboards are highly integrated and deliver advanced features.

- Mini-ITX
- MicroATX



Industrial Storage Modules

Advantech SQFlash combines with advanced management software as a total solution for all kinds of embedded applications.

- CompactFlash
- CFast
- PATA/SATA Disk Module
- PATA/SATA SSD
- USB Disk Module



Embedded Wireless Modules

Advantech combines wireless modules with ready-to use software that allows embedded developers to easily implement wireless functions into their own system or board-level applications.

- WLAN Module
- GPS Module
- Cellular Module
- Bluetooth Module



Embedded Touch Modules

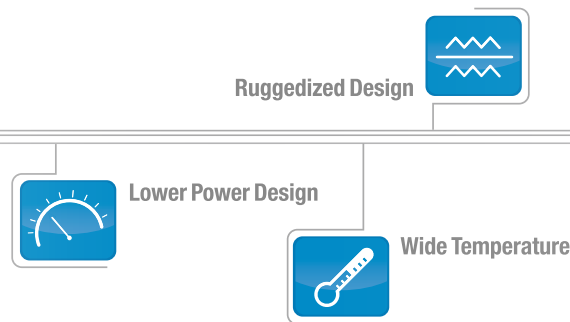
Advantech embedded touch modules offer high reliability, resolution, and fast conversion times. Designed with Advantech's own application software—TouchWare, they reduce integration effort and add extra value to hardware and software.

- Resistive Solution
- Surface Acoustic Wave Solution

Design-in Services & Embedded Software Services

Simplified Hardware & Software Integration

With a spotlight on customer design requirements, Advantech is committed to working closely with embedded developers to ensure design success by helping them explore business opportunities through Design-in Services.



Design-In Services

Power Efficiency Design

CPU throttling, enhanced standby mode, smart battery, LCD brightness control & smart fan control.

Mechanical Rugged Design

Extended temperature, thermal simulation, heat spreader/ heat sink designs and anti vibration.

Peripheral Integration

Integration services for industrial peripheral products such as storage, wireless, and touch modules.

Embedded Software Services

Embedded BIOS services, OS services and software API & utilities to reduce project complexity.

Embedded Software Services

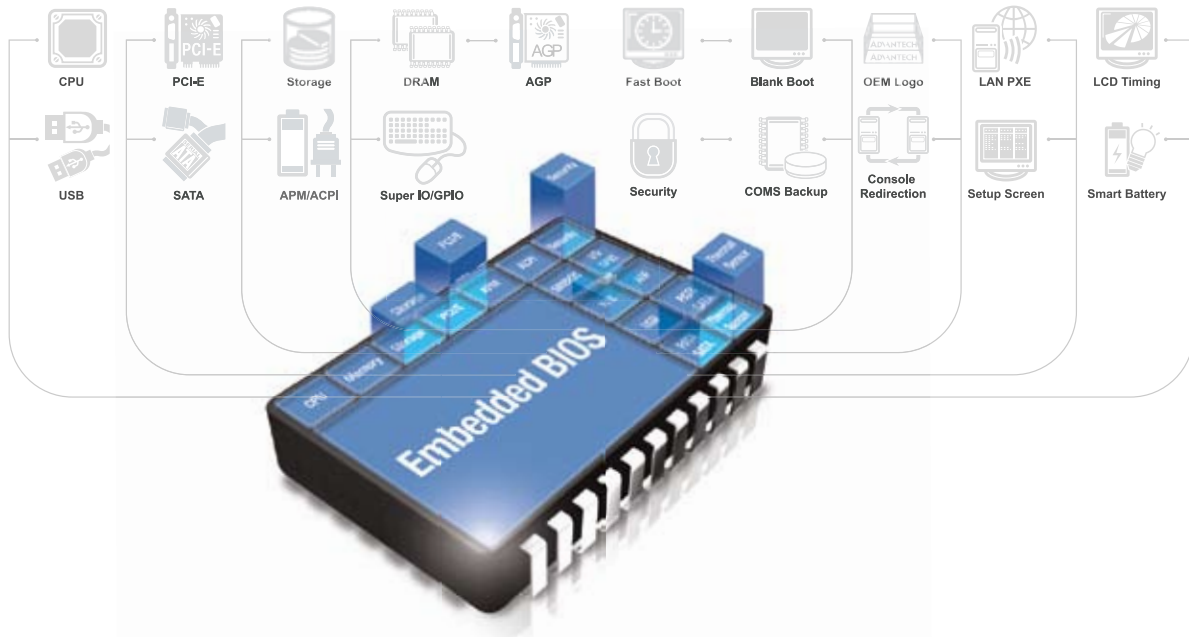
Embedded applications are becoming ever more complex. No matter how fast they change, the System Integrator is looking for efficient solutions to seamlessly integrate embedded hardware & software. Based on years of experience in embedded computing, Advantech has a dedicated global embedded software team to provide a range of services from firmware/BIOS, embedded OS, to software API & utilities. With seamless hardware & software integration services, embedded developers can decrease design effort and project complexity, and accelerate product development.

Embedded BIOS	Embedded OS	SUSIAccess
<ul style="list-style-type: none"> • EFI Core Architecture • EFI BIOS Utility • Embedded Controller 	<ul style="list-style-type: none"> • Microsoft Embedded OS • QNX, VxWorks, Linux • RTX, ETS OS 	<ul style="list-style-type: none"> • Device Monitoring • Remote Configuration • System Recovery • Multiple SUSI APIs

Embedded BIOS Services

Modularized BIOS Core Architecture for Product Differentiation

Advantech provides full-featured Embedded BIOS solutions that deliver the superior performance compatibility and functionality that system Integrators need. The various options and extensions let customers tailor their products to a wide range of designs for their target markets. In addition, Advantech continues to focus on providing more unique embedded features that help differentiate your solution from the competition.



Advantech Core Competence

EFI Core Architecture

We offer modularized solutions for EFI environments to speed up system development such as screenshot print outs, recovery, BIOS Flash and Fastboot. We also offer customizable mechanisms for enhanced secure systems. Furthermore, Advantech APIs for the EFI environment help customers develop their EFI applications more efficiently.

Real-Time Response

Instant reaction for real-time status monitoring. iManager 2.0 is a built-in, on-board Embedded Controller, providing faster response time for processing hardware control and interrupts.

EFI BIOS Utility

Advantech has developed a series of unique utilities for developers.

- BIOS Manager utility for read/write BIOS settings in the Windows environment
- One-click BIOS upgrade, combines a BIOS image with desired parameters

Embedded Controller

We offer a firmware customization service for embedded functions such as watchdog timer, smart fan, smart battery, auto back light, auto volume, GPIO, and power sequence. We also offer an iManager application customization service for specialist hardware control.

Dedicated BIOS Expertise

Experienced global professional BIOS engineers in chipset, peripheral, kernel and customization services.

iManager

Intelligent Self-Management Agent for Embedded Platforms

To fulfill the ever-changing specialized demands of industrial applications, Advantech designed an intelligent self-management tool with software control functions implemented in hardware. iManager is a built-in chip solution that provides a standardized API, integrating several unique platform consolidating functions needed by embedded system integrators to help improve consistency, lighten the development effort and speed-up a product's time-to-market.



Four Major Benefits:

- Simplified integration
- Enhanced system reliability
- Secure system
- Easy configuration

OS-Independent



Cross-Platform Programming

Operates independent of any OS. iManager 2.0 runs automatically without dependency on any operating system; it increases stability for managing platform resources.



Real-Time Response

Instant reaction for real-time status monitoring. iManager 2.0 source code is a built-in, on-board embedded controller, providing faster response time for processing hardware control and interrupts.



Plug & Play

Power on and run without any driver installation. iManager 2.0 works well without any software installed, easing the deployment process for developers.

Self-Management



Intelligent Resource Management

Auto adjusting fan speed based on temperature, and multi-control interfaces for peripheral devices. System health inspection includes real time monitoring of fan speed, temperature sensors and voltages etc.



Auto-protection & System Restore

Multi level protection quickly puts failover systems back in service. CPU Throttling feature automatically reduces clock frequency to lower temperature, preventing the CPU from physical damage and preventing data processing errors.



Security Enhancement

Records boot information and encrypted data protection for security enhancement.

iManager Function Block



Advanced Watchdog

- Multi-level
- Programmable



Unified S/W API/ Utility

- Smart Fan
- Smart battery



Brightness Control

- Control LCD brightness



Hardware Monitoring

- Voltage
- Temperature
- Fan speed



Data Security Area

- 64 Bytes for customer data
- 8 Byte key



Board Information

- Boot record
- Running hours
- Board data



Power Saving

- Deep sleep



Multi-control Interface

- I2C
- SMBus
- GPIO

Embedded OS

Custom OS Image & Complete Driver Support for Rapid Application Development

Advantech provides custom Embedded OS images and built-in configuration utilities on our embedded platforms, plus complete driver support to facilitate system integration.

Windows Embedded OS

In the embedded market, Windows Embedded is a very popular OS due to its easy programming and maintenance features. Advantech has Microsoft Valued Professional (MVP) experts to provide comprehensive service.

Customization Services

We offer a ready to use embedded OS image, which provides a complete set of components that enable rapid proto-typing and application development.

- Windows XP Embedded Image (WES 2009, WES 7)
- Windows CE Image (CE 4.2, 5.0, 6.0 R3)

Board Support Package (BSP) Services

We work with silicon vendors and independent hardware vendors to get the latest embedded drivers. We integrate them with our modified kernel, boot loader and our own SUSI Software API, & embedded utilities to produce a fully tested and verified BSP. With Advantech BSP, a customer can quickly create a Windows CE Image and rapidly bring up the operating system on their custom hardware.

Innovation Utility Services

- Boot Manager: A utility for setting boot-up logo, color and shell application
- EWF Manager: A utility for Microsoft HORM (Hibernation Once Resume Many) technology, and to control write protection.

Real-Time OS

Advantech provides a series of Real-Time OS services for Advantech Embedded products. The services include RTX, QNX, Windows CE and VxWorks.



Multi-Core BSP Support

- Supports latest multi-Core CPU and chipset
- Complete verification for Advantech platforms



Fast Boot-up

- Modified driver loading to speed boot-up
- Windows CE in less than 3 seconds
- QNX loader in less than 6 seconds



System Performance Optimization

- Enhanced kernel for Windows CE
- Customized background services
- Modified driver for IDE/USB/SATA/COM ports

Linux

Linux is a popular operating system in the embedded market. Advantech provides three major Linux integration services:

General Linux Distribution Services

We offer installation and verification on Ubuntu, SUSE, Redhat, Fedora, Debian, WindRiver Linux, Embedded Linux, MeeGo, and Android, depending on customer requirements.

Linux Driver Modification & Configuration Services

We offer SUSI Software API /driver development service based on customer defined Linux kernel or distribution, including API for WatchDog Timer, GPIO, SMBus, backlight on/off, and brightness. We also can help to configure the right parameters on graphic drivers, and network drivers etc.

Innovation Linux OS Services

- Mini-Linux: A small sized Linux OS with full features and graphic UI for SoC-based products.
- eSOS: A small embedded Linux OS stored inside the BIOS. In case of a main OS crash, the device will boot to this OS. eSOS will run pre-defined utilities and email the diagnostic results to the administrator.



Installation Wizard

- Advantech CE-Builder for Windows CE OS,
- Advantech VxTool for WindRiver VxWorks
- Advantech QNX-Builder for QNX OS



Software API/Utility Service

- SUSI API for hardware I/O control
- New APIs for custom functions
- Embedded utilities for fast deployment



Global Software Design Expertise

- Design Support Centers are located in Taiwan Taipei, China Xi'an and US Irvine, to offer instant design service

SUSIAccess

Smart Access to Embedded Devices

SUSIAccess enables users to remotely control, configure and manage, multiple terminal devices and data, as well as providing system maintenance, backup and recovery. The new smart remote access solution for embedded devices will give customers more control over their devices regardless of the hardware platform specifications.



Benefits to System Integrators

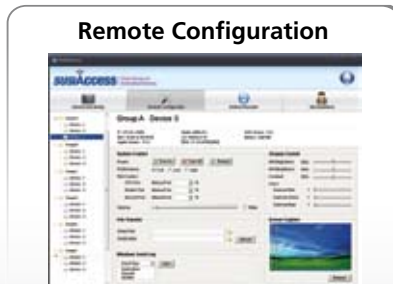
SUSIAccess is an application for System Integrators that centralizes monitoring and managing of embedded devices. By providing a ready-to-use remote access solution, System Integrators can focus more on their own applications, and let SUSIAccess configure the system, monitor their devices' health, and recover any system that may fail.

- Lowers complexity for embedded system deployment
- Saves time and resources during system builds
- Increases system reliability
- Decreases after-service cost

Major Functions



- Device status
- Remote site layout
- Alarm notification
- Hardware log
- Critical settings
- SQL server database



- Hardware control
- Brightness control
- File transfer
- Capture screens
- Windows event log



- One-click restore
- Incremental backup
- Backup image on FTP server

Emb'Store

On-Demand Services for Embedded Computing

Advantech embedded platforms have long continued to provide all kinds of system and integrated software services, and with the cloud computing era will continue to offer an even higher level of embedded software services. Emb'Store is an online, on-demand website for software updates and the latest embedded hardware device drivers. This will effectively relieve system developers and users of the complexity of device management and maintenance, and simplify the operation of embedded devices. Advantech software services from back to front, leads the industry in a new generation of industrial cloud computing services.

The Way to Manage Embedded Software Updates in Real-Time

Active Update Notification

- Automatically detects hardware platform
- Proactive notification of software updates
- Notification provides software titles and detailed descriptions

On-demand Software Services

- Delivers only the software you require
- Tested, qualified software guaranteed plug-in framework & architecture
- Based on Microsoft .NET Framework
- Implemented to meet customer requirements
- Allows for future additions of software without breaking the existing code base

Functions

System Updates

- Auto detects platform to offer the latest updates
- Includes BIOS, drivers, SUSI software API and documents

Platform Utilities

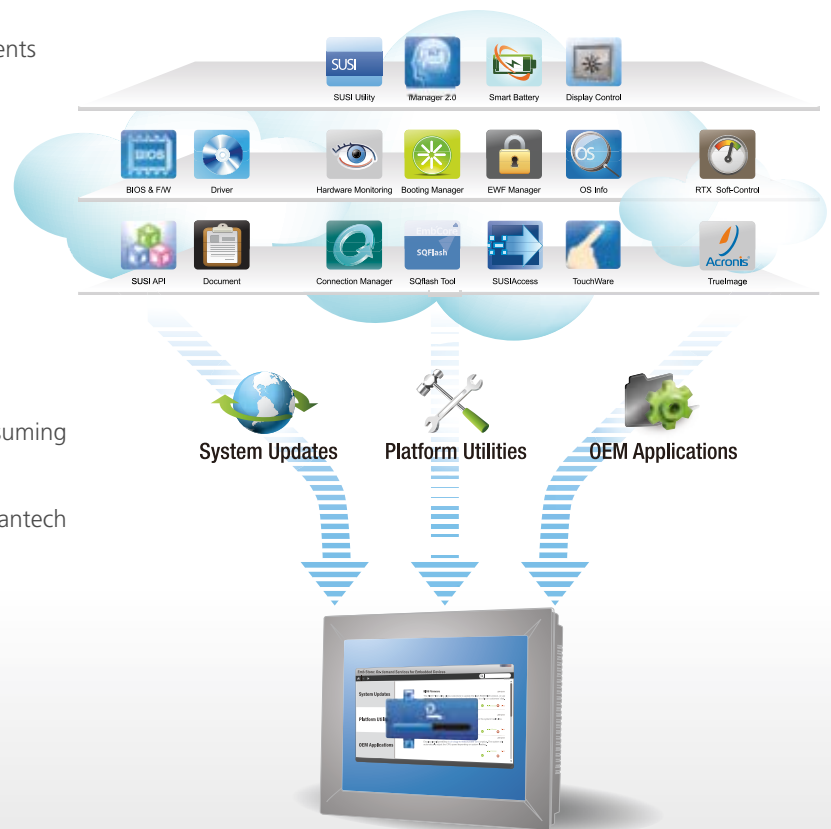
- Corresponding platform utilities offered on demand
- Downloaded directly to a target device

OEM Applications

- Plug-In framework for OEM application deployment
- Designed for Advantech embedded platforms

Benefits

- Speeds up system integration by eliminating time consuming manual searches
- Delivers only the correct software and updates
- Immediate access to the latest innovations from Advantech software center and OEM & ecosystem Partners



Software APIs & Utilities

Advantech has over 15 regional toll-free hotlines, and offices throughout 39 cities in 18 countries, with more than 4,000 employees to provide efficient, professional services for customer care, product selection, technical support, and order handling. Through our call centers and online stores, customers worldwide can now enjoy the convenience of Advantech's multi-service channels to reduce business turnaround time. Together with the four customer service centers in Taiwan, China, the Netherlands, and the United States, our global service network offers an extensive spectrum of services that includes warehousing, logistics, peripheral certification, sourcing & purchasing, and RMA & support services.

Software APIs

Control



GPIO

General Purpose Input/Output is a flexible parallel interface that allows a variety of custom connections. Advantech also provides programmable GPIO, which allows developers to dynamically set the GPIO input or output status.



SMBus

The SMBus API allows a developer to interface with an embedded system environment and transfer serial messages using the SMBus protocols, allowing multiple simultaneous device control.



I2C

The I2C API allows a developer to interface an embedded system environment and transfer serial messages using the I2C protocols, allowing multiple simultaneous device control.

Display



Brightness

The Brightness Control API allows a developer to interface with an embedded device and dynamically control brightness levels.



Backlight

The Backlight API allows a developer to control the backlight (screen) on/off in an embedded device.

Monitor



Watchdog

A watchdog timer can be programmed to perform a warm boot (restarting the system) after a certain number of seconds.



Hardware Monitor

The Hardware Monitor (HWM) API is a system health supervision API that inspects certain condition indexes, such as fan speed, temperature and voltage.



Hardware Control

The Hardware Control API allows developers to set the PWM (Pulse Width Modulation) value to adjust fan speed or other device options; it can also be used to adjust the LCD brightness.

Power Saving



CPU Speed

Employs Intel SpeedStep technology to reduce power consumption. The system will automatically adjust the CPU speed depending on system loading.



System Throttling

Refers to a series of methods for reducing power consumption in computers by lowering the clock frequency. This API allows the user to lower the clock frequency in several steps from 87.5% to 12.5%.

Software Utilities



BIOS Flash

The BIOS Flash utility allows customers to update the flash ROM BIOS version, or to back up current BIOS by copying it from the flash chip to a file. It also provides a command line version and API for fast implementation into customized applications.



Embedded Security ID

The embedded application contains valuable intellectual property and design knowledge that can be easily copied. The Embedded Security ID utility provides functions that allow customers to secure their application data within the embedded BIOS.



Monitoring

The Monitoring Utility lets the customer monitor the system health, including voltage, CPU and system temperature, and fan speed. These items are important; if critical errors happen and are not solved immediately, permanent damage may be caused.



eSOS

The eSOS is a small OS stored in BIOS ROM which will boot up in case of a main OS crash. It will diagnose the hardware status and then send an e-mail to the administrator. The eSOS also provides remote connection to a Telnet server and FTP server for an administrator to rescue the system.



Flash Lock

Flash Lock is a mechanism that binds the board and CF card (SQFlash) together. Users can "lock" and "unlock" SQFlash via BIOS while booting. A locked SQFlash cannot be read by any card reader or boot from other platforms without going through a BIOS "unlock".

Microsoft Windows Embedded Distributions

Advantech has been in the industrial computing and embedded business for more than twenty five years. In the embedded business we've been very successful by providing professional services, long-term support and training to customers. Advantech has been recognized by Microsoft as Embedded Gold Partner and also as Microsoft Authorized Embedded Distributors in Taiwan, Korea, South East Asia, China, and Australia. We provide Microsoft Windows Embedded products solely or integrated with Advantech embedded solutions. We offer more than just a distributing license, we offer a series of value added services which includes hosting embedded solution seminars, hands-on training, and software APIs and utilities. Customers can leverage Advantech's professional embedded solution development capability to effectively speed up their business. Advantech and Microsoft Windows Embedded are dedicated to delivering the best set of embedded tools and technologies available; helping you build reliable, powerful, and intelligent embedded devices for your customers.

The Windows Embedded Family of Products

Windows Embedded Compact

Windows Embedded Compact provides a 32-bit native, componentized, hard real-time operating system designed for small-footprint devices, ranging from power-conscious GPS handhelds to real-time, mission-critical industrial controllers.



Windows Embedded Standard

Windows Embedded Standard is designed for service-oriented, advanced commercial or consumer devices, and for running thousands of existing Windows applications and drivers, ranging from thin clients to multi-function printers.



Windows Embedded POSReady

Windows Embedded POSReady is a flexible operating system designed to seamlessly connect POS applications with peripherals, servers, and services. OEMs and enterprises can use POSReady OS to efficiently develop their POS solutions.



Windows Embedded Enterprise

Windows Embedded Enterprise distributions are versions that were designed to run on desktops but may be customized due to product licensing terms. Microsoft desktop OS for embedded use are Microsoft supported products that are available for applications with fixed functions or dedicated systems. All these additional operating systems are available from Advantech.

- Windows 7 for Embedded Systems
- Windows Vista for Embedded Systems
- Windows XP Professional for Embedded Systems
- Windows 2000 Professional for Embedded Systems
- Windows NT 4.0 Workstation for Embedded Systems
- MS-DOS 6.22 for Embedded Systems



Windows Embedded Server Products

These products are fully functional versions of Microsoft's server operating system with built-in security, reliability, and availability features intended for use in an embedded solution consisting of purpose-built hardware and application software. Windows Embedded Server allows OEMs to more easily design, build and deploy dedicated solutions.

- Windows Server 2000, 2003, 2008 for Embedded Systems
- SQL Server 2000, 2005, 2008 for Embedded Systems

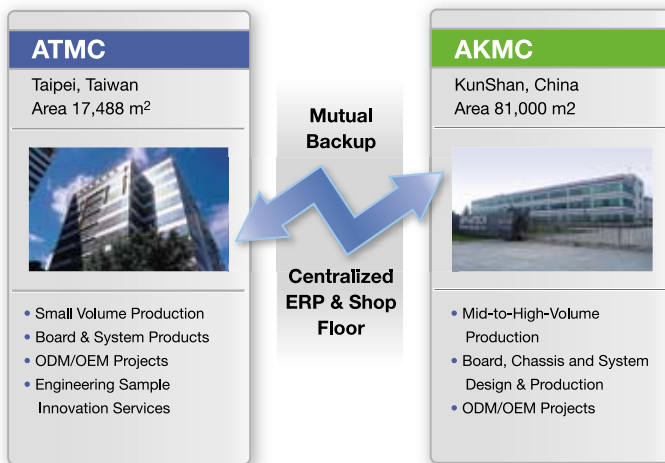


Manufacturing and Quality Assurance

Agile Manufacturing Capability and Certified Quality Assurance

Manufacturing

Our dual, world-class manufacturing centers in Taiwan and China both maintain precise quality control, and offer a full range of production in a timely and cost-effective manner. To maximize the efficiency of operational procedures, we have implemented a cluster manufacturing system within our segmented manufacturing service units. This unique approach enables a direct, simplified, and highly streamlined design-to-manufacturing process.



- In-house board, chassis, and system production
- Dual world-class manufacturing centers minimize business risks
- Advanced production capabilities and customizable processes
- Rigid quality assurance system
- Most complete ISO standard coverage

Certified Quality Assurance Systems

For 27 years, Advantech has been designing and manufacturing industrial PCs according to our 3C Quality Statement:

- Constantly strive for overall customer satisfaction
- Continuously improve
- Apply closed-loop mechanisms to resolve problems

At Advantech, quality is our main priority. A complete line of safety, EMC and reliability measures such as ESD, vibration, drop testing, temperature, humidity and HALT chambers are available to ensure our products meet the strictest standards. All facilities are at least ISO 9001 and 14001 certified while others hold additional certifications such as ISO 13485, 17025, TL9000 and OHSAS18001.

An environmental program that focuses on reducing, reusing and recycling of materials throughout the manufacturing process is also applied at Advantech. All our products are 100% RoHS compliant and Environmental Management Systems such as QC080000 are applied to meet worldwide environmental requests. Advantech's efforts towards environmental protection have been recognized by Sony since 2004 (Sony Green Partner).

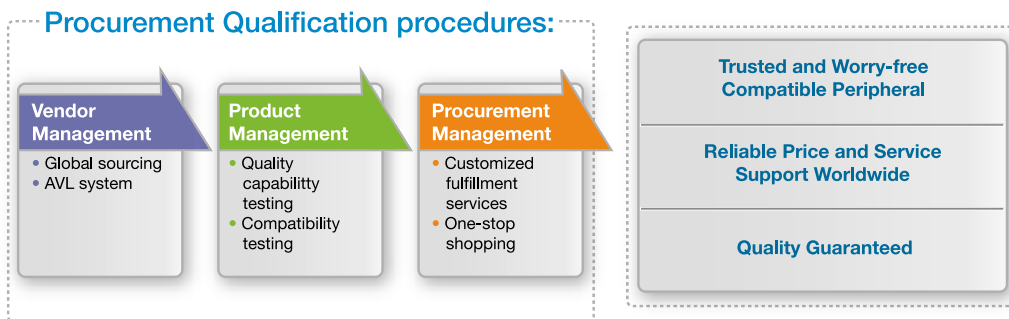


Global Customer Support Services

Global Access, Local Support

Our global procurement network consists of local teams that leverage strong, worldwide supplier relationships and strict vendor and product management to offer quality-guaranteed, compatible peripherals with short lead times and competitive prices.

- Localized procurement with worldwide network support
- Global standardization management
- Trusted quality with revision control



Global Logistics Services

With strong integrated ERP and SAP supply chain solutions, our worldwide logistics network offers a wide range of flexible services to satisfy different delivery models including local and global solutions that meet your unique needs and budget requirements.

Advantech's Logistics Service gives you the flexibility to simplify your logistical networks, bring your products to market on time, and enjoy a timely return on your investment.

- Optimized and flexible shipping solutions
- Integrated ERP and SAP supply chain solution with global distribution network
- Centralized plants with local delivery

Customer Support Services

Our global presence provides customizable and reliable customer support services. We can create an optimized maintenance and support plan, leveraging the full power of our service portfolio to help reduce costs and proactively mitigate business risks to best meet your needs. In addition to our complete technical and repair support, we provide a variety of customizable after-sales services, including extended warranty, advance replacement, upgrades, and fast repair. With our knowledgeable local support groups, we enable a consistent support experience around the world and help keep your investment at peak performance and within your budget.

- 24/7 technical support: hotline AE & online chat support
- Global deployment with local full-line repair capability
- Easy-to-use web-based repair and tracking system
- Various value-added, after-sales support services



Intelligent COM Module for Vehicle Diagnostic & Information system



Introduction

Today's interdependent vehicle control systems can be quite complex to operate. What's needed is an all-in-one, simple to use device. To answer this need, many fully integrated vehicle management solutions have been coming onto the market. This customer wanted to develop a hand held integrated diagnostic and information device based on Windows XP, and it needed to feature built-in data collection and event analysis, with graphical user interface and wireless connection features.

Application Requirements

Many proprietary systems were available in the market place, and many out of date technologies were being superseded by newer better advancements. To add to this, it often took several employees to keep on top of all the complex systems. What the market needed was a simple all-in-one low power mobile solution for a handheld vehicle diagnostic system. And, it needed to be able to have the BIOS customized for better thermal performance and power management setup.

System Solutions

Advantech SOM-6763 B1 compact module, based on the low power Intel Atom processor N455 1.66 GHz features 5 PCIe x1, 4 PCI Master, LPC, 3 SATAII, 8 USB 2.0, and HD Audio, fully satisfying the customer's requirements for a hand-held vehicle diagnostic device. In addition, with Advantech's thermal consulting capability, it's easy to fine tune fan speeds and heat sinks to reduce peak noise and integrate better with the customer's system. Advantech also provides full-featured Embedded BIOS solutions that deliver superior system compatibility and functionality that customers need.

Benefits

- Custom-designed heat-sink or cooler solution based on modularized thermal solution which is quick and cost effective.
- Skilled application engineers with solid technical support help improve reliability.
- Single contact window and total solution for special thermal design, BIOS customization, and driver development.



Ultra Low Power PC/104 SBC for CNC Machines



Introduction

Our customer is a leading CNC (Computer Numerical Controller) machine maker who has been offering milling and turning machines for tool rooms and production environments to worldwide markets for many years. Fast machine migration is a key factor for success in adapting to new challenges in the industrial machinery industry. Legacy support saves both time and cost and has a minimal impact on the business—making it an attractive option.

Application Requirements

The customer was looking for a special type of reliable industrial-grade computer to fulfill the requirements for the CNC machines. Advantech's PCM-3343 module was chosen for its powerful ruggedized features. It must be highly anti-vibration resistant, have ISA legacy support for easy migration, and include DOS support, allow BIOS customization and have strict revision control. PCM-3343 was the perfect choice.

System Solutions

Advantech's latest low-power platform, the PCM-3343 PC/104 CPU module, supports full legacy PC/104 (ISA) and ISA DMA, which makes it compatible with older existing carrier boards and PC/104 modules, and allows for easier migration. PCM-3343 is a fanless, low-power SoC with 256 MB on-board DDR2 memory, as well as VGA/LCD display outputs that enable simultaneous machine operations and more user friendly and flexible applications. PCM-3343 uses solid capacitors on a TG-150 PCB that are more stable and reliable in high temperature environments, and it has been stringently tested to work flawlessly in extended temperature ranges between -40 ~ 85° C. PCM-3343 has been designed with 256 MB DDR2 SDRAM that has been soldered down for better vibration resistance. All these stringent and critical component selections make it able to endure harsh environments, and made PCM-3343 the principal choice for the customer.

Benefits

- Onboard memory for reliability and vibration resistance
- Legacy ISA interface for compatibility with ISA modules
- x86 with ultra low power consumption around 5~7 Watts
- OS support: DOS, WinCE, Linux and XPE



Ruggedized 3.5" SBC for Cell Phone Communication Box



Introduction

Wireless communication is expanding in some developing countries even though landline telephone cables are not available to everyone due to lack of basic infrastructure. Wireless communication networks still require communication towers which need to be located in areas where regular equipment hardware and services may be an issue. Therefore, a reliable yet powerful platform with multiple Gigabit LANs for communication bandwidth, as well as extended temperature capability was required.

Application Requirements

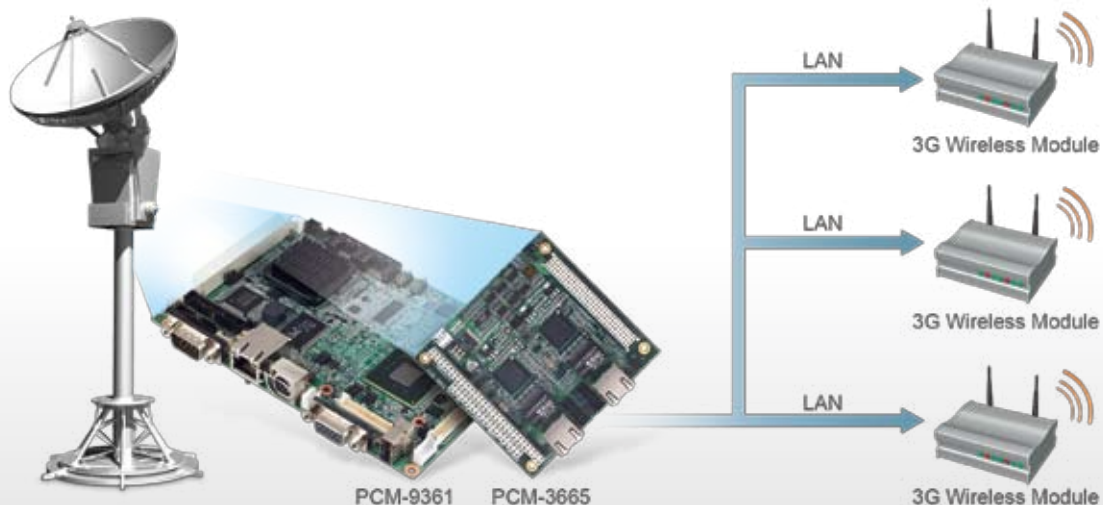
The customer identified four major requirements for the cell phone communication system. First, in order to integrate into communication boxes, a small form factor was necessary. Second, communication towers needed to be placed in a variety of locations which meant systems would be subject to extreme temperature fluctuations. Third, -20 to +80° C wide range operating temperatures were needed for integration into outdoor environments. Finally, PCI-104 expansion bus was needed which allowed customers to add additional Gigabit LANs which was critical to expand communication bandwidth.

System Solutions

PCM-9361, a low power 3.5" SBC with Intel Atom Processor N270 was selected as the main board for the application because of its extended temperature support of -40 to 85° C. The project used the three Gigabit LANs on PCM-9361 to talk with the wireless communication module to achieve the desired bandwidth. Advantech's software API & utilities for their Linux based system are used to control and monitor system health information. This enabled the developer to write applications for hardware control quickly and easily without having to know all the technical details of the chipset or driver architecture. The API library was diverse enough to allow the developer's engineers to control everything from system throttling to the CPU clock speeds which helped prevent damage from overheating.

Benefits

- Efficient I/O connectivity fulfilled a wide variety of applications and kept the total solution small and compact.
- Highly reliable in extreme vibration (during transportation) and wide temperature environments.
- Low power consumption meant less heat generated by the system, allowing it to survive harsh environments.



High Graphic Performance Motherboard for Digital Surveillance



Introduction

Advanced PC-based industrial-grade Digital Video Recording (DVR) security and surveillance systems are fast becoming ubiquitous. Already in use everywhere, applications include general security, public transportation, water treatment, electrical power monitoring, SOS emergency warnings, parking lots, and plant machinery process surveillance and control. Matched with intelligent video analysis, DVR surveillance systems such as those powered by Advantech's AIMB-581 industrial motherboard are fast becoming the most suitable method for visual security, enabling businesses to provide immediate, reliable and safe services.

Application Requirements

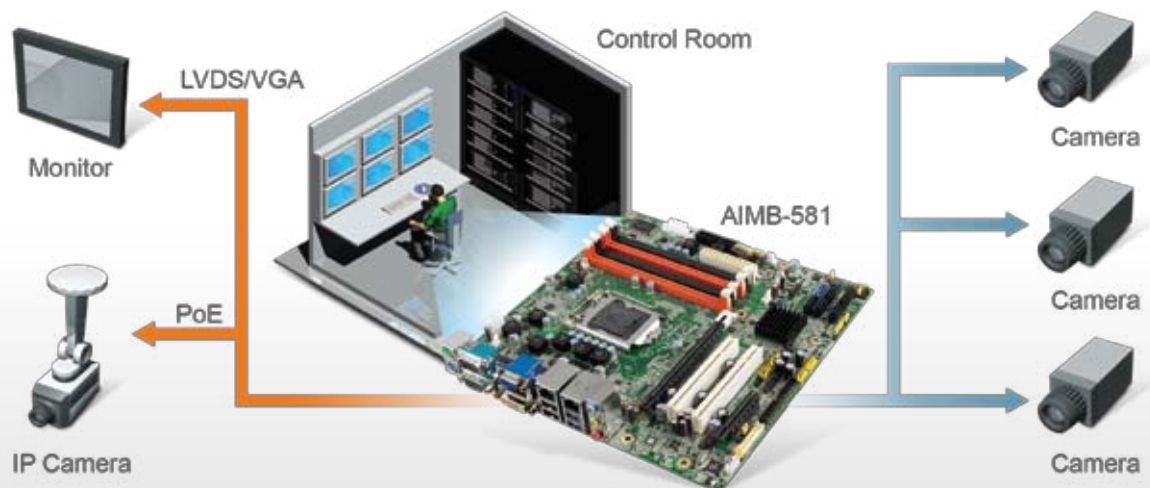
To match or even exceed current and future DVR surveillance system requirements, an exceptionally functional and flexible industrial motherboard was crucial. Essential elements included high graphic performance with enhanced media acceleration and 3D HDMI v1.4, extremely efficient and high performance platform with BIOS customization, compact industrial-grade embedded system design for the highest stability, and flexible I/O motherboard configuration for peripheral control.

System Solutions

Featuring Intel Active Management Technology 7.0, Quad-core processor capability, and more PCI Express expansion for high bandwidth transmission, the AIMB-581 industrial motherboard platform was the result of Advantech's mature security digital video recording technology and expertise. The AIMB-581 comes standard with Intel Q67, dual GbE LAN, six serial ports, 2 SATA 3.0, 2 USB 3.0 and 10 USB 2.0. The high performance motherboard has three digital video outputs supporting (DVI/LVDS/VGA). In addition, AIMB-581 supports dual channel DDR3 1066/1333 MHz SDRAM, SW RAID 0, 1, 5,10, and an optional TPM 1.2 function. The Advantech design team provided a total solution with hardware, software, drivers, BIOS, OS, and application software utilities.

Benefits

- High Performance 2nd Generation Intel Core i7 processor based platforms
- Intelligent performance, power efficiency, and integrated Intel HD graphics with DX10.1 support



Secure Industrial Flash Module for Gaming Applications



Introduction

In the United States, the legal gambling industry consists of about 500 casinos and hotels, with a total annual revenue of around \$90 billion. People go to Las Vegas or Atlantic City for entertainment and fun, visiting many different kinds of casinos. On average, each casino pays around US\$20 million in taxes annually. The gaming industry helps drive local economies and has become an important source of income for government as well.

Application Requirements

One of Advantech's gaming industry customers found that after placing their machines in one of the largest casinos, a data drive was stolen by a competitor who copied and reproduced their intellectual property and applications. Needless to say, this caused a significant loss to the original company and forced them to think seriously about security and how to protect their gaming machines from unscrupulous competitors in the gambling world.

System Solutions

Suffering from serious damage to its profits, this gaming industry player was eager to find a security solution. They researched the marketplace and chose Advantech's Industrial Flash Storage—SQFlash with Flash Lock, and an AIMB-212 motherboard. Flash Lock disables and secures the entire SQFlash contents as soon as the power goes off, and it cannot be booted or read by any other platform or USB card reader. The only way to read the locked SQFlash is to boot from a corresponding platform that has the matching password and unlock mechanism, which protected the customer's important assets. Advantech provides integrated products and services—from boards, to software, to modules. These total solutions not only provide convenient, one-stop shopping, but also lead to enhanced devices and products.

Benefits

- Fixed specification support and 3-year longevity for SQFlash
- Worry-free protection for intellectual property
- SQFlash available to suit every kind of motherboard
- One-stop shopping assures both time and cost efficiency



**If an SQFlash got stolen...
It cannot be read by any card
reader or other platforms without
unlock process.**

GPS Atomic Clock Synchronization for Power Grid Transmission



Introduction

Electrical power is an essential ingredient in modern living, providing energy that drives many different devices and applications. Power plants transmit generated electricity throughout the grid to all the residential and commercial users, so the power grid must function continuously and reliably. To keep all this running properly the power plant needed systems which could monitor and detect problems that might cause catastrophic failures before they happened.

Application Requirements

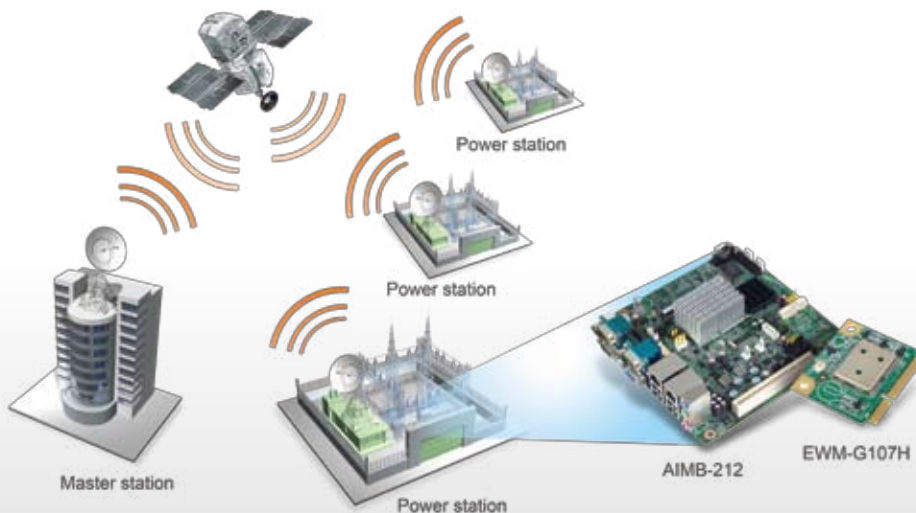
To quickly find the source of any potential power blackouts, the power plant sends a loop back code to each power station in the grid for feedback. This mechanism detects line faults and can quickly restore the whole system if necessary. A customer approached us wanting to enhance the time synchronization mechanism of the feedback code from the stations so they could receive the loop back code more precisely—thereby accurately locating the fault and making the recovery process more efficient.

System Solutions

Eager to solve this critical issue, the customer evaluated the market options and chose Advantech which provided them with wireless GPS modules. EWM-G107H was integrated with Advantech's AIMB-212 industrial motherboard and placed in the power station devices to synchronize time data. By analyzing the precise timing of any electrical anomalies after the loop back code has been sent out, the customer was able to trace the exact location of power line breaks. The application used GPS satellites for high-precision timing over the long distances of the power network, which helped them quickly locate power failures and avoid damage.

Benefits

- Ready to use modules for embedded OS and applications
- GPS modules with Mini-PCIe interface for easy integration and upgrades
- Mature GPS technology synchronizes time data precisely
- Efficient solution with reduced time and cost



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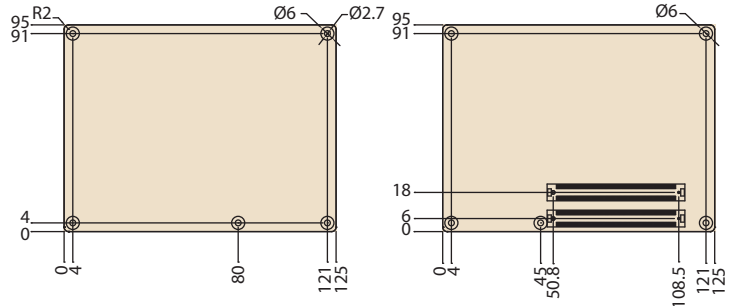
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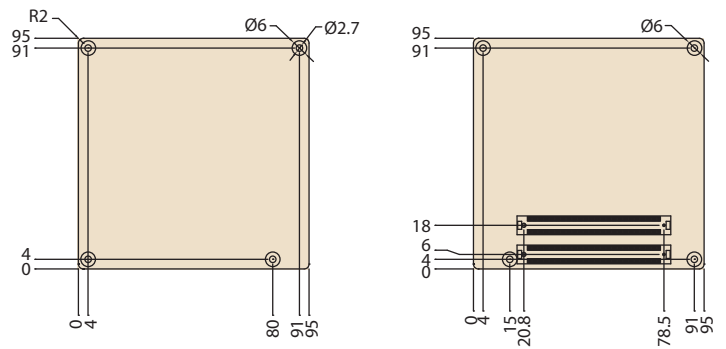
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Form Factors

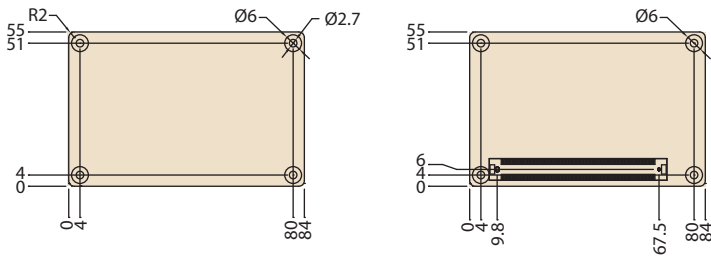
COM-Express Basic Module



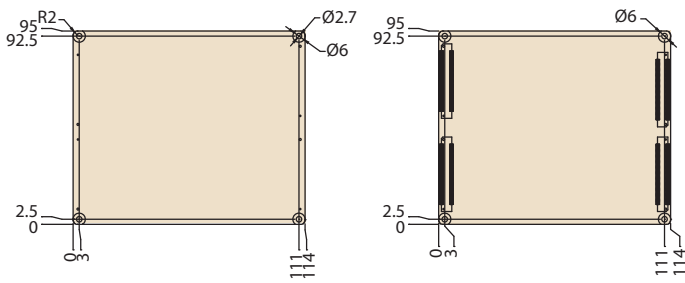
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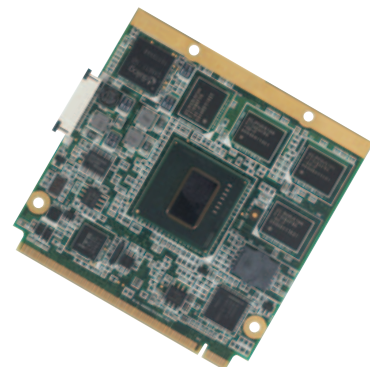
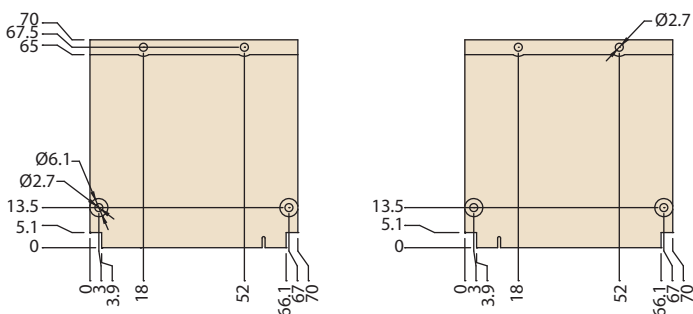
COM-Ultra Module



ETX/XTX Module

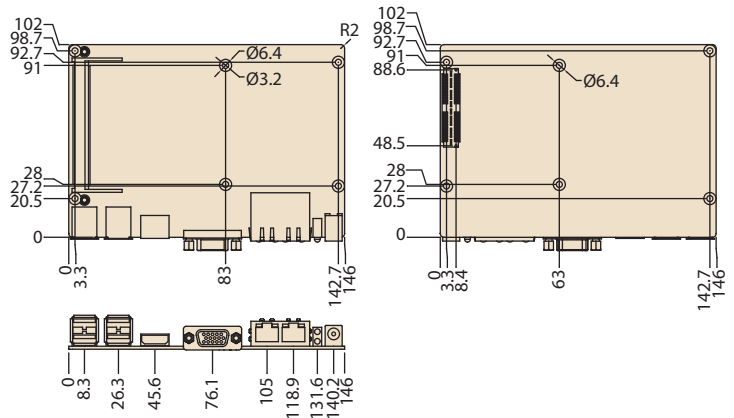


Qseven Module

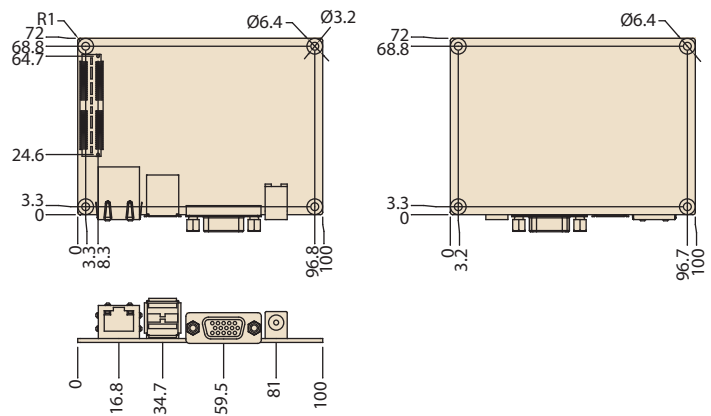


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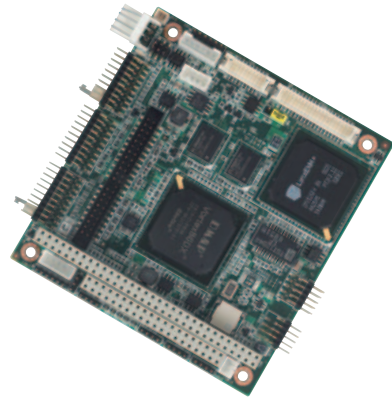
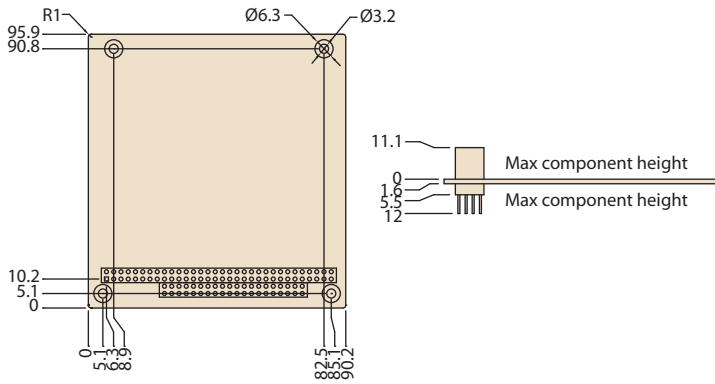
MIO Extension Single Board Computer



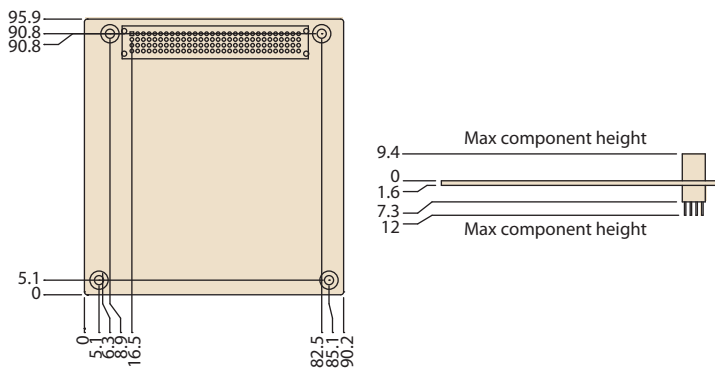
PICO-ITX Single Board Computer



PC/104 CPU Module

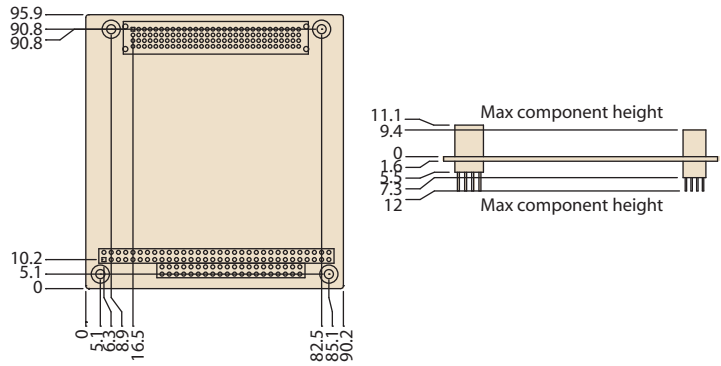
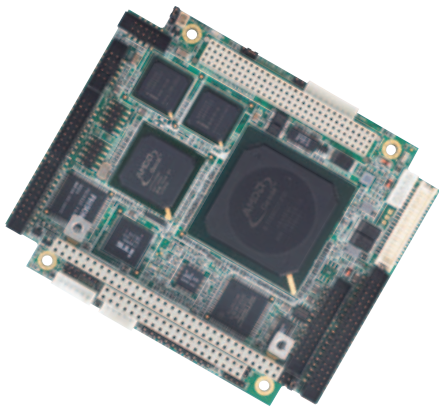


PCI-104 CPU Module

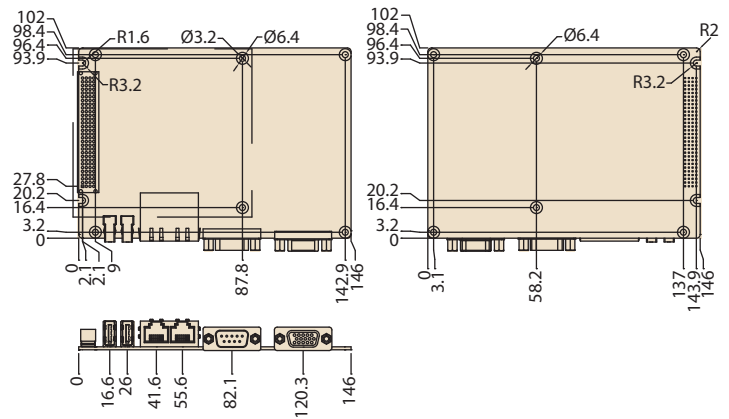
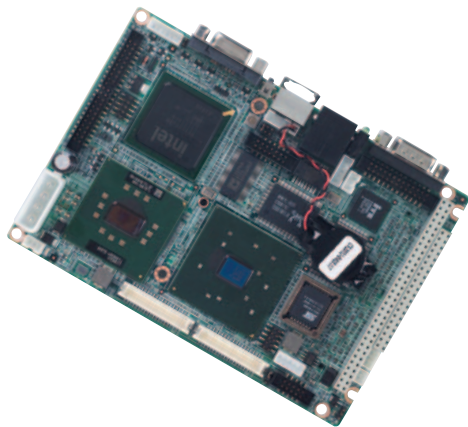


Form Factors

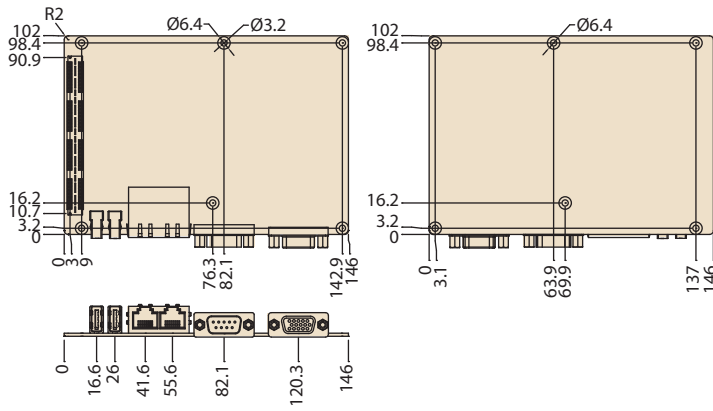
PC/104-Plus CPU Module



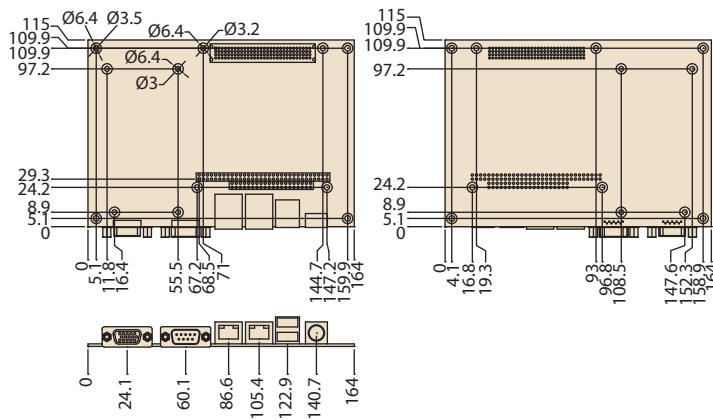
3.5" Single Board Computer



3.5" Single Board Computer w/ MIO Expansion

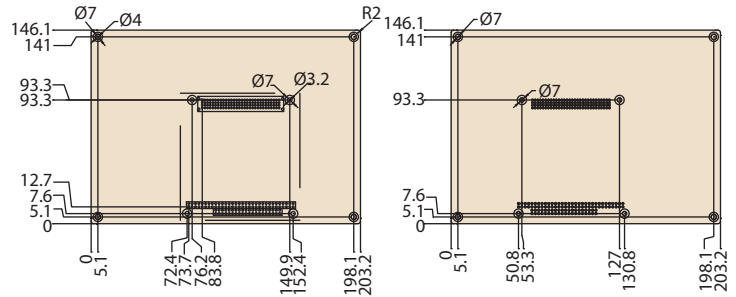


EPIC Single Board Computer

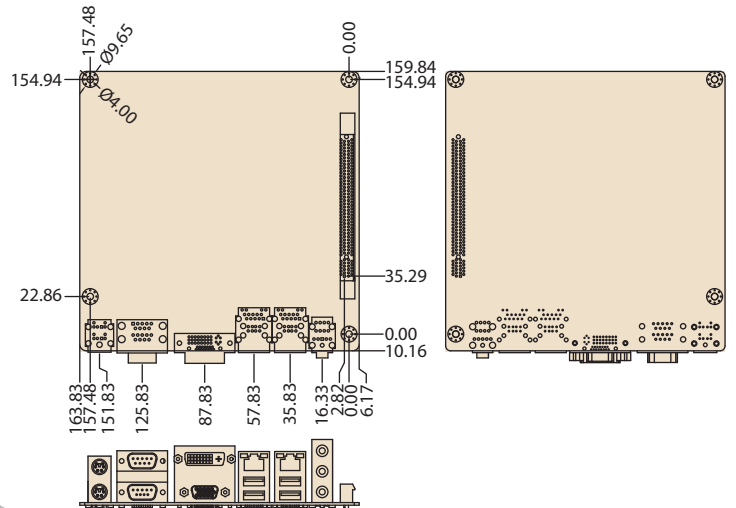
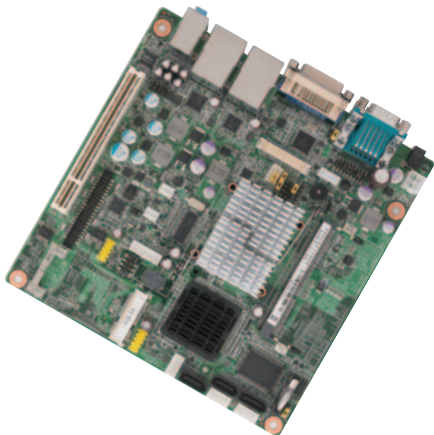


Form Factors

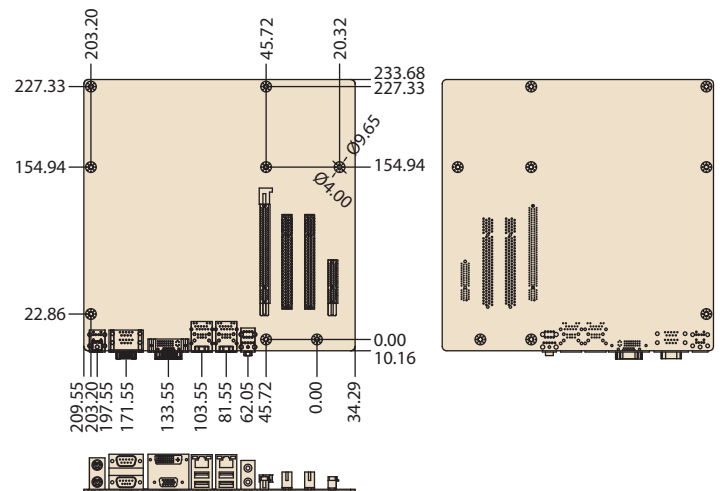
EBX Single Board Computer



Mini-ITX Industrial Motherboard



MicroATX Industrial Motherboard





Product Datasheets

Computer On Modules

Selection Guide

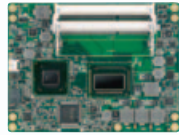


Model Name		SOM-5761	SOM-5781	SOM-5786	SOM-5787
Form Factor		COM-Express Basic Module	COM-Express Basic Module	COM-Express Basic Module	COM-Express Basic Module
Pin-out Type		COM R1.0 Type 2	COM R1.0 Type 2	COM R1.0 Type 2	COM R1.0 Type 2
Processor System	CPU	Intel Atom N270 1.6 GHz	AMD Turion / Sempron	Intel Core 2 Duo / Celeron M	Intel Core 2 Duo / Celeron M
	FSB	533 MHz	800 MHz	533 / 800 MHz	800 / 1066 MHz
	System Chipset	Intel 945GSE / ICH7M	AMD M690E / SB600	Intel GME965 / ICH8M	Intel GS45 / ICH9M
	BIOS	AWARD 8 Mbit	AWARD 4 Mbit	AWARD 4 Mbit	AMI 32 Mbit
Memory	Technology	DDR2 400 / 533 MHz	DDR2 533 / 667 / 800 MHz	DDR2 533 / 667 MHz	DDR3 800 / 1066 MHz
	Max. Capacity	2 GB	4 GB	4 GB	8 GB
	Socket / on-board	1 x 200-pin SODIMM	2 x 200-pin SODIMM	2 x 200-pin SODIMM	2 x 204-pin SODIMM
Display	Graphics	Intel 945GSE	AMD M690E	Intel GME965	Intel GS45
	LCD	2 ch. 18-bit LVDS	2 ch. 24-bit LVDS	2 ch. 24-bit LVDS	2 ch. 24-bit LVDS
	VGA	2048 x 1536	2048 x 1536	2048 x 1536	2048 x 1536
	DVI	-	-	-	2 Ports (shared with PEG)
	TV Out	NTSC/PAL, S-Video, Composite	-	-	NTSC/PAL, S-Video, Composite
	SDVO	1 Port	-	2 Ports	2 Ports
	Dual Display	CRT + LCD, TV out + LCD, TV out + CRT	CRT + LCD, LCD + DVI, CRT + DVI	CRT + LCD	Dual Display of VGA, LVDS, TV-out, HDMI, Displayport, DVI SDVO
Ethernet	Chipset	Intel 82574L	Realtek 8110SC	Intel 82566MM	Intel 82567LM
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
WatchDog Timer		256 levels, 0 ~ 255 sec/min	256 levels, 0 ~ 255 sec/min	256 levels, 0 ~ 255 sec/min	256 levels, 0 ~ 255 sec/min
Expansion		3 PCIe x1 or 1 PCIe x4, 4 PCI master, LPC, SMBus	PCIe x8, 4 PCIe x1, 4 PCI master, LPC, SMBus	PCIe x16, 5 PCIe x1, 4 PCI master, LPC, SMBus	PCIe x16, 5 PCIe x1, 4 PCI masters, LPC, SMBus
I/O	PATA	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)	-
	SATA	2 SATA	4 SATAII	3 SATAII	3 SATAII
	USB	8 USB 2.0	8 USB 2.0	8 USB 2.0	8 USB 2.0
	Audio	AC97 / HD Audio	HD Audio	HD Audio	HD Audio
	GPIO	8-bit	8-bit	8-bit	8-bit
	COM	-	-	-	-
	FDD / LPT	-	-	-	-
Power	SSD	-	-	-	2 GB (up to 4 GB)
	Power Type	ATX, AT	ATX, AT	ATX, AT	ATX, AT
	Power Supply Voltage	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
	Power Consumption (Typical)	(1 GB DDRII 533) + 12 V @ 0.62 A	(1 GB DDR2 667) + 12 V @ 1.23 A (AMD Turion TL-62) + 12 V @ 0.91 A (AMD Sempron 2100+)	(1 GB DDR2 667) + 12 V @ 1.22 A (Intel Core 2 Duo U7500) + 12 V @ 1.56 A (Intel Core 2 Duo T7500)	(1 GB DDR3 1066) SP9300: + 12 V @ 0.66 A
Power Consumption (Max, tested in HCT)	(1 GB DDRII 533) + 12 V @ 0.9 A	(1 GB DDR2 667) + 12 V @ 2.88 A (Turion TL-62) + 12 V @ 1.29 A (Sempron 2100+)	(1 GB DDR2 667) + 12 V @ 1.64 A (U7500) + 12 V @ 3.03 A (T7500)	(1 GB DDR3 1066) SP9300: + 12 V @ 2.1 A	
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")
Reference Page		1-4	1-6	1-8	1-10

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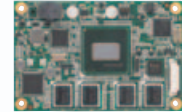
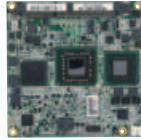
SOM-5788	SOM-5890	SOM-6761	SOM-6763	SOM-6763 B1	SOM-6764
COM-Express Basic Module	COM-Express Basic Module	COM-Express Compact Module	COM-Express Compact Module	COM-Express Compact Module	COM-Express Compact Module
COM R1.0 Type 2	COM R2.0 Type 6	COM R1.0 Type 2	COM R1.0 Type 2	COM R2.0 Type 2	COM R2.0 Type 2
Intel Core i7/ i5 / i3 / Celeron	2nd gen. Intel Core i7/ i5 / i3 / Celeron	Intel Atom N270 1.6 GHz	Intel Atom N450 1.66 GHz / D510 1.66 GHz	Intel Atom N455 1.66 GHz / D525 1.8GHz	Intel Atom E6xx series
-	-	533 MHz	-	-	-
Intel QM57	Intel QM67	Intel 945GSE / ICH7M	Intel ICH8M	Intel ICH8M	Intel EG20T
AMI 64 Mbit	AMI 64 Mbit	AWARD 8 Mbit	AMI 16 Mbit	AMI 16 Mbit	AMI 16 Mbit
DDR3 800 / 1066 MHz	DDR3 1066 / 1333 MHz	DDR2 400 / 533 MHz	DDR2 667 MHz	DDR3 667/ 800 MHz	DDR2 667 / 800 MHz
8 GB	16 GB	2 GB	2 GB	2 GB (N455) 4 GB (D525)	1 GB (up to 2 GB)
2 x 204-pin SODIMM	2 x 204-pin SODIMM	1 x 200-pin SODIMM	2 x 200-pin SODIMM	2 x 204-pin SODIMM	Memory on-board
Intel GFX	Intel GFX	Intel 945GSE	Intel Atom N450 / D510	Intel Atom N455 / D525	Intel Atom E6xx series
2 ch. 24-bit LVDS	2 ch. 24-bit LVDS	2 ch. 18-bit LVDS	18-bit LVDS	24-bit LVDS	24-bit LVDS
2048 x 1536	2048 x 1536	2048 x 1536	1400 x 1050 (N450) 2048 x 1536 (D510)	1400 x 1050 (N455) 2048 x 1536 (D525)	-
2 Ports (shared with PEG)	3 Ports (shared with HDMI / Displayport)	-	-	-	-
NTSC/PAL, S-Video, Composite	-	NTSC/PAL, S-Video, Composite	-	-	-
-	1 Port	1 Port	-	-	1 Port (optional)
Dual Display of VGA, LVDS, TV-out, HDMI, DisplayPort	Dual Display of VGA, LVDS, DVI, HDMI, DisplayPort	CRT + LCD, TV out + LCD, TV out + CRT	CRT + LCD	CRT + LCD	LVDS + VGA, LVDS + SDVO
Intel 82577LM	Intel 82579LM	Intel 82574L	Intel 82567V	Intel 82567V	Intel 82574L
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
65536 level, 0 ~ 65535 sec	65536 level, 0 ~ 65535 sec	256 levels, 0 ~ 255 sec/min	65536 level, 0 ~ 65535 sec	65536 level, 0 ~ 65535 sec	65536 level, 0 ~ 65535 sec
PCIe x 16, 6 PCIe x 1, 4 PCI masters, LPC, SMBus	PCIe x 16, 7 PCIe x 1, LPC, SMBus	3 PCIe x 1, 4 PCI masters, LPC, SMBus	5 PCIe x 1, 4 PCI masters, LPC, SMBus	5 PCIe x 1, 4 PCI masters, LPC, SMBus	1 PCIe x 1, PCI, LPC, SPI, SMBus, I2C, CANBus(optional)
1 EIDE (UDMA 100)	-	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)
4 SATAII	2 SATAIII 2 SATAII	2 SATA	3 SATAII	3 SATAII	1 SATA (optional 2 SATA)
8 USB 2.0	8 USB 2.0	8 USB 2.0	8 USB 2.0	8 USB 2.0	6 USB 2.0
HD Audio	HD Audio	AC97 / HD Audio	HD Audio	HD Audio	HD Audio
8-bit	8-bit	8-bit	8-bit	8-bit	8-bit
-	2 Ports	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	2 GB
ATX, AT	ATX, AT	ATX, AT	ATX, AT	ATX, AT	ATX, AT
ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
(1 GB DDR3 1066) i7-620UE: +12V @ 1.18A	(2 GB DDR3 1333) i7-2715QE: +12V @ 0.8A	(1 GB DDR2 533) + 12 V @ 0.62A	(1 GB DDR2 667) N450: +12V @ 0.67A D510: +12V @ 0.93A	(2 GB DDR3 667/800) N455: +12V @ 0.9A D525: +12V @ 1.3A	TBD
(1 GB DDR3 1066) i7-620UE: +12V @ 2.55A	(2 GB DDR3 1333) i7-2715QE: +12V @ 3.57A	(1 GB DDR2 533) + 12 V @ 0.9A	(1 GB DDR2 667) N450: +12V @ 0.89A D510: +12V @ 1.32A	(2 GB DDR3 667/800) N455: +12V @ 0.94A D525: +12V @ 1.5A	TBD
0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	-40 ~ 85° C (- 40 ~ 185° F)
0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing
125 x 95 mm (4.92" x 3.74")	125 x 95 mm (4.92" x 3.74")	95 x 95 mm (3.74" x 3.74")	95 x 95 mm (3.74" x 3.74")	95 x 95 mm (3.74" x 3.74")	95 x 95 mm (3.74" x 3.74")
1-12	1-14	1-16	1-18	1-20	1-22

- Computer On Modules **1**
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- PC/I/O4 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Computer On Modules

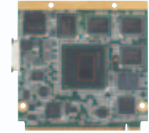
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Selection Guide

Model Name		SOM-6787	SOM-7562	SOM-7562 B1	SOM-7564
Form Factor		COM-Express Compact Module	COM-Ultra Module	COM-Ultra Module	COM-Ultra Module
Pin-out Type		COM R1.0 Type 2	COM R1.0 Type 1	COM R1.0 Type 1	COM R2.0 Type 10
Processor System	CPU	Intel Core 2 Duo / Celeron M	Intel Atom N450 1.66 GHz	Intel Atom N455 1.66 GHz	Intel Atom E6xx series
	FSB	800 / 1066 MHz	667 MHz	667 MHz	-
	System Chipset	Intel GS45 / ICH9M	Intel ICH8M	Intel ICH8M	Intel EG20T
	BIOS	AMI 32 Mbit	AMI 16 Mbit	AMI 16 Mbit	AMI 16 Mbit
Memory	Technology	DDR3 800 / 1066 MHz	DDR2 667 MHz	DDR3 667 MHz	DDR2 667 / 800 MHz
	Max. Capacity	8 GB	512 MB	1 GB (up to 2 GB)	1 GB (up to 2 GB)
	Socket / on-board	2 x 204-pin SODIMM	Memory on-board	Memory on-board	Memory on-board
Display	Graphics	Intel GS45	Intel Atom N450	Intel Atom N455	Intel Atom E6xx series
	LCD	2 ch. 24-bit LVDS	18-bit LVDS	18-bit LVDS	24-bit LVDS
	VGA	2048 x 1536	1400 x 1050	1400 x 1050	-
	DVI	2 Ports (shared with PEG)	-	-	-
	TV Out	NTSC/PAL, S-Video, Composite	-	-	-
	SDVO	2 Ports	-	-	1 Port
	Dual Display	Dual Display of VGA, LVDS, TV-out, HDMI, DisplayPort, DVI, SDVO	CRT + LVDS	CRT + LVDS	LVDS + SDVO
Ethernet	Chipset	Intel 82567LM	Intel 82567V	Intel 82567V	Intel 82583V
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
WatchDog Timer		256 levels, 0 ~ 255 sec/min	256 levels, 0 ~ 255 sec/min	256 levels, 0 ~ 255 sec/min	65536 level, 0 ~ 65535 sec
Expansion		PCIe x16, 5 PCIe x1, 4 PCI master, LPC, SMBus	5 PCIe x1, LPC	5 PCIe x1, LPC	3 PCIe x1, LPC, SPI, SMBus, I2C
I/O	PATA	-	-	-	-
	SATA	4 SATAII	3 SATAII	3 SATAII	-
	USB	8 USB 2.0	8 USB 2.0	8 USB 2.0	-
	Audio	HD Audio	HD Audio	HD Audio	HD Audio
	GPIO	8-bit	8-bit	8-bit	8-bit
	COM	-	-	-	-
	FDD / LPT	-	-	-	-
SSD	-	1 / 2 GB (up to 4 GB)	1 / 2 GB (up to 4 GB)	-	
Power	Power Type	ATX, AT	ATX, AT	ATX, AT	ATX, AT
	Power Supply Voltage	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)	ATX (12V, 5Vsb) AT (12V)
	Power Consumption (Typical)	(1 GB DDR3 1066) +12 V @ 0.66 A (Intel SP9300)	(512 MB DDRIII 667) +12 V @ 0.6 A	(1GB DDRIII 667) +12 V @ 0.67 A	TBD
	Power Consumption (Max, tested in HCT)	(1 GB DDR3 1066)+12 V @ 2.1 A (Intel SP9300)	(512 MB DDRIII 667) +12V @ 0.7A	(1GB DDRIII 667) +12V @ 0.87A	TBD
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")	84 x 55 mm (3.3" x 2.17")	84 x 55 mm (3.3" x 2.17")	84 x 55 mm (3.3" x 2.17")
Reference Page		1-24	1-26	1-28	1-30

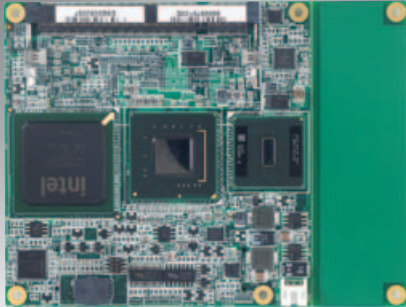
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SOM-4430	SOM-4455	SOM-4461 A2	SOM-4463	SOM-3560	SOM-3564
ETX	ETX	ETX	ETX	Qseven	Qseven
ETX 2.1	ETX 3.0	ETX 3.0	ETX 3.0	Qseven 1.1	Qseven 1.12
Advantech EVA-X4300	AMD Geode LX800	Intel Atom N270 1.6 GHz	Intel Atom N450 1.66 GHz / D510 1.66 GHz	Intel Atom Z530 1.6 GHz / Z510 1.1 GHz	Intel Atom E6xx series
33 MHz	33 MHz	533 MHz	667 MHz	400 / 533 MHz	-
Advantech EVA-X4300	AMD CS5536	Intel 945GSE / ICH7M	Intel ICH8M	Intel US15W	Intel EG20T
AWARD 4 Mbit	AWARD 4 Mbit	AWARD 8 Mbit	AMI 16 Mbit	Award 8 Mbit	AMI 16 Mbit
DDR2	DDR 200 / 266 / 333 / 400 MHz	DDR2 400 / 533 MHz	DDR2 667 MHz	DDR2 533 / 400 MHz	DDR2 667 / 800 MHz
64/ 128 MB	1 GB	2 GB	2 GB	512 MB (up to 1 GB)	1 GB (up to 2 GB)
Memory on-board	1 x 200-pin SODIMM	1 x 200-pin SODIMM	1 x 200-pin SODIMM	Memory on-board	Memory on-board
SMI SM712	AMD CS5536	Intel 945GSE	Intel Atom N450 / D510	Intel US15W	Intel Atom E6xx series
18-bit TTL	24-bit LVDS / 18-bit TTL	2 ch. 36/48-bit LVDS	18-bit LVDS	24-bit LVDS	24-bit LVDS
1024 x 768	1024 x 768	2048 x 1536	1400 x 1050 (N450) 2048 x 1536 (D510)	-	-
-	-	-	-	-	-
-	-	NTSC/PAL, S-Video, Composite	-	-	-
-	-	1 Port (optional)	-	1 Port	1 Port
CRT + LCD (Simultaneous mode)	CRT + LCD (Simultaneous mode)	CRT + LCD, TV out + LCD, TV out + CRT	CRT + LCD	-	LVDS + SDVO
Advantech EVA-X4300	RTL8100CL-LF	Realtek 8103EL	Realtek 8103EL	Realtek 8111	Intel 82583V
10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
24 bits, 30.5µ sec ~ 512s	256 levels, 0 ~ 255 sec/ min	256 levels, 0 ~ 255 sec/ min	256 levels, 0 ~ 255 sec/min	65536 level, 0 ~ 65535 sec	65536 level, 0 ~ 65535 sec
4 PCI master, ISA	4 x PCI master (3 x PCI master for SATA version), ISA	4 PCI master, ISA	4 PCI master, ISA	1 PCIe x1, LPC	2 PCIe x1, LPC
1 EIDE (UDMA 100)	1 EIDE (UDMA 100) 2 EIDE (SATA ver.)	1 EIDE (UDMA 100)	1 EIDE (UDMA 100)	-	-
-	2 SATA (on ETX module) (SATA ver.)	2 SATA (on ETX module)	2 SATA (on ETX module)	1 SATA	2 SATA
4 USB 2.0	4 USB 2.0	4 USB 2.0	4 USB 2.0	8 USB 2.0	-
-	AC97	AC97	HD Audio	HD Audio	HD Audio
-	1-bit GPIO, 2-bit GPE	2-bit GPIO (optional)	1-bit GPIO, 2-bit GPE	-	8-bit
2 Ports	2 Ports	2 Ports	2 Ports	-	-
LPT	FDD or LPT	FDD or LPT	FDD or LPT	-	-
-	Type II CF slot	-	-	0 / 2 GB	-
AT	ATX, AT	ATX, AT	ATX, AT	ATX, AT	ATX, AT
5V	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)	ATX (5V, 5Vsb) AT (5V)
-	(1 GB DDR 333) +5 V @ 1.80 A	(1 GB DDRII 533) +5 V @ 1.15 A	(1 GB DDRII 533) +5 V @ 1.31 A (Intel N450) +5 V @ 1.87 A (Intel D510)	(1 GB DDRII 533) +5 V @ 0.72 A (Intel Z510)	TBD
+5 V @ 0.7 A	(1 GB DDR 333) +5 V @ 2.01 A	(1 GB DDRII 533) +5 V @ 1.98 A	(1 GB DDRII 533) +5 V @ 1.84 A (Intel N450) +5 V @ 2.58 A (Intel D510)	(1 GB DDRII 533) +5 V @ 1.13 A (Intel Z510)	TBD
0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
0% ~ 90% relative humidity, non- condensing	0% ~ 90% relative humidity, non- condensing	0% ~ 90% relative humidity, non- condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing	0% ~ 90% relative humidity, non-condensing
114 x 95 mm (4.5" x 3.74")	114 x 95 mm (4.5" x 3.74")	114 x 95 mm (4.5" x 3.74")	114 x 95 mm (4.5" x 3.74")	70 x 70 mm (2.76" x 2.76")	70 x 70 mm (2.76" x 2.76")
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- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

SOM-5761

Intel® Atom™ Processor N270 COM-Express Basic Module



Features

- Embedded Intel® Atom™ N270 1.6 GHz Processor + 945GSE + ICH7M
- Intel GMA 950, Microsoft DirectX 9.1, Supports 36-bit LVDS TFT LCD
- Supports one DDR2-533 memory SODIMM socket up to 2 GB
- Supports 3 PCIe x1, 4 PCI Master, LPC, 2 SATA, 8 USB 2.0, AC97/HDA
- Supports embedded software APIs and Utility

Software APIs:

- Watchdog
- IPC
- SMBus
- H/W Monitor
- GPIO
- Backlight On/Off

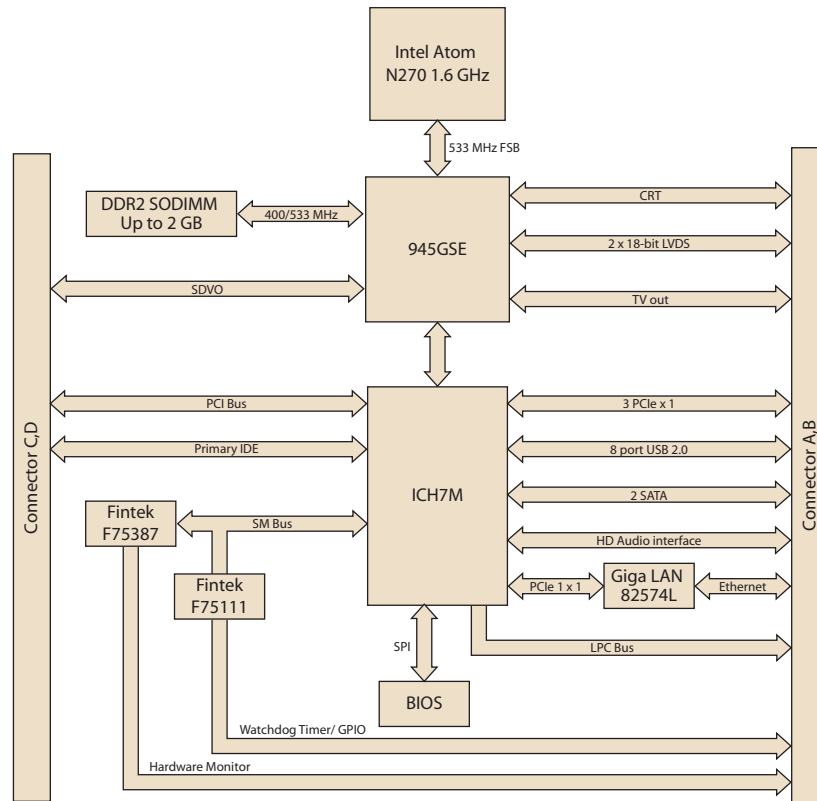
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor	COM-Express Basic Module, Type II Pin-out	
Processor System	CPU	Intel Atom Processor N270 1.6 GHz
	Front Side Bus	533 MHz
	System Chipset	Intel 945GSE/ ICH7M
	BIOS	AWARD 8 Mbit Flash BIOS
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	up to 2 GB
	Socket	1 x 200-pin SODIMM socket
Display	Chipset	Intel 945GSE
	VRAM	DVMT 3.0 supports up to 224 MB
	Graphics Engine	Intel GMA950, Microsoft DirectX 9.1
	LCD	Single and dual channel 18/36-bit LVDS
	VGA	up to 2048 x 1536
	TV Out	Supports NTSC/PAL, S-Video and Composite Output interfaces
	SDVO	1 SDVO Port (Note: SDVO function is supported by customized BIOS)
	Dual Display	CRT + LCD, TV out + LCD, TV out + CRT
Ethernet	Chipset	Intel 82574L Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset	
Expansion	LPC, SMBUS, 3 PCIe x1 or 1 PCIe x4, 4 PCI master	
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	2 x SATA, data transfer rates up to 150 MB/s
	USB	8 x USB 2.0
	Audio	AC97, High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V, and +5 VSB for ATX, +12 V for AT
	Power Consumption (Typical)	Typical: (1 GB DDRII 533) +12 V @ 0.62 A
	Power Consumption (Max, test in HCT)	Max: (1 GB DDRII 533) +12 V @ 0.9 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	SDVO	TV out	Giga LAN	HD Audio	PCIe	PCI	USB 2.0	SATA	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5761FG-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	2 x 18-bit	Yes	1	Yes	1	Yes	Note 1	4	8	2	1	1	Yes	Yes	Passive	0 ~ 60° C
SOM-5761Z-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	2 x 18-bit	Yes	1	Yes	1	Yes	Note 1	4	8	2	1	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-5761Z2-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	2 x 18-bit	Yes	1	Yes	1	Yes	Note 1	4	8	2	1	1	Yes	Yes	Passive	-40 ~ 85° C

Note 1: Supports 1 PCIe x4 or 3 PCIe x1. Reserve 1 PCIe x4 circuit if no need to use PCIe Giga LAN (BOM option, either one, default PCIe x1 for Giga LAN and 3 PCIe x1)

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm

Packing List

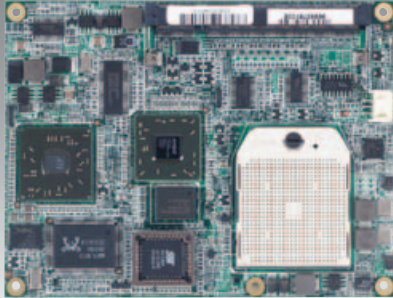
Part No.	Description	Quantity
-	SOM-5761 CPU Module	1
-	Utility CD	1
1960028640N101	Heatspreader	1

Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2 COM V1.2 ENG
Win XPE	2070007912	XPE WES2009 Intel-Uniprocess V4.0 MUI24 V6.4
QNX		

SOM-5781

AMD Turion™ M690E COM-Express Basic Module



CE FCC

Features

- AMD Turion™/Sempron™ processor + AMD M690E/SB600 chipsets
- Mobile AMD X1250 3D/2D engine, Supports 48-bit LVDS/VGA/HDMI/DVO/PCIe x 8
- Supports two DDR2-800 memory SODIMM sockets up to 4 GB
- Supports 4 PCIe x1, 4 PCI Master, LPC, 4 SATAII, 1 IDE, 8 USB 2.0, HDA
- Supports embedded software APIs and Utilities

Software APIs:

- Watchdog
- IPC
- SMBus
- H/W Monitor
- GPIO

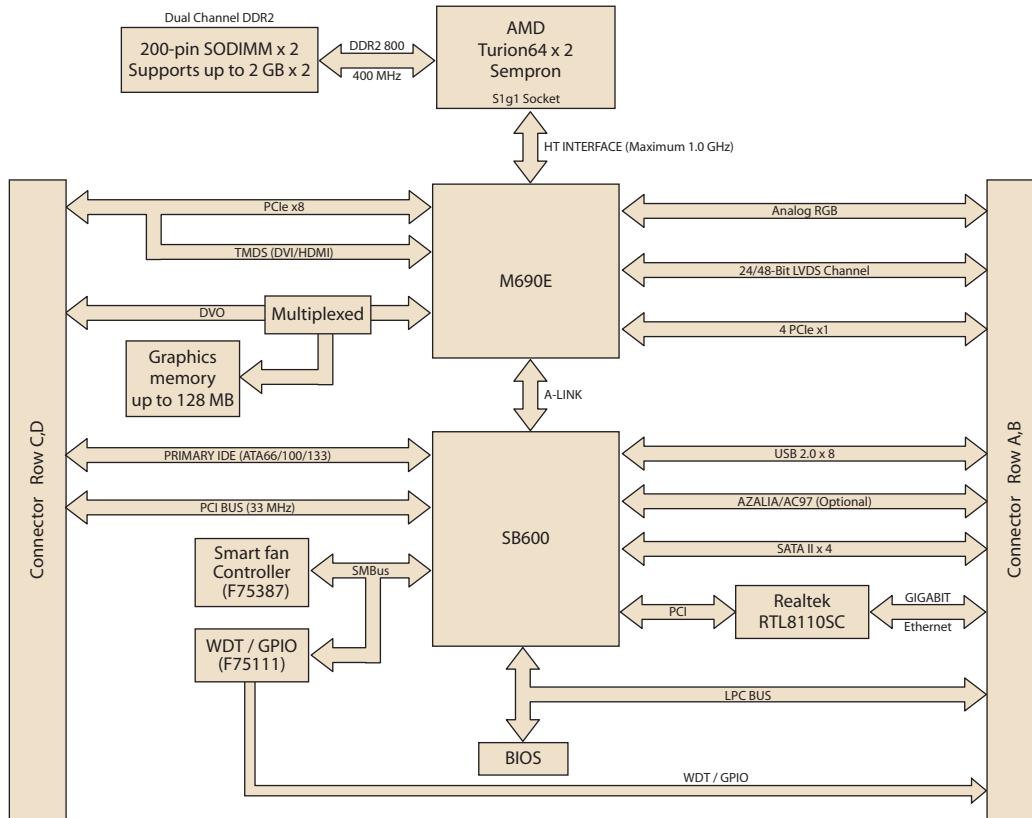
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor		COM-Express Basic Module, Type II Pin-out
Processor System	CPU	AMD Turion/Sempron processor
	Front Side Bus	800 MHz
	System Chipset	AMD M690E/SB600
	BIOS	AWARD 4 Mbit Flash BIOS
Memory	Technology	DDR2 533/667/800 MHz
	Max. Capacity	up to 4 GB
	Socket	2 x 200-pin SODIMM sockets
Display	Chipset	AMD M690E
	VRAM	Supports up to 256 MB (optional 128 MB side port)
	Graphics Engine	Mobile AMD X1250 3D/2D engine
	LCD	Single and dual channel 24/48-bit LVDS
	VGA	up to 2048 x 1536
	DVO	1
Ethernet	Chipset	Realtek 8110SC Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, PCIe x8, 4 PCIe x1, 4 PCI master
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	4 x SATAII
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
	Power Consumption (Typical)	Typical: (1 GB DDR2 667) +12 V @ 1.23 A (AMD Turion TL-62) +12 V @ 0.91 A (AMD Sempron 2100+)
	Power Consumption (Max, test in HCT)	Max: (1 GB DDR2 667) +12 V @ 2.88 A (AMD Turion TL-62) +12 V @ 1.29 A (AMD Sempron 2100+)
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
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- 3.5" SBCs **4**
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- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	Giga LAN	HD Audio	PCIe x 8	PCIe x 1	PCI	USB 2.0	SATA	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5781FS-00A1E	Socket	-	M690E	2 x 24-bit	Yes	1	Yes	1	4	4	8	4	Yes	Yes	Yes	Yes	Active	0 - 60° C
SOM-5781FS-S0A1E	Sempron 2100+	256 KB	M690E	2 x 24-bit	Yes	1	Yes	1	4	4	8	4	Yes	Yes	Yes	Yes	Active	0 - 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for Giga LAN COM Module

Optional Accessories

Part No.	Description
1960048818N001	Semi-Heatsink 125 x 95 x 17 mm
1960048820N001	Semi-Cooler 125 x 95 x 33.5 mm with 12 V Fan

Packing List

Part No.	Description	Quantity
-	SOM-5781 CPU Module	1
-	Utility CD	1
1960023313T00B	Heatspreader	1

SOM-5786

Intel® Core™2 Duo Processor GME965 COM-Express Basic Module



CE FCC

Features

- Embedded Intel® Core™2 Duo/Celeron® M Processor + GME965 + ICH8M
- Intel GMA X3100 graphic engine, Supports 48-bit LVDS
- Supports 2 DDR2 SODIMM up to 4 GB
- Supports PCIe x16, 5 PCIe x1, 4PCI, LPC, 3 SATAII, 1 IDE, 8 USB 2.0
- Supports embedded software APIs and Utilities

Software APIs:

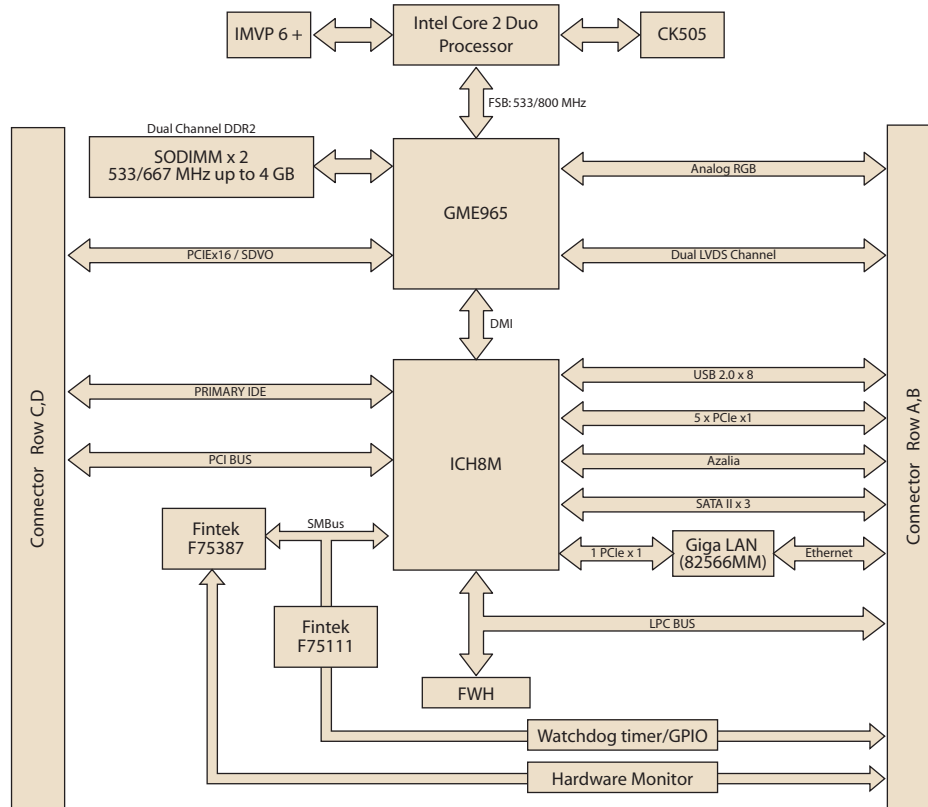
Utilities:

Watchdog I2C SMBus H/W Monitor GPIO
BIOS flash Monitoring Flash Lock

Specifications

Form Factor	COM-Express Basic Module, Type II Pin-out		
Processor System	CPU	Intel Core 2 Duo Processor	
	Front Side Bus	533/800 MHz	
	System Chipset	Intel GME965 GMCH/ICH8-M	
	BIOS	AWARD 4 Mbit Flash BIOS	
Memory	Technology	DDR2 533/667 MHz	
	Max. Capacity	up to 4 GB	
	Socket	2 x 200-pin SODIMM sockets	
Display	Chipset	Intel GME965	
	VRAM	DVMT 4.0 supports up to 384 MB	
	Graphics Engine	Mobile Intel GMA X3100 3D/2D engine	
	LCD	Single and dual channel 24/48-bit LVDS	
	VGA	up to 2048 x 1536	
	SDVO	2 SDVO Ports	
Ethernet	Dual Display	CRT + LCD (Note: SDVO function is supported by customized BIOS)	
	Chipset	Intel 82566MM Gigabit Ethernet	
WatchDog Timer	Speed	10/100/1000 Mbps	
		256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset	
Expansion	LPC, PCIe x16, 5 PCIe x1, 4 PCI master		
I/O	PATA	1 x EIDE (UDMA 100)	
	SATA	3 x SATAII	
	USB	8 x USB 2.0	
	Audio	High definition audio interface	
	GPIO	8-bit GPIO	
Power	Power Type	ATX, AT	
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT	
	Power Consumption (Typical)	Typical: (1 GB DDR2 667)	+12 V @ 1.22 A (Intel Core 2 Duo U7500)
			+12 V @ 1.56 A (Intel Core 2 Duo T7500)
Power Consumption (Max, test in HCT)	Max: (1 GB DDR2 667)	+12 V @ 1.64 A (Intel Core 2 Duo U7500)	
		+12 V @ 3.03 A (Intel Core 2 Duo T7500)	
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)	
	Operating Humidity	0% ~ 90% relative humidity, non-condensing	
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")	

Board Diagram



- 1 Computer On Modules
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- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	SDVO	Giga LAN	HD Audio	PCIe x16	PCIe x1	PCI	USB 2.0	SATA	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5786FG-00A1E	Socket 478	CPU	Intel GME965	2 x 24-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5786FG-S0A1E	Intel Core 2 Duo U7500 1.06 GHz	4 MB	Intel GME965	2 x 24-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5786FG-S6A1E	Intel Core 2 Duo L7500 1.6 GHz	4 MB	Intel GME965	2 x 24-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	1	Yes	Yes	Active	0 - 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048820N001	Semi-Cooler 125 x 95 x 33.5 mm with 12 V Fan

Packing List

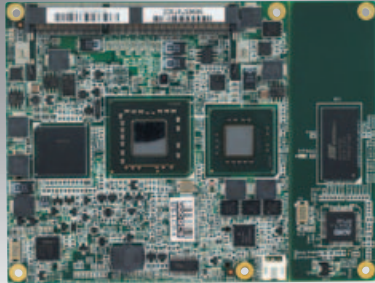
Part No.	Description	Quantity
-	SOM-5786 CPU Module	1
-	Utility CD	1
1960005316	Heatspreader (SOM-5786FG-00A1E only)	1
1960005315	Heatspreader (SOM-5786FG-S0A1E and SOM-5786FG-S6A1E)	1

Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2 COM V1.2 ENG
Win XPE	2070006671	Image XPE FP2007 SOM-5786 V3.01 ENG

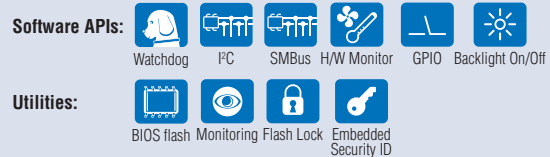
SOM-5787

Intel® Core™2 Duo Processor GS45 COM-Express Basic Module



Features

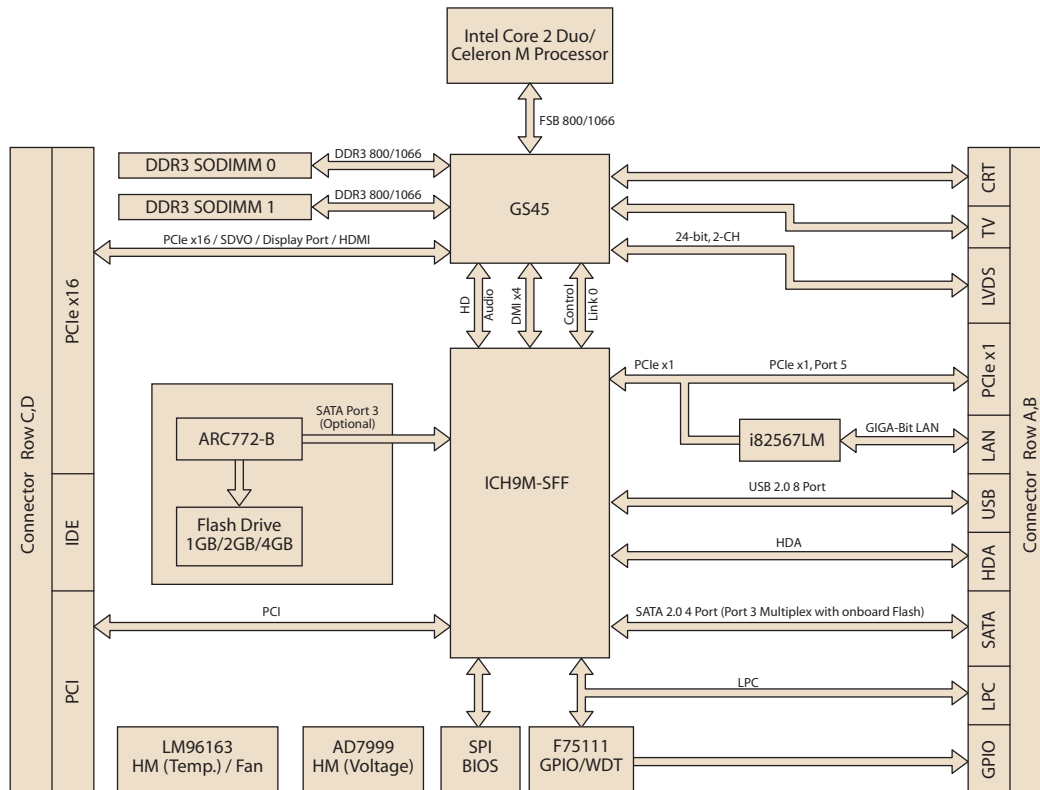
- Embedded Intel® Core™2Duo/Celeron® M processor
- Intel GMA X4500 Gen 5 DX10, HW support for H.264, VC-1 and MPEG2
- Supports 2 DDR3 SODIMM up to 8 GB
- Supports PCIe x16, 5 PCIe x1, 4 PCI, LPC, 3 SATAII, 8 USB2.0
- Supports embedded software APIs and Utilities



Specifications

Form Factor		COM-Express Basic Module, Type II Pin-out
Processor System	CPU	Intel Core 2 Duo SP9300, LV Core 2 Duo SL9400, ULV Core 2 Duo SU9300 / Intel ULV Celeron M 723
	Front Side Bus	800/1066 MHz
	System Chipset	Intel GS45/ICH9M SFF
	Intel AMT 4.0	Yes
	BIOS	AMI 32 Mbit
Memory	Technology	DDR3 800/1066 MHz
	Max. Capacity	up to 8 GB
	Socket	2 x 204-pin SODIMM sockets
Display	Chipset	Intel GS45
	VRAM	DVMT 5.0 supports up to 1024 MB
	Graphics Engine	Mobile Intel GMA X4500 3D/2D engine, HDMI, Displayport, SDVO shared with PCIe x16 (PEG)
	LCD	Single and dual channel 24/48-bit LVDS
	TV-out	Yes
	VGA	up to QXGA (2048 x 1536)
	SDVO	2 SDVO Ports
Dual Display	Dual Display of VGA, LVDS, TV-out, HDMI, Displayport, SDVO (Note: SDVO function is supported by customized BIOS)	
Ethernet	Chipset	Intel 82567 Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, PCIe x16, 5 PCIe x1, 4 PCI master
I/O	SATA	3 x SATAII (1 SATA port used for 2G onboard flash)
	SSD	2 GB SSD Flash on board
	USB	8 x USB 2.0 ports
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
	Power Consumption (Typical)	(1 GB DDR3 1066) SP9300: +12V @ 0.66A
	Power Consumption (Max. test in HTC)	(1 GB DDR3 1066) SP9300: +12V @ 2.1A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
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- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	SDVO	Giga LAN	HD Audio	PCIe x 16	PCIe x 1	PCI	USB 2.0	SATA	LPC	Onboard flash	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5787FG-S1A1E	Intel ULV Celeron M 723 1.2 GHz	1 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	2G	Yes	Yes	Active	0 ~ 60° C
SOM-5787FG-S2A1E	Intel ULV Celeron M 722 1.2 GHz	1 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	2G	Yes	Yes	Passive	0 ~ 60° C
SOM-5787FG-S3A1E	Intel ULV Core 2 Duo SU9300, 1.2 GHz	3 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	2G	Yes	Yes	Active	0 ~ 60° C
SOM-5787FG-S9A1E	Intel LV Core 2 Duo SL9400, 1.86 GHz	6 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	2G	Yes	Yes	Active	0 ~ 60° C
SOM-5787FG-U3A1E	Intel Core 2 Duo SP9300, 2.26 GHz	6 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	3 x SATAII	1	2G	Yes	Yes	Active	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048818N001	Semi-Heat sink 125 x 95 x 17 mm
1960048820N001	Semi- Cooler 125 x 95 x 33.5 mm with 12 V Fan

Packing List

Part No.	Description	Quantity
-	SOM-5787 CPU Module	1
-	Utility CD	1
1960046888N001	Heatspreader	1

Embedded OS

OS	Part No.	Description
Win XPE	2070009650	XPE WES2009 SOM-5787 V4.0 MUI24

SOM-5788

Intel® Core™ i7/i5/i3 Processor COM-Express Basic Module



Features

- Embedded Intel® Core™ i7/i5/i3 processor + QM57
- Intel GMA supports single and dual channel 18/24-bit LVDS, HDMI, Displayport, VGA
- Supports 2 DDR3-1066 memory SODIMM sockets up to 8 GB
- Supports 6 PCIe x1, 4 PCI masters, 4 SATAII, 8 USB 2.0, EIDE, GbE
- Supports Advantech iManager and software APIs

Software APIs:

- Watchdog
- PC
- SMBus
- H/W Monitor
- GPIO

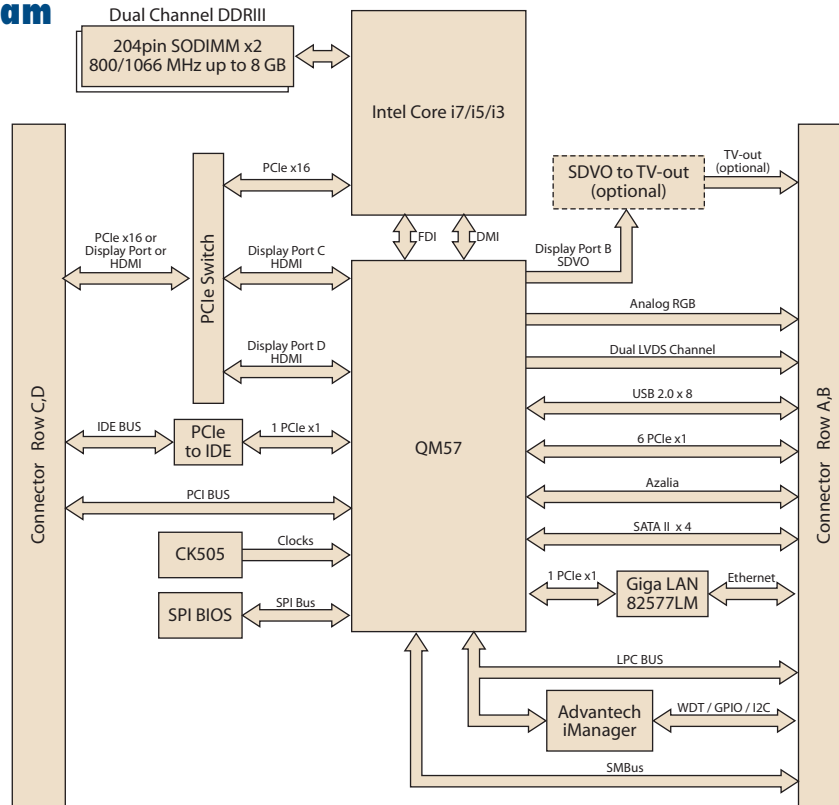
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor	COM-Express Basic Module, Type II Pin-out	
Processor System	CPU	Intel Core i7-610E Processor (4M Cache, 2.53 GHz) Intel Core i7-620LE Processor (4M Cache, 2.00 GHz) Intel Core i7-620UE Processor (4M Cache, 1.06 GHz) Intel Core i5-520E Processor (3M Cache, 2.40 GHz) Intel Core i3-330E Processor (3M Cache, 2.13 GHz) Intel Core i7-660UE Processor (4M Cache, 1.33 GHz) Intel Celeron P4505 Processor (2M Cache, 1.86 GHz) Intel Celeron U3405 Processor (2M Cache, 1.07 GHz)
	System Chipset	Intel QM57
	BIOS	AMI 64 Mbit Flash BIOS
Memory	Technology	DDR3 800/1066 MHz
	ECC Support	A1 Series - not supported, B1 Series - supported
	Max. Capacity	up to 8 GB
	Socket	2 x 204-pin SODIMM sockets
Display	Chipset	Intel GMA integrated in Core i7, Core i5, or Core i3
	LVDS	Single and dual channel 18/24-bit LVDS
	VGA	up to 2048 x 1536
	HDMI/DVI	Shared with PEG
	Display Port	Shared with PEG
Ethernet	Chipset	Intel 82577LM Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer	
Expansion	LPC, 6 PCIe x 1 and 1 PEG x 16, 4 PCI masters	
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	4 x SATAII (300 MB/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimension	125 x 95 mm (4.92" x 3.74")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
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- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	LLC	Chipset	DB3 SODIMM	LVDS	VGA	TV-out	Giga LAN	HD Audio	PCIe x4	PCIe x1	PCI	USB 2.0	SATA	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5788FG-U5A1E	Core i7-610E SV 2.53 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-U0A1E	Core i7-620LE LV 2.0 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-S1A1E	Core i7-620UE ULV 1.06 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-U4A1E	Core i5-520E SV 2.4 GHz	3 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-U1A1E	Core i3-330E SV 2.13 GHz	3 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-S9A1E	Celeron P4505 SV 1.86 GHz	2 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-S0A1E	Celeron U3405 ULV 1.07GHz	2 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-S3A1E	Core i7-660UE ULV 1.33GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788Z-S1A1E	Core i7-620UE ULV 1.06 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	-20 - 80° C
SOM-5788Z2-S1A1E	Core i7-620UE ULV 1.06 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	-40 - 85° C
SOM-5788Z-U0A1E	Core i7-620LE ULV 2.0 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	-20 - 80° C
SOM-5788Z2-U0A1E	Core i7-620LE ULV 2.0 GHz	4 MB	QM57	Non-ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	-40 - 85° C
SOM-5788FG-U5B1E	Core i7-610E SV 2.53 GHz	4 MB	QM57	ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-S1B1E	Core i7-620UE ULV 1.06 GHz	4 MB	QM57	ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C
SOM-5788FG-U4B1E	Core i5-520E SV 2.4 GHz	3 MB	QM57	ECC	18/24-bit	Yes	option	1	Yes	Option	6	4	8	4 x SATAII	1	1	Yes	Yes	Active	0 - 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048820N001	Semi-Cooler 125 x 95 x 33.5 mm with 12 V Fan

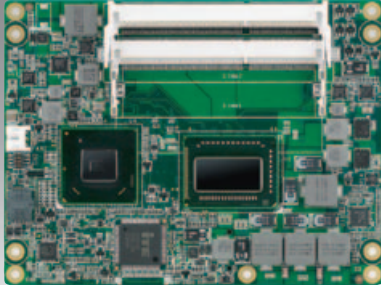
Packing List

Part No.	Description	Quantity
-	SOM-5788 CPU Module	1
-	Utility CD	1
1960047959T001	Heatspreader	1

SOM-5890

Intel® Core™ i7/i5/i3 Processor COM-Express Basic Module

NEW



Features

- Embedded Intel® Core™ i7/i5/i3 processor + QM67
- Intel Gfx supports 18/24-bit 2-CH LVDS, HDMI, Displayport, VGA
- Supports Dual Channel DDR3-1333 SO-DIMM sockets up to 16 GB
- Supports 7 PCIe x1, 2 SATAIII, 2 SATAII, 8 USB 2.0, GbE
- Supports Advantech iManager and software APIs

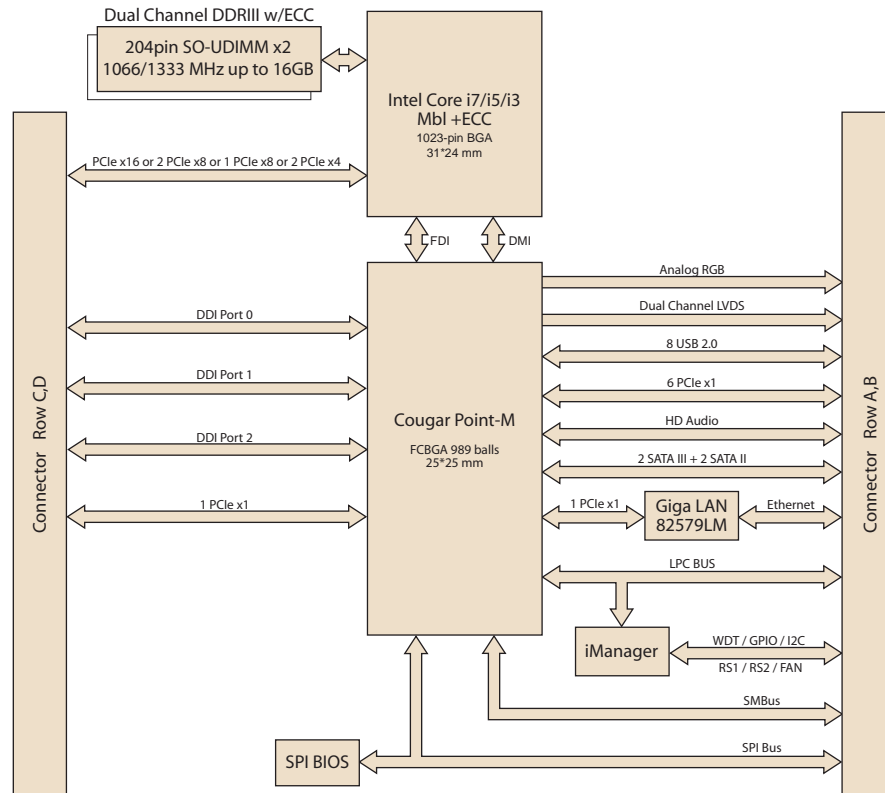
Software APIs: Watchdog, PC, SMBus, H/W Monitor, GPIO, Brightness Control

Utilities: BIOS flash, eSOS, Monitoring, Flash Lock, Embedded Security ID

Specifications

Form Factor	COM-Express 2.0 Basic Module, Type 6 Pin-out	
Processor System	CPU	Intel Core i7-2715QE Processor (6 M Cache, 2.1 GHz) Intel Core i7-2655LE Processor (4 M Cache, 2.2 GHz) Intel Core i7-2610UE Processor (4 M Cache, 1.5 GHz) Intel Core i5-2515E Processor (3 M Cache, 2.5 GHz)
	System Chipset	Intel QM67
	BIOS	AMI 64 Mbit Flash BIOS
	Technology	DDR3 1066/1333 MHz
Memory	ECC Support	A1 Series - not supported, B1 Series - supported
	Max. Capacity	16 GB
	Socket	2 x 204-pin SODIMM sockets
	Chipset	Intel Gfx integrated in Core i7, Core i5, or Core i3
Display	LVDS	Single and dual channel 18/24-bit LVDS
	VGA	up to 2048 x 1536
	HDMI/DVI/Displayport	3 ports shared
	SDVO	1 port shared with HDMI/DVI/Displayport
	TV-out	N/A
Ethernet	Chipset	Intel 82579LM Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer	
Expansion	1 PEGx16, 7 PCIe 1, LPC, SPI, SMBus, I2C	
I/O	SATA	2 x SATAIII (6.0 Gb/s), 2 x SATAII (3.0 Gb/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
	Serial port	2 x UARTs up to 115.2K bps
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimension	125 x 95 mm (4.92" x 3.74")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBK/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	LLC	Chipset	DDR3 SO-DIMM	LVDS	VGA	HDMI/ DisplayPort	SDVO	Giga LAN	HDA	PEG x16	PCIe x1	USB 2.0	SATA	LPC	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-5890FG-U1B1E	Core i7-2715QE 2.1 GHz	6 MB	QM67	ECC	18/24-bit	Yes	3	1	1	Yes	1	7	8	2 x SATA III 2 x SATA II	Yes	Yes	Yes	Active	0 ~ 60° C
SOM-5890FG-U2B1E	Core i7-2655LE 2.2 GHz	4 MB	QM67	ECC	18/24-bit	Yes	3	1	1	Yes	1	7	8	2 x SATA III 2 x SATA II	Yes	Yes	Yes	Active	0 ~ 60° C
SOM-5890FG-S5B1E	Core i7-2610UE 1.5 GHz	4 MB	QM67	ECC	18/24-bit	Yes	3	1	1	Yes	1	7	8	2 x SATA III 2 x SATA II	Yes	Yes	Yes	Active	0 ~ 60° C
SOM-5890FG-U5B1E	Core i5-2515E 2.5 GHz	3 MB	QM67	ECC	18/24-bit	Yes	3	1	1	Yes	1	7	8	2 x SATA III 2 x SATA II	Yes	Yes	Yes	Active	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB5800-00A1E	Development Board for COM-Express Type 6

Optional Accessories

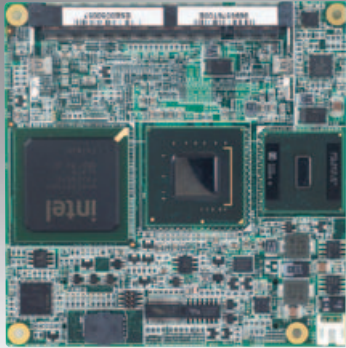
Part No.	Description
1960048820N001	Semi-Cooler 125x95x33.5mm with 12V Fan

Packing List

Part No.	Description	Quantity
-	SOM-5890 CPU Module	1
-	Utility CD	1
1960052233N001	Heatspreader	1

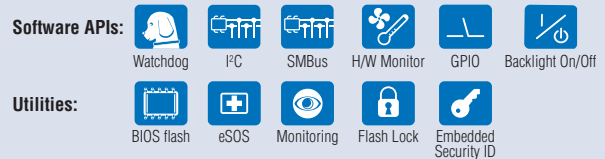
SOM-6761

Intel® Atom™ Processor N270 COM-Express Compact Module



Features

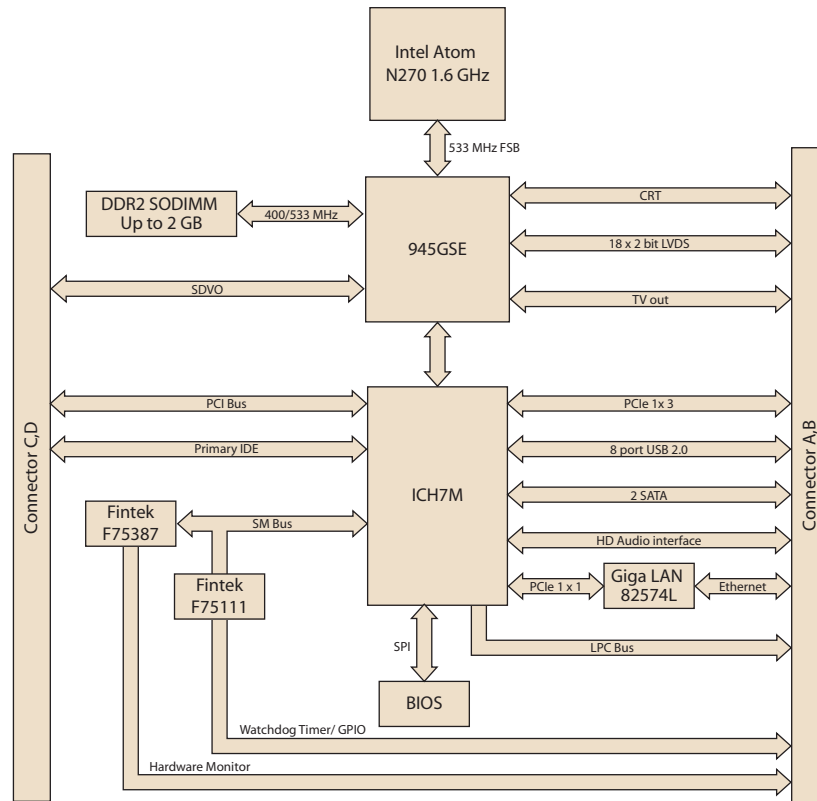
- Embedded Intel® Atom™ Processor N270 1.6 GHz + 945GSE+ICH7M
- Intel GMA 950, Microsoft DirectX 9.1, supports 18/36 bit LVDS TFT LCD
- Supports one DDR2-533 memory SODIMM Socket up to 2 GB
- Supports 3 PCIe x1, 4 PCI Master, LPC, 2 SATA, 8 USB 2.0, AC97/HDA
- Supports embedded software APIs and Utilities



Specifications

Form Factor		COM-Express Compact Module, Type II Pin-out.
Processor System	CPU	Embedded Intel Atom Processor N270 1.6 GHz
	Front Side Bus	533 MHz
	System Chipset	Intel 945GSE/ ICH7M
	BIOS	AWARD 8 Mbit Flash BIOS
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	up to 2 GB
	Socket	1 x 200-pin SODIMM socket
Display	Chipset	Intel 945GSE
	VRAM	DVMT 3.0 supports up to 224 MB
	Graphics Engine	Intel GMA950, Microsoft DirectX 9.1
	LCD	Single and dual channel 18/36-bit LVDS
	VGA	up to 2048 x 1536
	TV Out	Supports NTSC/PAL, S-Video and Composite Output interfaces
	SDVO	1 SDVO Port (Note: SDVO function is supported by customized BIOS)
Ethernet	Chipset	Intel 82574L Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, SMBUS, 3 PCIe x 1 or 1 PCIe x 4, 4 PCI master
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	2 x SATA, data transfer rates up to 150 MB/s
	USB	8 x USB 2.0
	Audio	AC97, High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V, and +5 VSB for ATX, +12 V for AT
	Power Consumption (Typical)	Typical: (1 GB DDRII 533) +12 V @ 0.62 A
	Power Consumption (Max, test in HCT)	Max: (1 GB DDRII 533) +12 V @ 0.9 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	SDVO	TV out	Giga LAN	HD Audio	PCIe	PCI	USB 2.0	SATA	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-6761FG-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	36-bit	Yes	1	Yes	1	Yes	See Note 1	4	8	2	1	1	Yes	Yes	Passive	0 ~ 60° C
SOM-6761Z-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	36-bit	Yes	1	Yes	1	Yes	See Note 1	4	8	2	1	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-6761Z2-S6A1E	Atom N270 1.6 GHz	512 KB	945GSE	36-bit	Yes	1	Yes	1	Yes	See Note 1	4	8	2	1	1	Yes	Yes	Passive	-40 ~ 85° C

Note 1: Supports 1 PCIe x4 or 3 PCIe x1. 1 PCIe x4 circuit available if PCIe Giga LAN is not needed (BOM option, either one, default PCIe x1 for Giga LAN and 3 PCIe x1)

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm

Packing List

Part No.	Description	Quantity
-	SOM-6761 CPU Module	1
-	Utility CD	1
1960028640N101	Heatspreader	1

Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2COM V1.2 ENG
Win XPE	2070007912	XPE WES2009 Intel-Uniprocess V4.0 MUI24 V6.4.1
QNX		

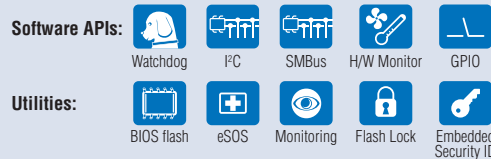
SOM-6763

Intel® Atom™ Processor N450/ D510 COM-Express Compact Module



Features

- Embedded Intel® Atom™ Processor N450 SC 1.66 GHz / D510 DC 1.66 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, supports 18-bit LVDS, VGA
- Supports 2 DDR2-667 SODIMM sockets up to 2 GB
- Supports 5 PCIe x 1, 4 PCI masters, LPC, 3 SATAII, 8 USB 2.0, EIDE, GbE
- Supports Advantech iManager and software APIs

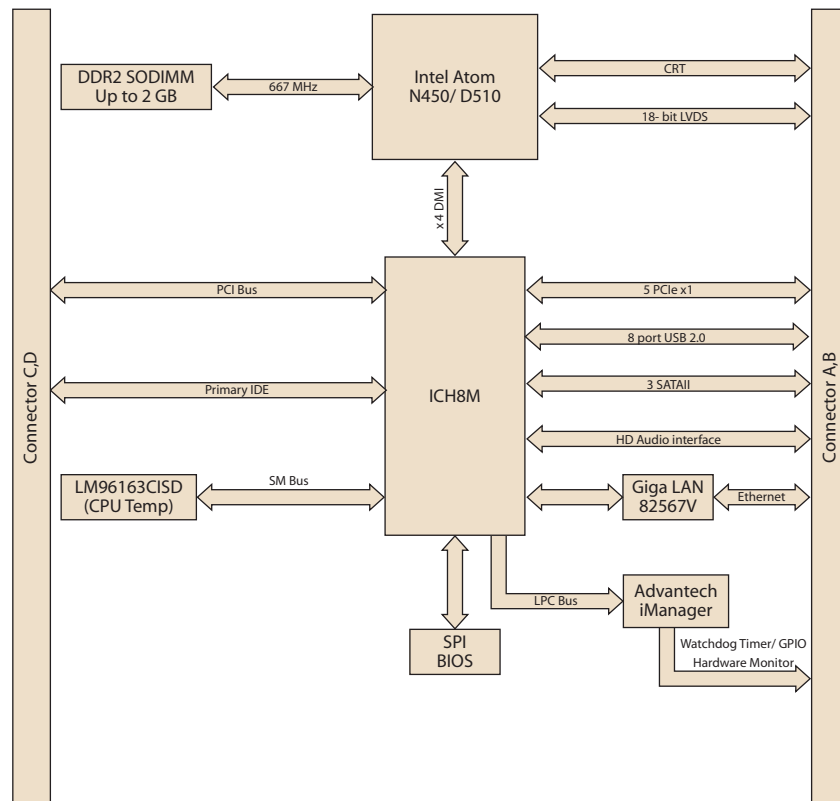


Specifications

Form Factor	COM-Express Compact Module, Type II Pin-out.	
Processor System	CPU	Intel Atom Processor N450 1.66 GHz (single core), 512 KB L2 Cache Intel Atom Processor D510 1.66 GHz (dual core), 1 MB L2 Cache
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	Supports DDR2 667 MHz only
	Max. Capacity	up to 2 GB (Note 1)
	Socket	2 x 200-pin SODIMM sockets
Display	Chipset	Intel Atom N450 or Intel Atom D510
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW
	LVDS	18-bit sig-I channel LVDS
	VGA	Intel Atom N450 up to 1400 x 1050 Intel Atom D510 up to 2048 x 1536
	DVI	-
	TV Out	-
	SDVO	-
Ethernet	Chipset	Intel 82567V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer	
Expansion	LPC, 5 PCIe x1 (1 PCIe x4), 4 PCI masters	
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	3 x SATAII (300 MB/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
	Power Consumption (Typical)	6763N (1 GB DDRII 667) +12 V @ 0.67 A 6763D (1 GB DDRII667) +12 V @ 0.93 A
	Power Consumption (Max, test in HCT)	6763N (1 GB DDRII 667) +12 V @ 0.89 A 6763D (1 GB DDRII667) +12 V @ 1.32 A
	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Environment	Operating Humidity 0% ~ 90% relative humidity, non-condensing	
Mechanical	Dimension 95 x 95 mm (3.74" x 3.74")	

Note 1: Supports 4 GB with D510 by Project Base.

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBK/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	Giga LAN	HD Audio	PCIe x4	PCIe x1	PCI	USB 2.0	SATA II	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-6763N-S6A1E	Atom N450 1.66 GHz	512 KB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Passive	0 – 60° C
SOM-6763D-S6A1E	Atom D510 1.66 GHz	1 MB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Active	0 – 60° C
SOM-6763NZ-S6A1E	Atom N450 1.66 GHz	512 KB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Passive	-20 – 80° C
SOM-6763NZ2-S6A1E	Atom N450 1.66 GHz	512 KB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Passive	-40 – 85° C
SOM-6763DZ-S6A1E	Atom D510 1.66 GHz	1 MB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Active	-20 – 80° C
SOM-6763DZ2-S6A1E	Atom D510 1.66 GHz	1 MB	ICH8M	18-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Active	-40 – 85° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm
1960048819N001	Semi-Cooler 95 x 95 x 33.5 mm with 12V fan

Packing List

Part No.	Description	Quantity
-	SOM-6763 CPU Module	1
-	Utility CD	1
1960049022N001	Heatspreader	1

Embedded OS

OS	Part No.	Description
Win XPE	2070009031	XPE WES2009 Lu- Pier V4.0 MUI24

SOM-6763 B1

Intel® Atom™ Processor N455/D525 COM-Express Compact Module

NEW



Features

- Embedded Intel® Atom™ Processor N455 SC 1.66 GHz / D525 DC 1.80 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, supports 24-bit LVDS, VGA
- Supports 2 DDR3-667 for N455 up to 2 GB and DDR3-800 for D525 up to 4 GB SODIMMB
- Supports 5 PCIe x 1, 4 PCI masters, LPC, 3 SATAII, 8 USB 2.0, EIDE, GbE
- Supports Advantech iManager and software APIs

Software APIs:

- Watchdog
- IPC
- SMBus
- H/W Monitor
- GPIO
- Brightness Control

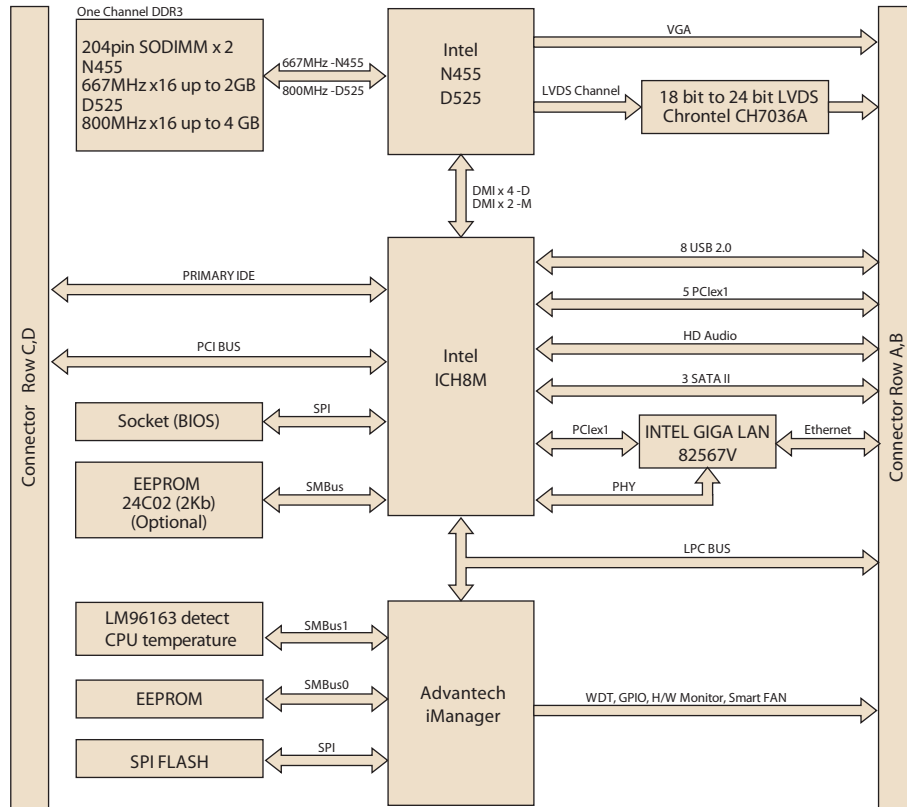
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor	COM-Express R2.0 Compact Module, Type II Pin-out.	
Processor System	CPU	Intel Atom Processor N455 1.66 GHz (single core), 512 KB L2 Cache Intel Atom Processor D525 1.80 GHz (dual core), 1 MB L2 Cache
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	Supports DDR3 667 MHz (N455) and 800 MHz (D525)
	Max. Capacity	up to 2GB for N455; up to 4GB for D525
	Socket	2 x 204-pin SODIMM sockets
Display	Chipset	Intel Atom N455 or Intel Atom D525
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW
	LVDS	24-bit single channel LVDS
	VGA	Intel Atom N455 up to 1400 x 1050 Intel Atom D525 up to 2048 x 1536
	DVI	-
	TV Out	-
	SDVO	-
Dual Display	CRT + LVDS	
Ethernet	Chipset	Intel 82567V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer	
Expansion	LPC, 5 PCIe x1 (1 PCIe x4), 4 PCI masters	
I/O	PATA	1 EIDE (UDMA 100)
	SATA	3 SATAII (300 MB/s)
	USB	8 USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
	Power Consumption (Typical)	6763N (2 GB DDR3 667) +12 V @ 0.9 A 6763D (2 GB DDR3 800) +12 V @ 0.94 A
	Power Consumption (Max, test in HCT)	6763N (2 GB DDR3 667) +12 V @ 1.3 A 6763D (2 GB DDR3 800) +12 V @ 1.5 A
	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Environment	Operating Humidity 0% ~ 90% relative humidity, non-condensing	
Mechanical	Dimension 95 x 95 mm (3.74" x 3.74")	

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/I/O4 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/EBX/5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	Giga LAN	HD Audio	PCIe x4	PCIe x1	PCI	USB 2.0	SATA II	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-6763N-S6B1E	Atom N455 1.66 GHz	512 KB	ICH8M	24-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Passive	0 - 60° C
SOM-6763D-S8B1E	Atom D525 1.8 GHz	1 MB	ICH8M	24-bit	Yes	1	Yes	Option	5	4	8	3	1	1	Yes	Yes	Active	0 - 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development board for SOM-Express GLAN Rev.A2

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm
1960048819N001	Semi-Cooler 95 x 95 x 33.5 mm with 12V fan

Packing List

Part No.	Description	Quantity
-	SOM-6763 B1 CPU Module	-
-	Utility CD	1
1960049022N001	Heatspreader	1

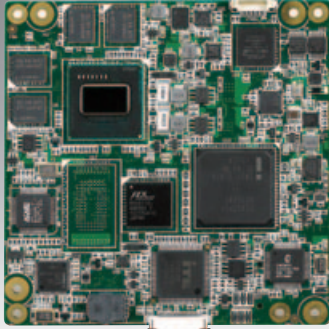
Embedded OS

OS	Part No.	Description
Win XPE	2070009031	XPE WES2009 Lu- Pier V4.0 MUI24

SOM-6764

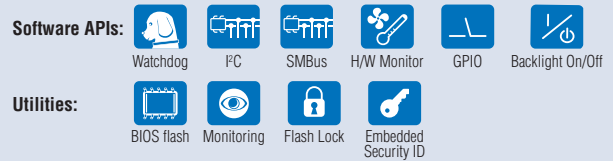
Intel® Atom™ Processor E6xx Series COM-Express Compact Module

NEW



Features

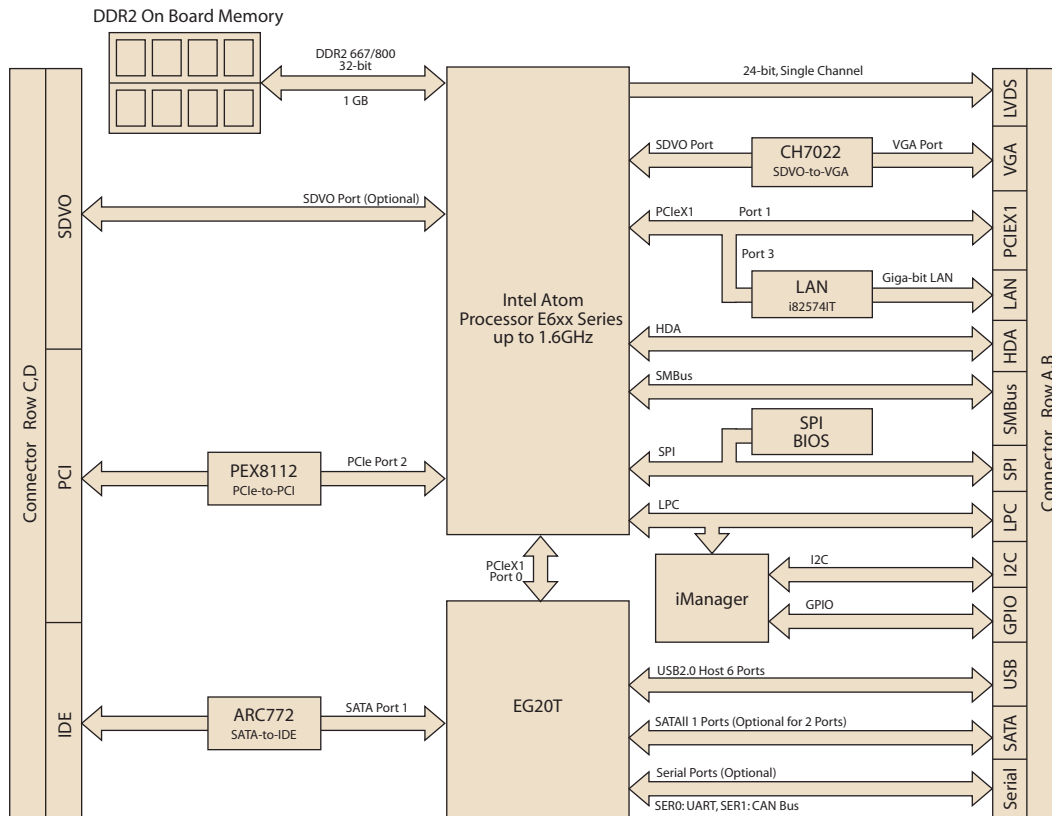
- Embedded Intel® Atom™ processor E6xx series up to 1.6 GHz
- Supports on board 1 GB DDR2 memory
- Supports PCI, 1 PCIe x 1, 1 SATA, 1 IDE, 6 USB
- Operating temperature: -40 ~ 85° C
- Supports Advantech iManager and software APIs



Specifications

Form Factor	COM-Express 2.0 Compact Module Type 2 Pin-out	
Processor System	CPU	Intel Atom E620(T) 600 MHz / E640(T) 1.0 GHz / E660(T) 1.3 GHz / E680(T) 1.6 GHz
	L2 Cache	512 KB
	System Chipset	Intel Atom Processor E6xx Series + Input/Output Hub EG20T
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667/800 MHz memory
	Max. Capacity	Onboard 1 GB memory
	Socket	N/A
Display	Chipset	Intel Atom processor E6xx series integrated graphic controller
	Graphics Engine	2D/3D graphic engine
	LVDS	24-bit single channel LVDS
	VGA	Yes
	DVI	N/A
	TV Out	N/A
	SDVO	(optional)
	Dual Display	LVDS + VGA or LVDS + SDVO
Ethernet	Chipset	Intel 82574 Gigabit Ethernet for industrial temperature
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0 ~ 65535 sec, multi-level, multi-option watchdog timer	
Expansion	1 PCIe x1, PCI, LPC, SPI, SMBus, I2C, CANBus (Optional)	
I/O	PATA	1 IDE Channel
	SATA	1 SATA (optional for 2 SATA)
	USB	6 USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
	Serial Port	1 UART up to 115.2K bps (Optional) 1 CANBus (Optional)
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 V for ATX, +12 V for AT
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
Environment	Operating Temperature	-40 ~ 85° C
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/ EBX/ 5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	Cache	Chipset	Onboard Memory	LVDS	VGA	SDVO	Giga LAN	HD Audio	PCIe x1	PCI	USB 2.0	SATA2	IDE	LPC	SMBus	Power	Thermal Solution	Operating Temp.
SOM-6764Z2-M0A1E	600 MHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	-40 ~ 85° C
SOM-6764Z2-S0A1E	1.0 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	-40 ~ 85° C
SOM-6764Z2-S3A1E	1.3 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	-40 ~ 85° C
SOM-6764Z2-S6A1E	1.6 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	-40 ~ 85° C
SOM-6764FG-M0A1E	600 MHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	0 ~ 60° C
SOM-6764FG-S0A1E	1.0 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	0 ~ 60° C
SOM-6764FG-S3A1E	1.3 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	0 ~ 60° C
SOM-6764FG-S6A1E	1.6 GHz	512 KB	EG20T	1 GB	24-bit	Yes	Optional	1	Yes	1	4	6	1	1	1	1	AT/ATX	Passive	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express Type 2

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x17 mm

Packing List

Part No.	Description	Quantity
-	SOM-6764 CPU Module	1
-	Utility CD	1
TBD	Heatspreader	1

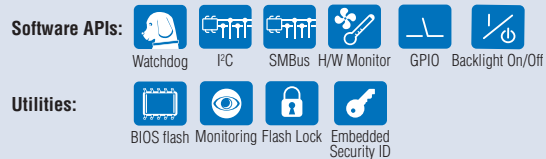
SOM-6787

Intel® Core™2 Duo Processor GS45 COM-Express Compact Module



Features

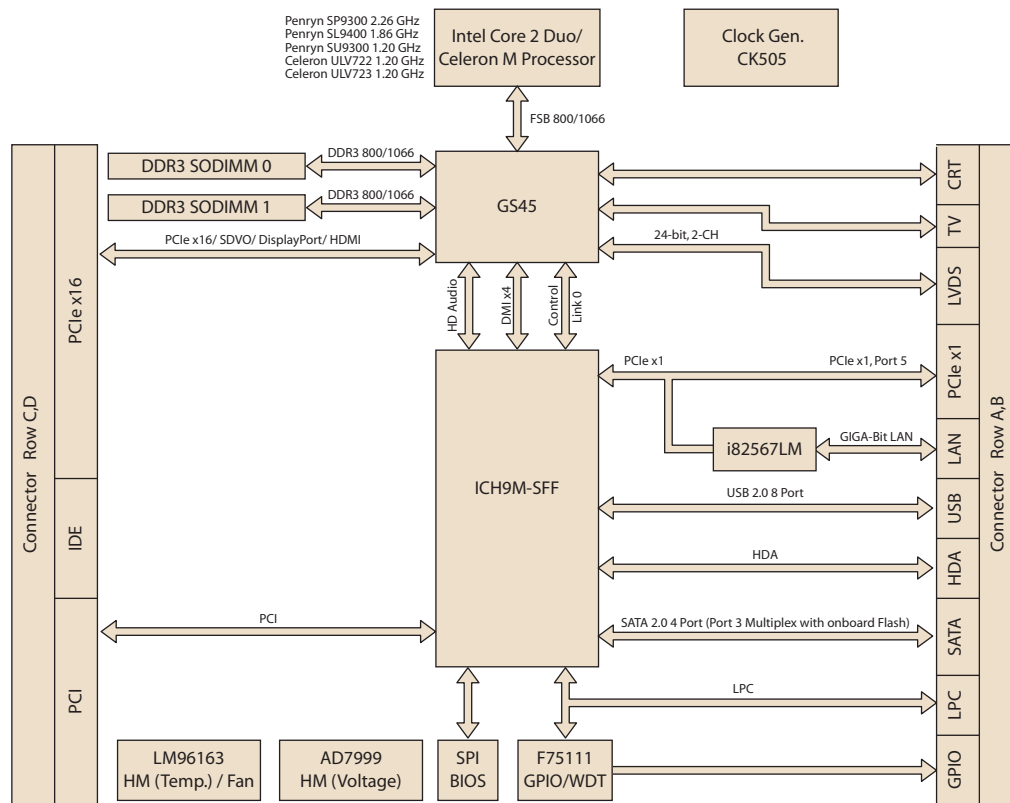
- Embedded Intel® Core™2 Duo/Celeron® M processor
- Intel GMA X4500 Gen 5 DX10, HW support for H.264, VC-1 and MPEG2
- Supports 2 DDR3 SODIMM up to 8 GB
- Supports PCIe x16, 5 PCIe x1, 4 PCI, LPC, 4 SATAII, 8 USB 2.0
- Supports embedded software APIs and Utilities



Specifications

Form Factor		COM-Express Compact Module, Type II Pin-out
Processor System	CPU	Intel Core 2 Duo SP9300, LV Core 2 Duo SL9400, ULV Core 2 Duo SU9300 Intel ULV Celeron M 722, ULV Celeron M 723
	Front Side Bus	800/1066 MHz
	System Chipset	Intel GS45/ICH9M SFF
	BIOS	AMI 32 Mbit Flash BIOS
Memory	Technology	DDR3 800/1066 MHz
	Max. Capacity	up to 8 GB
	Socket	2 x 204-pin SODIMM sockets
Display	Chipset	Intel GS45
	VRAM	DVMT 5.0 supports up to 1024 MB
	Graphics Engine	Mobile Intel GMA X4500 3D/2D engine, HDMI, Displayport, SDVO shared with PCIe x16 (PEG)
	LCD	Single and dual channel 24/48-bit LVDS
	VGA	up to QXGA (2048 x 1536)
	TV-out	Yes
	SDVO	2 SDVO Ports
Dual Display	Dual Display of VGA, LVDS, TV-out, HDMI, Displayport, SDVO (Note: SDVO function is supported by customized BIOS)	
Ethernet	Chipset	Intel 82567 Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 timer intervals, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, PCIe x16, 5 PCIe x1, 4 PCI master
I/O	SATA	4 x SATAII
	USB	8 x USB 2.0 ports
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT
	Power Consumption (Typical)	(1 GB DDR3 1066) SP9300: +12V @ 0.66A
	Power Consumption (Max. test in HTC)	(1 GB DDR3 1066) SP9300: +12V @ 2.1A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/ EBK/ 5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	SDVO	Giga LAN	HD Audio	PCIe x16	PCIe x1	PCI	USB 2.0	SATA	LPC	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-6787FG-S1A1E	Intel ULV Celeron M 723 1.2 GHz	1 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	4 x SATAII	1	Yes	Yes	Active	0 ~ 60° C
SOM-6787FG-S2A1E	Intel ULV Celeron M 722 1.2 GHz	1 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	4 x SATAII	1	Yes	Yes	Passive	0 ~ 60° C
SOM-6787FG-S3A1E	Intel ULV Core 2 Duo SU9300, 1.2 GHz	3 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	4 x SATAII	1	Yes	Yes	Active	0 ~ 60° C
SOM-6787FG-S9A1E	Intel LV Core 2 Duo SL9400, 1.86 GHz	6 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	4 x SATAII	1	Yes	Yes	Active	0 ~ 60° C
SOM-6787FG-U3A1E	Intel Core 2 Duo SP9300, 2.26 GHz	6 MB	Intel GS45	48-bit	Yes	2	1	Yes	1	5	4	8	4 x SATAII	1	Yes	Yes	Active	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB5700G-00A2E	Development Board for COM-Express with GLAN

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm
1960048819N001	Semi- Cooler 95 x 95 x 33.5 mm with 12 V Fan

Packing List

Part No.	Description	Quantity
-	SOM-6787 CPU Module	1
-	Utility CD	1
1960046889N001	Heatspreader	1

SOM-7562

Intel® Atom™ Processor N450 COM-Ultra Module



Features

- Embedded Intel® Atom™ Processor N450 1.66 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decodes in HW, supports 18-bit LVDS, VGA
- Supports 512MB on-board memory and 1GB/2GB on-board Flash
- Supports 5 PCIe x1, LPC, 3 SATAII, 8 USB 2.0, GbE
- Supports embedded software APIs and Utilities

Software APIs:

- Watchdog
- PC
- SMBus
- H/W Monitor
- GPIO
- Backlight On/Off

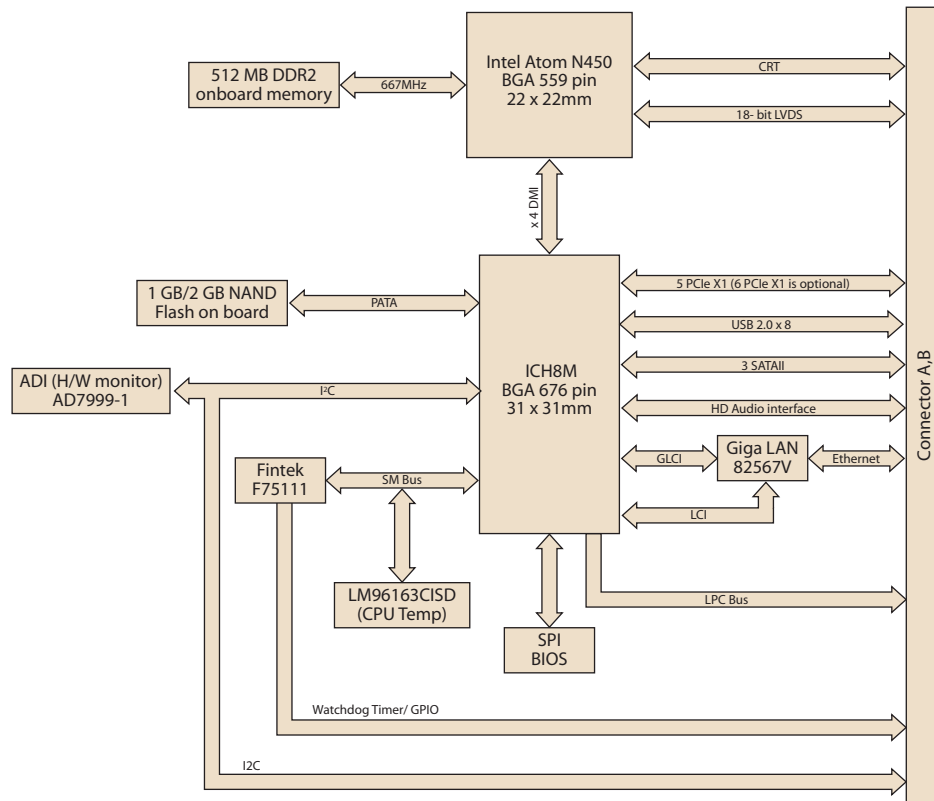
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor		COM-Ultra Module, Type I Pin-out
Processor System	CPU	Intel Atom Processor N450 1.66 GHz
	L2 Cache	512 KB
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667 MHz memory only
	Max. Capacity	Onboard 512 MB
	Socket	-
Flash	Capacity	1 GB/ 2 GB Flash onboard
Display	Chipset	Embedded Gen3.5+ GFX Core
	Graphics Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW
	LVDS	18-bit single channel LVDS
	VGA	Supports max. 1400 x 1050 @ 60 Hz
	DVI	-
	TV Out	-
	SDVO	-
	Dual Display	CRT + LVDS
Ethernet	Chipset	Intel 82567V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 level timer interval, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, 5 PCIe x1 (1 PCIe x4 or 1 PCIe x2 option)
I/O	PATA	-
	SATA	3 x SATAII (300 MB/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	12 V (5 VSB needs for ATX power mode), wide range voltage support by project base
	Power Consumption (Typical)	+12 V @ 0.6 A
	Power Consumption (Max, test in HCT)	+12 V @ 0.7 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	84 x 55 mm (3.3" x 2.17")

Board Diagram



- Computer On Modules **1**
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- 3.5" SBCs **4**
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- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Chipset	Onboard Memory	Onboard Flash	LVDS	VGA	Giga LAN	HD Audio	PCIe x4	PCIe x1	USB 2.0	SATA II	LPC	SMBus	Wide range Power	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-7562F1-S6A1E	Intel Atom N450	512 KB	ICH8M	512 MB	1 GB	18-bit	Yes	1	Yes	optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	0 ~ 60 °C
SOM-7562F2-S6A1E	Intel Atom N450	512 KB	ICH8M	512 MB	2 GB	18-bit	Yes	1	Yes	optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	0 ~ 60 °C

Development Board

Part No.	Description
SOM-DB5700G-U0A2E	Development Board for COM-Ultra Modules with GLAN

Optional Accessories

Part No.	Description
1960050950N001	Semi-Heatsink 84 x 55 x 34 mm

Packing List

Part No.	Description	Quantity
-	SOM-7562 CPU Module	1
-	Utility CD	1
1960047108N001	Heatspreader	1

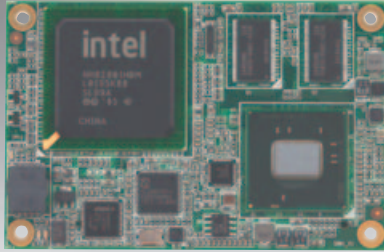
Embedded OS

OS	Part No.	Description
Win XPE	2070009031	XPE WES2009 Lu- Pier V4.0 MUI24

SOM-7562 B1

Intel® Atom™ Processor
N455 COM-Ultra Module

NEW



Features

- Embedded Intel® Atom™ Processor N455 1.66 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decodes in HW, supports 18-bit LVDS, VGA
- Supports 1 GB on-board memory and 1/2 GB on-board Flash
- Supports 5 PCIe x1, LPC, 3 SATAII, 8 USB 2.0, GbE
- Supports embedded software APIs and Utilities

Software APIs:

- Watchdog
- PC
- SMBus
- H/W Monitor
- GPIO
- Backlight On/Off

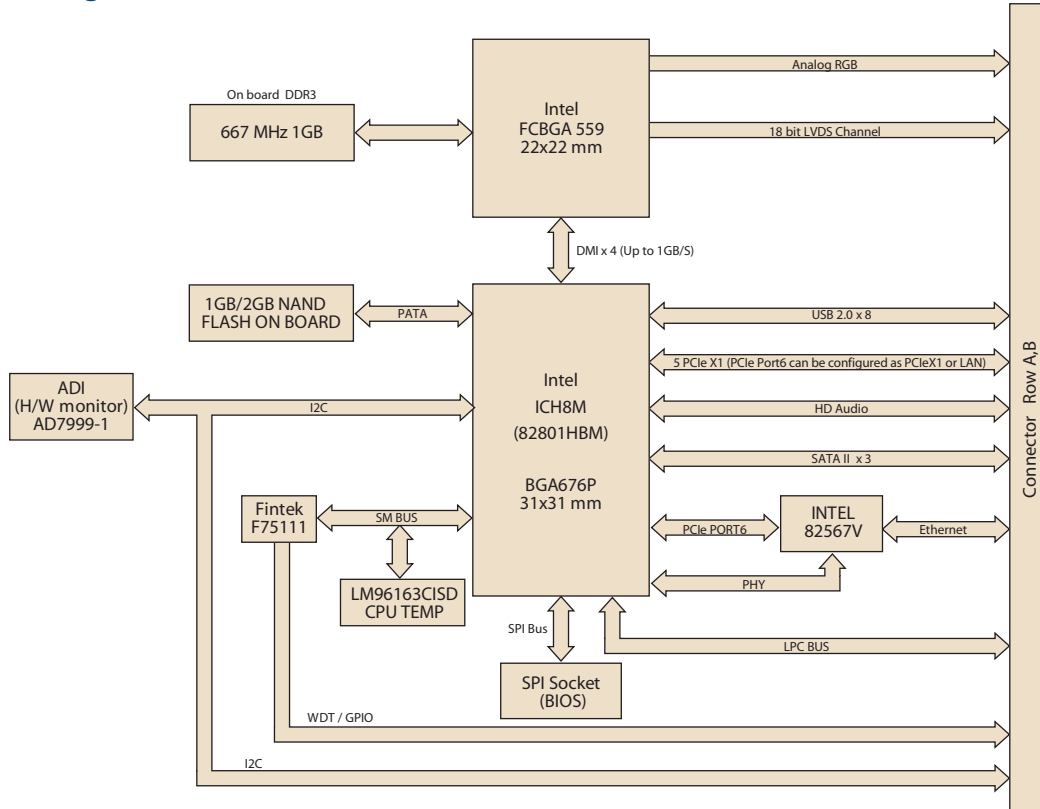
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor		COM-Ultra Module, Type I Pin-out
Processor System	CPU	Intel Atom Processor N455 1.66 GHz
	L2 Cache	512 KB
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR3 667 MHz memory only
	Max. Capacity	Onboard 1GB
	Socket	-
Flash	Capacity	1 GB/ 2 GB Flash onboard
Display	Chipset	Embedded Gen3.5+ GFX Core
	Graphics Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW
	LVDS	18-bit single channel LVDS
	VGA	Supports max. 1400 x 1050 @ 60 Hz
	DVI	-
	TV Out	-
	SDVO	-
	Dual Display	CRT + LVDS
Ethernet	Chipset	Intel 82567V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		256 level timer interval, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		LPC, 5 PCIe x1 (1 PCIe x4 or 1 PCIe x2 option)
I/O	PATA	-
	SATA	3 x SATAII (300 MB/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	12 V (5 VSB needs for ATX power mode), wide range voltage and 5V only version support by project base
	Power Consumption (Typical)	+12 V @ 0.67A; +5 V @ 1.43 A
	Power Consumption (Max, test in HCT)	+12 V @ 0.87A; +5 V @ 1.92 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	84 x 55 mm (3.3" x 2.17")

Board Diagram



- 1 Computer On Modules
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- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	Onboard Memory	Onboard Flash	LVDS	VGA	Giga LAN	HD Audio	PCIe x4	PCIe x1	USB 2.0	SATA II	LPC	SMBus	Wide range Power	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-7562F1-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	1 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	0 ~ 60° C
SOM-7562F2-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	2 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	0 ~ 60° C
SOM-7562SZ-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	1 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	-20 ~ 80° C
SOM-7562S2-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	1 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	-40 ~ 85° C
SOM-7562UZ-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	2 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	-20 ~ 80° C
SOM-7562U2-S6B1E	Intel Atom N455	512 KB	ICH8M	1 GB	2 GB	18-bit	Yes	1	Yes	Optional	5	8	3	1	1	+5V--+14V	Yes	Yes	Passive	-40 ~ 85° C

Development Board

Part No.	Description
SOM-DB5700G-U0A2E	Development Board for COM-Ultra Modules with GbE LAN

Optional Accessories

Part No.	Description
1960050950N001	Semi-Heatsink 84 x 55 x 34 mm

Packing List

Part No.	Description	Quantity
-	SOM-7562 CPU Module	1
-	Utility CD	1
1960047108N001	Heatspreader	1

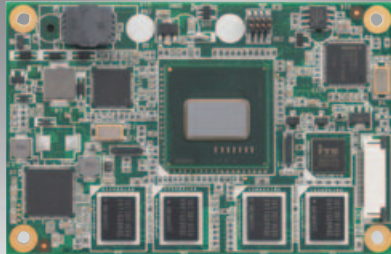
Embedded OS

OS	Part No.	Description
Win XPE	2070009031	XPE WES2009 Lu- Pier V4.0 MUI24

SOM-7564

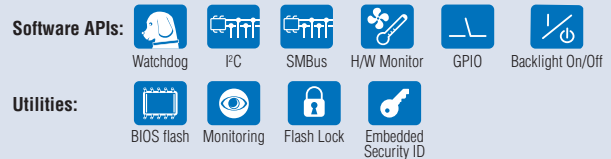
Intel® Atom™ Processor E6xx Series COM-Ultra Module

NEW



Features

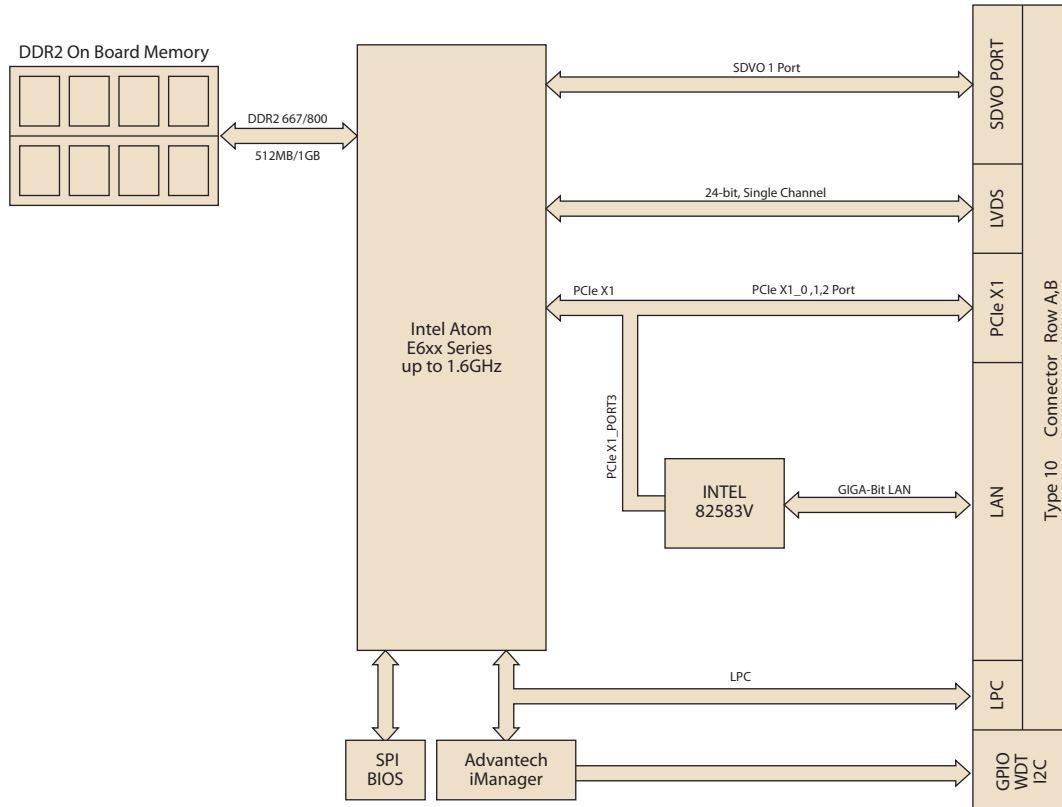
- Embedded Intel® Atom™ processor E6xx series up to 1.6 GHz
- Supports 1 GB DDR2 Memory on board
- Supports 3 PCIe x1, LPC, 1 GbE
- Supports Advantech iManager and software APIs



Specifications

Form Factor	COM-Ultra Module Type 10 Pin-out	
Processor System	CPU	Intel Atom E620 600 MHz / E640 1.0 GHz / E660 1.3 GHz / E680 1.6 GHz
	L2 Cache	512 KB
	System Chipset	Intel Atom Processor E6xx Series Integrated
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667/800 MHz memory
	Max. Capacity	Onboard 1 GB memory
	Socket	-
Flash	Capacity	-
Display	Chipset	Intel Atom processor E6xx series integrated graphic controller
	Graphics Engine	2D/3D graphic engine
	LVDS	24-bit single channel LVDS
	VGA	-
	DVI	-
	TV Out	-
	SDVO	1 port to carrier board
	Dual Display	LVDS + SDVO
Ethernet	Chipset	Intel 82583V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer	65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer	
Expansion	LPC, 3 PCIe x1 SPI, SMBus, I2C	
I/O	SATA	-
	USB	-
	Audio	High definition audio interface
	GPIO	8-bit GPIO
	Serial port	2 x UART
Power	Power Type	ATX, AT
	Power Supply Voltage	12V, 5VSB
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
Environment	Operating Temperature	0 – 60° C (32 – 140° F)
	Operating Humidity	0% – 90% relative humidity, non-condensing
Mechanical	Dimensions	84 x 55 mm (3.3" x 2.17")

Board Diagram



- Computer On Modules **1**
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- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Onboard Memory	LVDS	Giga LAN	HD Audio	PCIe x1	I ² C bus	LPC	SMBus	Wide range Power	ATX Power	AT Power	Thermal Solution
SOM-7564FG-M0A1E	600 MHz	512 KB	1 GB	24-bit	1	Yes	2	1	1	1	+5 - +14V	Yes	Yes	Passive
SOM-7564FG-S0A1E	1.0 GHz	512 KB	1 GB	24-bit	1	Yes	2	1	1	1	+5 - +14V	Yes	Yes	Passive
SOM-7564FG-S3A1E	1.3 GHz	512 KB	1 GB	24-bit	1	Yes	2	1	1	1	+5 - +14V	Yes	Yes	Passive
SOM-7564FG-S6A1E	1.6 GHz	512 KB	1 GB	24-bit	1	Yes	2	1	1	1	+5 - +14V	Yes	Yes	Passive

Development Board

Part No.	Description
SOM-AB5500G-00A1E	3.5" Application Board for COM-Ultra Modules

Optional Accessories

Part No.	Description
1960050950N001	Semi-Heatsink 84 x 55 x 34 mm

Packing List

Part No.	Description	Quantity
-	SOM-7564 CPU Module	1
-	Utility CD	1
-	Heatspreader	1

Embedded OS

OS	Part No.	Description
Win XPE	TBD	XPE WES 2009

SOM-4430

Advantech EVA-X4300 SoC ETX CPU Module



Features

- Embedded Advantech x86 SoC
- SMI 712, Supports 18-bit TTL/VGA
- Onboard DDR2 memory 128MB/64MB
- Supports ISA, 4 PCI Master, 1 IDE, 4 USB2.0, 2 COMs, LPT
- Supports embedded software APIs and Utilities

Software APIs:



Utilities:

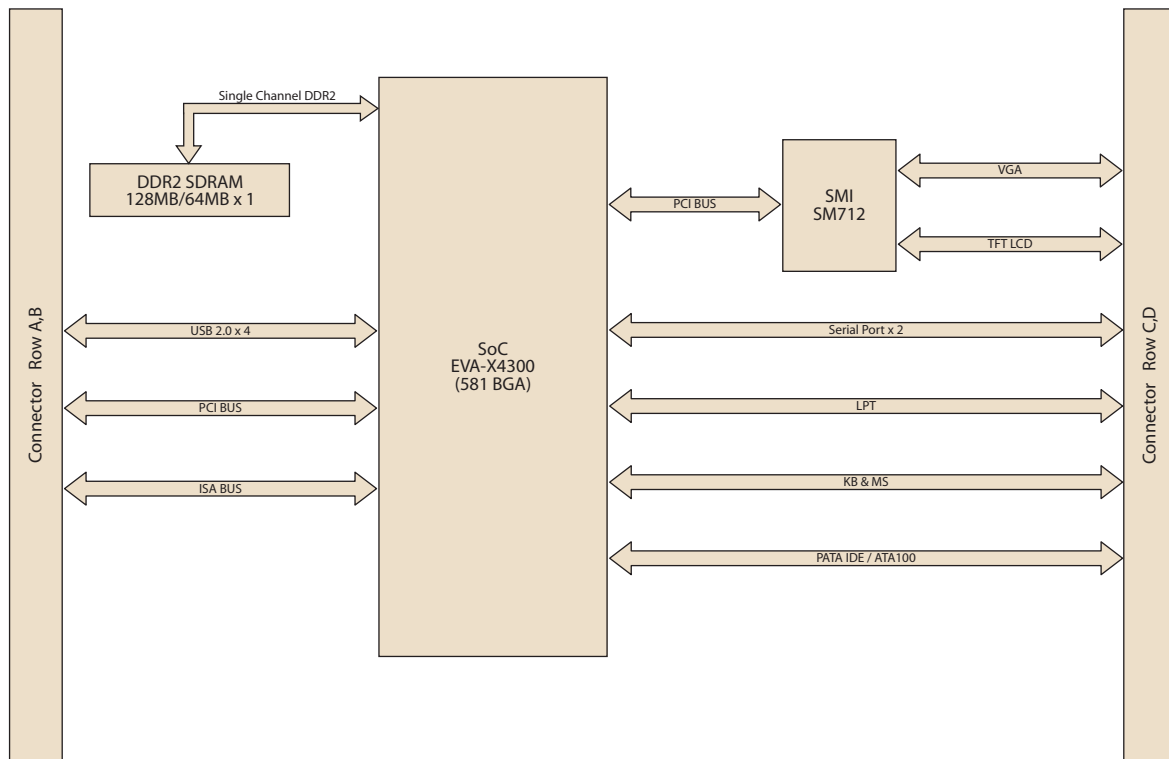


Specifications

Form Factor		ETX
Processor System	x86 SoC	Advantech EVA-X4300 SoC
	Front Side Bus	33 MHz
	BIOS	AWARD 2 Mbit Flash BIOS
Memory	Technology	DDR2
	Max. Capacity	On-board 128MB/64MB memory
Display	Chipset	SMI 712
	VRAM	4 MB graphic memory
	Graphics Engine	SMI 712
	LCD	18-bit TTL
	VGA	up to 1024 x 768
	Dual Display	CRT + LCD (Simultaneous mode)
WatchDog Timer		24-bit timer interval, from 30.5 μ sec. to 512 sec. setup by software, jumperless selection, generates system reset
Expansion		* 4 x PCI Master, ISA
I/O	PATA	1 x EIDE (UDMA 100)
	USB	4 x USB 2.0
	COM	2 x COM ports
	FDD/LPT	1 x LPT
Power	Power Type	AT
	Power Supply Voltage	+5 V only
	Power Consumption (Max, test in HCT)	Max: +5 V @ 0.7 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	114 x 95 mm (4.5" x 3.74")

*For the PCI design of SOM-4430, please refer to Advantech ETX design guide.

Board Diagram



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- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	SoC	On Board Memory	VGA	PCI	USB 2.0	AT Power	Thermal Solution	Operating Temp.
SOM-4430F-GDA1E	EVA-X4300	64 MB	Yes	4	4	Yes	Passive	0 ~ 60° C
SOM-4430F-GEA1E	EVA-X4300	128 MB	Yes	4	4	Yes	Passive	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB4700-00A1E	Development Board for ETX Rev.A1

Embedded OS

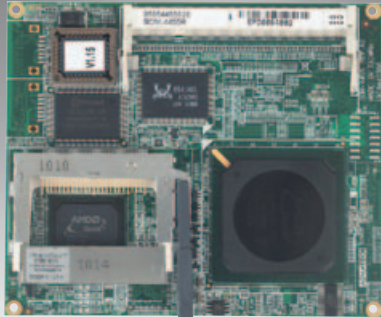
OS	Part No.	Description
WinCE	2070006949	Image CE 6.0 Pro EVA-4150-4COM V1.1 ENG

Packing List

Part.No.	Description	Quantity
-	SOM-4430 CPU Module	1
-	Utility CD	1

SOM-4455

AMD Geode™ LX800 ETX CPU Module



Features

- CPU: Embedded AMD Geode™ LX800 CPU+ AMD CS5536 Chipset
- Graphics: AMD CS5536 Integrated 2D engine, Supports 24-bit LVDS or 18-bit TTL
- Memory: Supports one DDR-400 memory SODIMM sockets up to 1GB
- Interface & IO: Supports 1 IDE, 2 SATA, 4 USB2.0, 2 COMs, FDD/LPT, Type II CF, Line In/Out, Mic-In
- Software support: Supports embedded software APIs and Utilities

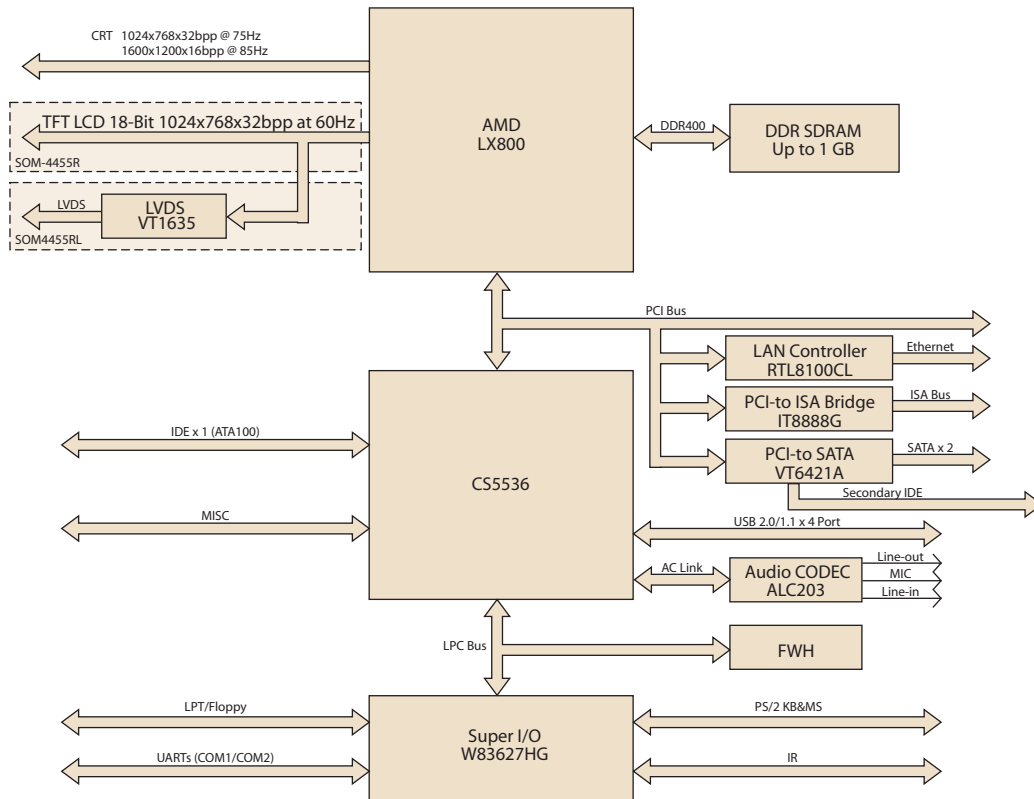
Software APIs:  Watchdog  PC  SMBus  H/W Monitor  Backlight On/Off

Utilities:  BIOS flash  Monitoring

Specifications

Form Factor	ETX 3.0	
Processor System	CPU	AMD Geode LX800
	Front Side Bus	33 MHz
	System Chipset	AMD Geode LX800/CS5536
	BIOS	AWARD 4 Mbit Flash BIOS
Memory	Technology	DDR 200/266/333/400 MHz
	Max. Capacity	up to 1 GB
	Socket	1 x 200-pin SODIMM socket
Display	Chipset	AMD CS5536
	VRAM	Shared system memory up to 254 MB
	Graphics Engine	AMD CS5536 2D engine
	LCD	24-bit single channel LVDS or 18-bit single channel TTL
	VGA	up to 1024 x 768
	Dual Display	CRT + LCD (Simultaneous mode)
Ethernet	Chipset	RTL8100CL-LF 10/100 Mbps Ethernet
	Speed	10/100 Mbps
WatchDog Timer	256 timer intervals, from 1 to 255 sec or min setup by software, jumperless selection, generates system reset	
Expansion	4 x PCI master (3 x PCI master for SATA version), ISA	
I/O	PATA	1 x EIDE (UDMA 100) (2 x EIDE for SATA version)
	SATA	2 x SATA on ETX CPU module (For SATA version)
	USB	4 x USB 2.0
	Audio	Realtek ALC203 AC97 Codec support Line-in/out, Mic-in
	GPIO	1-bit GPIO, 2-bit GPE
	COM	2 COM ports
	FDD/LPT	1 x FDD or LPT
	SSD	1 x Type II CF slot
Power	Power Type	ATX, AT
	Power Supply Voltage	+5 V only (+5 VSB needs for ATX)
	Power Consumption (Typical)	Typical: (1 GB DDR 333) +5 V @ 1.80 A (AMD LX800)
	Power Consumption (Max, test in HCT)	Max: (1 GB DDR 333) +5 V @ 2.01 A (AMD LX800)
	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Environment	Operating Humidity 0% ~ 90% relative humidity, non-condensing	
Mechanical	Dimensions 114 x 95 mm (4.5" x 3.74")	

Board Diagram



- 1 Computer On Modules
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- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	10/100 LAN	AC97 Audio	PCI	USB 2.0	IDE	SATA	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-4455R-L0A2E	AMD LX800	128 KB	CS5536	-	Yes	Yes	Yes	4	4	1	-	Yes	Yes	Passive	0 ~ 60° C
SOM-4455RL-L0A2E	AMD LX800	128 KB	CS5536	24-bit	Yes	Yes	Yes	4	4	1	-	Yes	Yes	Passive	0 ~ 60° C
SOM-4455R-LSA2E	AMD LX800	128 KB	CS5536	-	Yes	Yes	Yes	3	4	2	2	Yes	Yes	Passive	0 ~ 60° C
SOM-4455RL-LSA2E	AMD LX800	128 KB	CS5536	24-bit	Yes	Yes	Yes	3	4	2	2	Yes	Yes	Passive	0 ~ 60° C
SOM-4455ZR-L0A2E	AMD LX800	128 KB	CS5536	-	Yes	Yes	Yes	4	4	1	-	Yes	Yes	Passive	-20 ~ 80° C
SOM-4455ZRL-L0A2E	AMD LX800	128 KB	CS5536	24-bit	Yes	Yes	Yes	4	4	1	-	Yes	Yes	Passive	-20 ~ 80° C
SOM-4455ZR-LSA2E	AMD LX800	128 KB	CS5536	-	Yes	Yes	Yes	3	4	2	2	Yes	Yes	Passive	-20 ~ 80° C
SOM-4455ZRL-LSA2E	AMD LX800	128 KB	CS5536	24-bit	Yes	Yes	Yes	3	4	2	2	Yes	Yes	Passive	-20 ~ 80° C

Development Board

Part No.	Description
SOM-DB4400-00A2E	Development Board for ETX Rev.A2
SOM-DB4700-00A1E	Development Board for ETX Rev.A1

Optional Accessories

Part No.	Description
1960012091T00S	Semi-Heatsink 114 x 96 x 15 mm

Packing List

Part No.	Description	Quantity
-	SOM-4455 CPU Module	1
-	Utility CD	1
1960007057	Heatspreader	1

Embedded OS

OS	Part No.	Description
WinCE	2070001579	CE 6.0 Pro GX3 V1.0 ENG
Win XPE	2070007910	XPE WES2009 GX3 LX800 V4.0 MUI24
QNX		V6.4.1

SOM-4461

Intel® Atom™ Processor
N270 ETX CPU Module



Features

- Embedded Intel® Atom™ Processor N270 1.6 GHz + 945GSE + ICH7M
- Intel GMA 950, Microsoft DirectX 9.1, Supports 36/48-bit LVDS TFT LCD
- Supports one DDR2-533 memory SODIMM sockets up to 2 GB
- Interface & I/O: Supports 4 PCI Master, LPC, 1 IDE, 2 SATA, 4 USB 2.0, 2 COMs, FDD/LPT, Line-in/out, Mic-in
- Supports embedded software APIs and Utility

Software APIs:

- SMBus
- H/W Monitor
- IPC
- Watchdog
- GPIO

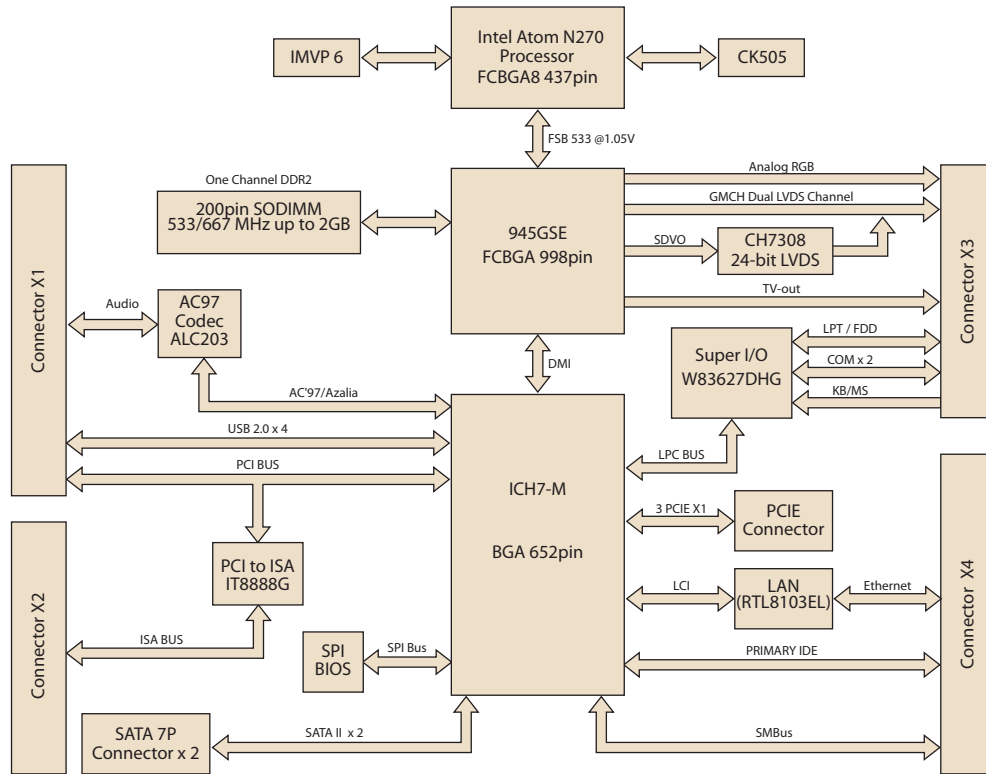
Utilities:

- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor		ETX 3.0
Processor System	CPU	Embedded Intel Atom Processor N270 1.6 GHz
	Front Side Bus	533 MHz
	System Chipset	Intel 945GSE/ ICH7M
	BIOS	AWARD 8 Mbit Flash BIOS
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	up to 2 GB
	Socket	1 x 200-pin SODIMM socket
Display	Chipset	Intel 945GSE
	VRAM	DVMT 3.0 supports up to 224 MB
	Graphics Engine	Intel GMA950, Microsoft DirectX* 9.1 supported
	LVDS	Dual channel 36/48-bit LVDS
	VGA	up to 2048 x 1536
	DVI	-
	TV-out	Supports NTSC/PAL, S-Video and Composite Output interfaces
Ethernet	Chipset	Realtek 8103EL 10/100 Mbps Ethernet
	Speed	10/100 Mbps
WatchDog Timer		256 levels timer interval, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		4 x PCI master, ISA
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	2 x SATA (On ETX CPU module)
	USB	4 x USB 2.0
	Audio	Realtek ALC203 AC97 Codec support Line-in / out, Mic-in
	GPIO	2-bit GPIO (Supports by customized BIOS)
	COM	2 COM ports
	FDD/LPT	1 x FDD or LPT
	SSD	-
Power	Power Type	ATX, AT
	Power Supply Voltage	+5V only (+5VSB needs for ATX)
	Power Consumption (Typical)	Typical: (1 GB DDRII 533) +5 V @ 1.15 A
	Power Consumption (Max, test in HCT)	Max: (1 GB DDRII 533) +5 V @ 1.98 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	114 x 95 mm (4.5" x 3.74")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/I/O4 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/EBX/5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	TV out	10/100 LAN	AC97 Audio	PCI	USB 2.0	SATA	LPT/Floppy	KB/MS	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-4461RL-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	0 ~ 60° C
SOM-4461RZ-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	-20 ~ 80° C
SOM-4461RZ2-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	-40 ~ 85° C

Note1: Select Parallel port function and floppy via BIOS selection. Default mode is Parallel port mode.

Development Board

Part No.	Description
SOM-DB4400-00A2E	Development Board for ETX Rev.A2
SOM-DB4700-00A1E	Development Board for ETX Rev.A1

Optional Accessories

Part No.	Description
1960012091T00S	Semi-Heatsink 114 x 96 x 15 mm

Packing List

Part No.	Description	Quantity
-	SOM-4461 CPU Module	1
-	Utility CD	1
1960035037N00B	Heatspreader	1

Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2COM V1.2 ENG
Win XPE	2070007912	XPE WES2009 Intel-Uniprocess V4.0 MUI2 V6.4.1
QNX		

SOM-4463

Intel® Atom™ Processor N450/D510 ETX CPU Module



Features

- Embedded Intel® Atom™ Processor N450 1.66 GHz single core/ D510 1.66 GHz dual-core + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, multiple display: VGA, 18-bit LVDS
- Supports DDR2 SODIMM up to 2 GB
- Supports 4 PCI, 2 SATAII, 4 USB 2.0, ISA
- Supports embedded software APIs and Utilities

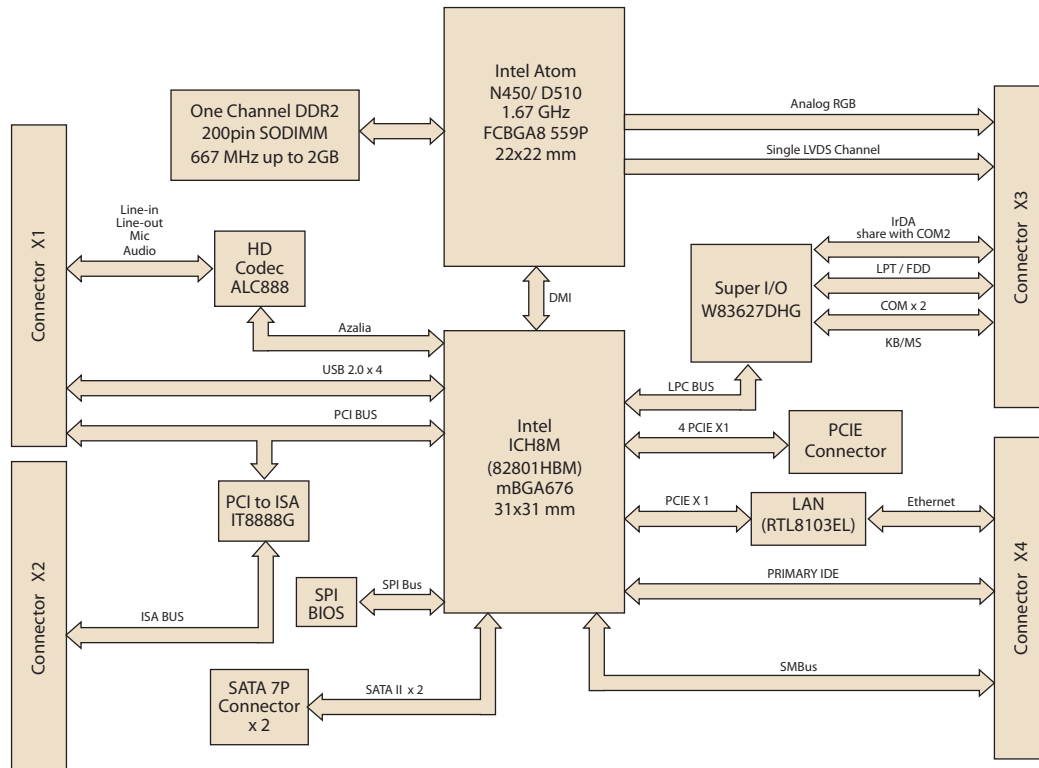
Software APIs: Watchdog, I2C, SMBus, H/W Monitor, Brightness, GPIO, Backlight On/Off

Utilities: BIOS flash, Monitoring, Flash Lock, Embedded Security ID

Specifications

Form Factor		ETX 3.0
Processor System	CPU	Intel Atom N450 1.67 GHz (single core), 512 KB L2 Cache Intel Atom D510 1.67 GHz (dual core), 1 MB L2 Cache
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667 MHz
	Max. Capacity	Up to 2 GB
	Socket	1 x 200-pin SODIMM sockets
Display	Chipset	Intel Atom N450 or Intel Atom D510
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW
	LVDS	18-bit single channel LVDS
	VGA	Intel Atom N450 Single Core up to 1400 x 1050 (SXGA) Intel Atom D510 Dual Core up to 2048 x 1536
	DVI	-
	TV Out	-
	SDVO	-
	Dual Display	CRT + LVDS
Ethernet	Chipset	Realtek 8103EL 10/100 Mbps Ethernet
	Speed	10/100 Mbps
WatchDog Timer		256 level timer interval, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		ISA, 4 PCI masters
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	2 x SATAII (300 MB/s)
	USB	4 x USB 2.0
	Audio	ALC888 Audio
	GPIO	1-bit GPIO, 2-bit GPE
	COM	2 x COM Ports
	FDD/LPT	1 x FDD or LPT
Power	Power Type	ATX, AT
	Power Supply Voltage	+5 V (+5 VSB for ATX)
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	95 x 114 mm (3.74" x 4.5")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/EBX/5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	10/100 LAN	HD Audio	PCI	USB 2.0	SATA	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-4463N-S6A1E	Atom N450	512 KB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Passive	0 ~ 60° C
SOM-4463D-S6A1E	Atom D510	1 MB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Active	0 ~ 60° C
SOM-4463DZ-S6A1E	Atom D510	1 MB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Active	-20 ~ 80° C
SOM-4463DZ2-S6A1E	Atom D510	1 MB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Active	-40 ~ 85° C
SOM-4463NZ-S6A1E	Atom N450	512 KB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-4463NZ2-S6A1E	Atom N450	512 KB	ICH8M	18-bit	Yes	1	Yes	4	4	2 x SATAII	1	Yes	Yes	Passive	-40 ~ 85° C

Development Board

Part No.	Description
SOM-DB4400-00A2E	Development Board for ETX Rev.A2
SOM-DB4700-00A1E	Development Board for ETX Rev.A1

Optional Accessories

Part No.	Description
1960012091T00S	Semi-Heatsink 114 x 96 x 15 mm
1750001980	Semi-Cooler 114 x 96 x 15 mm

Packing List

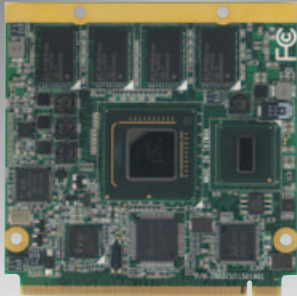
Part No.	Description	Quantity
-	SOM-4463 CPU Module	1
-	Utility CD	1
1960047537T001	Heatspreader	1
1960049773T001	Heatspreader for wide temperature product	1

Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2COM V1.2 ENG
Win XPE	2070007912	XPE WES2009 Intel-Uniprocess V4.0 MUI2
QNX		V6.4.1

SOM-3560

Intel® Atom™ Processor SCH
US15W Qseven CPU Module



Features

- Intel® Atom™ processor Z510 1.1 GHz, Z530 1.6 GHz
- Intel GMA integrated in US15W
- Supports onboard DDR2 512 MB/1 GB Memory
- LPC, 1 PCIe x1, 8 x USB 2.0, up to 2 GB onboard flash
- Supports Embedded Software APIs and Utilities

Software APIs:

- Watchdog
- PC
- SMBus
- H/W Monitor

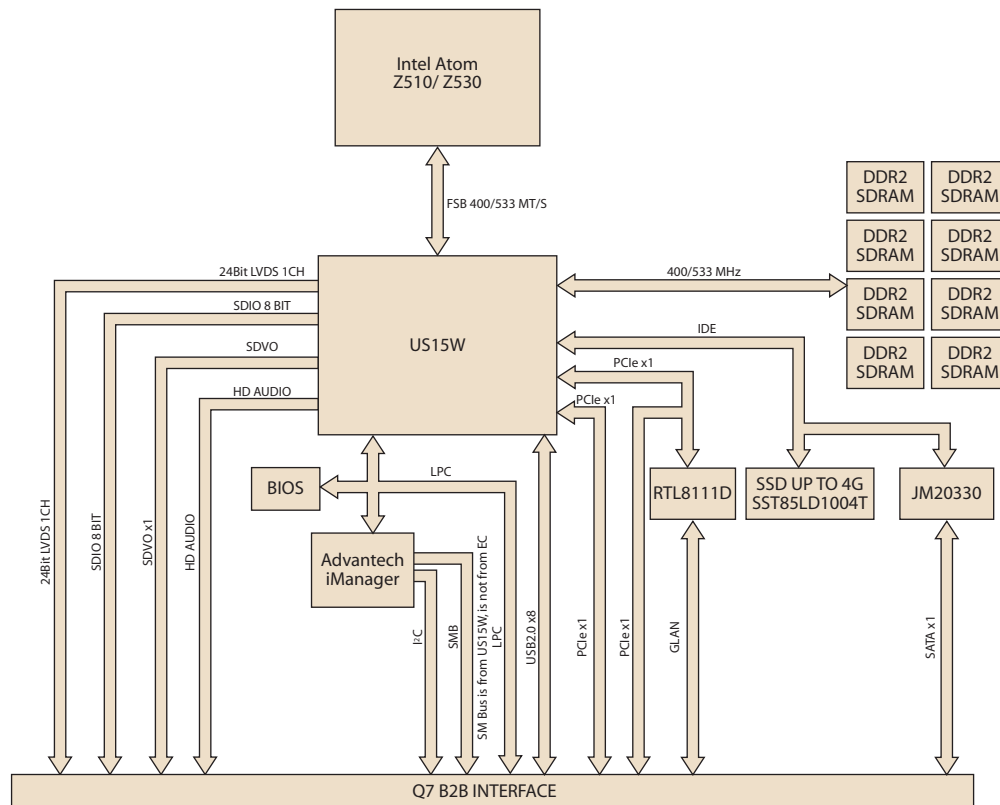
Utilities:

- BIOS flash
- Monitoring
- Embedded Security ID

Specifications

Form Factor		Qseven
Processor System	CPU	Intel Atom processor Z510 1.1 GHz, Z530 1.6 GHz
	System Chipset	US15W
	BIOS	Award 8 Mbit Flash BIOS
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	Onboard 512 MB/1 GB memory
Display	Chipset	Intel GMA integrated in US15W
	Graphics Engine	DirectX 9Ex. Supports H.264, MPEG2 and MPEG4 hardware decoder
	LVDS	24-bit single channel LVDS
	SDVO	Yes
Ethernet	Chipset	Realtek 8111D Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer
Expansion		LPC, 1 PCIe x1
I/O	PATA	-
	SATA	1 x SATAII (300 MB/s)
	USB	8 x USB 2.0
	Audio	High definition audio interface
	SSD	Up to 2GB SSD flash on board
	SDIO	8-bit SDIO
Power	Power Type	ATX, AT
	Power Supply Voltage	5V only
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	70 x 70 mm

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/EBX/5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	Chipset	IDE	Memory	LVDS	VGA	Giga LAN	HD Audio	PCIe x1	USB 2.0	SATA II	LPC	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-3560FG-S1A1E	1.1 GHz	512 KB	Intel US15W	-	512 MB	18/24-bit	-	1	Yes	1	8	1	1	1	Yes	Yes	Passive	0 - 60° C
SOM-3560FG-S6A1E	1.6 GHz	512 KB	Intel US15W	No, 2 GB SSD onboard flash	1 GB	18/24-bit	-	1	Yes	1	8	1	1	1	Yes	Yes	Passive	0 - 60° C

Development Board

Part No.	Description
SOM-DB3500	Development Board for Qseven with GLAN

Embedded OS

OS	Part No.	Description
Win XPE	2070009031	XPE WES2009 Lu- Pier V4.0 MUI24

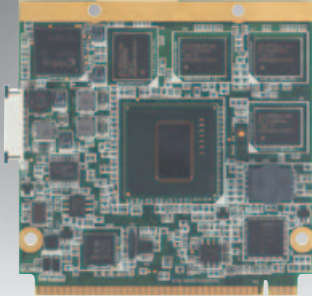
Packing List

Part No.	Description	Quantity
	SOM-3560 CPU Module	1
	Utility CD	1
	Heatspreader	1

SOM-3564

Intel® Atom™ Processor E6xx Series Qseven CPU Module

NEW



Features

- Embedded Intel® Atom™ processor E6xx series up to 1.6 GHz
- Supports 1 GB DDR2 memory on board
- Supports 2 PCIe x 1, LPC, 2 SATA
- Supports Advantech iManager and software APIs

Software APIs:

- Watchdog
- PC
- SMBus
- H/W Monitor
- GPIO
- Backlight On/Off

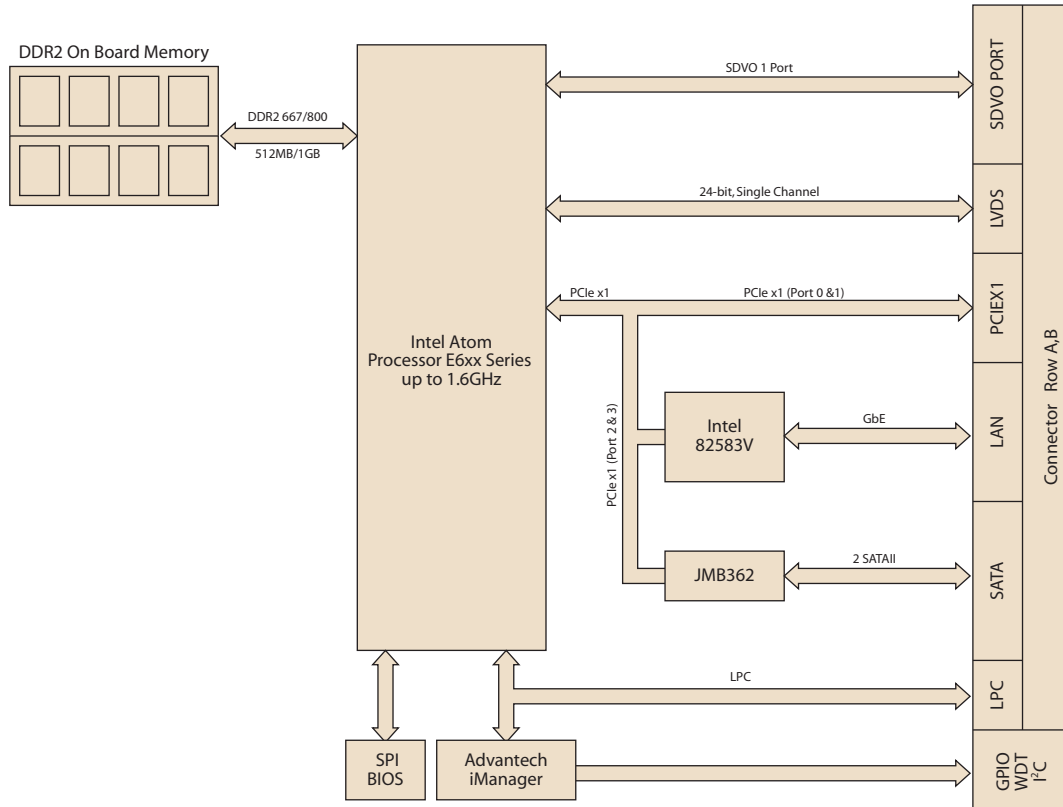
Utilities:

- BIOS flash
- Monitoring
- Flash Lock
- Embedded Security ID

Specifications

Form Factor		Qseven form factor
Processor System	CPU	Intel Atom E620 600 MHz / E640 1.0 GHz / E660 1.3 GHz / E680 1.6 GHz
	L2 Cache	512 KB
	System Chipset	Intel Atom Processor E6xx Series integrated
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667/800 MHz memory
	Max. Capacity	Onboard 1 GB memory
Display	Chipset	Intel Atom processor E6xx series integrated graphic controller
	Graphics Engine	2D/3D graphic engine
	LVDS	24-bit single channel LVDS
	VGA	-
	DVI	-
	TV Out	-
	SDVO	1
Dual Display	LVDS + SDVO	
Ethernet	Chipset	Intel 82583V Gigabit Ethernet
	Speed	10/100/1000 Mbps
WatchDog Timer		65536 level timer interval, from 0-65535 sec, multi-level, multi-option watchdog timer
Expansion		LPC, 2 PCIe x 1
I/O	PATA	-
	SATA	2 x SATA
	USB	-
	Audio	High Definition Audio Interface
	GPIO	8-bit GPIO
Power	Power Type	ATX, AT
	Power Supply Voltage	12V, 5VSB
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	70 x 70 mm

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Onboard Memory	LVDS	Giga LAN	HD Audio	PCIe x 1	SATA II	LPC	SMBus	Power input	ATX Power	AT Power	Thermal Solution
SOM-3564FG-M0A1E	600 MHz	512 KB	512 MB	24-bit	1	Yes	2	2	1	1	+5 V	Yes	Yes	Passive
SOM-3564FG-S0A1E	1.0 GHz	512 KB	1 GB	24-bit	1	Yes	2	2	1	1	+5 V	Yes	Yes	Passive
SOM-3564FG-S3A1E	1.3 GHz	512 KB	1 GB	24-bit	1	Yes	2	2	1	1	+5 V	Yes	Yes	Passive

Development Board

Part No.	Description
SOM-DB3500-00A1E	Development Board for Qseven Modules

Embedded OS

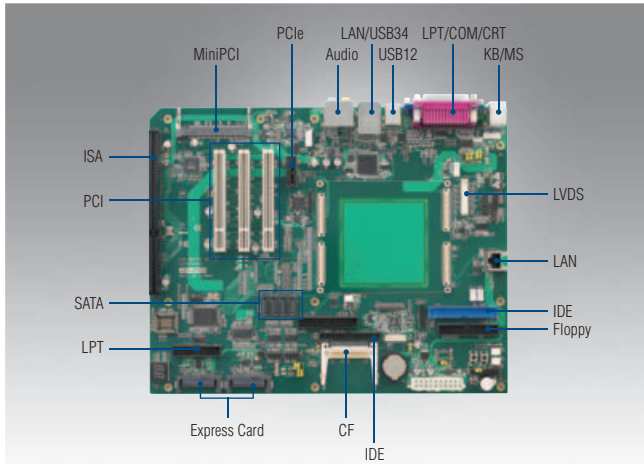
OS	Part No.	Description
Win XPE	TBD	XPE WES 2009

Packing List

Part No.	Description	Quantity
-	SOM-3564 CPU Module	1
-	Utility CD	1
-	Heatspreader	1

SOM-DB4700

ETX/XTX Development Board



Features

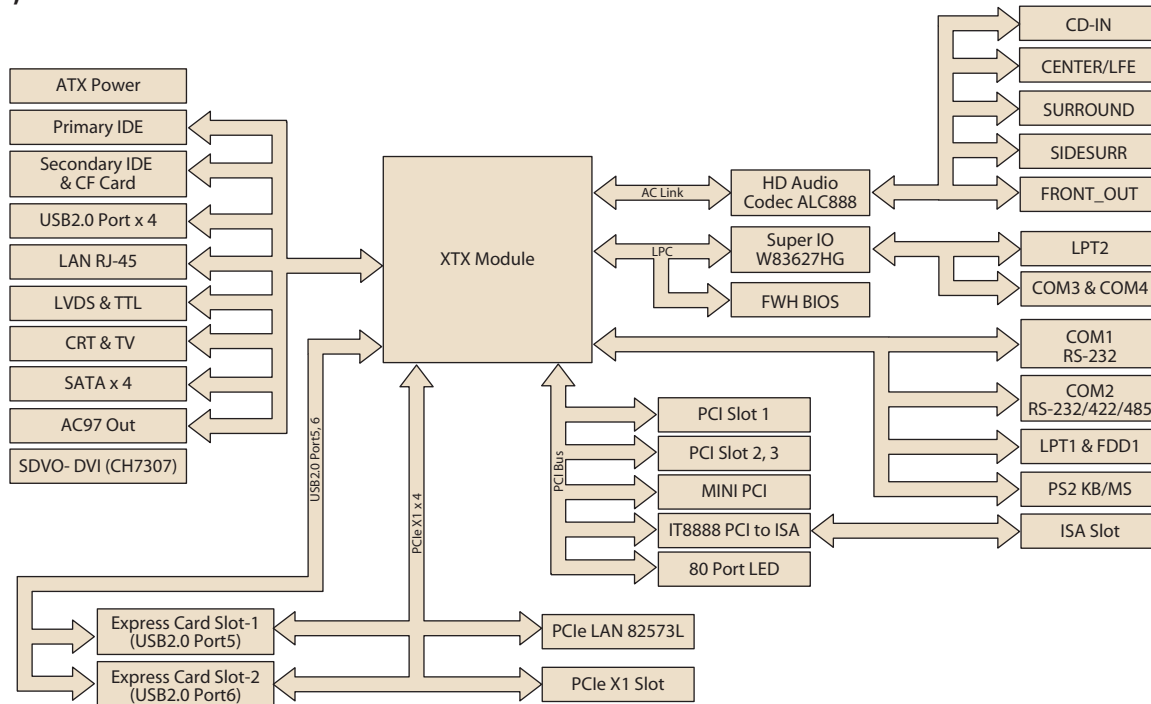
- ETX/XTX Development Board
- ATX form factor
- Display type: LVDS, DVI, VGA, TV out
- Expansion: 2 Express Card, 3 PCI, 1 Mini PCI, 1 ISA bus slot
- SATA/EIDE/FDD/LPT/Keyboard/Mouse/USB/Audio/SSD interface

Specifications

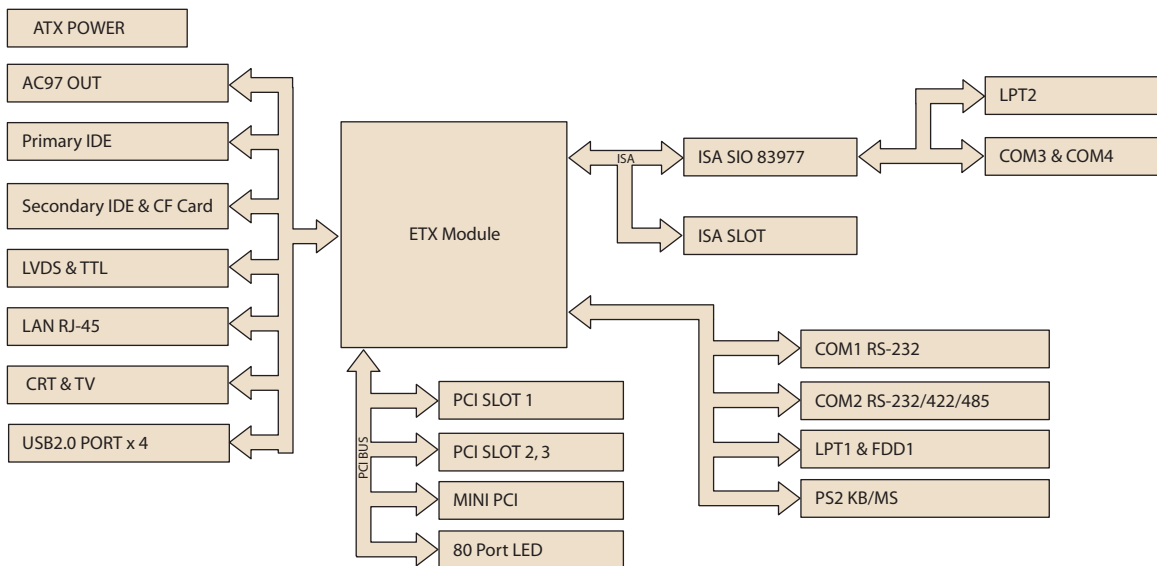
Compatible Models		ETX	XTX
Display	LCD	TTL/LVDS (depends on CPU module)	TTL/LVDS (depends on CPU module)
	VGA	1	1
	DVI	-	1
	TV out	1	1
	Dual Display	TTL/LVDS, VGA, TV out	TTL/LVDS, VGA, TV out
Ethernet		1 x 10/100	1 x 10/100 + 1 Giga
Audio		AC97	High Definition Audio
Expansion	Express Card	-	2
	PCI	3	2
	Mini PCI	1	1
	ISA	1	1
I/O	SATA	-	4
	EIDE	1 x 40 pin + 1 x 44 pin	1 x 40 pin + 1 x 44 pin
	Serial	4 COM ports 3 x RS-232, 1 x RS-232/422/485	4 COM ports 3 x RS-232, 1 x RS-232/422/485
	USB	4 x USB 2.0	6 x USB 2.0
	LPT/FDD	1	1
	KB/MS	1	1
	CF	1	1
	System Fan	2	2
	SMBus	1	1
	I2C	1	1
Port 80	1	1	
Power	Power Type	ATX modes	
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)	
	Operating Humidity	0% ~ 90% relative humidity, non-condensing	
Mechanical	Dimensions	304.8 x 190.5 mm (12" x 7.5")	

Board Diagram

(XTX)



(ETX)



Ordering Information

Part No.	Description
SOM-DB4700-00A1E	Development Board for ETX Rev.A1
SOM-DB4700X-00A1E	Development Board for XTX Rev.A1

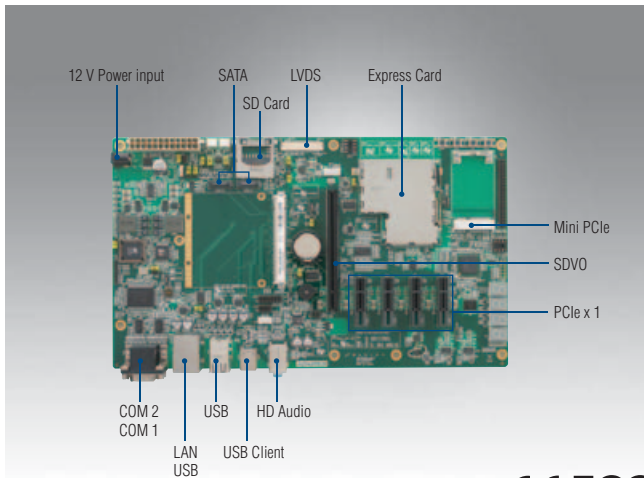
Packing List

Part No.	Description	Quantity
SOM-DB4700-00A1E	SOM-DB4700	1
1703050307	TV-Out Cable	1

- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/EBK/5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

SOM-DB3500

Qseven Development Board



CE FCC

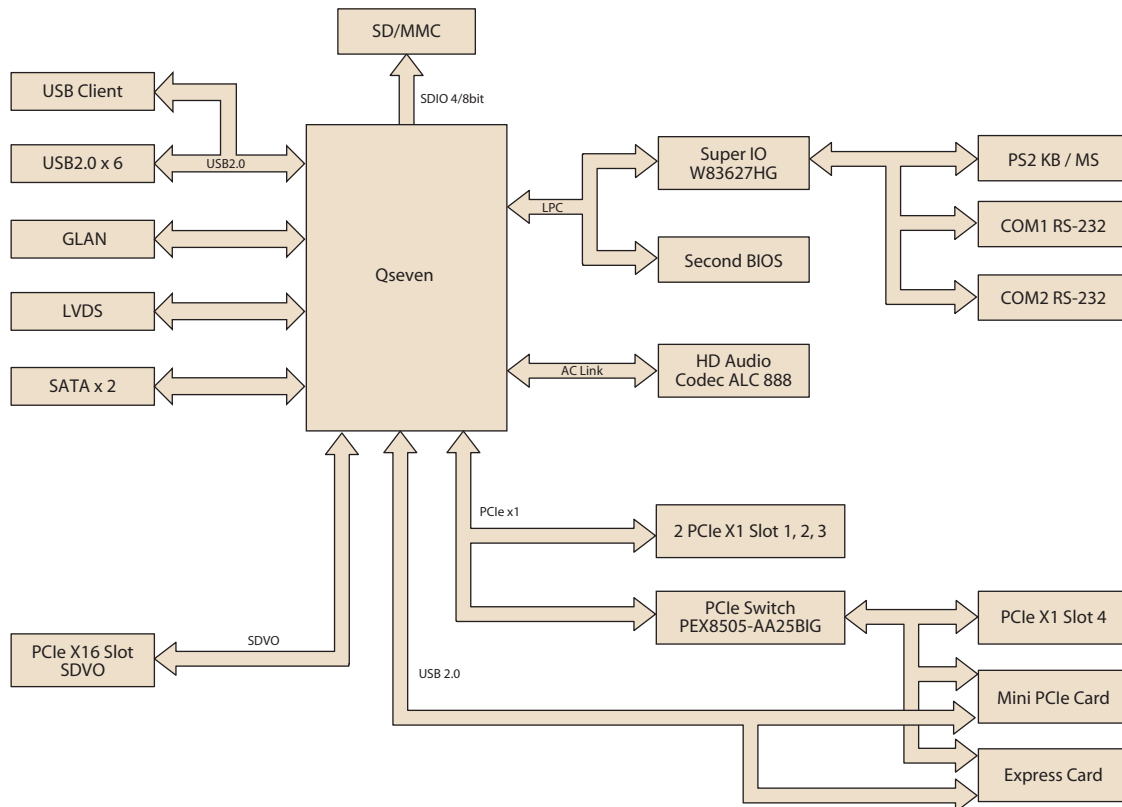
Features

- Supports Qseven CPU Module
- Supports 24 bit LVDS TFT Panel
- Supports 1 PCIe x16 slot for SDVO, 4 PCIe x1 slot
- Supports 2 SATA, 2 COMs, 1 RJ-45, 6 USB 2.0 (with 1 USB client)
- HD Audio Codec

Specifications

Compatible Modules		Advantech Qseven CPU Module Series (70 x 70 mm)
Display	SDVO	Support one SDVO through PCIe x16 slot
	LCD	24-bit LVDS
Ethernet		1 x Giga LAN
Audio	Chipset	High Definition Audio
Expansion	SDVO Slot	1
	PCIe x 1 slot	4
	Express Card socket	1
	SD/MMC	1
	Mini PCIe	1
I/O	USB	6 USB 2.0 (one is alternating with USB client)
	USB client	1 (alternating with USB1)
	COM	2 COM ports
	SATA	2
	KB/MS	1
	System FAN	2
	I2C	1
Power	Power Type	ATX/AT modes
Environment	Operation	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Physical Characteristics	Dimensions	293 x 172 mm (11.5" x 6.75")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

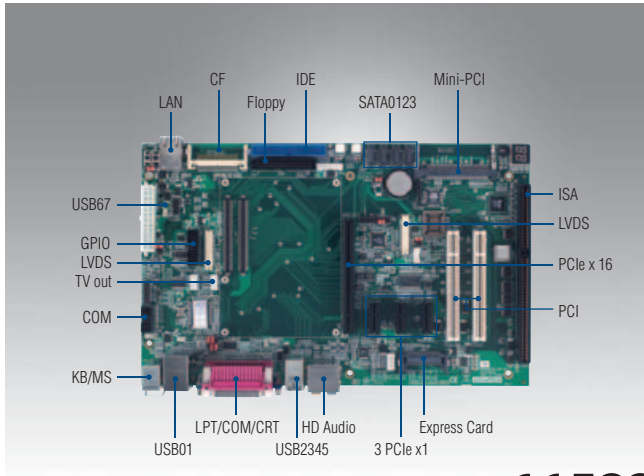
Part No.	Description
SOM-DB3500-00A1E	Development board for Qseven CPU Module series

Packing List

Part No.	Description	Quantity
-	SOM-DB3500 development board	1
1700008894	SERIAL ATA cable 7P/7P 30 cm	1

SOM-DB5700

COM-Express Development Board



CE FCC

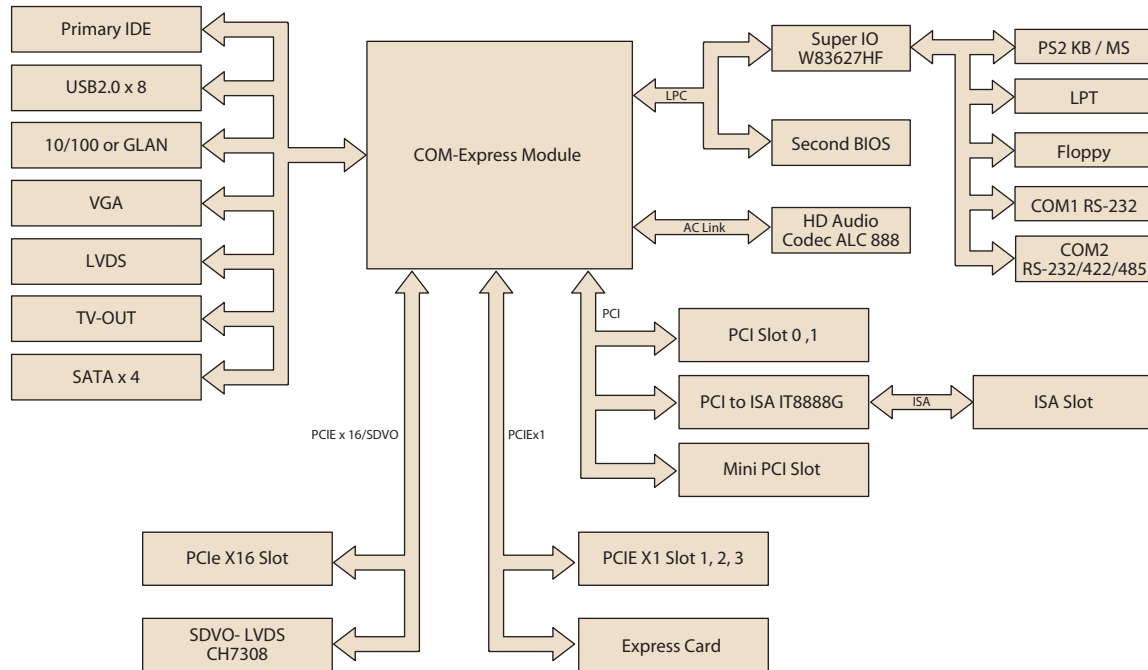
Features

- Supports COM-Express Basic Modules, COM-Express Compact Modules and COM-Ultra Modules
- Compatible with COM.0 R1.0, Type I & Type II Pin-out.
- ATX form factor
- Display type: Dual LVDS, VGA, TV out
- Expansion: 1 PCIe x16, 3 PCIe x1, 1 Express Card, 2 PCI master, 1 MiniPCI, 1 ISA bus slot
- SATA/EIDE/FDD/LPT/Keyboard/Mouse/USB/Audio/SSD interface

Specifications

Compatible Models		Advantech COM-Express Basic Modules (125 x 95 mm), COM-Express Compact Modules (95 x 95 mm) and COM-Ultra Modules (84 x 55 mm)
Display	LVDS	LVDS1 (SPEC based on CPU Module) 48-bit LVDS2 (LVDS2 is optional)
	VGA	1 (D-SUB 15P Female)
	TV Out	1
	Dual Display	LVDS1, LVDS2, VGA, TV out (LVDS2 is optional)
Ethernet		1 x Giga LAN or 10/100 (SPEC based on CPU Module)
Audio	Chipset	High Definition Audio (Line/Micro-In, Front/Center/Surround/Side surround-out)
Expansion	PCIe x16 slots	1
	PCIe x1 slot	3
	Express Card socket	1
	PCI slots	2
	MiniPCI socket	1
	ISA slot	1
I/O	SATA	4 (Type B)
	EIDE	1 x 40 pin
	Serial	2 COM Ports (D-SUB 9P) 1 x RS-232, 1 x RS-232/422/485
	USB	8 x USB 2.0
	LPT	1 (D-SUB 15P)
	FDD	1
	KB/MS	1
	CF	1 (Type I)
	GPIO	8-bit (GPI 4-bit/GPO 4-bit)
	System FAN	2
	SMBUS	1
	I2C	1
	Port 80	1
Power	Power Type	ATX/ AT modes
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	304.8 x 190.5 mm (12" x 7.5")

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	Description
SOM-DB5700-00A2E	Development board for COM-Express Basic Modules/ COM-Express Compact Modules Series with 10/100 Mbps LAN
SOM-DB5700G-00A2E	Development board for COM-Express Basic Modules/ COM-Express Compact Modules Series with GLAN
SOM-DB5700G-U0A2E	Development board for COM-Ultra Modules Series with GLAN

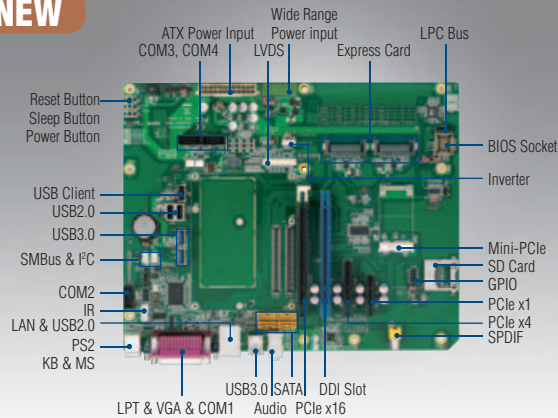
Packing List

Part No.	Description	Quantity
-	SOM-DB5700 development board	1
1700100170	17.5 cm 2 CH USB cable	1
1701100300	FLAT COM port cable	1
1700001892	30 cm TV-out 5P cable	1
1701400452	FLAT 40P IDE cable 45 cm	1
1700008894	SERIAL ATA cable 7P/7P 30 cm	1
1701340603	Floppy cable 34P 60 cm	1

SOM-DB5800

COM Express Development Board for Type 6 Pin-out

NEW



CE FCC

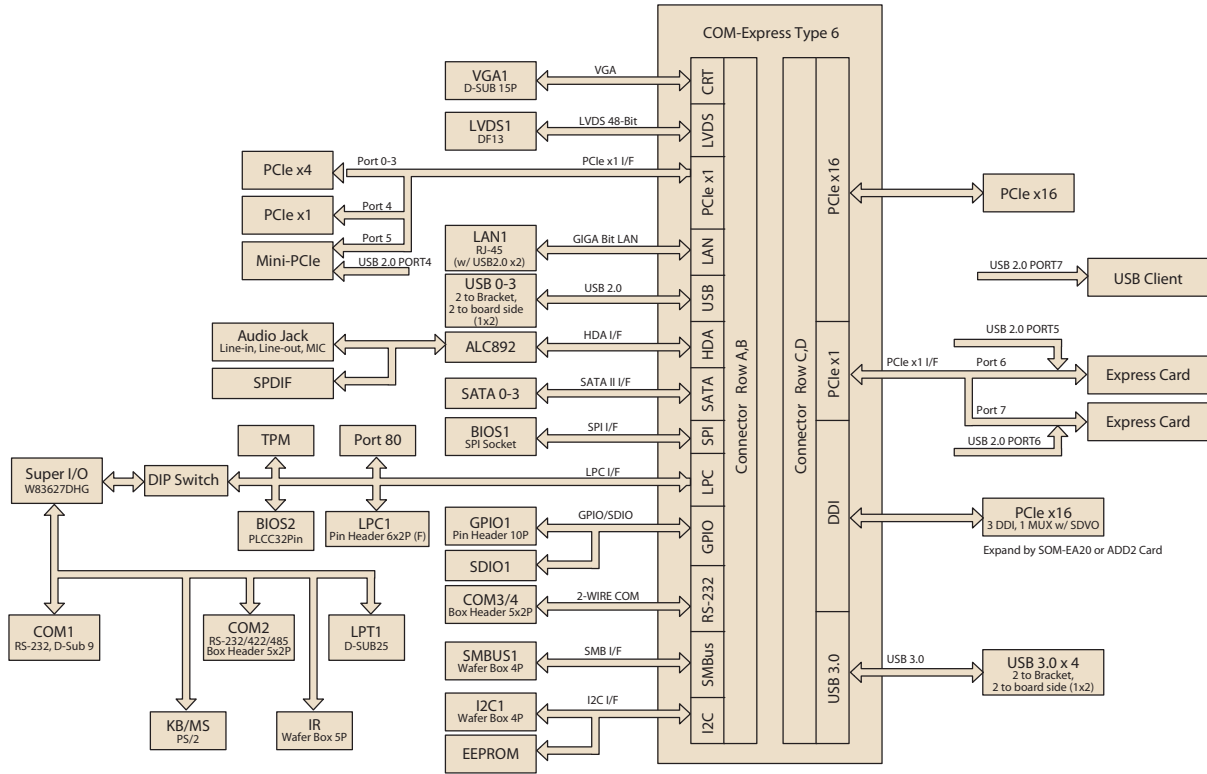
Features

- COM Express Development Board Compliant to PICMG COM.0 R2.0 Type 6 Pin-out
- COM Express Basic/Compact/COM-Ultra module compatible
- ATX form factor with both ATX & AT power support
- Display Type: VGA, LVDS, HDMI/Displayport Expand by SOM-EA20
- Expansion: PCIe x16, PCIe x4, PCIe x1, Mini-PCle, Express Card

Specifications

Compatible Models		Advantech COM-Express Basic Modules (125 x 95 mm), COM-Express Compact Modules (95 x 95 mm) and COM-Ultra Modules (84 x 55 mm)
Display	LVDS	18/24-bit single or dual channel
	VGA	1 (D-SUB 15P Female)
	HDMI/Displayport	Up to 3 ports (Expand by SOM-EA20)
Ethernet		1 x Giga LAN
Audio	Chipset	Realtek ALC892 HD Audio (Line-in, Line-out, MIC, SPDIF)
Expansion	PCIe x16	1
	PCIe x4	1
	PCIe x1	1
	Mini-PCle	1
	Express Card	2
	LPC	1
I/O	SATA	4 (Type B)
	USB2.0	8 Port Host, include 1 Port Client
	USB3.0	4 Port
	Serial	4 COM Ports 1 x RS-232 (D-SUB 9P), 1 x RS-232/422/485, 2 x 2-Wire RS-232
	KB/MS	1
	LPT	1 (D-SUB 15P)
	GPIO	8
	SDIO	1 (Mux with GPIO)
	SMBus	1
	I2C	1
	SPI	1
	Fan	2 (1 from Module support iManager Smart Fan)
	Port 80	1
TPM	1	
Power	Power Type	ATX/ AT modes
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	304.8mm x 244mm (12" x 9.6")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/ EBK/ 5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	Description
SOM-DB5800-00A1E	COM-Express Development Board for Type 6 Pin-out

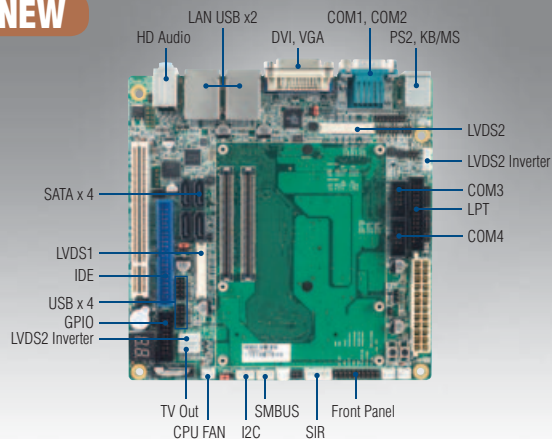
Packing List

Part No.	Description	Quantity
-	SOM-DB5800 COM-Express Development Board	1
9696EA2000E	HDMI/Displayport Riser Card for SOM-DB5800	1
9892430100E	1 PCIe x 4 to 3 PCIe x1 Riser Card	1
1700008894	Serial ATA Cable 7P/7P 30 cm	1
1701100300	Flat COM Port Cable	1
1960012351T000	I/O Shield Bracket	1

SOM-AB5710

COM-Express Application Board

NEW



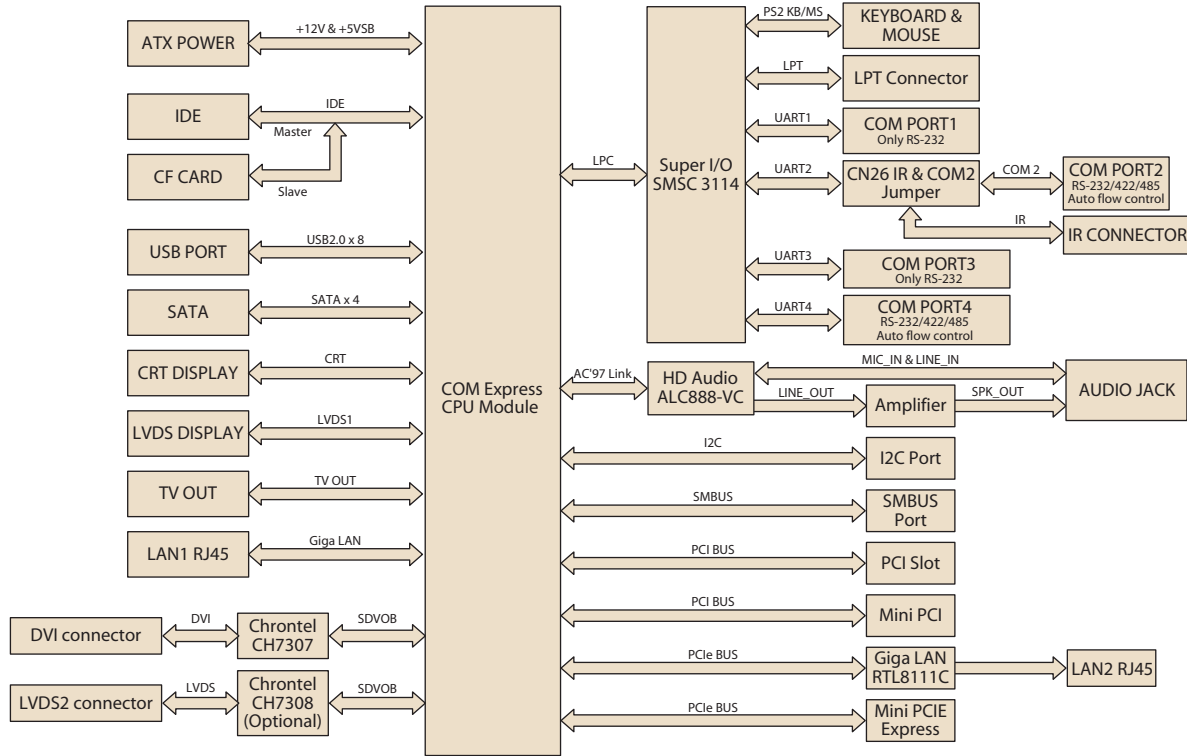
Features

- Supports COM-Express Basic Modules, COM-Express Compact Modules and COM-Ultra Modules
- Compatible with COM.0 R1.0, Type I & Type II Pin-out
- Mini-ITX form factor
- Display type: VGA, LVDS1, DVI, TV out, 48-bit LVDS2 optional
- Expansion: PCI, Mini PCI, Mini PCI-Express
- I/O: 4 COM, 4 SATA, 8 USB, 1 IDE, 1 CF, LPT,KB/MS, IrDA, 8-bit GPIO

Specifications

Form Factor	Mini-ITX form factor	
Compatible Models	Advantech COM-Express Basic Modules (125 x 95 mm), COM-Express Compact Modules (95 x 95 mm) and COM-Ultra Modules (55 x 84 mm) series	
Display	LVDS	LVDS1 (SPEC depends on CPU Module) 48-bit LVDS2 (Supports on SOM-5786)(LVDS2 is optional)
	VGA	1 port. (SPEC depends on CPU Module)
	DVI	1 port, supported by Chrontel CH7307
	TV Out	1 port. (SPEC depends on CPU Module)
	Dual Display	LVDS1, LVDS2, DVI, VGA, TV out
Ethernet	Interface	10/100/1000 Mbps
	Controller	GbE LAN1: SPEC depends on CPU Module GbE LAN2: Realtek(RTL8111C)
	Connector	RJ45 x 2
Audio	Chipset	ALC888-VC
	Amplifier	Yes. (2.2W)
Expansion	PCIe x16 Slot	-
	PCIe x1 Slots	-
	Mini PCIe	1
	PCI Slots	1
	MiniPCI Socket	1
	ISA Slot	-
SATA	Max Data Transfer Rate	Depends on CPU module SPEC
	Channel	4
SSD	Compact Flash	Supports CompactFlash Card TYPE I/II
Rear I/O	VGA	1
	DVI	1
	Ethernet	2
	USB	4 (USB 2.0)
	Audio	3 (Mic-in, Line-in, Line-out)
	Serial	2 (COM1 supports RS-232, COM2 supports RS-232/422/485)
	PS/2	2 (keyboard and mouse)
Internal Connectors	LVDS	2 (LVDS1 and 48-bit LVDS2 (LVDS2 is optional))
	USB	4 x USB 2.0
	Serial	2 COM (COM3, COM4) COM3 supports RS-232 COM4 supports RS-232/422/485
	IDE	1 x 40 pin
	SATA	4
	Compact Flash	1
	Parallel	1
	IrDA	1 (share with COM2)
	FDD	-
	DIO	8-bit (GPI 4-bit/GPO 4-bit)
	CPU FAN	1
	System FAN	3
	SMBUS	1
	LPC	1
	I2C	1
Port 80	1	
Power	Power Type	ATX/ AT modes
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	170 mm x 170 mm (6.69" x 6.69")

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/ EBK/ 5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

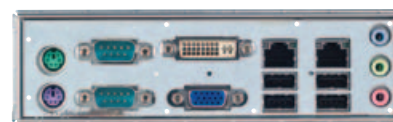
Part No.	Compatible model	LVDS1	LVDS2	DVI	CRT	TV out	Giga LAN	HD Audio	COM	PCI	Mini PCI	Mini PCIe	USB 2.0	SATA	LPT	KB/MS	IrDA	IDE	CF	Operating Temp.
SOM-AB5710-5786A1E	SOM-5786 series	Yes	Optional	Yes	Yes	Yes	2	Yes	4	1	1	1	8	3	Yes	Yes	Yes	Yes	Yes	0 ~ 60° C
SOM-AB5710-5761A1E	SOM-5761/6761 series	Yes	Optional	Yes	Yes	Yes	2	Yes	4	1	1	1	8	2	Yes	Yes	Yes	Yes	Yes	0 ~ 60° C

Packing List

Part No.	Description	Quantity
1700008894	SOM-AB5710 Evaluation board	1
1703150102	CABLE SERIAL ATA 7P/7P 30CM	1
1700100170	Wire BIG4P/Serial ATA power 15P 10cm	1
1700100170	A Cable USB-A(F) x 2/2 x 5P-2.54 17.5 cm W/BKT F/5	1
1700000446	F Cable D-SUB 25P(F)/IDE#3 26P-2.54 45 cm	1
1701400452	FLAT IDE CABLE 40P GRAY FOR DMA-66 PIN20 I.P. 45 cm	1
1701100300	Flat COM Cable D-SUB 9P(M) W/Bracket 320 mm	1
1700001892	Wire 5P TV-out 30 cm	1

Optional Accessories

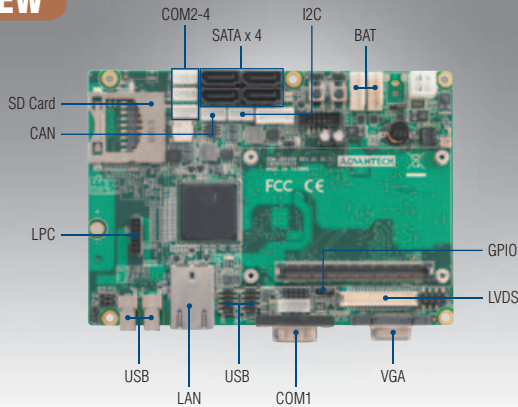
Part No.	Description
1960019193T000	I/O SHIELD Bracket 158.8 x 45.5 mm



SOM-AB5500

COM-Ultra Application Board

NEW



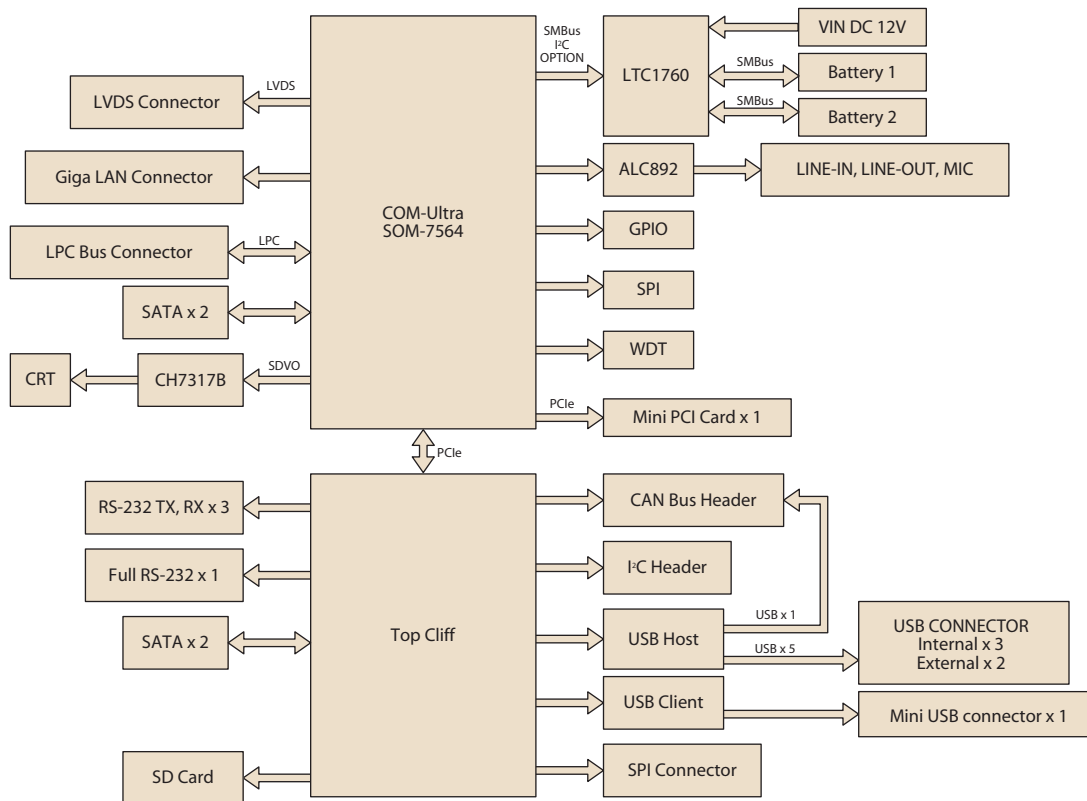
Features

- Supports COM-Ultra Module at 3.5" Form-factor
- Supports Smart Battery Control
- Display type: VGA, LVDS
- Expansion: 1 mini PCIe, LPC
- 4 COMs, 2 SATA, 5 USB 2.0, 1 USB Client, CAN bus, 1 Gigabit LAN

Specifications

Form Factor		3.5" form factor
Compatible Models		Advantech COM-Ultra Module (84 x 55 mm)
Display	LVDS	LVDS (Spec depends on COM module)
	VGA	1 port. (SPEC depends on CPU Module)
	DVI	NA
	TV Out	NA
	Dual Display	LVDS, CRT
Ethernet	Interface	10/100/1000 Mbps
	Controller	GbE LAN1: SPEC depends on CPU Module
	Connector	RJ-45 x 1
Audio	Chipset	ALC 892
	Amplifier	Yes. (2W)
Expansion	Mini PCIe	1
SSD	SDIO	1 port
Rear I/O	VGA	1
	Ethernet	1
	USB	2 (USB 2.0)
	Serial	1 (COM1 supports RS-232)
Internal Connector	LVDS	1 LVDS
	USB	3 x USB 2.0
	Serial	3 x RS-232 (TX/RX only)
	SATA	4 (2 from COM-Ultra, 2 from SOM-AB5500)
	SDIO	1
	DIO	8-bit (From COM-Ultra module)
	Smart Battery	2
	SPI	1
	I2C	1
CAN Bus	1	
Power	Power Type	ATX/ AT modes +12V, +5VSB
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	146 x 102mm (5.7" x 4")

Board Diagram

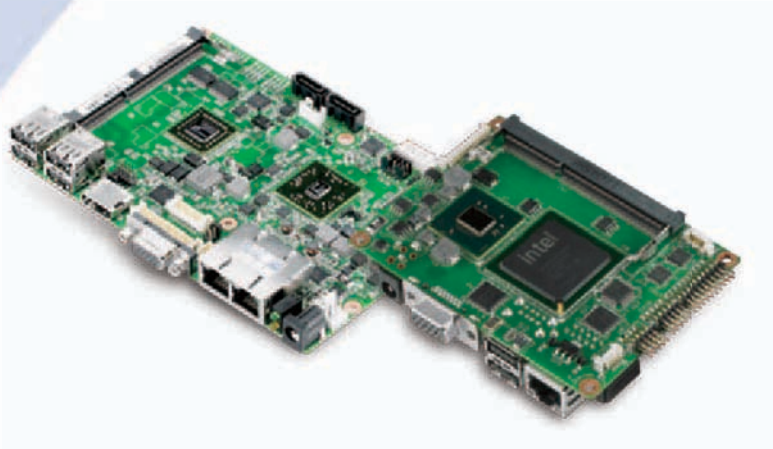


- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
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- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	Compatible model	LVDS	CRT	Giga LAN	HD Audio	COM	SDIO	CAN Bus	Mini PCIe	USB 2.0	SATA	LPT	Smart Battery	Operating Temp.
SOM-AB5500G-00A1E	SOM-7564 series	Yes	Yes	1	Yes	4	1	1	1	5	4	Yes	2	0 ~ 60° C

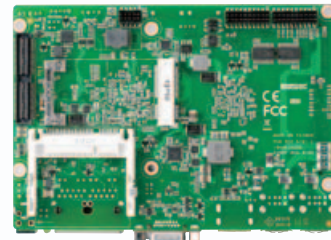
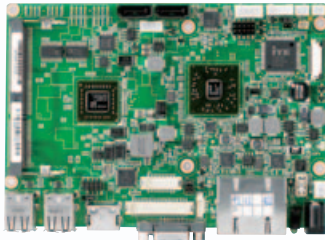
MIO Extension SBCs



Introduction

Many standard embedded single board computers cannot 100% meet developers' application specifications because there are no interfaces flexible enough to supply expansion from the hardware perspective. Advantech's MIO Extension SBC series were developed to solve this problem. By connecting with MIOe I/O extension modules through high speed sockets, customers get the most flexible I/O choices to fulfill vertical applications. MIOe integrates several interfaces which include compatibility for PCIe, USB 3.0, SATA and DisplayPort. MIOe can be completely customized to meet any customer requirements.

Mechanical Features



Heat Generating Parts on Component Side

- Larger space for better thermal results
- Solves thermal issues on one side

Thermal Solution

- Covers CPU, SB, memory, power & active IC
- Reduced tooling fee with minimum CNC reworking

Coast Line and DIP connectors

- Saves production costs
- Right angle DIP connectors (Power)

Customer Benefits

- **Cost Effective:** Reduce RD resource & develop schedules with complete solutions (MIO + MIOe), with same flexibility but lower cost than ODM or COM solution.
- **Easy System Integration:** Easier system assemblage saves up to 20% system space, compatible with compact chassis design.
- **Minimum Design Effort:** Advantech provides MIOe design guide for reference, reducing design effort.

Unified Expansion Slot locations on Solder Side

- MIOe expansion
- miniPCIe expansion
- CF/Cfast card (card can be removed from rear I/O)

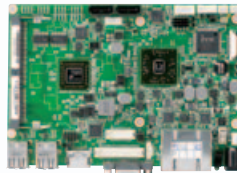
Hard Disk Placement

- Hard disk on solder side prevents thermal issues
- Saves system space

Lockable Connectors

- Lockable connector type on COM & audio

- **Secure Core Knowledge:** MIOe provides the computing and power - you create your I/O module with dedicated design know-how.
- **Flexibility for Vertical Markets:** Ready for future interfaces helps maintain vertical application know-how.



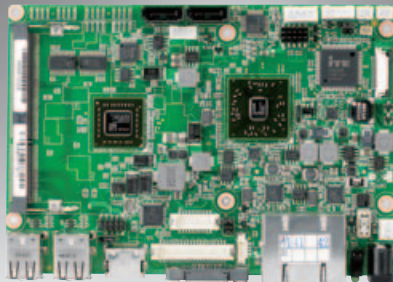
Model Name		MIO-5270	PICO-2260
Module Type		MIO Extension SBC	PICO-ITX
Processor System	CPU	AMD G- Series, T40R 1.0GHz single core, T40E 1.0GHz dual core, T44R 1.2GHz single core, T56N 1.65GHz dual core	Intel Atom processor N455 Single Core 1.66 GHz
	Frequency	1.0GHz single/dual core, 1.2GHz single core, 1.65GHz dual core	1.66GHz
	L2 Cache	512 KB on T44R, 1 MB on T56N	512 KB/1 MB
	System Chipset	AMD G-Series + A50M FCH	Intel N455 + ICH8M
Memory	BIOS	AMI EFI 16Mbit	AMI 16 Mbit Flash BIOS
	Technology	DDR3 1066 MHz, 1333MHz only on T56N	DDR3 800 MHz
	Max. Capacity	4 GB	2 GB
Display	Socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM
	Chipset	AMD G- Series	Intel Atom processor N455 1.66GHz
	LVDS	Single channel 24/48-bit LVDS 2048 x 1536 – T56N, 1920 x 1200 – T40R, T40E, T44R	LVDS: Single channel 18-bit LVDS up to WXGA 1366 x 768
	VGA	2560 x 1600 – T56N, 1920 x 1200 – T40R, T40E, T44R	Intel Atom processor N455 Single Core up to 1400 x 1050 (SXGA)
	HDMI	Supports 1920 x 1080p at 60 Hz, 36 bpp, Supports HDMI v1.3, using TMDS data encoding	-
	eDP	Option (Support by request) 2560 x 1600 – T56N, 1920 x 1200 – T40R, T40E, T44R	-
Ethernet	Dual Display	VGA + LVDS or VGA + HDMI or HDMI + LVDS	VGA+LVDS
	Speed	10/100/1000Mbps	10/100/1000 Mbps
Audio	Chipset	Realtek ALC892, High Definition Audio (HD), Line-in, Line out, Mic-in	Realtek ALC892 High Definition Audio (HD), Line-in, Line out
WatchDog Timer		255 levels timer interval, setup by software	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	Cfast	1	-
	CF	-	Supports CompactFlash Card TYPE II (Primary Master IDE Channel)
	SATA	2 x SATA II (Max. Data Transfer Rate 300 MB/s)	1 SATA II (Max. Data Transfer Rate 300 MB/s)
Rear I/O	Ethernet	2	1 (10/100/1000 Mbps)
	VGA	1	1
	HDMI	1	-
	USB	4 x USB 2.0	2 x USB 2.0
	LED	Power, Hard disk	-
	DC Power Jack	1	1 (support by request)
	Internal I/O	USB	2 x USB 2.0
Expansion	Serial	3 RS-232, 1 RS-232/422/485	2 x RS-232
	SMBUS	Supported	Supported (share with I ² C)
	GPIO	8-bit general purpose input/output	8-bit general purpose input/output
Power	Mini PCI Express	1 (full size)	1 (half size)
	MIO	MIOe	MIOe
	Power Type	Single 12V DC power input	Single 12V DC power input
	Power Supply Voltage	Supports single 12V input, ± 10%	Support single 12V input (12V+/- 10%)
	Power Consumption (Typical)	TBD	TBD
Environment	Power Consumption (Max, test in HCT)	TBD	TBD
	Power Management	ACPI	APM, ACPI, wake on LAN
	Battery	Lithium 3 V/210 mA	Lithium 3 V/210 mA
Physical Characteristics	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")	100 x 72 mm (3.94" x 2.83")
	Weight	0.85 kg (1.87 lb), weight of total package	0.54 kg (1.19 lb), weight of total package
Reference Page		2-2	2-4

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

MIO-5270

AMD® G- Series MIO SBC, DDR3, HDMI, 48-bit LVDS, VGA, 2 GbE, CFast, iManager, MIOe

NEW



Features

- Embedded AMD® G- Series Single Core/ Dual Core processor + AMD A50M FCH, 1 x DDR3 memory support upto 4 GB
- DirectX® 11, 2D/3D Acceleration, multiple display: 48-bit LVDS, HDMI, VGA
- Flexible design for vertical demands, minimum cabling needed, compact design
- 2 GbE support, HD Audio, Rich I/O interface with 4 COM, 2 SATA, 6 USB and GPIO
- Supports embedded software APIs and Utilities

Software APIs:

- GPIO
- H/W Monitor
- Brightness
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

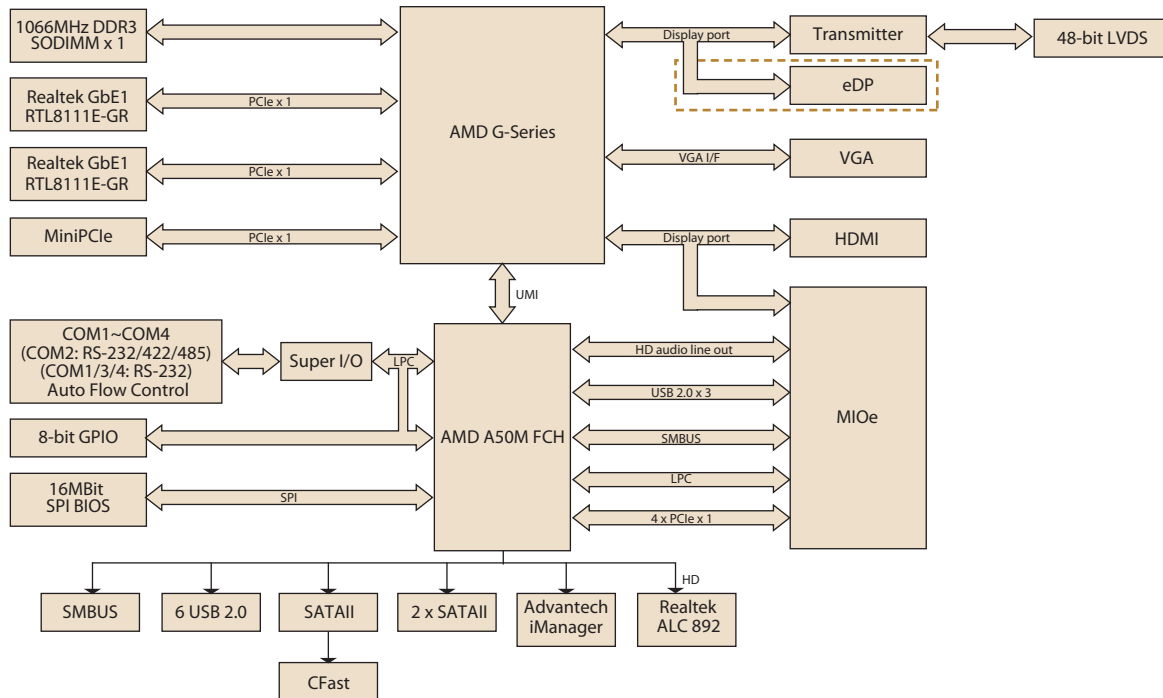
Utilities:

- Monitoring
- eSOS
- Embedded Security ID

Specifications

Processor System	CPU	AMD G- Series, T40R 1.0GHz single core, T40E 1.0GHz dual core, T44R 1.2GHz single core, T56N 1.65GHz dual core
	Frequency	1.0GHz single/dual core, 1.2GHz single core, 1.65GHz dual core
	L2 Cache	512 KB on T44R, 1 MB on T56N
	System Chipset	AMD G-Series + A50M FCH
	BIOS	AMI EFI 16Mbit
Memory	Technology	DDR3 1066 MHz, 1333MHz only on T56N
	Max. Capacity	4 GB
	Socket	1 x 204-pin SODIMM
Display	Chipset	AMD G- Series
	Graphic Engine	DirectX® 11 graphics with LVD 3.0 2D Acceleration, 3D Acceleration, Motion Video Acceleration, Supports DVD, Blu-ray*
	LVDS	LVDS: Supports single channel 24-bit or dual channel 48-bit LVDS
	VGA	T56N up to 2560 x 1600 @ 60 Hz, T40R, T40E, T44R up to 1920 x 1200 @ 60 Hz (pixel clock rate = 80 MHz)
	HDMI	T56N up to 2560 x 1600, T40R, T40E, T44R up to 1920 x 1200
	eDP	Supports 1920 x 1080p at 60 Hz, 36 bpp, Supports HDMI v1.3, using TMDS data encoding
	Dual Display	Option (Support by request) T56N up to 2560 x 1600, T40R, T40E, T44R up to 1920 x 1200
Ethernet	Speed	Yes (VGA+LVDS or VGA + HDMI or HDMI + LVDS)
	Controller	10/100/1000Mbps
	Connector	GbE1 Realtek RTL8111E-VB-GR 10/100/1000Mbps, GbE2 Realtek RTL8111E-VB-GR 10/100/1000Mbps
Audio	Chipset	2 RJ45 on Costline
	Amplifier	Realtek ALC892, High Definition Audio(HD),Line-in, Line out, Mic-in Can be supported via MIOe
WatchDog Timer		255 levels timer interval, programmable by software
Storage	CFast	1
	SATA	2 x SATA II (Max. Data Transfer Rate 300 MB/s)
Rear I/O	Ethernet	2 (10/100/1000Mbps)
	VGA	1
	HDMI	1
	USB	4 x USB 2.0
	LED	Power, Hard disk
	DC Power	1
Internal I/O	USB	2 x USB 2.0
	Serial	3 RS-232 from COM1/3/4, 1 RS-232/422/485 from COM2 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	SMBUS	Supported
	GPIO	8-bit general purpose input/output
Expansion	Mini PCI Express	1 (full size)
	MIOe	1
Power	Power Type	Single 12V DC power input
	Power Supply Voltage	Supports single 12V input, ± 10%
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
	Power Management	ACPI
	Battery	3 V / 210 mAH
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package

Board Diagram



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/ EBK/ 5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

Ordering Information

Part No.	CPU	L2 Cache	LVDS	VGA	HDMI	GbE1	GbE2	Audio	RS-232/422/485	RS-232	USB 2.0	GPIO	SATAII	Cfast	miniPCIe	MIOe	Thermal Solution	Operational Temp.
MIO-5270S-S0A1E	AMD T40R 1.0G SC	512 KB L2	48-bit	Yes	Yes	1	1	Yes	1	3	6	8-bit	2	1	1	Yes	Passive	0 - 60° C
MIO-5270D-S0A1E	AMD T40E 1.0G DC	512 KB L2	48-bit	Yes	Yes	1	1	Yes	1	3	6	8-bit	2	1	1	Yes	Passive	0 - 60° C
MIO-5270S-S2A1E	AMD T44R 1.2G SC	512 KB L2	48-bit	Yes	Yes	1	1	Yes	1	3	6	8-bit	2	1	1	Yes	Passive	0 - 60° C
MIO-5270D-S6A1E	AMD T56N 1.65G DC	1 MB L2	48-bit	Yes	Yes	1	1	Yes	1	3	6	8-bit	2	1	1	Yes	Active	0 - 60° C

Packing List

Part No.	Description	Quantity
	MIO-5270 SBC	
	Startup Manual	
	Utility CD	
1700006291	SATA1 cable 7P/ 7P 30cm C=R 180/90	1
1703150102	SATA 10cm power cable	1
1703040157	COM1 RS-485 D-SUB 9P (M)/1*4P 2.0 15cm cable	1
1701200220	COM RS232 Cable 2*10P-2.0/D-SUB 9P (M)*2 22CM	2
1703100152	Audio Cable 2*5P-2.0/JACK*3 20cm	1
9689000002	mini Jumper pack	

Optional Accessories

Part No.	Description
	Heat spreader for MIO-5270
1700006291	SATA2 cable 7P/ 7P 30cm C=R 180/90
	USB5/6 cable

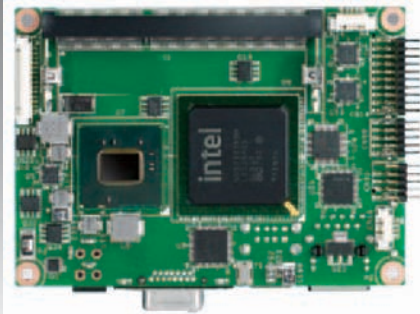
Embedded OS/API

Embedded OS/API	Description
Win XPE	XPE WES 2009
WES 7	WES 7
Linux	Ubuntu 10.04
QNX	V6.5, 6.4, 6.3
Software API	SUSI V3.0

MIO-2260

Intel® Atom™ N455 PICO-ITX SBC, DDR3, 18-bit LVDS, VGA ,1 GbE, Mini PCIe, 2 USB, 2 COM, MIOe

NEW



Features

- Embedded Intel® Atom™ N455 Single Core + ICH8M, DDR3 memory support
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, Dual Independent display: 18-bit LVDS + VGA
- Supports 12V+/-10% input power and DC power hot plug design
- 1 Intel GbE support, Rich I/O interface with 2 COM, 1 SATA, 2 USB 2.0, GPIO, SMBus, CF, and MIOe expansion interface
- Supports embedded software APIs and Utilities

Software APIs:

- GPIO
- H/W Monitor
- Brightness
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

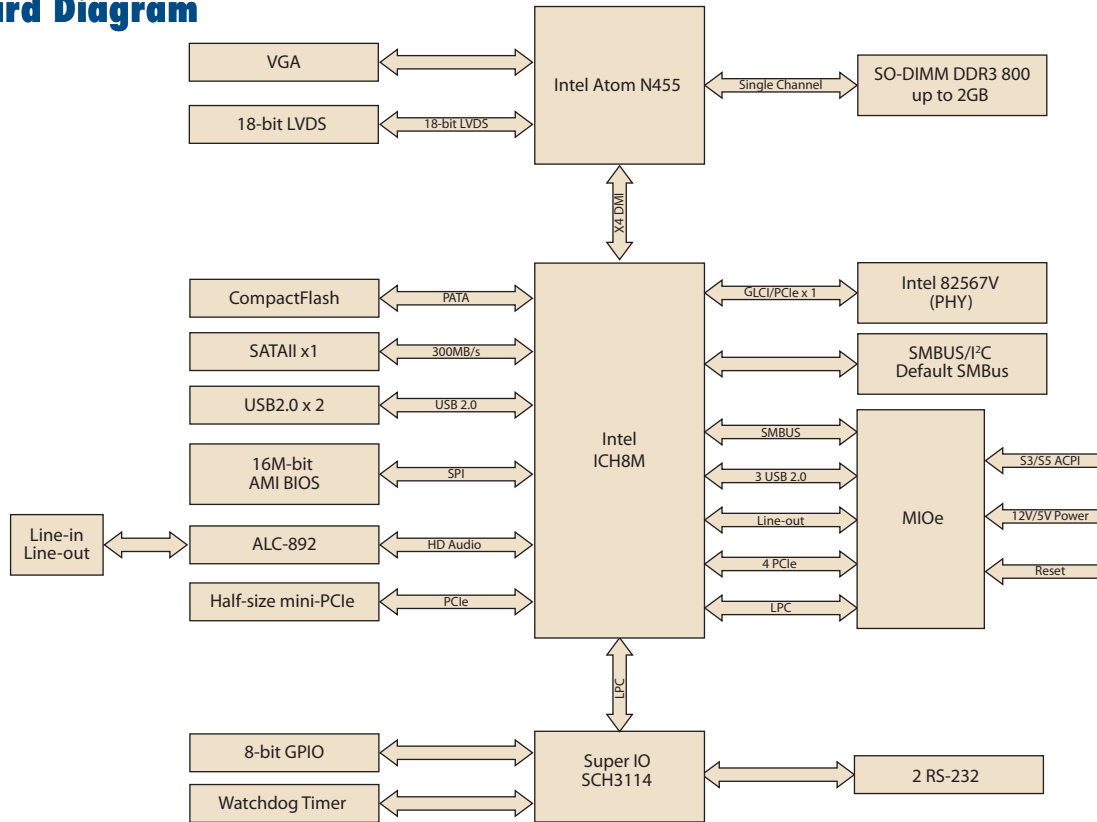
Utilities:

- BIOS flash Monitoring
- Monitoring
- eSOS
- Flash Lock
- Embedded Security ID

Specifications

Processor System	CPU	Intel Atom N455 Single Core 1.66 GHz Processor
	Front Side Bus	667 MHz
	Frequency	1.66 GHz
	L2 Cache	512 KB
	System Chipset	Intel N455 + ICH8M
Memory	BIOS	AMI 16 Mbit Flash BIOS
	Technology	DDR3 800 MHz
	Max. Capacity	2GB
Display	Socket	1 x 204-pin SODIMM
	Chipset	Intel Atom Processor N455 1.66GHz
	VRAM	Optimized Shared Memory Architecture up to 224 MB system memory
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW Embedded Gen3.5+ GFX Core
	LVDS	LVDS: Single channel 18-bit LVDS up to WXGA 1366 x 768
	VGA	Intel Atom N455 Single Core up to 1400 x 1050 (SXGA)
Ethernet	Dual Display	VGA+LVDS
	Speed	10/100/1000 Mbps (Supports Wake on LAN)
	Controller	GbE1 Intel 82567V
Audio	Connector	RJ45
	Chipset	Realtek ALC892 High Definition Audio (HD), Line-in, Line out
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	Compact Flash	Supports CompactFlash Card TYPE II (Primary Master IDE Channel)
	SATA	1 SATA II (Max. Data Transfer Rate 300 MB/s)
Rear I/O	Serial	-
	Ethernet	1 (10/100/1000Mbps)
	VGA	1
	USB	2
	DC Power Jack	1 (support by request)
Internal I/O	Serial	2 x RS-232 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	I ² C	1 (Share SMBus pin , support by request)
	SMBUS	1
	GPIO	8-bit GPIO
Expansion	Mini PCI Express	1 (half size)
	MIOe	1 (SMBus, 3 x USB2.0, 4 x PCIe, line out, LPC, 5V/12V power, ACPI S3/S5)
Power	Power Type	AT (Supports DC power hot plug design)
	Power Supply Voltage	Support single 12V input (12V+/- 10%)
	Total peripheral power supply output	5V@3A for all devices , 12V@1A for MIOe
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
	Power Management	APM, ACPI
Environment	Battery	Lithium 3 V/210 mAh
	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing
	Dimensions (L x W)	100 x 72 mm (3.9" x 2.8")
	Total Height	30.5 mm
Weight	0.85 kg (1.87 lb), weight of total package	

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	LVDS	VGA	GbE	Audio	RS-232	USB 2.0	SATAII	GPIO	CF	MIOe	mini PCIe	DC power jack	Thermal Solution	Operational Temp.
MIO-2260NF-S6A1E	Intel Atom N455 1.66 GHz	512 KB	18-bit	Yes	1	Yes	2	2	1	8-bit	1	1	1 (half size)	-	Passive	0 ~ 60° C
MIO-2260NL-S0A1E	Intel Atom N455 1.0 GHz (by adjusting BIOS)	512 KB	18-bit	Yes	1	Yes	2	2	1	8-bit	1	-	-	-	Passive	0 ~ 60° C

Packing List

Part No.	Description	Quantity
	MIO-2260 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	
1700008941	SATA Cable w/lock 30 cm	1
1703150102	SATA 10 cm Power cable	1
1701200220	RS-232 x 2 ports 2.0mm pitch 22cm	1
1700019156	Audio cable 2.0mm pitch 20cm (line in & line out)	1
TBD	passive heatsink	

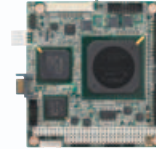
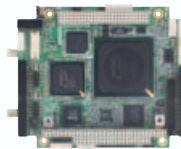
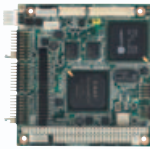
Optional Accessories

Part No.	Description
TBD	Heat spreader

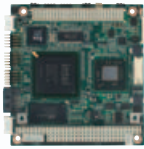
Embedded OS/API

Embedded OS/API	Part No.	Description
Win XPE	2070010314	XPE WES2009 V4.0 24MUI
	2070010313	XPE WES2009 V4.0 ENG
WinCE	2070010331	CE6.0 R3 Pro V6.0.0 ENG (3COM)
WES 7	2070009835	Image WES7E Intel Lunar V5.0 ENG
QNX		V6.5/ 6.4/ 6.3
Vxwork		V6.8
Linux		Ubuntu V10.04
Software API		SUSI V3.0

PC/104 CPU Modules



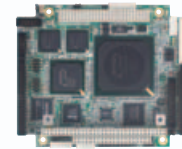
Module Name		PCM-3343	PCM-3353	PCM-3355
Module Type		PC/104 CPU Module	PC/104-Plus CPU Module	PC/104 CPU Module
Processor System	CPU	DM&P Vortex86DX 1.0 GHz, supports Floating point unit (FPU)	AMD Geode LX800, 500 MHz / AMD Geode LX600, 366 MHz	AMD Geode LX800, 500 MHz / AMD Geode LX600, 366 MHz
	Frequency	1.0 GHz	500 MHz	500 MHz/366 MHz
	L2 Cache	256 KB	128 KB	128 KB
	System Chipset	DM&P Vortex86DX- 1.0 GHz	AMD CS5536	AMD CS5536
Memory	BIOS	Award integrated 16 Mbit ROM in SOC	Award 4-Mbit	Award 4-Mbit
	Technology	DDR2 333 MHz SDRAM on-board	DDR 333/400 MHz	DDR 333/400 MHz
	Max. Capacity	512 MB	1 GB	1 GB
	Socket	-	1 x 200-pin SODIMM	1 x 200-pin SO-DIMM
Display	Onboard Memory	256 MB	-	-
	Chipset	SMI SM712	AMD Geode LX800	AMD Geode LX800/LX600
	VRAM	4 MB internal memory	Optimized Shared Memory Architecture up to 64 MB system memory	Optimized shared memory Architecture up to 64 MB system memory
	Graphics Engine	62.5 MHz single clock/cycle engine (EM+) 86 MHz single clock/cycle engine (EM4+) Designed to accelerate DirectDraw	-	-
	LVDS	Supports up to 1024 x 768 @ 24-bit LVDS LCD Panel	Supports up to 1600 x 1200 x 32 bpp at 60 Hz 18-bit LVDS Panel	-
	CRT	Supports up to 1024 x 768 @85Hz	Supports up to 1920x1440x32 bpp at 85 Hz Supports up to 1600x1200x32 bpp at 100 Hz	Supports up to 1920x1440x32 bpp at 85 Hz; Supports up to 1600x1200x32 bpp at 100 Hz
	TTL LCD	Supports up to 1024 x 768 @ 24-bit TFT LCD Panel	Supports up to 1600 x 1200 x 32 bpp at 60 Hz for 24-bit TFT	Supports up to 1600x1200x32 bpp at 60 Hz for 24-bit TFT
Ethernet	Dual Display	CRT+TTL, CRT+LVDS	CRT+TTL, CRT+LVDS	CRT+TTL
	Speed	10/100 Mbps	10/100 Mbps	10/100 Mbps
	Controller	FE1: Vortex86DX SOC integrated FE2: LAN RTL8100C-LF	Intel 82541PI	Intel 82551QM
Audio	Connector	Pin header	Box header	Box header
	Chipset	-	Realtek ALC203	-
Watchdog Timer		System reset; Software programmable from 30.5µ seconds to 512 sec. x 2 sets	Output System Reset; Programmable counter from 1 ~ 255 minutes/ seconds	Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	CompactFlash socket (Type I/II), shared with primary PATA	CompactFlash socket (Type I)	CompactFlash socket (Type I)
	SATA	-	-	1 (Transfer from PATA)
	PATA	1	1	-
	Floppy	-	1	1 (share with LPT)
	SPI Flash	Optional onboard 4 MB SPI Flash Disk (Support by request)	-	-
Internal I/O	On-board Flash	-	-	-
	USB	4 x USB 2.0	4 x USB 2.0	2 x USB 2.0
	Serial	3 RS-232, 1 RS-232/422/485	3 RS-232, 1 RS-232/422/485	2 RS-232, 1 RS-422/485
	Parallel(LPT)	-	1	1
	Keyboard/Mouse	1	1	1
	GPIO	16-bit GPIO	8-bit GPIO	-
	I ² C	1	-	-
Expansion	SMBus	-	1	1
	PC/104 / PCI-104 / PC/104-Plus	PC/104	PC/104-Plus	PC/104
Power	Power Type	AT	AT	AT
	Power Supply Voltage	5V only to boot up (12 V is optional for LCD inverter and add on card)	5V only to boot up (12 V is optional for LCD inverter and add on card)	5V only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption (Typical)	0.74 A @ +5 V	1.35 A @ +5V, 0.1 A @ +12V	1.45 A @ +5 V, 2 mA @ +12V
	Power Consumption (Max, test in HCT)	0.85 A @ +5 V	1.51 A @ +5V, 0.1 A @ +12 V	1.74 A @ +5V, 0.1 A @ +12 V
	Power Management	APM 1.2	APM1.2	APM1.2
Environment	Battery	Lithium 3 V/210 mAh	Lithium 3 V/210 mAh	Lithium 3 V / 210 mAh
	Operational	0 ~ 60° C (32 ~ 140° F) (operational humidity: 40° C @ 85% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (operational humidity: 40° C @ 85% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")	96 x 115 mm (3.8" x 4.5")	96 x 90 mm (3.8" x 3.5")
	Weight	0.097 kg (0.214 lb)	0.162 kg (0.357 lb) (with heat-sink)	0.097 kg (0.214lb)
Reference Page		3-2	3-4	3-6



NEW



NEW

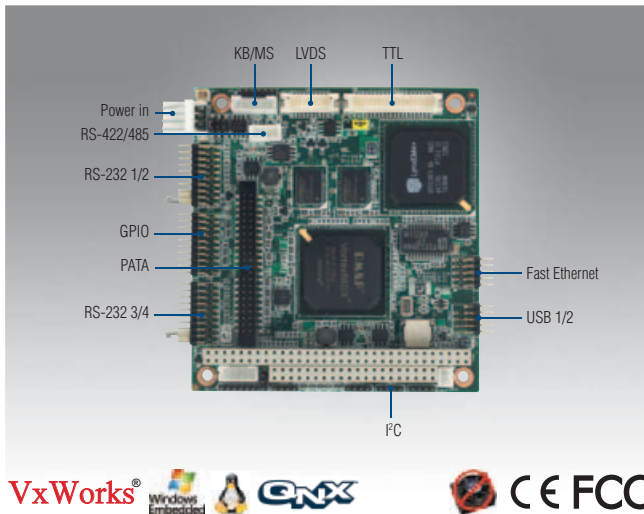


PCM-3362	PCM-3363	PCM-3364	PCM-4153
PC/104-Plus CPU Module	PCI-104 CPU Module	PCI-104 CPU Module	PC/104-Plus CPU Module
Intel Atom N450 1.66 GHz	Intel Atom N455 1.66 GHz Intel Atom D525 1.8 GHz	Intel E620 600 MHz/ E640 1.0 GHz/ E660 1.3 GHz	AMD Geode LX800, 500 MHz
1.66 GHz	1.66 GHz / 1.8 GHz	0.6 GHz/1.0 GHz/1.3 GHz	500 MHz
512 KB	512 KB / 1 MB	512 KB	128 KB
ICH8M	ICH8M	Intel Platform Controller Hub EG20T	AMD CS5536
AMI 16-Mbit	AMI 16-Mbit	AMI EFI 16-Mbit	Award 4-Mbit
DDR2 667 MHz	DDR3 800 MHz	DDR2 800 MHz	DDR 333/400 MHz
2 GB	1 GB	1 GB	512 MB
1 x 200-pin SODIMM	-	-	-
-	1 GB	512 MB / 1GB	512 MB
Intel Atom N450 1.66 GHz	Intel Atom N455 / D525	Intel Atom E6xx series	AMD Geode LX800
Optimized shared memory Architecture up to 224 MB system memory	Optimized shared memory Architecture up to 224 MB system memory	Optimized shared memory architecture up to 64 MB system memory	Optimized Shared Memory Architecture up to 64 MB system memory
Intel Gen 3.5 DX9, MPEG2 Hardware Acceleration, 200 / 400 MHz	Intel Gen 3.5 DX9, MPEG2 Hardware Acceleration, 200 / 400 MHz	Integrated 2D/3D graphics engine up to 400 Hz; Supports OpenGL* ES2.0, OpenVG* 1.0, DirectX9.0c*	-
Single channel 18-bit LVDS up to WXGA 1366 x 768	Single channel 24-bit LVDS up to WXGA 1366 x 768	Single channel 24-bit LVDS up to 1280 x 768 @ 60 Hz.	-
Supports up to SXGA 1400 x 1060 @ 60 Hz	Intel Atom N455 Single Core up to SXGA 1400 x 1050 Intel Atom D525 Dual Core up to 2048 x 1536	Supports up to 1280 x 1024 @ 85 Hz	Supports up to 1920x1440x32 bpp at 85 Hz Supports up to 1600x1200x32 bpp at 100 Hz
-	-	-	Supports up to 1600x1200x32 bpp at 60 Hz for 24-bit TFT
CRT+LVDS	CRT+LVDS	CRT+LVDS	CRT+TTL
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100 Mbps
Intel 82567V	Intel 82567V	Intel 82583V	FE1: Intel 82551ER FE2: Intel 82551ER
Pin header	Locked Box header	Locked Box header	Box header
-	-	Realtek ALC892	Realtek ALC203
Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds
-	CompactFlash socket (Type I/II)	CFast socket	-
1	1	1	-
-	-	-	1
-	-	-	1
-	-	-	-
2 GB (up to 4 GB)	-	-	1 GB (up to 4 GB)
4 x USB 2.0	4 x USB 2.0	2 x USB 2.0 host, 1 x USB client	4 x USB 2.0
2 RS-232, 1 RS-422/485	2 RS-232, 1 RS-422/485	2 RS-232, 1 RS-422/485	3 RS-232, 1 RS-232/422/485
-	1	-	1
1	1	1	1
8-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO
1	-	1	-
1	1	1	-
PC/104-Plus	PCI-104	PCI-104	PC/104-Plus
AT/ATX	AT	AT	AT
5V only to boot up (12 V is optional for LCD inverter and add on card)	5V only to boot up (12 V is optional for LCD inverter and add on card)	5V only to boot up (12 V is optional for LCD inverter and add on card)	5V only to boot up (12 V is optional for LCD inverter and add on card)
2 A @ +5 V, 5 mA @ +12V	N455: 1.404 A @ +5V D525: 1.85 A @ +5V	TBD	1.35 A @ +5 V, 0.1 A @ +12V
2.37 A @ +5V, 7 mA @ +12 V	N455: 2.365 A @ +5V D525: 2.695 A @ +5V	TBD	1.51 A @ +5V, 0.1 A @ +12 V
APM1.2/ACPI2.0	APM1.2/ACPI2.0	APM1.2/ACPI2.0	APM1.2
Lithium 3 V / 210 mAh	Lithium 3 V / 210 mAh	Lithium 3 V / 610 mAh	Lithium 3 V / 210 mAh
0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	96 x 115 mm (3.8" x 4.5")
0.162 kg (0.357 lb) (with heat-sink)	0.162 kg (0.357 lb) (with heat-sink)	0.162 kg (0.357 lb) (with heat-sink)	0.162 kg (0.357 lb) (with heat-sink)
3-8	3-10	3-12	3-14

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PCM-3343

DM&P Vortex86DX-1 GHz PC/104 SBC,
LCD, Ethernet, CFC, Onboard Memory



Features

- Ultra low power, fanless DM&P Vortex86DX- 1 GHz and 256 MB onboard DDR2 memory
- CRT+LCD dual display outputs, 24-bit LVDS/TTL supported
- Integrated Floating-point Unit
- Supports 2 Fast Ethernet ports in standard PC/104 96 x 90 mm dimensions
- Supports Embedded Software APIs and Utilities

Software APIs:

- Watchdog
- I²C
- Brightness
- GPIO
- Backlight On/Off

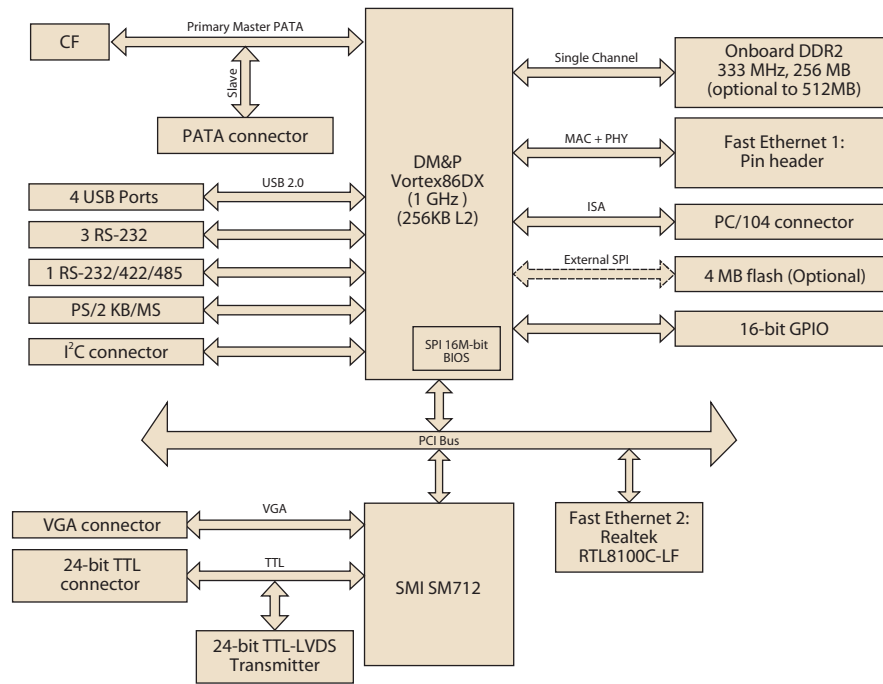
Utilities:

- BIOS flash
- eSOS
- Flash Lock
- Embedded Security ID

Specifications

Processor System	CPU	DM&P Vortex86DX 1.0 GHz, supports Floating Point Unit (FPU)
	Frequency	1.0 GHz
	L2 Cache	256 KB
	System Chipset	DM&P Vortex86DX- 1 GHz
	BIOS	Award integrated 16 Mbit ROM in SOC
Memory	Technology	DDR2 333 MHz SDRAM on board
	Max. Capacity	512 MB
	Onboard Memory	Onboard 256 MB (512 MB supported by request)
Display	Chipset	SMI SM712
	VRAM	4 MB internal memory
	Graphics Engine	62.5 MHz single clock/cycle engine (EM+) 86 MHz single clock/cycle engine (EM4+) Designed to accelerate DirectDraw
	LVDS	Supports up to 1024 x 768 @ 24-bit LVDS single channel LCD Panel
	CRT	Supports up to 1024 x 768 @ 85 Hz
	TTL LCD	Supports up to 1024 x 768 @ 24 bit single channel TFT LCD Panel
	Dual Display	CRT+TTL, CRT+LVDS
Ethernet	Speed	10/100 Mbps
	Controller	Fast Ethernet1: Vortex86DX SOC integrated Fast Ethernet2: Realtek RTL8100C-LF
	Connector	Pin Header
Watchdog Timer		System reset Software programmable counter from 30.5µ sec. to 512 sec. x 2 sets
Storage	CompactFlash	CompactFlash socket (Type I/II), shared with primary master PATA
	PATA	1 Channel
	SPI Flash	Optional onboard 4 MB SPI Flash Disk (Support by request for boot device or storage on DOS OS)
Internal I/O	USB	4 x USB 2.0
	Serial	3 RS-232 from COM1/3/4, 1 RS-232/422/485 from COM2 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Keyboard/Mouse	1
	GPIO	16-bit general purpose input/output
	I²C	1
Expansion	PC/104 Slot	1
Power	Power Type	AT
	Power Supply Voltage	5V ± 5% only to boot up (12 V is optional for LCD inverter and add-on card)
	Power Consumption (Typical: Idle in WinXPe)	0.74 @ +5 V (Vortex86DX 1 GHz, DDR2 667 256 MB)
	Power Consumption (Max, test in passmark burn-in program)	0.85 A @ +5 V (Vortex86DX 1 GHz, DDR2 667 256 MB)
	Battery	3 V/210 mAH
Power Management	Power Management	APM 1.2
	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
Environment	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.097 kg (0.214 lb)
	Height	Top Side: 8.6 mm; Bottom Side: 10.6 mm

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBK/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Model	CPU	L2 Cache	Memory	CRT	LVDS	TTL	Fast Ethernet	USB 2.0	RS-232	RS-232/422/485	PATA	KB/MS	Thermal solution	Expansion	Operational Temp
PCM-3343L-256A1E	DM&P Vortex86DX 1 GHz	256 KB	Onboard 256 MB	-	-	-	1	2	1	1	1	Yes	Passive	PC/104	0 ~ 60° C
PCM-3343F-256A1E	DM&P Vortex86DX 1 GHz	256 KB	Onboard 256 MB	Yes	Yes	1	2	4	3	1	1	Yes	Passive	PC/104	0 ~ 60° C
PCM-3343Z-256A1E	DM&P Vortex86DX 800 MHz	256 KB	Onboard 256 MB	Yes	Yes	1	2	4	3	1	1	Yes	Passive	PC/104	-20 ~ 80° C
PCM-3343Z2-256A1E	DM&P Vortex86DX 800 MHz	256 KB	Onboard 256 MB	Yes	Yes	1	2	4	3	1	1	Yes	Passive	PC/104	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-3343 SBC	
	Startup Manual	
	Utility CD	
1700060202	Cable 6P-6P-6P PS/2 KB & MOUSE 20 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1703100260	USB cable 2 port 2.0 mm pitch w/ bracket 26 cm	1
1701200220	RS-232 x 2 ports 2.0mm pitch 22 cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1700000898	VGA cable D-SUB 15P(F)/12P-1.25 mm 15 cm	1
1700017863	LAN cable RJ45/2 x 5P-2.0 15 cm	1
9660104000	PC/104 screw and copper post package	1
1960047356N001	Heatsink for DMP Vortex86DX (27 x 27 x 6.3 mm)	1

Optional Accessories

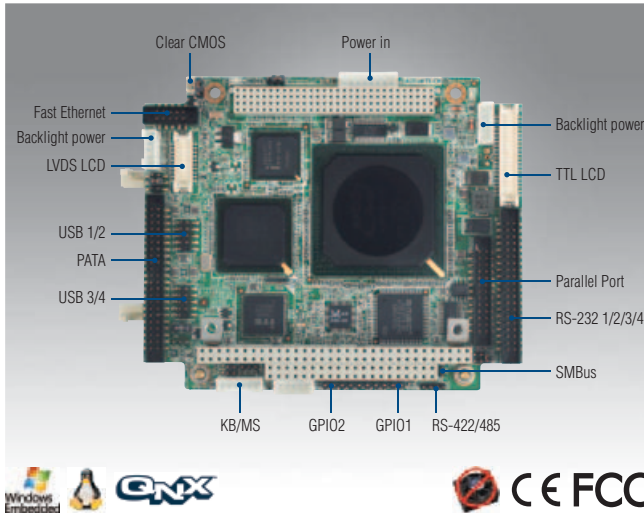
Part No.	Description
1701440350	PATA cable 44P/44P/44P 35 cm

Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070009763	CE 5.0 Pro PCM-3343 V1.3 ENG
	2070009536	CE 6.0 Pro PCM-3343 V1.3 ENG
	2070009528	XPE WES2009 Vortex86DX V4.0 ENG
Win XPE	2070009529	XPE WES2009 Vortex86DX V4.0 MUI24
		6.4.1
Linux		Ubuntu 10.04.1/ 9.04
VxWorks		5.5
Software API	205E343000	SUSI 3.0 SW API for PCM-3343 B:20091209 XP

PCM-3353

AMD LX800/LX600 PC/104-Plus SBC, CRT, LVDS, TTL, Ethernet, USB, COM, CFC



Features

- AMD low power LX800 500 MHz/LX600 366 MHz processor
- 24-bit TFT LCD interface, 18/ 24-bit (JEIDA format) LVDS display
- PC/104-plus Expansion
- Supports up to 4 COM ports, 4 USB ports
- Supports Embedded Software API and Utility

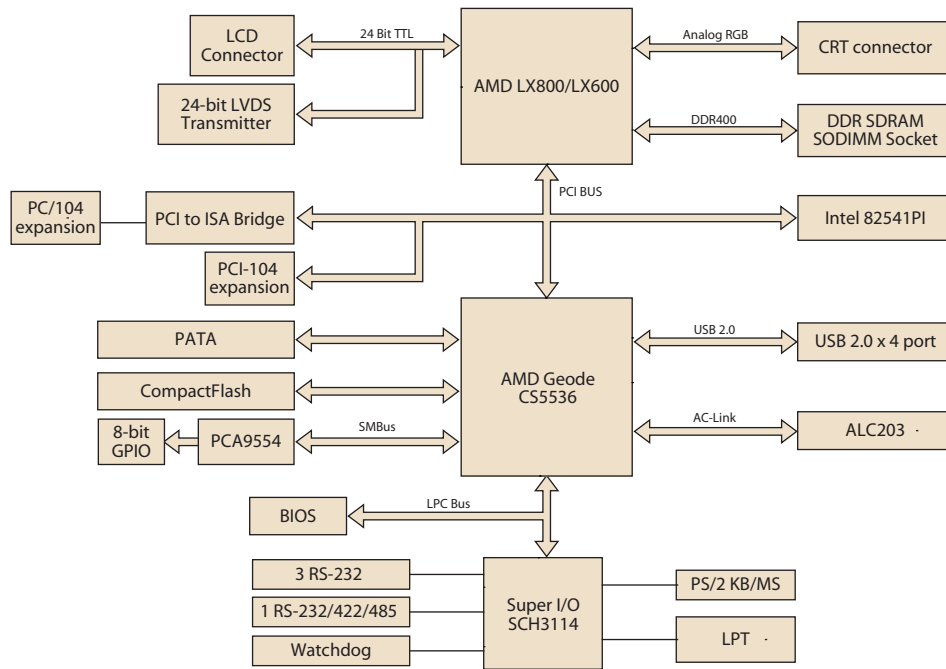
Software APIs:

Utilities:

Specifications

Processor System	CPU	AMD Geode™ LX800 500 MHz/AMD Geode™ LX600 366 MHz
	Frequency	500 MHz / 366 MHz
	L2 Cache	128 KB
	System Chipset	AMD CS5536
	BIOS	Award 4-Mbit
Memory	Technology	DDR 333/400 MHz
	Max. Capacity	1 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	AMD Geode LX800 / LX600
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory
	LVDS	Supports up to 1600 x 1200 x 32 bpp at 60 Hz 18/ 24-bit (JEIDA format) single channel LVDS Panel
	CRT	Supports up to 1920 x 1440 x 32 bpp at 85 Hz Supports up to 1600 x 1200 x 32 bpp at 100 Hz
	TTL LCD	Supports up to 1600 x 1200 x 32 bpp at 60 Hz for 24-bit single channel TFT Panel
Ethernet	Dual Display	CRT+TTL, CRT+LVDS
	Speed	10/100/1000 Mbps
	Controller	Intel 82541PI
Audio	Connector	Box Header
Watchdog Timer	Chipset	Realtek ALC203
Storage		Output System Reset Programmable counter from 1 ~ 255 minutes/ seconds
	CompactFlash	Compact Flash socket (Type I)
Internal I/O	PATA	1 Channel
	USB	4 x USB 2.0
	Serial	3 RS-232 from COM1/3/4, 1 RS-232/422/485 from COM2 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Parallel (LPT)	1, IEEE 1284, EPP, and ECP compatible
	SMBus	1
	Keyboard/Mouse	1
Expansion	GPIO	8-bit general purpose input/output
	PC/104-Plus slot	1
Power	Power Type	AT
	Power Supply Voltage	5V ± 5% only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption (Typical)	LX800: 1.35 A @ +5 V, 0.1 A @ +12 V
	Power Consumption (Max, test in HCT)	LX800: 1.51 A @ +5 V, 0.1 A @ +12 V
	Power Management	APM1.2
	Battery	Lithium 3 V / 196 mAH
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	96 x 115 mm (3.8" x 4.5")
	Weight	0.162 kg (0.357 lb) (with heat-sink)
	Height	Top Side: 11.45 mm; Bottom Side: 10.6 mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	Memory	CRT	LVDS	TTL	GbE	USB 2.0	RS-232	RS-232/422/485	LPT/FDD	Audio	Expansion	Thermal Solution	Operational Temp.
PCM-3353F-LOA2E	AMD LX800	SODIMM	Yes	18/24-bit	24-bit	1	4	3	1	Yes	Yes	PC/104+	Passive	0 ~ 60° C
PCM-3353F-JOA2E	AMD LX600	SODIMM	Yes	18/24-bit	24-bit	1	4	3	1	Yes	Yes	PC/104+	Passive	0 ~ 60° C
PCM-3353Z-512A2E	AMD LX800	512 MB Bundle	Yes	18/24-bit	24-bit	1	4	3	1	Yes	Yes	PC/104+	Passive	-20 ~ 80° C
PCM-3353Z2-512A2E	AMD LX800	512 MB Bundle	Yes	18/24-bit	24-bit	1	4	3	1	Yes	Yes	PC/104+	Passive	-40 ~ 85° C

Note: Wide temperature range version has been bundled with industrial grade memory module

Packing List

Part No.	Description	Quantity
	PCM-3353 SBC	
	Startup Manual	
	Utility CD	
1700000898	VGA cable D-SUB 15P(F)/12P-1.25 mm 15 cm	1
1700000918	Audio cable 10 cm	1
1700003491	AT power cable 1 x 8P-2.0/B4P-5.08 x 2 15 cm	1
1700060202	Cable 6P-6P PS/2 KB & Mouse 20 cm	1
1700260250	LPT Port cable 25P to 26P 2.0 mm 25 cm	1
1701100202	LAN Flat Cable IDC10P 2.0 mm/RJ-45 20 cm	1
1701400181	COM 4 ports Flat Cable 18 cm IDC40P 2.0 mm	1
1701440350	IDE cable 44P/44P/44P 35CM	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1703100121	USB 2Ports cable 10P 12 cm IDC 2.0 mm	1
9660104000	PC/104 screw and copper post package	1
1960005764	Heatsink for PCM-3353 (80.44 x 77.97 x 7.82 mm)	1

Optional Accessories

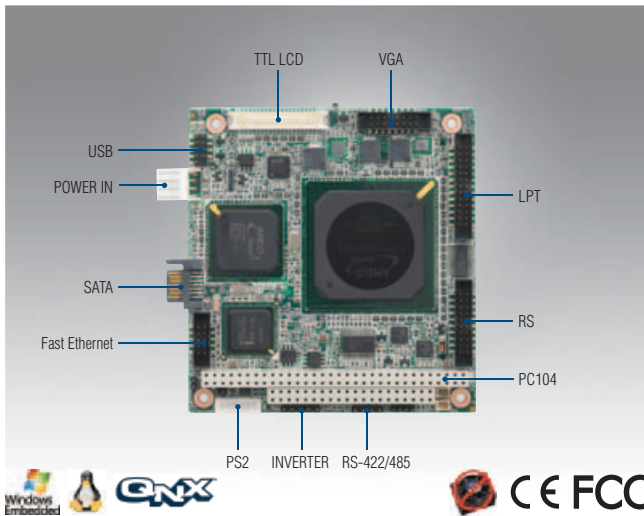
Part No.	Description
1653130421	PCI-104 connector 120pin (Long pin)
165313222B	PC/104 connector 64-pin (Long pin)
165312022B	PC/104 connector 40-pin (Long pin)
1960037701N000	CF retainer for anti-vibration

Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070000729	Image PCM-3353 CE 5.0 Pro Plus Eng
	2070001612	CE6.0 Pro GX3 4 COM V1.0 ENG
	2070005769	CE6.0 Pro GX3 2 COM V1.1 JPN
Win XPE	2070009905	Image XPE WES2009 PCM-3353 A2 V4.0 ENG
	2070009906	Image XPE WES2009 PCM-3353 A2 V4.0 24MUI V6.4.1/6.3.2
Linux		Ubuntu V9.10
Software API	205E000019	SUSI 3.0 SW API for ESBC B: 20091116 XP

PCM-3355

AMD LX800/LX600 PC/104 SBC,
CRT, TTL, Ethernet, USB, COM, CFC



Features

- AMD low power LX800/500 MHz and LX600/366 MHz Processor
- 24-bit TFT LCD interface
- Supports compact size 96 x 90 mm PC/104 standard dimension
- Supports two RS-232, one RS-422/485, and two USB 2.0 ports
- Supports Embedded Software API and Utility

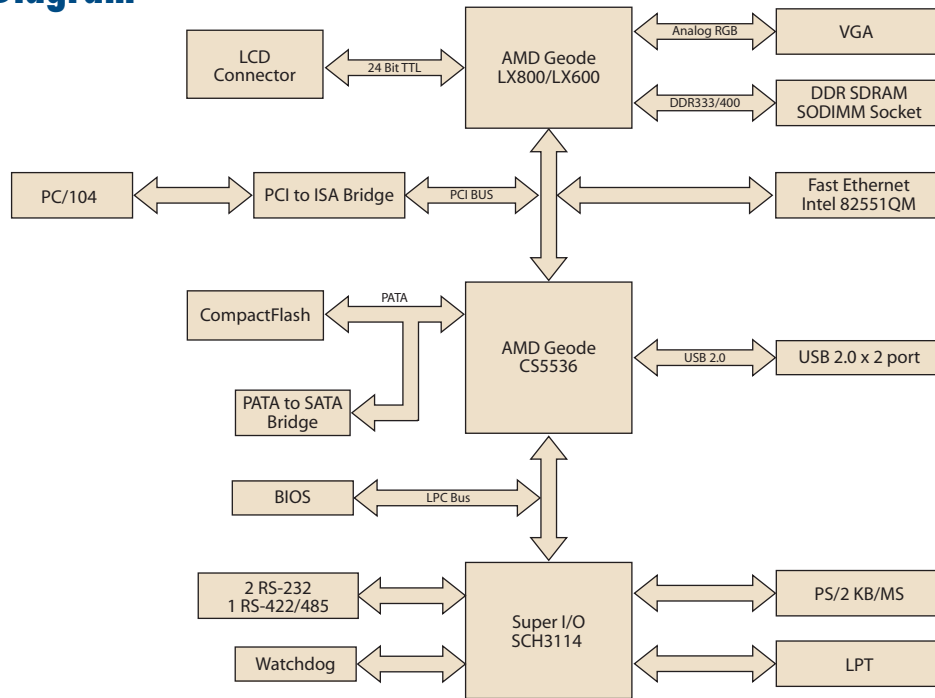
Software APIs: Watchdog, SMBus, Brightness, H/W Monitor, Backlight On/Off

Utilities: BIOS flash, Monitoring

Specifications

Processor System	CPU	AMD Geode™ LX800, 500 MHz/AMD Geode™ LX600, 366 MHz
	Frequency	500 MHz/ 366 MHz
	L2 Cache	128 KB
	System Chipset	AMD CS5536
	BIOS	Award 4-Mbit
Memory	Technology	DDR 333/400 MHz
	Max. Capacity	1 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	AMD Geode LX800/LX600
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory
	CRT	Supports up to 1920 x 1440 x 32 bpp at 85 Hz Supports up to 1600 x 1200 x 32 bpp at 100 Hz
	TTL LCD	Supports up to 1600 x 1200 x 32 bpp at 60 Hz for 24-bit single channel TFT
	Dual Display	CRT+TTL
Ethernet	Speed	10/100 Mbps
	Controller	Intel 82551QM
	Connector	Box Header
Watchdog Timer		Output System Reset Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	Compact Flash socket (Type I)
	SATA	1 SATA, up to 1.5 Gb/s (150 MB/s) (Transfer from PATA)
	Floppy	1 82077AA compatible
Internal I/O	USB	2 x USB 2.0
	Serial	2 RS-232 from COM1/2, 1 RS-422/485 from COM3 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Parallel (LPT)	1, IEEE 1284, EPP, and ECP compatible
	SMBus	1
	Keyboard/Mouse	1
Expansion	PC/104 slot	1
Power	Power Type	AT
	Power Supply Voltage	± 5% only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption (Typical)	LX800: 1.45 A @ +5 V, 2 mA @ +12 V
	Power Consumption (Max, test in HCT)	LX800: 1.74 A @ +5 V, 0.1 A @ +12 V
	Power Management	ACPI/ APM1.2
	Battery	Lithium 3 V/210 mAh
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.097 kg (0.214 lb)
	Height	Top Side: 8.7 mm; Bottom Side: 10.6 mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/EBX/5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	Memory	TTL	SATA	Fast Ethernet	USB2.0	RS-232	RS-422/485	LPT/KB/MS	Expansion	Thermal Solution	Operating Temp.
PCM-3355F-L0A1E	AMD LX800	SODIMM	24-bit	Yes	1	2	2	1	Yes/Yes	PC/104	Passive	0 ~ 60° C
PCM-3355L-J0A1E	AMD LX600	SODIMM	24-bit	No	1	2	2	1	Yes/Yes	PC/104	Passive	0 ~ 60° C
PCM-3355Z-512LA1E	AMD LX800	512 MB bundle	24-bit	Yes	1	2	2	1	Yes/Yes	PC/104	Passive	-20 ~ 80° C
PCM-3355Z2-512LA1E	AMD LX800	512 MB bundle	24-bit	Yes	1	2	2	1	Yes/Yes	PC/104	Passive	-40 ~ 85° C

Note: Wide temp version has bundled with extended temperature grade memory module

Packing List

Part No.	Description	Quantity
	PCM-3355 SBC	
	Startup Manual	
	Utility CD	
1700060202	Cable 6P-6P PS/2 KB & Mouse 20 cm	1
1700260250	LPT Port cable 25P to 26P 2.0 mm 25 cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1703100121	USB 2-Port cable 10P 12 cm IDC 2.0 mm	1
1700008894	SATA data cable 7P 30 cm	1
1703150102	SATA power cable B4P-5.08/SATA 15P 10 cm	1
1701200220	RS-232 x 2 ports 2.0 mm 22 cm	1
1701160150	VGA Cable 15P to 16P 2.0 mm D-SUB 15 cm	1
1700005158	LAN cable RJ45 10P-2.0 mm 12 cm	1
9660104000	PC/104 screw and copper post package	1
1960016313T000	Heatsink for PCM-3355 (LX800/ LX600, 47.1 x 47.1 x 7.5 mm)	1
1960016315T000	Heatsink for PCM-3355 (CS5536, 22.7 x 22.8 x 6.3 mm)	1

Optional Accessories

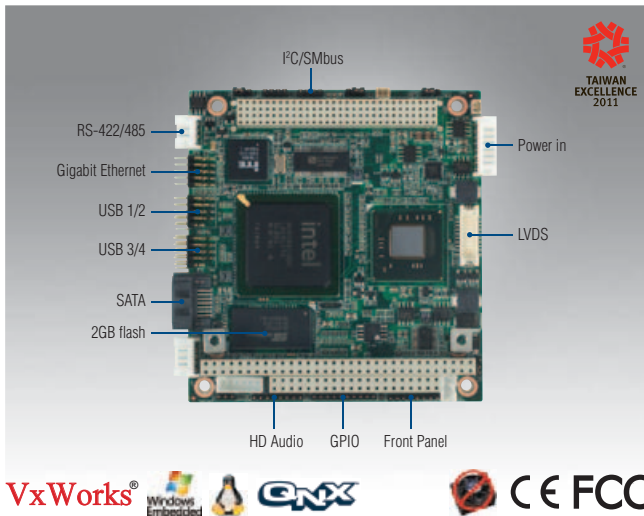
Part No.	Description
165313222B	PC/104 connector 64-pin (Long pin)
165312022B	PC/104 connector 40-pin (Long pin)

Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070007869	Image CE 6.0 Pro PCM-3355 V1.2 ENG
Win XPE	2070007790	XPE WES2009 PCM-3355 Image GX3 V4.0 ENG
	2070007910	XPE WES2009 GX3 LX800 V4.0 MUI24
QNX		V6.3.2/ 6.4.1
Linux		Ubuntu 9.10
Software API	205E000019	SUSI 3.0 SW API for ESBC B: 20091116 XP

PCM-3362

Intel® Atom™ N450 PC/104-Plus SBC, CRT, LVDS, Ethernet, USB, COM, SATA, Onboard Flash



Features

- Intel® Atom™ N450 1.66 GHz Processor and DDR2 667MHz SDRAM up to 2 GB
- Supports extended temperature -40 ~ 85° C
- Standard 96 x 90 mm dimension and PC/104-Plus expansion connector
- Onboard 2 GB flash (4 GB optional)
- Supports embedded software APIs and Utilities

Software APIs:

- Watchdog
- I²C
- Brightness
- H/W Monitor
- GPIO
- Backlight On/Off

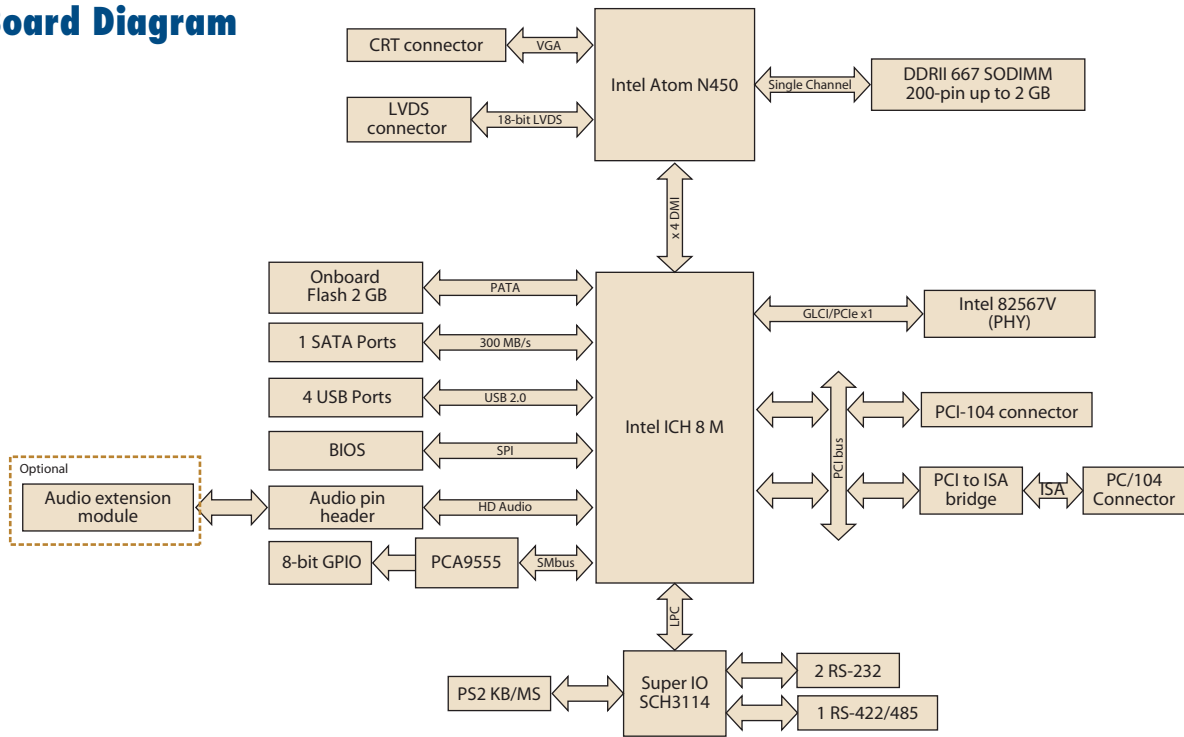
Utilities:

- Monitoring
- eSOS
- Embedded Security ID

Specifications

Processor System	CPU	Intel Atom N450 1.66 GHz
	Front Side Bus	667 MHz
	Frequency	1.66 GHz
	L2 Cache	512 KB
	System Chipset	Intel Atom N450 + ICH8M
	BIOS	AMI 16 Mbit
Memory	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SO-DIMM
Display	Chipset	Intel Atom N450 1.66 GHz
	VRAM	Shared system memory up to 224 MB
	Graphics Engine	Intel Gen 3.5 graphic core, DX9 compliant, MPEG2 Hardware Acceleration
	LVDS	Single channel 18-bit single channel LVDS up to WXGA 1366 x 768
	CRT	Supports up to SXGA 1400 x 1060 @ 60 Hz
Ethernet	Speed	10/100/1000 Mbps
	Controller	ICH8M + Intel 82567V (PHY), support Wake-on-LAN
Watchdog Timer	Connector	Pin Header
		Output System Reset Programmable counter from 1 ~ 255 minutes/ seconds
Storage	SATA	1 SATAII, up to 3.0 GB/s (300 MB/s)
	Onboard Flash	2 GB (Up to 4 GB)
Internal I/O	USB	4 x USB 2.0
	Serial	2 RS-232 from COM1/2, 1 RS-232/422/485 from COM3 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Keyboard/Mouse	1
	GPIO	8-bit general purpose input/output
	I²C	1
	Audio	Intel High Definition audio interface
Expansion	PC/104-Plus slot	1
Power	Power Type	AT/ATX
	Power Supply Voltage	5V ± 5% only to boot up (12 V is optional for LCD inverter and add-on card)
	Power Consumption (Typical)	2A @ +5V, 5 mA @ +12V
	Power Consumption (Max, test in HCT)	2.37A @ +5V, 7 mA @ +12V
	Battery	Lithium 3 V / 210 mAH
Environment	Power Management	ACPI/ APM 1.2
	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.162 kg (0.357 lb) (with heat-sink)
	Height	Top Side: 14.4 mm, 19.4 mm (Z & Z2); Bottom Side: 10.6 mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	Memory	On board flash	CRT	LVDS	Gigabit Ethernet	USB 2.0	RS-232	RS-422/485	Thermal Solution	Operating Temp.
PCM-3362N-S6A1E	Atom N450	SODIMM	2 GB	Yes	18-bit	1	4	2	1	Passive	0 ~ 60° C
PCM-3362N-S6F4A1E	Atom N450	SODIMM	4 GB	Yes	18-bit	1	4	2	1	Passive	0 ~ 60° C
PCM-3362Z-1GS6A1E	Atom N450	1 GB bundle	2 GB	Yes	18-bit	1	4	2	1	Passive	-20 ~ 80° C
PCM-3362Z2-1GS6A1E	Atom N450	1 GB bundle	2 GB	Yes	18-bit	1	4	2	1	Passive	-40 ~ 85° C

Note: Wide temp version has been bundled with extended temperature grade memory module

Packing List

Part No.	Description	Quantity
	PCM-3362 SBC	
	Startup Manual	
	Utility CD	
170000898	VGA cable D-SUB 15P(F)/12P-1.25 mm15 cm	1
170003491	AT power cable 1 x 8P-2.0/B4P-5.08 x 2 15 cm	1
1700060202	Cable 6P-6P-6P PS/2 KB & Mouse 20 cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1700002332	ATX power cable 20P-13P/8P/3P/3P 13 cm	1
1703100260	USB cable 2port 2.0 mm pitch w/ bracket 26 cm	1
1700071000	SATA data cable 7p 100 cm	1
1703150102	SATA power cable B4P-5.08/SATA 15P 10 cm	1
1701200220	RS-232 x 2 ports 2.0 mm 22 cm	1
1700017863	LAN cable RJ-45/2 x 5P-2.0 15 cm	1
9660104000	PC/104 screw and copper post package	1
1960045487T001	Heatsink for PCM-3362 (79.66 x 77.97 x 12.22 mm)	1
1960045487T001	Heatsink for PCM-3362Z series only (79.66 x 77.97 x 17.22 mm)	1

Optional Accessories

Part No.	Description
1960047106T001	Heat spreader (79.66 x 77.98 x 10.32 mm) of PCM-3362
1653130421	PCI-104 connector 120pin (Long pin)
165313222B	PC/104 connector 64-pin (Long pin)
165312022B	PC/104 connector 40-pin (Long pin)
PCA-AUDIO-HDA1E	Audio extension module with bracket
1700018427	Audio cable connecting PCM-3362 and PCA-AUDIO-HDA1E

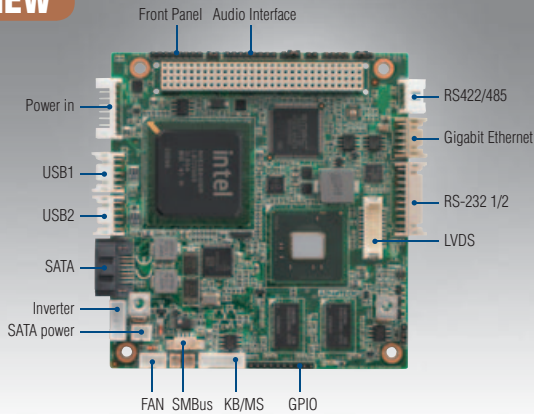
Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070009692	WinCE 6.0 Pro for PCM-3362 V1.3 ENG
Win XPE	2070009030	XPE WES2009 Luna Pier V4.0 ENG
QNX	2070009031	XPE WES2009 Luna Pier V4.0 MUI24 V6.5
Linux		Ubuntu 10.04
VxWorks		V6.8
Software API	205E362000	SUSI 3.0 SW API for PCM-3362 B:20091015 XP

PCM-3363

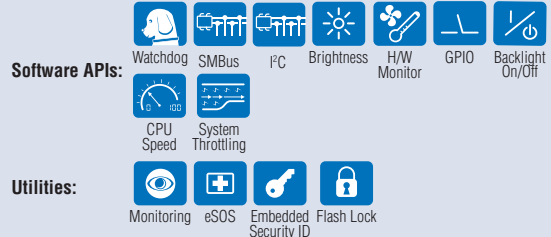
Intel® Atom™ N455/D525 PCI-104
SBC, CRT, LVDS, Ethernet, USB,
COM, SATA, Onboard Memory

NEW



Features

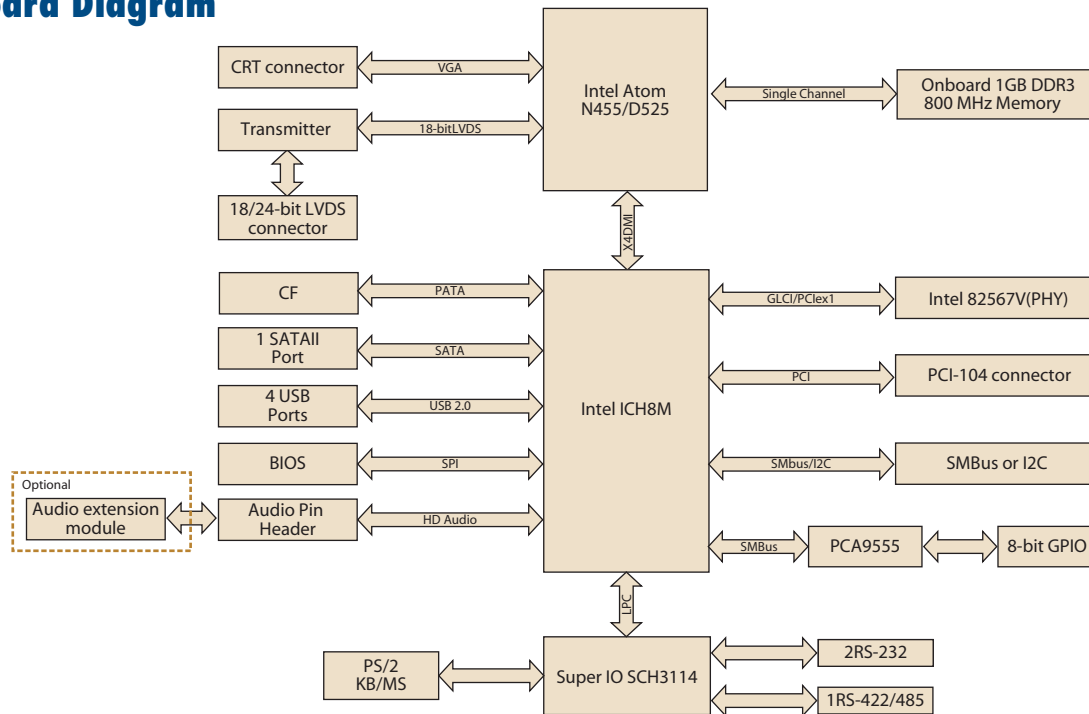
- Intel® Atom N455 1.66 GHz Single Core/D525 Dual Core 1.8 GHz Processor
- Supports extended temperature -40 ~ 85° C
- 24-bit LVDS support and onboard 1 GB DDR3 800 MHz memory
- HALT tested and 100% locked connector
- Supports Lite iManager and embedded software APIs and Utilities



Specifications

Processor System	CPU	Intel Atom N455 Single Core 1.66 GHz Intel Atom D525 Dual Core 1.8 GHz	
	Front Side Bus	667/800 MHz	
	Frequency	1.66 GHz/1.8 GHz	
	L2 Cache	512 KB/1 MB	
	System Chipset	Intel Atom N455/D525 + ICH8M	
	BIOS	AMI 16 Mbit	
Memory	Technology	DDR3 800 MHz	
	Max. Capacity	1 GB	
	On board memory	1GB DDR3 800 MHz Memory	
Display	Chipset	Intel Atom N455/D525	
	VRAM	Shared system memory up to 224 MB	
	Graphics Engine	Intel Atom N455 Single Core:	Gen 3.5 graphic core, DX9 compliant, MPEG2 Hardware Acceleration, 200 MHz
		Intel Atom D525 Dual Core:	Gen 3.5 graphic core, DX9 compliant, MPEG2 Hardware Acceleration, 400 MHz
	LVDS	Single channel 18/24-bit single channel LVDS up to 1366 x 768 (WXGA)	
	VGA	Intel Atom N455 Single Core up to 1400 x 1050(SXGA) Intel Atom D525 Dual Core up to 2048 x 1536	
Dual Display	CRT+LVDS		
Ethernet	Interface	10/100/1000 Mbps	
	Controller	ICH8M + Intel 82567V (PHY), support Wake-on-LAN	
	Connector	Locked Box Header	
WatchDog Timer		Output System Reset, Programmable counter from 1 ~ 255 minutes/ seconds	
Storage	CompactFlash	1 CompactFlash socket (Type I/II)	
	SATA	SATAII, up to 3.0 GB/s (300 MB/s)	
	USB	4 x USB 2.0	
Internal I/O	Serial	2 RS-232 from COM1/2, 1 RS-422/485 from COM3 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)	
	SMBus	1 (allow to configure to I²C by customer's request)	
	Keyboard/Mouse	1	
	GPIO	8-bit general purpose input/output	
	Audio	Intel High Definition audio interface (requires an audio extension module P/N: PCA-AUDIO-HDA1E)	
Expansion	PCI-104 slot	1	
Power	Power Type	AT	
	Power Supply Voltage	5 V ± 5% only to boot up (12 V is optional for LCD inverter and add on card)	
	Power Management	ACPI	
	Power Consumption (Typical)	N455: 1.404A @ +5V; D525: 1.85 A @ +5V	
	Power Consumption (Max, test in HCT)	N455: 2.365A @ +5V; D525: 2.695 A @ +5V	
	Battery	Lithium 3 V / 210 mAh	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing	
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")	
	Weight	0.162 kg (0.357 lb) (with heat-sink)	
	Height	Top Side: 14.4 mm, 19.4 mm (D, Z & Z2); Bottom Side: 10.6 mm	

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	L2 Cache	Memory	CRT	LVDS	GbE	USB 2.0	RS-232	RS-485	Thermal Solution	Operating Temp
PCM-3363N-1GS6A1E	Atom N455 (1.66 GHz)	512 KB	Onboard 1 GB DDR3	1	18/24-bit	1	4	2	1	Passive	0 ~ 60° C
PCM-3363D-1GS8A1E	Atom D525 (1.8 GHz)	1 MB	Onboard 1 GB DDR3	1	18/24-bit	1	4	2	1	Active	0 ~ 60° C
PCM-3363Z-1GS6A1E	Atom N455 (1.66 GHz)	512 KB	Onboard 1 GB DDR3	1	18/24-bit	1	4	2	1	Passive	-20 ~ 80° C
PCM-3363Z2-1GS6A1E	Atom N455 (1.66 GHz)	512 KB	Onboard 1 GB DDR3	1	18/24-bit	1	4	2	1	Passive	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-3363 SBC	
	Startup Manual	
	Utility CD	
1700000898	VGA cable D-SUB 15P(F)/12P-1.25 MM 15 cm	1
1700003491	AT power cable 1*8P-2.0/B4P-5.08*2 15 cm	1
1700060202	Cable 6P-6P-6P PS/2 KB & Mouse 20cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1700019000	USB cable 2-port 2.0 mm pitch w/ bracket 26 cm (w/ locked)	1
1700008941	SATA data cable 7p 32 cm (w/ locked)	1
1703150102	SATA power cable B4P-5.08/SATA 15P 10 cm	1
1700018999	RS232 x2 ports 2.0 mm 22 cm (w/ locked)	1
1700019001	LAN cable RJ-45/2*5P-2.0 15 cm (w/ locked)	1
9660104000	PC/104 screw and copper post package	1
1960051405N001	Heatsink with FAN for PCM-3363D only (79.66 x 77.97 x 17.22 mm)	1
1960051403N001	Heatsink for PCM-3363N only (79.66 x 77.97 x 12.22 mm)	1
1960051404N001	Heatsink for PCM-3363Z series only (79.66 x 77.97 x 17.22 mm)	1

Optional Accessories

Part No.	Description
1960051701N001	Heat spreader (79.66 x 77.98 x 10.32 mm) for PCM-3363
1653130421	PCI-104 connector 120-pin (Long pin)
PCA-AUDIO-HDA1E	Audio Extension module with bracket
1700018427	Audio cable connecting PCM-3363 and PCA-AUDIO-HDA1E
1700018259	SATA power cable for onboard connector (5V only)

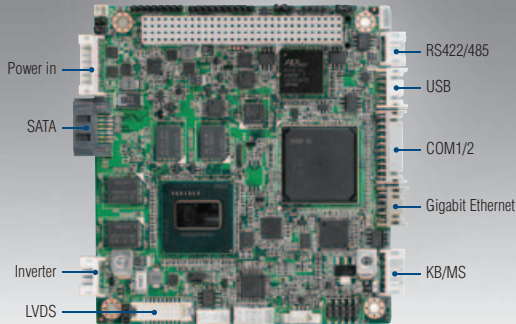
Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE		CE 6.0 R3
Win XPE	2070009030	XPE WES2009 Luna Pier V4.0 ENG
	2070009031	XPE WES2009 Luna Pier V4.0 MUI24
QNX		V6.5
Linux		Ubuntu 10.04
VxWorks		V6.8
Software API		SUSI V3.0

PCM-3364

Intel® Atom™ E6xx series PCI-104 SBC,
LVDS, Ethernet, mini-PCIe, CFast,
CAN-bus, USB Client, Onboard Memory

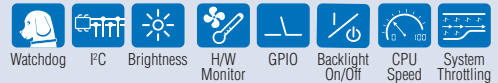
NEW



Features

- Intel® Atom™ E6xx series 0.6 GHz/1.0 GHz/1.3 GHz
- Supports extended temperature -40 ~ 85° C, fanless design
- Supports CAN-bus, protocol version 2.0B active, USB client
- Supports half size mini-PCIe socket and 100% locked connector
- Supports Lite iManager and embedded software API and utility

Software APIs:



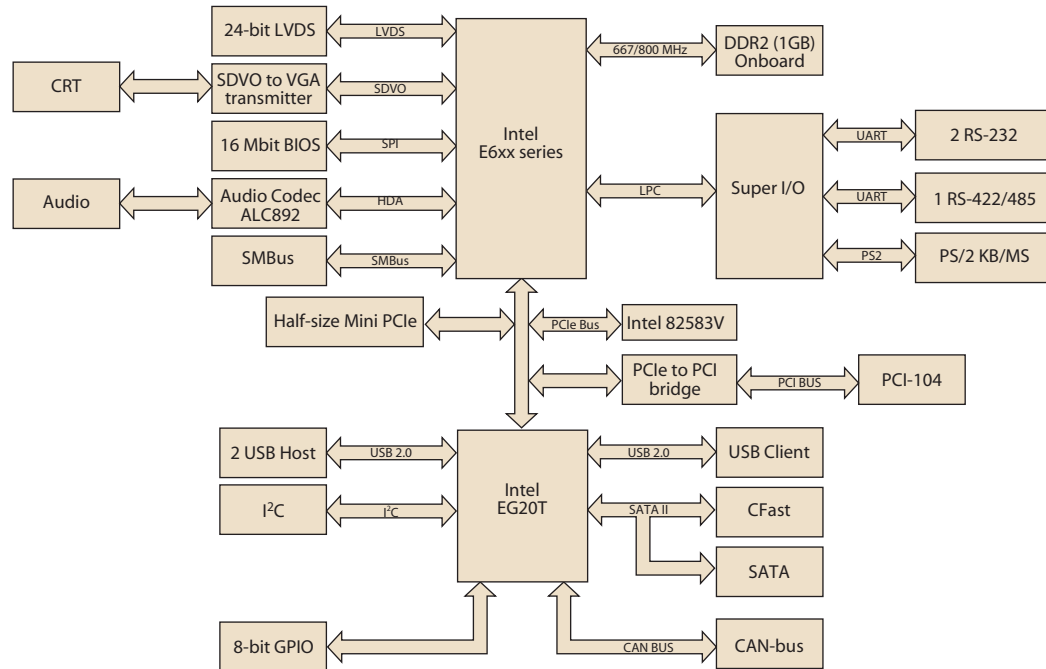
Utilities:



Specifications

Processor System	CPU	Intel E620 600 MHz/ E640 1.0 GHz/ E660 1.3 GHz	
	Frequency	600 MHz/1.0 GHz/1.3 GHz	
	L2 Cache	512 KB	
	System Chipset	Intel Atom E6xx series + Intel Platform Controller Hub EG20T	
	BIOS	AMI EFI 16 Mbit	
Memory	Technology	DDR2 800 MHz SDRAM	
	Max. Capacity	1 GB	
	Onboard memory	Onboard 512 MB/1 GB	
Display	Chipset	Intel Atom E6xx series	
	VRAM	Optimized shared memory architecture up to 64 MB system memory	
	Graphics Engine		Integrated 2D/3D graphics engine up to 400 MHz. Supports OpenGL* ES2.0, OpenVG* 1.0, DirectX9.0c*
			Encode format: MPEG4, H.263, H.264 Decode format: MPEG2, MPEG4, VC1, WMV9, H.264
	LVDS	Supports up to 24-bit single channel LVDS up to 1280 x 768 @ 60 Hz.	
	CRT	Supports up to 1280 x 1024 @ 85 Hz.	
Dual Display	CRT + LVDS		
Ethernet	Interface	10/100/1000Mbps	
	Controller	Intel 82583V, support Wake-on-LAN	
	Connector	Locked box header	
WatchDog Timer		Output System Reset Programmable counter from 1 ~ 255 minutes/ seconds	
Audio	Chipset	Realtek ALC892, High Definition audio (HD), line-in, line out, mic-in	
Storage	CFast	1	
	SATA	1 SATAII, up to 3.0 GB/s (300 MB/s)	
Internal I/O	USB	2 x USB 2.0 host, 1 x USB client	
	Serial	2 RS-232 from COM1/2, 1 RS-422/485 from COM3 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)	
	Keyboard/Mouse	1	
	GPIO	8-bit general purpose input/output	
	I²C	1	
	CAN-bus	Supports CAN Protocol version 2.0B Active	
	SMBus	1	
	Expansion	PCI-104 slot	1
	Mini PCI Express	1 (half-size)	
Power	Power Type	AT	
	Power Supply Voltage	5 V ± 5% only to boot up (12 V is optional for LCD inverter and add on card)	
	Power Consumption (Typical)	TBD	
	Power Consumption (Max, test in HCT)	TBD	
	Power Management	ACPI	
	Battery Lithium	3 V/610 mA	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)	
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")	
	Weight	0.097 kg (0.214lb)	
	Height	Top Side: 14.4 mm, 19.4 mm (Z&Z2) ; Bottom Side: 10.6 mm	

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	Memory	CRT	LVDS	RS-232	RS-422/485	GbE	USB 2.0 Host	USB Client	CAN	SATA	CFast	Audio	mini-PCle	Expansion	Thermal Solution	Operating Temp.
PCM-3364-512M0A1E	Intel Atom E620 600 MHz	512 MB on board	1	24-bit	2	1	1	2	Yes	Yes	1	1	Yes	1	PCI-104	passive	0 – 60° C
PCM-3364-1GS0A1E	Intel Atom E640 1.0 GHz	1 GB on board	1	24-bit	2	1	1	2	Yes	Yes	1	1	Yes	1	PCI-104	passive	0 – 60° C
PCM-3364-1GS3A1E	Intel Atom E660 1.3 GHz	1 GB on board	1	24-bit	2	1	1	2	Yes	Yes	1	1	Yes	1	PCI-104	passive	0 – 60° C
PCM-3364Z2-1GS3A1E	Intel Atom E660T 1.3 GHz	1 GB on board	1	24-bit	2	1	1	2	Yes	Yes	1	1	Yes	1	PCI-104	passive	-40 – 85° C

Packing List

Part No.	Description	Quantity
	PCM-3364 SBC	
	Startup Manual	
	Utility CD	
170000898	VGA cable D-SUB 15P(F)/12P-1.25MM 15 cm	1
1700060202	Cable 6P-6P-6P PS/2 KB & mouse 20cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 cable 6P (MINI-DIN)-6P (wafer 2.0 mm) 6 cm	1
1700019000	USB cable 2port 2.0mm pitch w/ bracket 26 cm (w/ lock)	1
1700008941	SATA data cable 7p 32 cm (w/ lock)	1
1703150102	SATA power cable B4P-5.08/SATA 15P 10 cm	1
1700018999	RS232 x 2 ports 2.0 mm 22 cm (w/ lock)	1
1700019001	LAN cable RJ45/2*5P-2.0 15 cm (w/ lock)	1
9660104000	PC/104 screw and copper post package	1
TBD	Audio cable 10cm (w/ lock)	1
TBD	Heatsink for PCM-3364	1

Optional Accessories

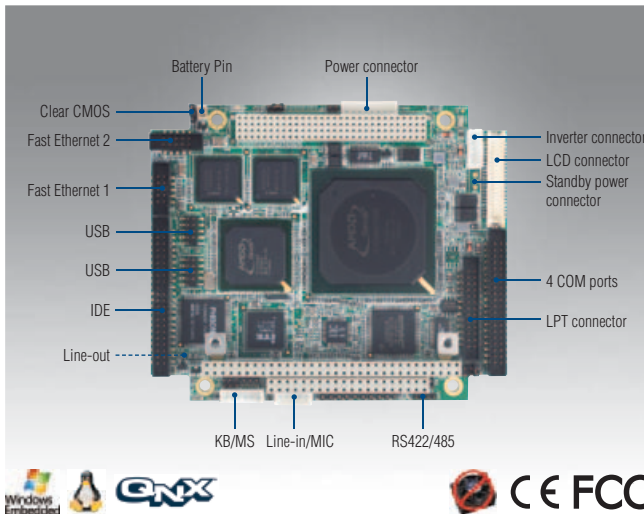
Part No.	Description
TBD	Heat spreader (79.66 x 77.98 x 10.32 mm)
1653130421	PCI-104 connector 120pin (Long pin)

Embedded OS/API

Embedded OS/API	Part No.
WinCE	CE 6.0 R3
Win XPE	XPE WES 2009
WES 7	WES 7
Linux	Ubuntu V10.04
Software API	SUSI V3.0

PCM-4153

AMD LX800 PC/104-Plus SBC, Onboard Memory/Flash, CRT, TTL, Extended Temp. -40 ~ 85° C



Features

- AMD low power LX800 500 MHz processor
- Supports extended temperature range -40 ~ 85° C
- PC/104-plus expansion
- Onboard 1 GB Flash and onboard DDR 333MHz 512 MB memory
- Supports embedded software APIs and utilities

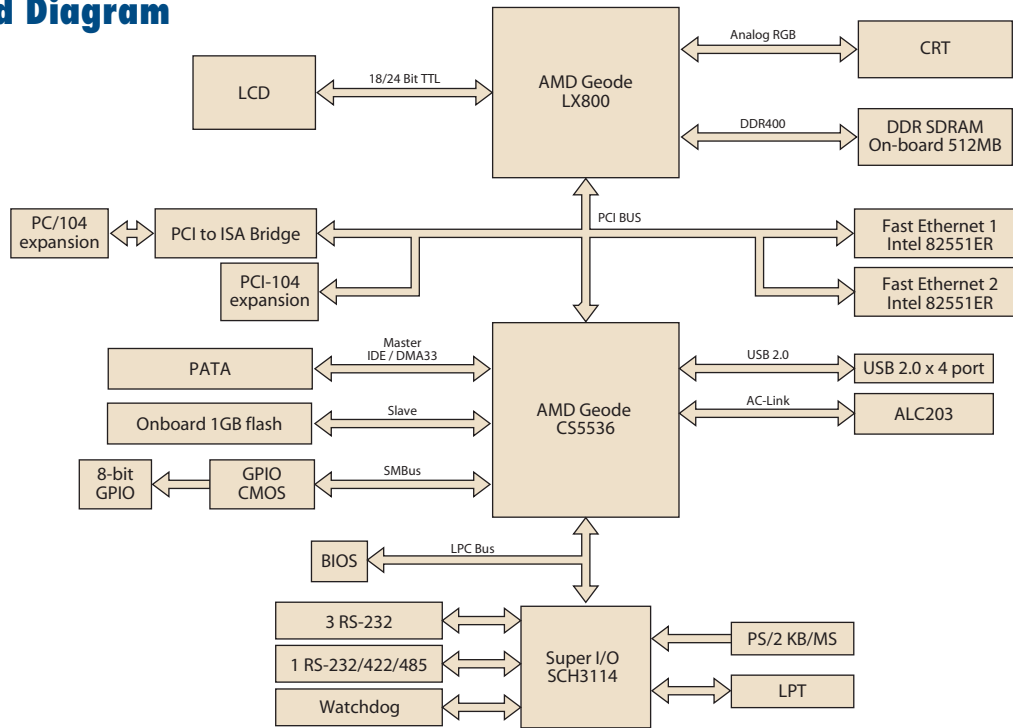
Software APIs:

Utilities:

Specifications

Processor System	CPU	AMD Geode™ LX800, 500 MHz
	Frequency	500 MHz
	L2 Cache	128 KB
	System Chipset	AMD Geode LX800, with AMD CS5536
	BIOS	Award 4-Mbit
Memory	Technology	DDR 333 MHz
	Max. Capacity	512 MB
	Onboard memory	512 MB
Display	Chipset	AMD Geode LX800
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory
	CRT	Supports up to 1920 x 1440 x 32 bpp at 85 Hz Supports up to 1600 x 1200 x 32 bpp at 100 Hz
	TTL LCD	Supports up to 1600 x 1200 x 32 bpp at 60 Hz for 24-bit single channel TFT
	Dual Display	CRT+TTL
Ethernet	Speed	10/100 Mbps
	Controller	Fast Ethernet1: Intel 82551ER Fast Ethernet2: Intel 82551ER
	Connector	Box Header
Audio	Chipset	Realtek ALC203
Watchdog Timer		Output System Reset Programmable counter from 1 ~ 255 minutes/ seconds
Storage	PATA	1 Channel
	Onboard Flash	1 GB (up to 4 GB)
Internal I/O	USB	4 x USB 2.0
	Serial	3 RS-232 from COM1/3/4, 1 RS-232/422/485 from COM2 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Parallel (LPT)	1, IEEE 1284, EPP, and ECP compatible
	SMBus	1
	Keyboard/Mouse	1
	GPIO	8-bit general purpose input/output
Expansion	PC/104-Plus slot	1
Power	Power Type	AT
	Power Supply Voltage	5V ± 5% only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption (Typical)	1.35A @ +5V, 0.1 A @ +12V
	Power Consumption (Max, test in HCT)	1.51A @ +5V, 0.1 A @ +12V
	Power Management	ACPI/APM1.2
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 85% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	96 x 115 mm (3.8" x 4.5")
	Weight	0.162 kg (0.357 lb) (with heat-sink)
	Height	Top Side: 11.45 mm; Bottom Side: 10.6 mm

Board Diagram



- Computer On Modules 1
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- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	Onboard Memory	CRT	TTL	Fast Ethernet	USB2.0	RS-232	RS-232/422/485	LPT	KB/MS	Onboard Flash	Audio	Expansion	Thermal Solution	Operating Temp.
PCM-4153F-LOA2E	AMD LX800	512 MB	Yes	18/24 bit	2	4	3	1	Yes	Yes	1 GB	Yes	PC/104+	Passive	0 - 60° C
PCM-4153FZ-LOA2E	AMD LX800	512 MB	Yes	18/24 bit	2	4	3	1	Yes	Yes	1 GB	Yes	PC/104+	Passive	-20 - 80° C
PCM-4153FZZ-LOA2E	AMD LX800	512 MB	Yes	18/24 bit	2	4	3	1	Yes	Yes	1 GB	Yes	PC/104+	Passive	-40 - 85° C

Packing List

Part No.	Description	Quantity
	PCM-4153 SBC	
	Startup Manual	
	Utility CD	
1700000898	VGA cable D-SUB 15P(F)/12P-1.25 mm 15 cm	1
1700000918	Audio cable 10 cm	
1700003491	AT power cable 1 x 8P-2.0/B4P-5.08 x 2 15 cm	1
1700060202	Cable 6P-6P-6P PS/2 KB & Mouse 20 cm	1
1700260250	LPT Port cable 25P to 26P 2.0 mm 25 cm	1
1701100202	LAN Flat Cable IDC10P 2.0 mm/RJ-45 20 cm	1
1701400181	COM 4 ports Flat Cable 18 cm IDC40P 2.0 mm	1
1701440350	IDE cable 44P/44P/44P 35 cm	1
1703040157	RS-422/485 W/D-SUB COM 4P 15 cm	1
1703060053	PS2 Cable 6P (MINI-DIN)-6P (Wafer 2.0 mm) 6 cm	1
1703100121	USB 2-port cable 10P 12 cm IDC 2.0 mm	1
9660104000	PC/104 screw and copper post package	1
1960005764	Heatsink for PCM-4153 (80.44 x 77.97 x 7.82 mm)	1

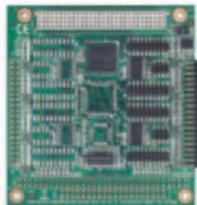
Optional Accessories

Part No.	Description
1653130421	PCI-104 connector 120-pin (Long pin)
165313222B	PC/104 connector 64-pin (Long pin)
165312022B	PC/104 connector 40-pin (Long pin)

Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070000729	Image GX3 CE 5.0 Pro Plus Eng
	2070001612	CE 6.0 Pro GX3 4 Com V1.0 ENG
	2070001576	XPE FP2007 GX3 (LX800) V3.0 ENG
Win XPE	2070003216	XPE FP2007 GX3 Group V3.1 ENG (717.22 MB)
	2070003557	XPE FP2007 GX3 Group V3.0 CHS (641.41 MB)
QNX		V6.3.2/ 6.4.1
Software API	205E000019	SUSI 3.0 SW API for ESBC B: 20091116 XP

PC/104 Datacom Modules



PCM-3614I/3618I

4/8-port RS-232/422/485 PCI-104 Modules

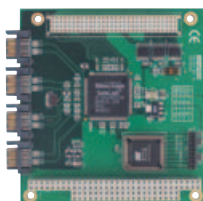


Specifications

General	
Connectors	PCM-3614I: 1 x 40-pin box header, PCM-3618I: 2 x 40-pin box header
Ports	PCM-3614I: 4, PCM-3618I: 8
Power Consumption	+5 V @ 450 mA
Communications	
Data Bits	5, 6, 7, 8
Data Signals	RS-422: TxD+, TxD-, RxD+, RxD-, CTS+, CTS-, RTS+, RTS- RS-485: DATA+, DATA-, GND RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
IRQ	3, 4, 5, 6, 7, 9, 10, 11, 12, 15
Parity	None, even and odd
Speed	50 bps ~ 921.6 kbps
Stop Bits	1, 1.5, 2
Protection	
EFT Protection	1,000 V _{oc}
Environment	
Operating Humidity	0 ~ 90 % RH
Operating Temperature	0 ~ 65° C (32 ~ 149° F)
Storage Temperature	-25 ~ 80° C (-13 ~ 176° F)
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")

Ordering Information

P/N	Description
PCM-3614I-AE	4-port RS-232/422/485 PCI-104 Module
PCM-3618I-AE	8-port RS-232/422/485 PCI-104 Module



PCM-3621

4 SATA PC/104-Plus Module

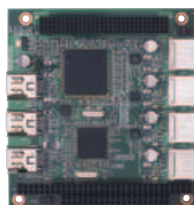


Specifications

General	
Bus Interface	PC/104-Plus (PCI interface only)
SATA Chip	Silicon Image® Si3114
GPIO	8-bit with LED
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5") compliant with PC/104-plus 1.2
Weight	0.084 kg (0.185 lb)
Temperature	0 ~ 60° C (32 ~ 140° F), operating
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, +12 V

Ordering Information

P/N	Description
PCM-3621-00A1E	PC/104-plus four channels SATA Module



PCM-3620

USB 2.0/IEEE 1394a PC/104-Plus Module

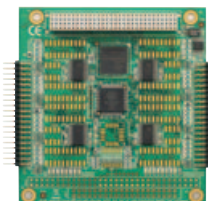


Specifications

General	
Bus Interface	PC/104-Plus (PCI interface only)
Chipset	NEC® uPD720101 and TI TSB43AB23
USB	4 x USB 2.0 Compliant Ports Compliant with OHCI USB Rev 1.0a Compliant with EHCI for USB Rev 1.0 High-speed (480 Mbps), full-speed (12 Mbps) and low-speed (1.5 Mbps) transfer
IEEE 1394a	3 port compliant with 1394 Open Host Controller Interface Specification (Release 1.1)
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.81 kg (0.18 lb)
Temperature	Standard operating: 0 ~ 60° C (32 ~ 140° F). [Optional operating: -20 ~ 80° C (-4 ~ 176° F).]
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, +12 V

Ordering Information

P/N	Description
PCM-3620-00A1E	4 x USB 2.0 and 3 IEEE 1394a PC/104-Plus Module
PCM-3620P-00A1E	4 x USB 2.0 & 3 IEEE 1394a w/pinhead PC/104-Plus module



PCM-3641I/3642I

4/8-port RS-232 PCI-104 Modules



Specifications

General	
Connectors	PCM-3641I: 1 x 40-pin box header, PCM-3642I: 2 x 40-pin box header
Ports	PCM-3641I: 4, PCM-3642I: 8
Power Consumption	+5 V @ 250 mA (max.)
Communications	
Data Bits	5, 6, 7, 8
Data Signals	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
IRQ	3, 4, 5, 6, 7, 9, 10, 11, 12, 15
Parity	None, even and odd
Speed	50 bps ~ 460.3 kbps
Stop Bits	1, 1.5, 2
Protection	
EFT Protection	1,000 V _{oc}
Environment	
Operating Humidity	0 ~ 90 % RH
Operating Temperature	0 ~ 65° C (32 ~ 149° F) (IEC-68-1-1, 2)
Storage Temperature	-25 ~ 80° C (-13 ~ 176° F)
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")

Ordering Information

P/N	Description
PCM-3614I-AE	4-port RS-232 PCI-104 Module
PCM-3618I-AE	8-port RS-232 PCI-104 Module

PC/104 Datacom Modules



PCM-3643 4/8 RS-232 COM Port Module

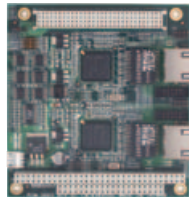


Specifications

General	
Bus Interface	PC/104 (ISA)
Chipset	Standard 16550, 16650, or 16750 compatible chipsets for serial ports
Channel	4/8 port RS-232 support
Baud Rate	50 ~ 115, 200 bps
Data Bits	5, 6, 7 or 8-bits
Stop Bit	1, 1.5, or 2
Parity	Even, odd, or none
Interrupt Level	IRQ 3, 4, 5, 6, 7, 9, 10, 11, 12 or 15
I/O Connector	40-pin header
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.084 kg (0.185 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F); Storage: -40 ~ 85° C (-10 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, ± 5 % tolerance on power supply
Power Consumption	+5 V @ 400 mA (typical)

Ordering Information

P/N	Description
PCM-3643-08A1E	8 x COM RS-232 Port Module
PCM-3643-04A1E	4 x COM RS-232 Port Module



PCM-3665 Dual GbE Module

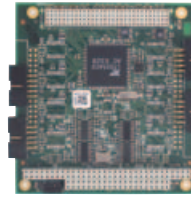


Specifications

General	
Bus Interface	PC/104-Plus (PCI interface only)
Chipset	Intel® 82541PI (PCI 10/100/1000 Mbps)
Port	Single/Twin Ethernet port
Speed	10/100/1000 Mbps
Compatibility	PCI version 2.2, 33 MHz PCI
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.09 kg (0.198 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F); Storage: -40 ~ 85° C (-10 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Consumption	Dual LAN: +5 V @ 1.2 A (typical) Single LAN: +5 V @ 0.6 A (typical)
Power Supply Voltage	+5 V, ±5 % tolerance on power supply

Ordering Information

P/N	Description
PCM-3665-00A1E	Dual GbE with RJ45 connector Module
PCM-3665P-00A1E	Dual GbE w/o RJ45 connector Module
PCM-3665-01A1E	Single GbE w/o RJ45 connector Module



PCM-3644 RS-232/422/485 COM Port Module



Specifications

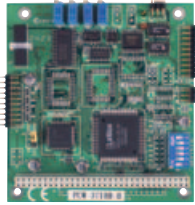
General	
Bus Interface	PC/104-Plus (PCI interface only)
I/O Address	0 x 000 ~ 0 x 3F8
UART	4 x 16C550 (PCM-3614), 8 x 16C550 (PCM-3618)
IRQ	3, 4, 5, 6, 7, 9, 10, 11, 12, 15
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	none, even, odd
Speed (bps)	50 ~ 921.6 K
Connectors	4/8 DB-9 male
Signal Support	TxD+, TxD-, RxD-, CTS+, CTS-, RTS+ and RTS-
Surge Protection	1000 V _{DC}
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.084 kg (0.185 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F); Storage: -40 ~ 85° C (-10 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, ± 5 % tolerance on power supply
Power Consumption	+5 V @ 400 mA (typical)

Ordering Information

P/N	Description
PCM-3644-08A1E	8 x COM RS-232 Port Module
PCM-3644-04A1E	4 x COM RS-232 Port Module
PCM-3644H-04A1E	4 x COM RS-422 Port Module

- Computer On Modules 1
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- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PC/104 Datacom Modules



PCM-3718H/HG/HO 100 kS/s, 12-bit, 16-ch PC/104 Multifunction Modules

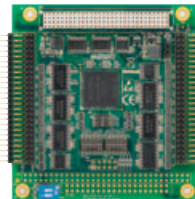


Specifications

Analog Input			
Channels	16 single-ended / 8 differential		
Resolution	12 bits		
Max. Sampling Rate	100 KHz* (DMA transfer), *80 kHz on P4-based (or better)		
Input Impedance	10 MW		
Input Range			
PCM-3718H and PCM-3718HO	Bipolar:	$\pm 10, \pm 5, \pm 2.5, \pm 1.25, \pm 0.625$	
	Unipolar:	0 - 10, 0 - 5, 0 - 2.5, 0 - 1.25	
PCM-3718HG	Bipolar:	$\pm 10, \pm 5, \pm 1, \pm 0.5, \pm 0.1, \pm 0.05, \pm 0.01, \pm 0.005$	
	Unipolar:	0 - 10, 0 - 1, 0 - 0.1, 0 - 0.01	
Analog Output (PCM-3718HO only)			
Channels	1 (12 bits)		
Output Rate	Static update		
Output Range	Internal Reference	Unipolar (V):	0 - 5, 0 - 10
	External Reference (V)		0 - 10, 0 - -10
Output Impedance	0.1 W max.		
Digital Input/Output			
Channels	16, 5V/TTL		
General			
I/O Connectors	2 x 20-pin box header		
Power Consumption	Typical: 5 V @ 180 mA; Max.: 5 V @ 400 mA		
Operating Temperature	0 - 60° C (32 - 140° F)		
Storage Temperature	-40 - 85° C (-40 - 185° F)		
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")		

Ordering Information

P/N	Description
PCM-3718H	100 kS/s, 12-bit Multi. PC/104 Module
PCM-3718HG	100 kS/s, 12-bit High-gain Multi. PC/104 Module
PCM-3718HO	100 kS/s, 12-bit Multi. PC/104 Module w/AO



PCM-3753I 96-Ch Digital I/O PCI-104 Module

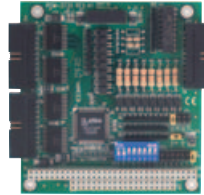


Specifications

Digital Input/Output	
Channels	96 (bi-directional)
Compatibility	5 V/TTL
Input Voltage	Logic 0: 0.8 V max.
	Logic 1: 2.0 V min.
Output Voltage	Logic 0: 0.4 V max.
	Logic 1: 2.4 V min.
Output Capability	Sink: 0.4 V @ 24 mA Source: 2.4 V @ 15 mA
General	
I/O Connectors	4 x IDC 50-pin
Operating Temperature	-20 - 70° C
Storage Temperature	-50 - 120° C
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")

Ordering Information

P/N	Description
PCM-3753I-AE	96-Ch Digital I/O PCI-104 Module



PCM-3730 16-ch Isolated Digital I/O PC/104 Module

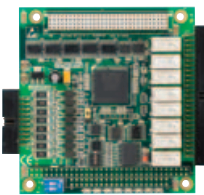


Specifications

Digital Input	
Channels	16, 5 V/TTL
Interrupt Capable Ch.	4
Isolated Digital Input	
Channels	8
Input Voltage	Logic 0: 2 V max., Logic 1: 5 V min., 24 V max.
Isolation Protection	2,500 V _{DC}
Input Resistance	2 k Ω @ 0.5 W
Digital Output	
Channels	16, 5 V/TTL
Output Capability	Sink: 8 mA @ 0.5 V max., Source: -0.4 mA @ 2.4 V min.
Isolated Digital Output	
Channels	8
Output Type	Sink (NPN)
Isolation Protection	2,500 V _{DC}
Output Voltage	5 - 40 V _{DC}
General	
I/O Connectors	3 x 20-pin box header
Power Consumption	Typical: 330 mA @ +5 V; Max.: 500 mA @ +5 V
Operating Temperature	0 - 60° C (32 - 158° F)
Storage Temperature	-20 - 70° C (-4 - 158° F)
Storage Humidity	5 - 95% RH, non-cond.
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")

Ordering Information

P/N	Description
PCM-3730-AE	16-ch Isolated DI/O PC/104 Module w/ 20p Cable



PCM-3761I 8-Ch Relay and 8-Ch Isolated Digital Input PCI-104 Module



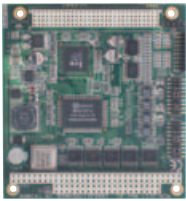
Specifications

Isolated Digital Input	
Channels	8
Input Voltage	Logic 0: 3 V max., Logic 1: 5 V min., 30 V max.
Input Current	2.5 mA @ 5 V, 15 mA @ 30 V
Input Resistance	2 k Ω 0.5 W
Isolation Protection	2,500 V _{DC}
Overvoltage Protection	70 V _{DC}
Interrupt Capable Ch.	8
Opto-isolator Response Time	25 μ s
Relay Output	
Channels	8
Relay Type	DPDT, Form C
Contact Rating	240 V _{AC} @ 0.25 A, or 30 V _{DC} @ 1 A
Relay On Time	5 ms max.
Relay Off Time	4 ms max.
Life Span	1 x 10 ⁷ @ 6 V/100 mA
Resistance Contact	< 50 mW
Insulation	1 GW min. (at 500 V _{DC})
General	
I/O Connectors	1 x IDC-50 pin, 1 x IDC-20 pin
Operating Temperature	0 - 60° C (32 - 140° F) (refer to IEC 68-2-1, 2)
Storage Temperature	-20 - 70° C (-4 - 158° F)
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")

Ordering Information

P/N	Description
PCM-3761I-AE	8-Ch Relay/Isolated Digital Input PCI-104 Module

PC/104 I/O & Power Modules



PCM-3117
PCI to ISA Bridge Module



Specifications

General	
Bus Interface	PC/104-Plus
Controller	ITE IT8888F
Bus	PC/104 (ISA) and PC/104+ (PCI)
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.092 kg (0.203 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -40 ~ 85° C (-40 ~ 18° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, ±5 % tolerance on power supply
Power Consumption	+5 V @ 70 mA (typical)

Ordering Information

P/N	Description
PCM-3117-00A1E	PCI to ISA bridge module



PCM-3835
IDE Flash Disk Module/
CompactFlash Card



Specifications

General	
Bus Interface	PC/104
IDE Connector	Two onboard 44-pin 2.0 mm pitch IDE connectors and one 40-pin 2.5 mm pitch IDE connector
Power Supply Voltage	+5 V ±10%
Environment	0 ~ 60° C, operating
Power Connector	Standard 4-pin power input
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.084 kg (0.185 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

P/N	Description
PCM-3835-00A1E	IDE Flash disk module



PCM-3836
IDE Flash Disk Module/
CompactFlash Card

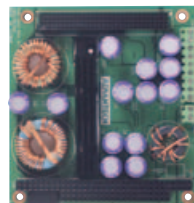


Specifications

General	
Bus Interface	PC/104
IDE Connector	One 40-pin 2.5 mm pitch IDE connector
Power Supply Voltage	+5 V ±10%
Environment	0 ~ 60° C, operating
Power Connector	Standard 4-pin power input
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Weight	0.084 kg (0.185 lb)
Temperature	Operating: 0 ~ 60° C (32 ~ 140° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

P/N	Description
PCM-3836-0000E	IDE Flash disk module (Type II)



PCM-3910
DC to DC Power Supply
PC/104-plus Module



Specifications

General	
Bus Interface	PC/104-Plus
Input Voltage	10 V to 24 V _{DC} ±5%
Output Voltage	5 V output 10.0 A 12 V output 2.0 A -5 V output 0.4 A (optional) -12 V output 0.4 A
Mechanical and Environmental	
Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
Temperature	0 ~ 60° C (32 ~ 140° F)
Weight	0.084 kg (0.185 lb)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

P/N	Description
PCM-3910-00A1E	DC to DC power module PC/104-plus Module

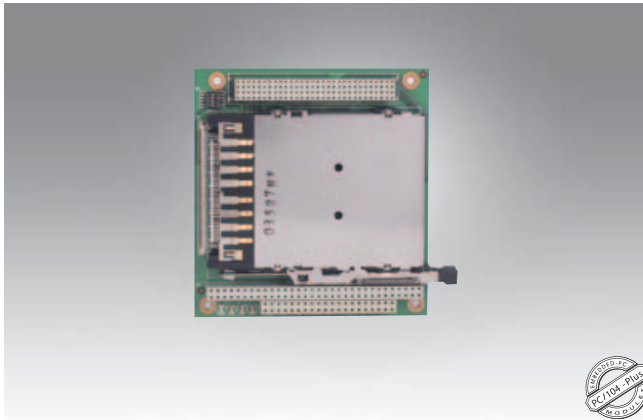
Note: For wide temperature range, please contact sales rep.

- Computer On Modules 1
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- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PC/104 PCMCIA Modules

PCM-3115

2-Slot CardBus PC/104-Plus Module



Features

- High-performance (PC/104-Plus)
- Low power consumption (Hardware Suspend)
- Compliant with PC Card 95/97/98, CardBus (32 Bit), PCMCIA V2.1/JEIDA 4.2 (16-bit)
- Accepts Type I/II/III PCMCIA cards
- Supports 2 PCMCIA slots (when Type III card used in Slot 2, Slot 1 will be occupied too)

Specifications

General	Bus Interface	PC/104-Plus (PCI Interface Only)
	Chipset	Ricoh® CardBus Controller
	16-bit Legacy Mode	YES (3E0/3E2 I/O port) support
	GPIO Support	YES
	PCI way Legacy DMA	YES supported
	Data Bus	32-bit data bus (Compliant with PCI Bus Specification 2.1)
	PCI Interface	3.3 V interface (5 V tolerant)
	H/W Configuration	Plug & Play automatic detection & configuration
	S/W Driver	Supports Windows® NT 4.0, Windows® 95/98/2000
Mechanical and Environmental	Dimension (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.094 kg (0.207 lb)
	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -40 ~ 85° C (-40 ~ 185° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	Power Supply Voltage	+5 V, ± 5 % tolerance on power supply
	Power Consumption	+5 V @ 70 mA (typical)

Ordering Information

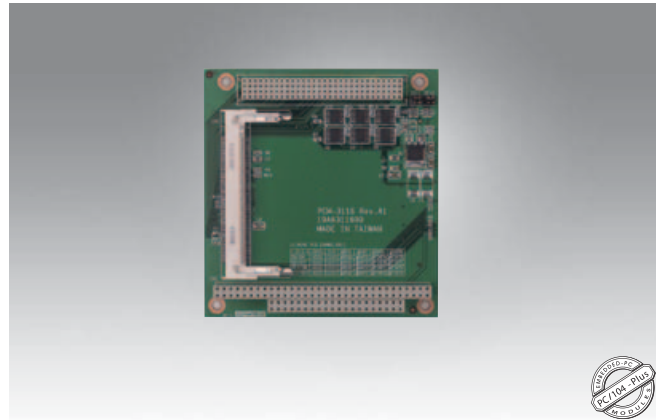
P/N	Description
PCM-3115-00B1E	2-slot CardBus module

Packing List

- 1 x Startup manual
- 1 x CD-ROM (Manual, Driver, Utility)
- 1 x PCM-3115

PCM-3116

2-Slot mini PCI PC/104-Plus Module



Features

- Supports 2 mini-PCI devices
- High performance (PC/104-Plus)
- Compliant with PCI Bus Specification 2.1

Specifications

General	Bus Interface	PC/104-Plus (PCI Interface Only)
	Data Bus	32-bit data bus (Compliant with PCI Bus Specification 2.1)
	PCI Interface	3.3 V interface (5 V tolerant)
Mechanical and Environmental	Dimension (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.094 kg (0.207 lb)
	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -40 ~ 85° C (-40 ~ 185° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	Power Supply Voltage	+5 V, ± 5 % tolerance on power supply

Ordering Information

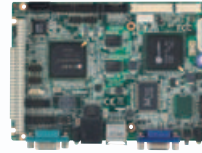
P/N	Description
PCM-3116-00A1E	2-slot mini-PCI module

Packing List

- 1 x Startup manual
- 1 x PCM-3116

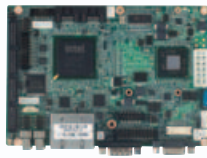
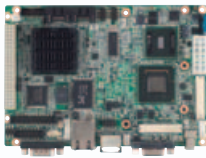


3.5" Single Board Computers

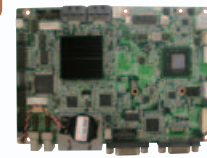


Selection Guide

Model Name		PCM-9343
Module Type		3.5 SBC
Processor System	CPU	DM&P Vortex86DX 1.0 GHz, supports floating point unit (FPU)
	Front Side Bus	-
	Frequency	1.0 GHz
	L2 Cache	256 KB
	System Chipset	DM&P Vortex86DX + SMI SM712
	BIOS	Award integrated 16 Mbit ROM in SOC
Memory	Technology	DDR2 333 MHz SDRAM
	Max. Capacity	512 MB
	Socket	-
	Onboard Memory	Onboard 256 MB or 512 MB
Display	Chipset	SMI SM712 2D graphics chip
	LVDS	Supports single channel 18/24-bit LVDS LCD Panel to 1024 x 768 (1280 x 1024 supported by request)
	VGA	Supports up to 1024 x 768 @ 85 Hz (1280 x 1024 possible, supported by request)
	HDMI	-
	TTL LCD	Supports up to 1024 x 768 @ 24-bit TFT LCD Panel (1280 x 1024 possible, supported by request)
	DVI	-
Ethernet	Speed	10/100 Mbps
	Chipset	-
WatchDog Timer		Internal: 2 sets, 32.768 KHz frequency source to count a 24-bit counter so the time range is from 30.5µ sec to 512 sec with resolution 30.5µ sec
Storage	CompactFlash	Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel) Supports 2 channels Ultra-DMA 100
	Cfast	-
	SATA	1
	IDE	-
	Floppy	-
	SPI Flash	Optional onboard 2 MB/4 MB SPI Flash Disk (Supported by request)
Rear I/O	Serial	1 (COM1 supports RS-232)
	Ethernet	1 (10/100 Mbps Ethernet 1)
	PS/2 KB/Mouse	1
	VGA	1
	HDMI	-
	USB	-
Internal I/O	Reset Button	1
	USB	4 x USB 2.0
	Serial	1 x RS-232/422/485, 2 x RS-232
	IDE	-
	Parallel (LPT)	1
	FDD	-
	SMBUS	-
	PS/2 KB/Mouse	-
	GPIO	16-bit GPIO
	IrDA	-
Expansion	I2C	1
	PC/104 Slot	PC/104 Expansion (8/16-bit ISA)
	PCI-104 Slot	-
	Mini PCI Express	-
	MIO 160	-
	Can Bus	-
Power	Power Type	AT
	Power Supply Voltage	Single +5V boot up, (+12V for LCD, ISA)
	Power Consumption (Typical)	PCM-9343L-S6A1E: 0.44 A @ 5 V PCM-9343F-S6A1E: 0.81 A @ 5 V PCM-9343FG-S6A1E: 1.03 A @ 5 V
	Power Consumption (Max, test in HCT)	PCM-9343L-S6A1E: 0.746 A @ 5 V PCM-9343F-S6A1E: 1.09 A @ 5 V PCM-9343FG-S6A1E: 1.18 A @ 5 V
	Power Management	APM
Environment	Battery	Lithium 3 V / 210 mA
	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
Reference Page		4-4



NEW



PCM-9361	PCM-9362	PCM-9363
3.5 SBC	3.5 SBC	3.5 SBC
Intel Atom processor N270 1.60 GHz	Intel Atom processor N450 Single Core 1.66 GHz Intel Atom processor D510 Dual Core 1.66 GHz	Intel Atom processor N455 Single Core 1.66 GHz Intel Atom processor D525 Dual Core 1.8 GHz 667 MHz for N455, 800 MHz for D525 1.66 GHz on N455, 1.8 GHz on D525
533 MHz	667 MHz	667 MHz for N455, 800 MHz for D525
1.60 GHz	1.66 GHz	1.66 GHz on N455, 1.8 GHz on D525
512 KB	512 KB/1 MB	512 KB/1 MB
Intel 945GSE+ ICH7M	Intel N450/D510 + ICH8M	Intel N455/D525 + ICH8M
Award 4 Mbit	AMI 16 Mbit Flash BIOS	AMI 16 Mbit Flash BIOS
DDR2 400/533 MHz	DDR2 667 MHz	DDR3 800 MHz
2 GB	2 GB	2 GB for N455, 4 GB for D525
1 x 200-pin SODIMM	1 x 200-pin SODIMM	1 x 204-pin SODIMM
-	-	-
Intel 945GSE	Intel Atom processor N450/D510 1.66 GHz	Intel Atom processor N455 1.66 GHz/D525 1.8 GHz
LVDS1: Single channel 18-bit or dual channel 36-bit LVDS LVDS2: Single channel 18/24-bit or dual channel 36/48-bit LVDS (only for PCM-9361EVG) LVDS2 wide screen supported: Eg:1366 x 768 (24-bit), 1440 x 900 (48-bit), 1680 x 1050 (48-bit), 1920 x 1080 (48-bit)	LVDS: Single channel 18-bit LVDS up to WXGA 1366 x 768	LVDS: Single channel 18/24-bit LVDS up to WXGA 1366 x 768
Supports QXGA Up to 2048 x 1536	Intel Atom processor N450 Single Core up to 1400 x 1050 (SXGA) Intel Atom processor D510 Dual Core up to 2048 x 1536	Intel Atom processor N455 Single Core up to 1400 x 1050 (SXGA) Intel Atom processor D525 Dual Core up to 2048 x 1536 Supports 1080P and scale function (PCM-9363DH only) Supports Hot Plug Detection (HPD) for HDMI
-	-	-
18-bit TTL: Up to 800 x 600	-	-
-	-	-
VGA + LVDS VGA + TTL	VGA + LVDS	VGA+LVDS
LVDS1+LVDS2, VGA+LVDS2 (not supported in DOS mode, only for PCM-9361EVG)	-	-
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Realtek ALC888 High Definition Audio (HD), Line-in, Line out, Mic-in	Realtek ALC888 High Definition Audio (HD), Line-in, Line out, Mic-in	Realtek ALC892 High Definition Audio (HD), Line-in, Line out, Mic-in
Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel)	Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel)	Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel)
-	-	-
2 SATA II (Max. Data Transfer Rate 300 MB/s)	2 SATA II (Max. Data Transfer Rate 300 MB/s)	2 SATA II (Max. Data Transfer Rate 300 MB/s)
-	-	-
1 (Shared with LPT)	-	-
-	-	-
1 (COM1 supports RS-232)	1 (COM1 supports RS-232)	1 (COM1 supports RS-232)
1 (10/100/1000 Mbps)	2 (10/100/1000 Mbps)	2 (10/100/1000 Mbps)
1	1	1
1	1	1
1	2	1 (PCM-9363DH only)
1	2	2
-	-	-
4 x USB 2.0	4 x USB 2.0	4 x USB 2.0
1 x RS-232/422/485	2 x RS-232, 1 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485
-	-	-
1	1	1
1 (Shared with LPT)	-	-
1	1	1
-	1	1
-	-	-
8-bit GPIO	8-bit GPIO	8-bit GPIO
-	-	-
-	-	-
PCI-104 Expansion	-	-
-	1	1
-	1 (Optional by request)	-
-	-	-
AT/ATX	AT/ATX	AT
ATX: +5 V ± 5%, +12V ± 10% AT: 5V only to boot up (12V is optional for LCD inverter and add on card)	AT: 5V (± 5%) or 12V (± 10%), ATX: 5V (± 5%), 5 V sb (12 V is optional for LCD inverter, add on card.MIO IO) AT: 12 V(± 10%), ATX: 12V (± 10%), 5 V sb	Supports single 12V, ± 10% (supports DC power hot plug)
Typical 1.90 A @ 5 V, 0.07 A @ 12 V Suspend 1.36 A @ 5 V, 0.06 A @ 12 V	PCM-9362NC-S6A1E: 2.31 A @ 5 V PCM-9362N-S6A1E: 0.87 A @ 12 V PCM-9362D-S6A1E: 0.91 A @ 12 V	PCM-9363N-S6A1E: 0.74 A @ 12 V PCM-9363D-S8A1E: 0.86 A @ 12 V
2.38 A @ 5 V, 0.09 A @ 12 V	PCM-9362NC-S6A1E: 2.36 A @ 5 V PCM-9362N-S6A1E: 1.01 A @ 12 V PCM-9362D-S6A1E: 1.17 A @ 12 V	PCM-9363N-S6A1E: 0.86 A @ 12 V PCM-9363D-S8A1E: 1.18 A @ 12 V
APM1.2, ACPI3.0, wake on LAN, and modem ring-in functions	APM, ACPI,wake on LAN	APM, ACPI,wake on LAN
Lithium 3 V/210 mAH 0 ~ 60° C (32 ~ 140° F)	Lithium 3 V/210 mAH 0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	Lithium 3 V/210 mAH 0 ~ 60° C (32 ~ 140° F)
(Operating humidity: 40° C @ 95% RH non-condensing)	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	(Operating humidity: 40° C @ 95% RH non-condensing)
-40° C ~ 85° C and 60° C @ 95% RH non-condensing	146 x 102 mm (5.7" x 4")	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
146 x 102 mm (5.7" x 4")	0.85 kg (1.87 lb), weight of total package	146 x 102 mm (5.7" x 4")
0.85 kg (1.87 lb), weight of total package	0.85 kg (1.87 lb), weight of total package	0.85 kg (1.87 lb), weight of total package
4-6	4-8	4-10

- Computer On Modules 1
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- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

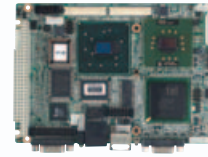
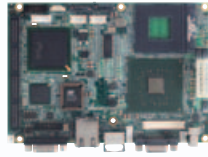
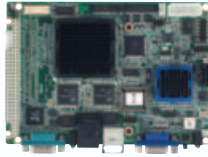
3.5" Single Board Computers

NEW



Selection Guide

Model Name		PCM-9364
Module Type		3.5 SBC
Processor System	CPU	Intel Atom E620 600 MHz Intel Atom E640 1.0 GHz Intel Atom E660 1.3 GHz
	Front Side Bus	-
	Frequency	600 MHz/1.0 GHz/1.3 GHz
	L2 Cache	512 KB
	System Chipset	Intel E6XX series + Intel Platform Controller Hub EG20T
	BIOS	AMI UEFI 16 Mbit
Memory	Technology	DDR2 800 MHz on board
	Max. Capacity	1 GB
	Socket	-
	Onboard Memory	Onboard memory 512 MB/1 GB
Display	Chipset	Intel E6xx series
	LVDS	LVDS1: Supports 18/24-bit LVDS panel, 1280 x 768 @ 60 Hz (pixel clock rate = 80 MHz) LVDS2: Supports dual channel 48-bit LVDS Panel Supports 1280 x 1024 @ 85 Hz (pixel clock rate = 160 MHz)
	VGA	-
	HDMI	-
	TTL LCD	-
	DVI	-
Ethernet	Dual Display	VGA + LVDS1 or LVDS1 + LVDS2
	Speed	10/100/1000 Mbps
Audio	Chipset	Realtek ALC892, High Definition Audio (HD), Line-in, Line out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	-
	Cfast	1
	SATA	1 SATA II (Max. Data Transfer Rate 300 MB/s)
	IDE	-
	Floppy	-
	SPI Flash	-
Rear I/O	Serial	1 (COM1 supports RS-232)
	Ethernet	2 (10/100/1000 Mbps)
	PS/2 KB/Mouse	-
	VGA	1
	HDMI	-
	USB	2
Internal I/O	Reset Button	-
	USB	2 USB 2.0 + 1 client
	Serial	2 x RS-232, 1 x RS-422/485
	IDE	-
	Parallel (LPT)	-
	FDD	-
	SMBUS	1
	PS/2 KB/Mouse	1
	GPIO	8-bit GPIO
	IrDA	-
Expansion	I2C	-
	PC/104 Slot	-
	PCI-104 Slot	1
	Mini PCI Express	1
	MIO 160	-
	Can Bus	CANbus, protocol version 2.0B active
Power	Power Type	ATX / AT (Supports ACPI)
	Power Supply Voltage	Supports single 12V, ± 10%
	Power Consumption (Typical)	TBD
	Power Consumption (Max, test in HCT)	TBD
Environment	Power Management	APM, ACPI, wake on LAN
	Battery	3V/610mA
	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
Reference Page		4-12



PCM-9375 3.5 SBC	PCM-9382 3.5 SBC	PCM-9388 3.5 SBC
AMD Geode LX800 processor, up to 500 MHz	Intel Core 2 Duo/Dore Duo/Core Solo processor FSB667Mhz socket 478 type, up to Intel Core2 Duo T7400 Intel Celeron M 1.06 GHz (423) Onboard CPU	Intel Celeron M processor 600 MHz and 1.0 GHz onboard type
-	533/667 MHz	400 MHz
500 MHz	Depends on processor	600 MHz and 1.0 GHz
128 KB	-	512 KB on 600 MHz, 0L2 on 1.0 GHz
AMD Geode LX800	Intel 945GME + ICH7M	Intel 852GM + ICH4
Award 4 Mb Flash ROM BIOS	Award 4 Mb Flash ROM BIOS	Award 4 Mb Flash ROM BIOS
DDR 333/400 MHz	DDRII 533/667 MHz SO-DIMM	DDR266MHz SO-DIMM supported
512 MB	2 GB	1 GB
1 x 200-pin SODIMM	1 x 200-pin SODIMM	1 x 200-pin SODIMM
-	-	-
AMD Geode LX800	Intel 945GME	Intel 852GM
1 x Single channel 18-bit LVDS (PCM-9375E), up to 1600 x 1200 x 32 bpp at 60 Hz	1x LVDS (single channel 24-bit or dual channel 48-bit LVDS)	1 x LVDS (single channel 18/24-bit or dual channel 36/48-bit LVDS)
up to 1920 x 1440 @ 32bpp (85 Hz)	up to 2048 x 1536 @ 32bpp (85 Hz)	up to 1600 x 1200 @ 32bpp (85 Hz)
-	-	-
1 x 24-bit TTL (PCM-9375F), up to 1600 x 1200 x 32 bpp at 60 Hz	-	1 x 18-bit TTL
-	-	-
VGA+TTL, VGA+LVDS	VGA+LVDS	VGA + TTL, VGA + LVDS
10/100 Mbps	10/100 Mbps	10/100 Mbps
Realtek ALC203 AC97, Line-in, Line-out, Mic-in	Realtek ALC888, High Definition Audio (HD), Line-in, Line out, Mic-in	Realtek ALC203 AC97, Line-in, Line-out, Mic-in
Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
1	1	1
-	-	-
1 x SATA(Max. Data Transfer Rate 150 MB/s) (only for PCM-9375S)	1 x SATA(Max. Data Transfer Rate 150 MB/s)	1 x SATA(Max. Data Transfer Rate 150 MB/s) (only for PCM-9388S)
1	-	1 (only for PCM-9388F)
1	-	1 (Shared with LPT)
-	-	-
1 (COM1 supports RS-232)	1 (COM1 supports RS-232)	1 (COM1 supports RS-232)
1 (10/100 Mbps)	1 (10/100 Mbps)	1 (10/100 Mbps)
1	1	1
1	1	1
-	-	-
1	1	1
4 x USB 2.0	4 x USB 2.0	2 x USB 2.0
2 x RS-232, 1 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485
1 UDMA 33/66	-	1 UDMA 33 (only for PCM-9388F)
1 (shared with LPT)	-	1 (Shared with LPT)
1 (shared with LPT)	-	1 (Shared with LPT)
-	Supported	Supported
-	1	-
8-bit GPIO	8-bit GPIO	8-bit GPIO
-	-	115 kbps
Optional	-	-
PC/104 Expansion (8/16-Bit ISA)	-	PC/104 Expansion (8/16-Bit ISA)
-	-	-
-	-	-
-	1	-
-	-	-
AT/ATX	AT/ATX	AT/ATX
5V ± 5% (12V option for LCD, PC/104)	5V ± 5% (12V option for LCD, MIO IO, CPU FAN)	5 V ± 5% (12V option for LCD)
Typical: 0.6 A @ 5 V, 0.03 A @ 12 V	Typical: 4.64 A @ 5 V, 0.09 A @ 12 V (Core Duo 2.16G/DDRII 533/512 MB)	Typical: 1.56 A @ 5 V, 0.16 A @ 12 V (Celeron M 600/DDR 256 MB)
MAX: 1.2 A @ 5 V, 0.23 A @ 12 V	MAX: 5.14 A @ 5 V, 0.15 A @ 12 V (Core Duo 2.16G/DDRII 533/512 MB)	MAX: 2.11 A @ 5 V, 0.17 A @ 12 V (Celeron M 600/DDR 256 MB)
APM 1.2, ACPI ,wake on LAN	APM1.2, ACPI2.0, wake on LAN, and modem ring-in functions	APM, ACPI S1, S5 ,wake on LAN
Lithium 3 V/196 mAh 0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	Lithium 3 V/210 mAh 0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	3 V/210 mAh 0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
146 x 102 mm (5.7" x 4")	146 x 102 mm (5.7" x 4")	146 x 102 mm (5.7" x 4")
0.85 kg (1.87 lb), weight of total package	0.85 kg (1.87 lb), weight of total package	0.85 kg (1.87 lb), weight of total package

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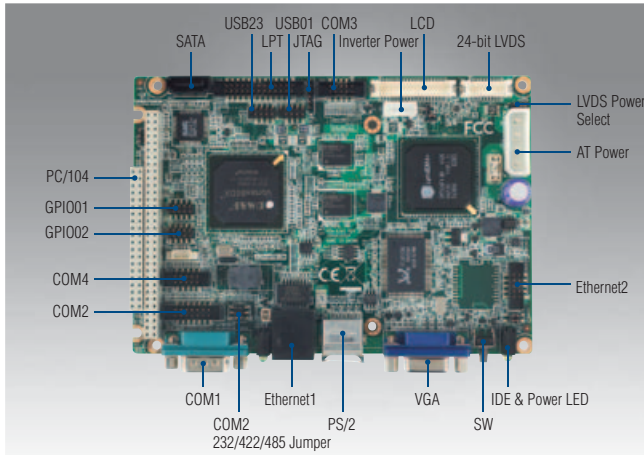
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- Computer On Modules 1
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- EPIC/ EBX/ 5.25" SBCs 5
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- Industrial Storage Modules 7
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PCM-9343

**DM&P Vortex86DX 1.0 GHz 3.5" SBC,
Ultra Low Power, Onboard Memory,
Dual Ethernet, PC/104**



Features

- DM&P Vortex86DX, onboard DDR2 memory up to 512 MB
- Display type: VGA, 18/24-bit LVDS, 18/24-bit TTL
- Supports Floating Point Unit, total power consumption 4 ~ 6 Watts
- Dual Ethernet: 10/100 Ethernet1 and 10/100 Ethernet2, supports PC/104 (8-bit/16-bit ISA) expansion
- Supports embedded software APIs and utilities, OS: DOS, WinCE, WinXPE and Linux

Software APIs:

- Watchdog
- IPC
- Brightness
- GPIO
- Backlight On/Off

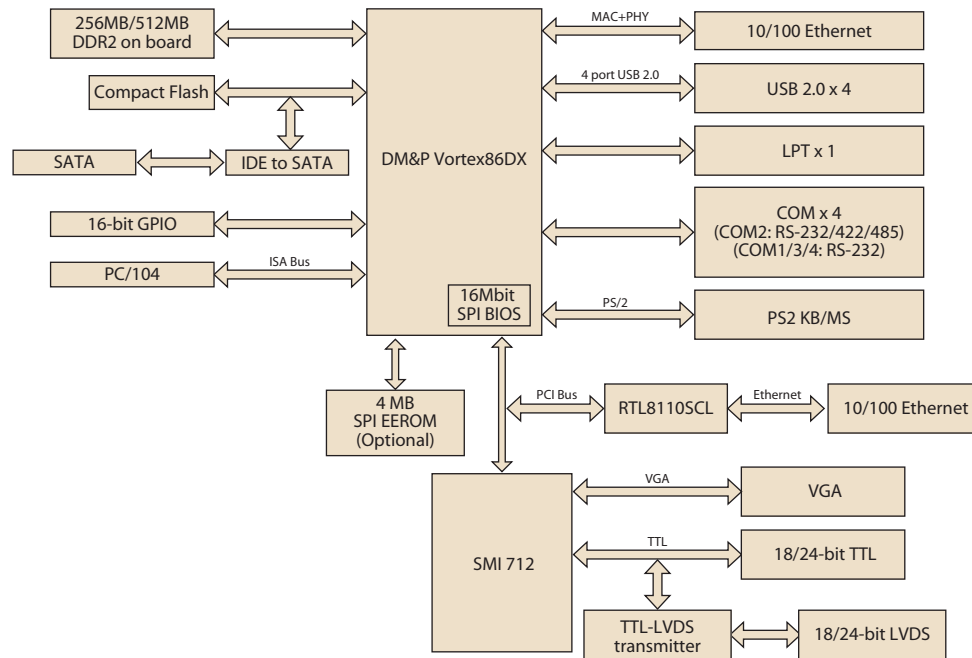
Utilities:

- BIOS flash
- eSOS
- Flash Lock
- Embedded Security ID

Specifications

Processor System	CPU	DM&P Vortex86DX 1.0 GHz, supports floating Point Unit (FPU)	
	Frequency	1.0 GHz	
	L2 Cache	256 KB	
	System Chipset	DM&P Vortex86DX + SMI SM712	
	BIOS	Award integrated 16 Mbit ROM in SOC	
Memory	Technology	DDR2 333 MHz SDRAM on board	
	Max. Capacity	512 MB	
	Onboard memory	Onboard 256 MB or 512 MB	
Display	Chipset	SMI SM712 2D graphics chip	
	VRAM	4 MB internal memory	
	Graphics Engine		62.5 MHz single clock/cycle engine (EM+)
			86 MHz single clock/cycle engine (EM4+)
			Designed to accelerate DirectDraw
	LVDS		Supports single channel 18/24-bit LVDS LCD Panel to 1024 x 768 (1280 x 1024 supported by request)
VGA		Supports up to 1024 x 768 @ 85 Hz	
TTL LCD		Supports up to 1024 x 768 @ 24-bit TFT LCD Panel	
Dual Display		VGA + TTL, VGA + LVDS	
Ethernet	Speed	10/100 Mbps on Ethernet1 10/100 Mbps on Ethernet2	
	Controller	Ethernet1: 10/100 Mbps on DM&P Vortex86DX Ethernet2: 10/100 Mbps on Realtek RTL8110SC	
	Connector	RJ-45 on Ethernet1, box header on Ethernet2	
WatchDog Timer		Internal: 2 sets, 32.768 KHz frequency source to count a 24-bit counter so the time range is from 30.5µ sec to 512 sec with resolution 30.5µ sec	
Storage	CompactFlash	Supports CompactFlash card TYPE I/II (Primary Master IDE Channel) Supports 2 channels Ultra-DMA 100	
	SATA	1 x SATA (Max. Data Transfer Rate 150 MB/s)	
	SPI Flash	Optional onboard 4MB SPI Flash Disk (Supported by request)	
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)	
	Ethernet	1 (10/100 Mbps Ethernet1)	
	PS/2 KB/Mouse	1	
	VGA	1	
	Reset Button	1	
Internal I/O	USB	4 x USB 2.0	
	Serial	3 COM (COM2, COM3, COM4) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM2 supports RS-232/422/485 (Supports RS-485 auto flow control) COM3/COM4 supports RS-232	
	Parallel(LPT)	1	
	GPIO	16-bit GPIO	
	IPC	1	
Expansion	PC/104 slot	PC/104 Expansion (8/16-Bit ISA)	
Power	Power Type	AT	
	Power Supply Voltage	Single +5V boot up, ± 5% (+12V option for LCD, ISA)	
	Power Consumption (Typical)		PCM-9343L-S6A1E: 5V : 0.44A
			PCM-9343F-S6A1E: 5V : 0.81A
			PCM-9343FG-S6A1E: 5V : 1.03A
	Power Consumption (Max, test in HCT)		PCM-9343L-S6A1E: 5V : 0.746 A
		PCM-9343F-S6A1E: 5V : 1.09 A	
Power Management		APM	
Battery		Lithium 3 V / 210 mAh	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")	
	Weight	0.85 kg (1.87 lb), weight of total package	
	Total Height	23.7mm	

Board Diagram



- Computer On Modules 1
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- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	Onboard Memory	TTL	LVDS	VGA	10/100 Ethernet1	10/100 Ethernet2	LPT	RS-232/422/485	RS-232	USB 2.0	CF	SATA	Expansion	AT Power	Thermal Solution	Operational Temp.
PCM-9343L-S6A1E	256 MB	-	-	-	1	-	1	1	1	2	1	-	PC/104	Yes	Passive	0 ~ 60° C
PCM-9343F-S6A1E	256 MB	18/24-bit	18/24-bit	Yes	1	-	1	1	3	4	1	1	PC/104	Yes	Passive	0 ~ 60° C
PCM-9343FG-S6A1E	512 MB	18/24-bit	18/24-bit	Yes	1	1	1	1	3	4	1	1	PC/104	Yes	Passive	0 ~ 60° C
PCM-9343FGZ-S6A1E	512 MB	18/24-bit	18/24-bit	Yes	1	1	1	1	3	4	1	1	PC/104	Yes	Passive	-20 ~ 80° C

Packing List

Part No.	Description	Quantity
	PCM-9343 SBC	
	Startup Manual	
	Utility CD	
1700008894	SATA 7P 30 cm cable	1
1700060202	PS2 6P x 2 20 cm cable	1
1700100250	COM3/4 IDE D-SUB 25 cm cable	2
1701140201	COM2 IDE D-SUB 20 cm cable	1
1700260250	LPT IDE 26P D-SUB 25 cm cable	1
1703100121	USB 2 x 5P-2.0 12 cm W/BKT cable	1
1700017863	Ethernet cable RJ45 15cm (PCM-9343FG/FGZ use)	1
9689000002	mini jumper pack	1
1960047356N001	Heatsink for DM&P Vortex86DX (27x27x6.3mm)	1

Optional Accessories

Part No.	Description
1703150102	SATA 10 cm Power cable

Embedded OS/API

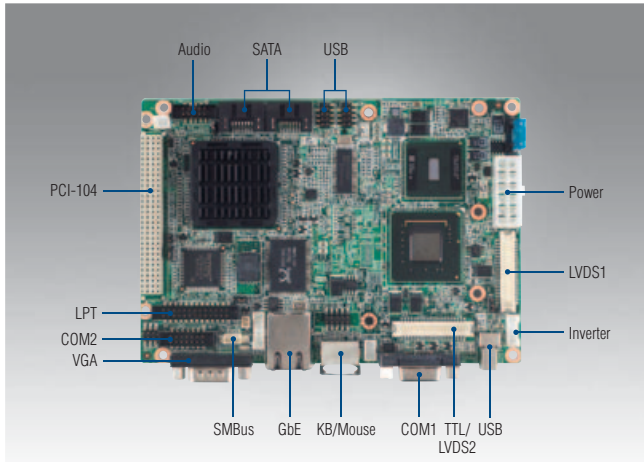
Embedded OS/API	Part No.	Description
WinCE	2070009764	CE 5.0 Pro PCM-9343 V1.3 ENG
	2070009537	Image CE 6.0 Pro PCM-9343 V1.3 ENG
Win XPE	2070009528	Image XPE for PCM-9343 ENG
	2070009529	Image XPE for PCM-9343 24MUI
QNX		V6.4.1
Vxwork		V5.5
Linux		Ubuntu V9.10/V10.04.1
Software API	2056343000	SUSI 3.0 SW API for PCM-9343 B:20100122 XP

Rear I/O View



PCM-9361

Intel® Atom™ N270 3.5" SBC, Dual LVDS, TTL, VGA, GbE, USB, SATA, PCI-104



Features

- Intel® Atom™ Processor N270+ 945GSE+ ICH7M
- Supports 18-bit TTL/VGA/36-bit LVDS1/48-bit LVDS2 (including Wide screen)
- Supports GbE/HD Audio
- Supports up to 2 COM ports, 5 USB 2.0 ports, 2 SATA Interfaces
- Supports embedded software API and utility
- Supported OS: Win XP embedded, Win XP Pro, WinCE6.0, Linux, QNX

Software APIs:

- GPIO
- H/W Monitor
- Brightness
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

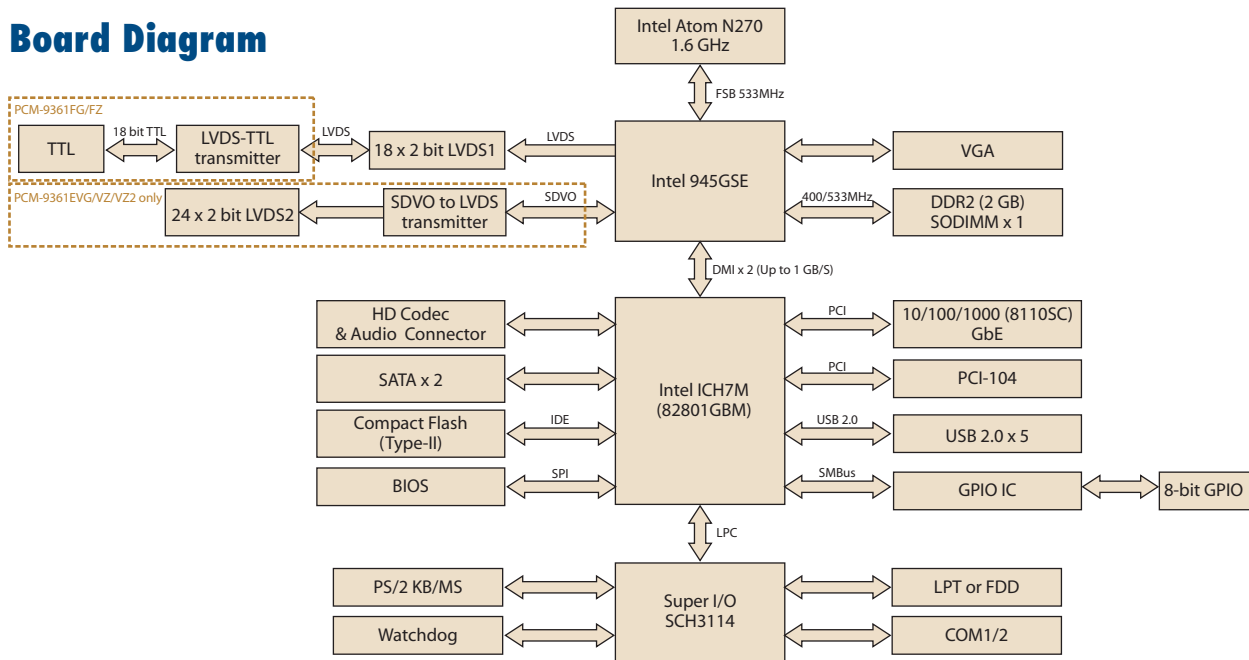
Utilities:

- BIOS flash Monitoring
- eSOS
- Flash Lock
- Embedded Security ID

Specifications

Processor System	CPU	Intel Atom N270 1.60 GHz
	Front Side Bus	533 MHz
	Frequency	1.60 GHz
	L2 Cache	512 KB
	System Chipset	Intel 945GSE+ ICH7M
Memory	BIOS	Award 4 Mbit
	Technology	DDR2 400/533 MHz
	Max. Capacity	2 GB
Display	Socket	1 x 200-pin SODIMM
	Chipset	Intel 945GSE
	VRAM	Optimized shared memory architecture up to 224 MB system memory
	Graphics Engine	Intel 3.5 Gen integrated graphics engine
	LVDS	LVDS1: Supports single channel 18-bit or dual channel 36-bit LVDS LVDS2: Supports single channel 18/24-bit or dual channel 36/48-bit LVDS (only for PCM-9361EVG)
	VGA	Supports QXGA Up to 2048 x 1536
	TTL LCD	18-bit TTL: Up to 800 x 600
	Dual Display	- VGA + LVDS1 - VGA + TTL - LVDS1+LVDS2 / VGA+LVDS2 (not supported in DOS mode, only for PCM-9361EVG)
Ethernet	Speed	10/100/1000 Mbps (Supports Wake on LAN)
	Controller	Realtek 8110SC
	Connector	RJ-45 on GbE
Audio	Chipset	Realtek ALC888, High Definition Audio (HD), Line-in, Line out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 - 255 minutes/ seconds
Storage	CompactFlash	Supports CompactFlash card TYPE I/II (Primary Master IDE Channel)
	SATA	2 x SATA (Max. Data Transfer Rate 150 MB/s)
	Floppy	1 (shared with LPT)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	1 (10/100/1000 Mbps GbE1)
	PS/2 KB/Mouse	1
	VGA	1
	USB	1
Internal I/O	USB	4 x USB 2.0
	Serial	1 x COM (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	Parallel(LPT)	1
	FDD	1 (shared with LPT)
	SMBUS	1
	GPIO	8-bit GPIO
Expansion	PCI-104 slot	PCI-104 Expansion
Power	Power Type	AT/ATX
	Power Supply Voltage	ATX: +5 V ± 5%, +12 V ± 10% AT: 5V only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption	5 V 12 V
		Typical 1.90 A 0.07 A
		Suspend 1.36 A 0.06 A
	Power Consumption (Max, test in HCT)	5 V: 2.38 A 12 V: 0.09 A
	Power Management	APM1.2, ACPI3.0, wake on LAN, and modem ring-in functions
Battery	Lithium 3 V / 210 mA	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
	Total Height	28.2mm

Board Diagram



Ordering Information

Part No.	CPU	Memory	VGA	LVDS	LVDS2	TTL	GbE	Audio	USB 2.0	RS-232	RS232/422/485	LPT	KB/MS	Expansion	Thermal Solution	Operating Temp.
PCM-9361FG-S6A1E	Atom N270 1.6G	DDR2 SODIMM	1	-	-	1	1	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C
PCM-9361EG-S6A1E	Atom N270 1.6G	DDR2 SODIMM	1	18/36-bit	-	-	1	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C
PCM-9361EVG-S6A1E	Atom N270 1.6G	DDR2 SODIMM	1	18/36-bit	36/48-bit	-	1	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C
PCM-9361L-S6A1E (W/O cables)	Atom N270 1.6G	DDR2 SODIMM	1	18/36-bit	-	-	1	HD	5	1	1	1	1	-	Passive	0 ~ 60° C
PCM-9361FZ-1GS6A1E	Atom N270 1.6G	1G bundle	1	-	-	1	1	HD	5	1	1	1	1	PCI-104	Passive	-20 ~ 80° C
PCM-9361VZ-1GS6A1E	Atom N270 1.6G	1G bundle	1	18/36-bit	36/48-bit	-	1	HD	5	1	1	1	1	PCI-104	Passive	-20 ~ 80° C
PCM-9361VZ21GS6A1E	Atom N270 1.6G	1G bundle	1	18/36-bit	36/48-bit	-	1	HD	5	1	1	1	1	PCI-104	Passive	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-9361 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	1
1700000265	ATX Power Cable 10 cm	1
1700006291	SATA Cable 30 cm	1
1700060202	PS/2 cable 20 cm	1
1701140201	COM2 IDE D-SUB 20 cm cable	1
1703100121	USB 2 x 5P-2.0 12 cm W/BKT cable	2
1703100152	Audio Cable	1
1700260250	LPT IDE 26P D-SUB 25 cm cable	1
1703150102	SATA 10 cm power cable	1
1960024933S00B	ICH7M heatsink (38.1x33.6x7.5mm)	1
1960029380N000	Heatsink for N270 and 945GSE (50.77x88.59x15mm)	1

Rear I/O View



Optional Accessories

Part No.	Description
1700001531	LPT to FDD cable
1700016161	AT power cable, 2 x 6P to 3 x 4P 10 cm
1700016141	AT power cable, 2 x 6P to 2 x 10P 10 cm

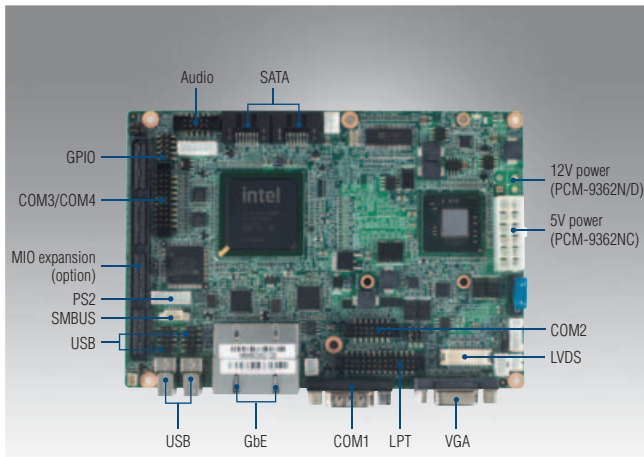
Embedded OS/API

Embedded OS/API	Part No.	Description
WinCE	2070008069	Image CE 6.0 Pro PCM-9361 V1.1 JPN
	2070006670	Image XPE FP2007 PCM-9361 V3.01 ENG
Win XPE	2070007911	XPE WES2009 Intel-Multitprocess V4.0 MUI24
	2070007789	XPE WES2009 Intel-Multitprocess V4.0 ENG
QNX	2070006929	Image QNX V6.4 PCM-9361 V1.0 ENG V6.8
Vxwork		Ubuntu V10.04
Linux		EmbCore PCM-9361 3.5" SUSI package V3.08
Software API	205E936000	

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PCM-9362

Intel® Atom™ N450/ D510 3.5" SBC, LVDS, VGA, 2 GbE, Mini PCIe, 4 COM Ports



Features

- Embedded Intel® Atom™ processor N450 Single Core/ D510 Dual Core 1.66 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, multiple display: VGA, 18-bit LVDS
- Supports 12 V input power for PCM-9362N/D, 5V input power for PCM-9362NC
- Supports 2 Intel Giga Ethernet ports; Rich I/O interfaces with 4 COM, 2 SATA, 6 USB and GPIO
- Supports embedded software APIs and utilities

Software APIs:



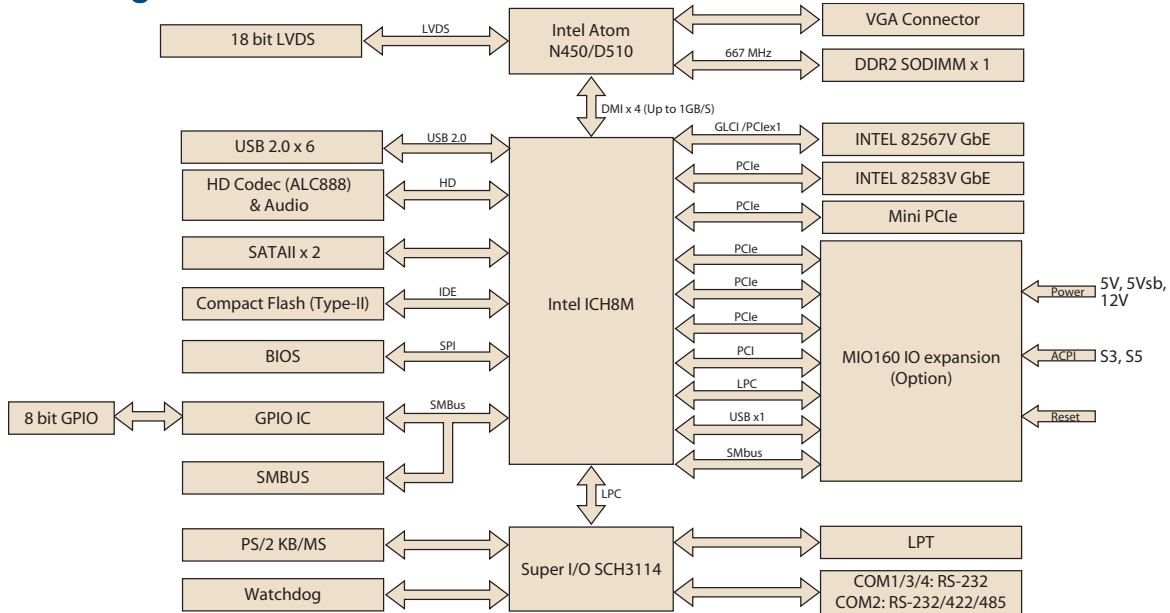
Utilities:



Specifications

Processor System	CPU	Intel Atom Processor, N450 Single Core 1.66 GHz Intel Atom Processor, D510 Dual Core 1.66 GHz
	Front Side Bus	667 MHz
	Frequency	1.66 GHz
	L2 Cache	512 KB/1 MB
	System Chipset	Intel N450/D510 + ICH8M
Memory	BIOS	AMI 16 Mbit Flash BIOS
	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
Display	Socket	1 x 200-pin SODIMM
	Chipsset	Intel Atom N450/D510 1.66 GHz
	VRAM	Optimized Shared Memory Architecture up to 224 MB system memory
	Graphics Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW Embedded Gen3.5+ GFX Core
	LVDS	LVDS: Single channel 18-bit LVDS up to WXGA 1366 x 768
	VGA	Intel Atom N450 Single Core up to 1400 x 1050 (SXGA) Intel Atom D510 Dual Core up to 2048 x 1536
Ethernet	Dual Display	VGA+LVDS
	Speed	10/100/1000 Mbps (Supports Wake on LAN)
	Controller	GbE1 Intel 82567V GbE2 Intel 82583V
Audio	Connector	RJ-45 on GbE1, GbE2
	Chipset	Realtek ALC888, High Definition Audio(HD), Line-in, Line out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel)
	SATA	2 x SATA II (Max. Data Transfer Rate 300 MB/s)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	2 (10/100/1000 Mbps)
	VGA	1
	USB	2
Internal I/O	USB	4 x USB 2.0 ports
	Serial	3 x COM ports (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM3/COM4 supports RS-232 COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	Parallel (LPT)	1
	PS/2 KB/Mouse	1
	GPIO	8-bit GPIO
	SMBus	1
Expansion	Mini PCI Express	1
	MIO 160	1 (Optional by request)
Power	Power Type	AT/ATX
	Power Supply Voltage	AT: 5V (± 5%) or 12V (± 10%), ATX: 5V (± 5%), 5 V sb (12 V is optional for LCD inverter and add on card) AT: 12V (± 10%), ATX: 12V (± 10%), 5 V sb
	Power Consumption (Typical)	PCM-9362NC-S6A1E: 5 V : 2.31 A
		PCM-9362N-S6A1E: 12 V : 0.87 A
		PCM-9362D-S6A1E: 12 V : 0.91 A
	Power Consumption (Max, test in HCT)	PCM-9362NC-S6A1E: 5 V : 2.36 A
PCM-9362N-S6A1E: 12 V : 1.01 A PCM-9362D-S6A1E: 12 V : 1.17 A		
Power Management	APM, ACPI	
Battery	Lithium 3 V/210 mAh	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package 30.5mm for PCM-9362NC/N/NZ/NZ2 34.5mm for PCM-9362D
	Total Height	

Board Diagram



Ordering Information

Model	CPU	Memory	Power Input	VGA	LVDS	GbE1	GbE2	Audio	SATAII	USB 2.0	Mini-PCle	CF	LPT	RS-232	RS-232/422/485	Thermal Solution	Operating Temperature
PCM-9362NC-S6A1E	Atom N450	DDR2 SO-SIMM	5 V	1	1	1	1	HD	2	6	1	1	1	3	1	Passive	0 ~ 60° C
PCM-9362N-S6A1E	Atom N450	DDR2 SO-SIMM	12 V	1	1	1	1	HD	2	6	1	1	1	3	1	Passive	0 ~ 60° C
PCM-9362D-S6A1E	Atom D510	DDR2 SO-SIMM	12 V	1	1	1	1	HD	2	6	1	1	1	3	1	Active	0 ~ 60° C
PCM-9362NZ-1GS6A1E	Atom N450	1GB bundle	12 V	1	1	1	1	HD	2	6	1	1	1	3	1	Passive	-20 ~ 80° C
PCM-9362NZ21GS6A1E	Atom N450	1GB bundle	12 V	1	1	1	1	HD	2	6	1	1	1	3	1	Passive	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-9362 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	1
1700000265	ATX power cable (PCM-9362NC series only)	1
1700006291	SATA cable 30cm	1
1703060191	PS/2 cable 19cm	1
1701140201	COM2 IDE D-SUB 20 cm cable	1
1703100121	USB 2 x 5P-2.0 12 cm W/BKT cable	2
1703100152	Audio cable 20cm	1
1700260250	LPT IDE 26P D-SUB 25 cm cable	1
1703150102	SATA 10 cm Power cable	1
1700001795	COM3/4 cable 19cm	1
1960050034N001	CPU N450 heatsink (75 x 62 19.9 mm) for PCM-9362N series	1
1960050035N001	CPU D510 cooler (75 x 62 x 24.4 mm) for PCM-9362D	1
1960024933S00B	ICH8M Heatsink for PCM-9362 series (38.1x33.6x7.5mm)	1

Rear I/O View



Optional Accessories

(MIO interface is optional by request)

Part No.	Description
MIO-6250-00A1E	MIO2.0 module w/ 3 10/100 Ethernet (RTL8139)
MIO-6260-00A1E	MIO2.0 IO module w/2 COM, 4 USB
MIO-6260L-00A1E	MIO2.0 IO module w/2 COM, 4 USB, 1 10/100 Ethernet
1700016161	AT Power cable, 2 x 6P to 3 x 4P 10 cm
1700016141	AT power cable, 2 x 6P to 2 10P 10 cm
1960047470N001	Heat spreader(97 x 75 18.5 mm)

Embedded OS/API

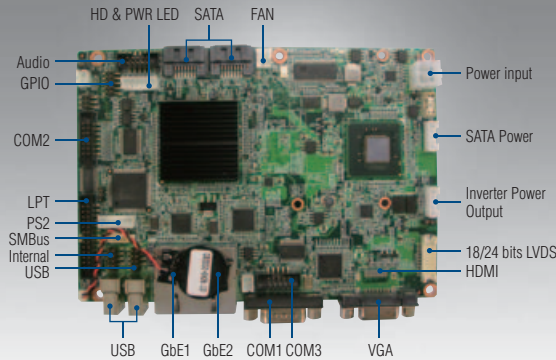
Embedded OS/API	Part No.	Description
Win XPE	2070009030	XPE WES2009 Luna Pier V4.0 ENG
WinCE	2070009031	XPE WES2009 Luna Pier V4.0 MUI24
WES 7	2070009693	CE 6.0 Pro PCM-9362 V1.3 ENG
QNX	2070009835	Image WES7E V5.0 ENG
Vxwork		V6.5
Linux		V6.8
		Ubuntu V10.04
Software API	205E362010	SUSI 3.0 SW API for PCM-9362 B: 20091117 XP

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PCM-9363

Intel® Atom™ N455/D525 3.5" SBC,
DDR3, 18/24-bit LVDS, VGA or HDMI,
2 GbE, Mini PCIe, 3 COM

NEW



Features

- Embedded Intel® Atom™ N455 Single Core/ D525 Dual Core processor + ICH8M, DDR3 memory support
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, multiple display: 18/24-bit LVDS, VGA or 1080P HDMI
- Supports 12V input power for PCM-9363, easy for power integration
- 2 Intel GbE support, Rich I/O interface with 3COM, 2 SATA, 6 USB and GPIO
- Supports embedded software APIs and Utilities

Software APIs:

- GPIO
- H/W Monitor
- Brightness
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

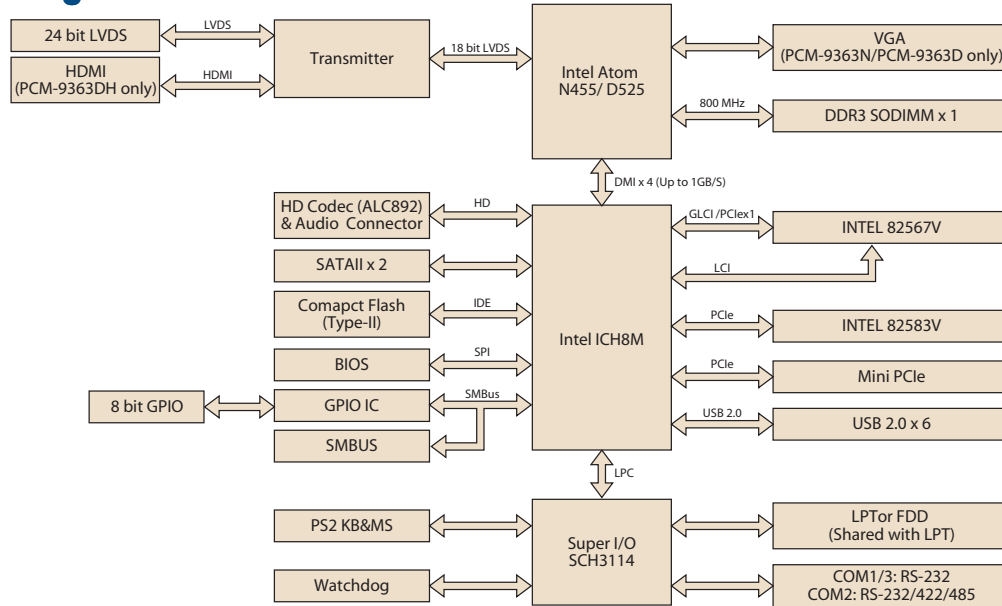
Utilities:

- BIOS flash Monitoring
- Monitoring
- eSOS
- Flash Lock
- Embedded Security ID

Specifications

Processor System	CPU	Intel Atom N455 Single Core 1.66 GHz Processor Intel Atom D525 Dual Core 1.8 GHz Processor
	Front Side Bus	667 MHz for N455, 800 MHz for D525
	Frequency	1.66 GHz on N455, 1.8 GHz on D525
	L2 Cache	512 KB/1 MB
	System Chipset	Intel N455/D525 + ICH8M
Memory	BIOS	AMI 16 Mbit Flash BIOS
	Technology	DDR3 800 MHz
	Max. Capacity	4GB for D525, and 2GB for N455
Display	Socket	1 x 204-pin SODIMM
	Chipset	Intel Atom Processor N455 1.66GHz/D525 1.8GHz
	VRAM	Optimized Shared Memory Architecture up to 224 MB system memory
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW Embedded Gen3.5+ GFX Core
	LVDS	LVDS: Single channel 18/24-bit LVDS up to WXGA 1366 x 768
	VGA	Intel Atom N455 Single Core up to 1400 x 1050 (SXGA), Intel Atom D525 Dual Core up to 2048 x 1536
	HDMI	Supported by request. Support 1080P and scale function Supports Hot Plug Detection (HPD) for HDMI
Ethernet	Dual Display	VGA+LVDS
	Speed	10/100/1000 Mbps (Supports Wake on LAN)
	Controller	GbE1 Intel 82567V, GbE2 Intel 82583V
Audio	Connector	RJ45 on GbE1, GbE2
	Chipset	Realtek ALC892 High Definition Audio (HD), Line-in, Line out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 - 255 minutes/ seconds
Storage	Compact Flash	Supports CompactFlash Card TYPE I/II (Primary Master IDE Channel)
	SATA	2 SATA II (Max. Data Transfer Rate 300 MB/s), 1 internal SATA power connector
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	2 (10/100/1000Mbps)
	VGA	1
	HDMI	1 (only on PCM-9363DH)
	USB	2
Internal I/O	USB	4 x USB 2.0
	Serial	2 x COM (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM3 supports RS-232, COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	Parallel(LPT)	1
	SMBUS	1
	PS/2 KB/Mouse	1
	GPIO	8-bit GPIO
Expansion	Mini PCI Express	1
	Power Type	AT
Power	Power Supply Voltage	Support single 12V input, ± 10%
	Power Consumption (Typical)	0.74 A @ 12 V (N455/ DDR3 1 GB) 0.86 A @ 12 V (D525/ DDR3 1 GB)
	Power Consumption (Max, test in HCT)	0.86 A @ 12 V (N455/ DDR3 1 GB) 1.18 A @ 12 V (D525/ DDR3 1 GB)
	Power Management	APM, ACPI
	Battery	Lithium 3 V/210 mAh
Environment	Operational	0 - 60° C (32 - 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)
	Non-Operational	-40° C - 85° C and 60° C @ 95% RH Non-Condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package 30.5mm for PCM-9363N 34.5mm for PCM-9363D/DH
	Total Height	

Board Diagram



Ordering Information

Part No.	CPU	Memory	L2 Cache	LVDS	HDMI	VGA	GbE1	GbE2	Audio	RS-232	RS-232/422/485	USB 2.0	SATAII	GPIO	LPT	CF	mini PCIe	Thermal Solution	Operational Temp.
PCM-9363N-S6A1E	Intel Atom N455 1.66 GHz	DDR3 SO-SIMM	512 KB	18/24-bit	By request	Yes	1	1	Yes	2	1	6	2	8-bit	1	1	1	Passive	0 ~ 60° C
PCM-9363NL-S6A1E	Intel Atom N455 1.66 GHz	DDR3 SO-SIMM	512 KB	18-bit	By request	Yes	1	-	Yes	2	1	6	2	8-bit	1	1	1	Passive	0 ~ 60° C
PCM-9363D-S8A1E	Intel Atom D525 1.8 GHz	DDR3 SO-SIMM	1 MB	18/24-bit	-	Yes	1	1	Yes	2	1	6	2	8-bit	1	1	1	Active	0 ~ 60° C
PCM-9363DH-S8A1E	Intel Atom D525 1.8 GHz	DDR3 SO-SIMM	1 MB	18/24-bit	1	-	1	1	Yes	2	1	6	2	8-bit	1	1	1	Active	0 ~ 60° C
PCM-9363NZ-1GS6A1E	Intel Atom N455 1.66 GHz	1GB bundle	512 KB	18/24-bit	By request	Yes	1	1	Yes	2	1	6	2	8-bit	1	1	1	Passive	-20 ~ 80° C
PCM-9363NZ21GS6A1E	Intel Atom N455 1.66 GHz	1GB bundle	512 KB	18/24-bit	By request	Yes	1	1	Yes	2	1	6	2	8-bit	1	1	1	Passive	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-9363 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	
1700008941	SATA Cable w/lock 30 cm	1
1703060191	PS/2 cable 19 cm	1
1701140201	COM2 IDE D-SUB 20 cm cable	1
1703100121	USB 2 x 5P-2.0 12 cm W/BKT cable	2
1700018839	Audio Cable 20 cm	1
1700260250	LPT IDE 26P D-SUB 25 cm cable	1
1703150102	SATA 10 cm Power cable	1
1700100250	COM3 Cable IDE#2 10P-2.0/D-SUB 9P (M) 25 cm	1
1960050034N001	CPU N455 heatsink (75 x 62 x 19.9 mm) for PCM-9363N series	1
1960050035N001	CPU D525 cooler (75 x 62 x 24.4 mm) for PCM-9363D	1
1960024933S00B	ICH8M Heatsink for PCM-9363 series (38.1 x 33.6 x 7.5 mm)	1

Optional Accessories

Part No.	Description
1960047470N001	Heat spreader (97 x 75 x 18.5 mm)
1700018785	Internal SATA power cable 35cm (power source is from PCM-9363)

Embedded OS/API

Embedded OS/API	Part No.	Description
Win XPE	2070010314	XPE WES2009 PCM-9363 V4.0 24MUI
	2070010313	XPE WES2009 PCM-9363 V4.0 ENG
WinCE	2070010331	CE 6.0 R3 Pro PCM-9363 V6.0.0 ENG (3COM)
WES7	2070009835	Image WES7E Intel Lunar V5.0 ENG V6.5
QNX		V6.8
Vxwork		V6.8
Linux		Ubuntu V10.04
Software API		

Rear I/O View



PCM-9363N-S6A1E
PCM-9363D-S8A1E
PCM-9363NZ-1GS6A1E
PCM-9363NZ21GS6A1E

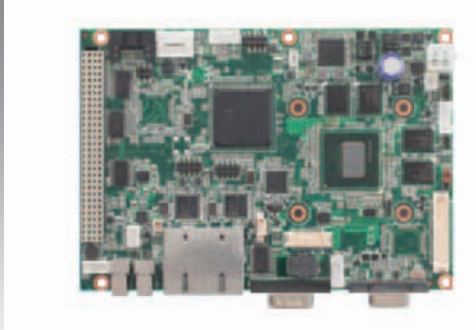
PCM-9363DH-S8A1E

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

PCM-9364

Intel® Atom™ E600 series 3.5" SBC, 2 LVDS, 2 GbE, Onboard Memory, mini-PCIe, Cfast

NEW



Features

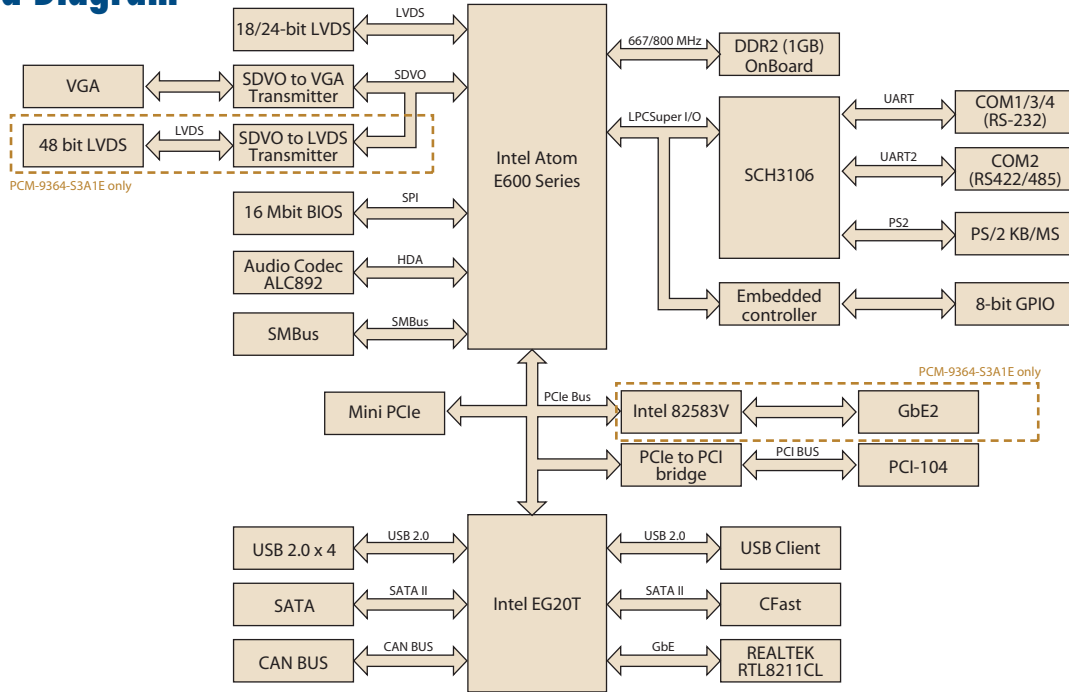
- Embedded Intel® Atom™ Atom E600+ Intel IOH E620T, onboard memory up to 1 GB
- Display type: VGA, 24-bit LVDS1, 48-bit LVDS2,
- Supports H/W Decode and Encode
- Ultra low power, total power consumption under 7 Watts, fanless design
- Supports dual GbE, HD Audio, 4 COM ports, 5 USB2.0 ports (1 for client), CFast, 8-bit GPIO and 1 SATA interface
- Supports embedded software APIs and utilities



Specifications

Processor System	CPU	Intel Atom E620 600 MHz/ E640 1.0 GHz/ E660 1.3 GHz	
	Frequency	600 MHz/1.0 GHz/1.3 GHz	
	L2 Cache	512 KB	
	System Chipset	Intel E6xx series + Intel Platform Controller Hub EG20T	
	BIOS	AMI UEFI 16 Mbit	
Memory	Technology	DDR2 800 MHz on board	
	Max. Capacity	1 GB	
	On board memory	Onboard 512 MB/ 1 GB	
Display	Chipset	Intel E6xx series	
	VRAM	Optimized shared memory architecture up to 64 MB system memory	
	Graphic Engine		Integrated 2D/ 3D graphics engine up to 400 MHz in CPU Supports OpenGL™ ES2.0, OpenVG™ 1.0, DirectX9.0c* Decode & Encode in CPU Encode format: MPEG4, H.263, H.264 Decode format: MPEG2, MPEG4, VC1, WMV9, H.264
		LVDS	LVDS1: Supports single channel 18/24-bit LVDS panel, 1280 x 768 @60 Hz (pixel clock rate = 80 MHz) LVDS2: Support dual channel 48-bit LVDS Panel
		VGA	Supports 1280 x 1024 @ 85 Hz (pixel clock rate = 160 MHz)
Dual Display	VGA + LVDS1 or LVDS1 + LVDS2		
Ethernet	Speed	10/100/1000Mbps (Supports Wake on LAN)	
	Controller	GbE1 Realtek RTL8211CL 10/100/1000Mbps GbE2 Intel 82583V 10/100/1000Mbps	
	Connector	RJ45 on GbE1, GbE2	
Audio	Chipset	Realtek ALC892, High Definition Audio (HD), Line-in, Line out, Mic-in	
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds	
Storage	Cfast	1	
	SATA	1	
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)	
	Ethernet	2 (10/100/1000 Mbps)	
	VGA	1	
	USB	2	
Internal I/O	USB	2 USB 2.0 + 1 client	
	Serial	2 COM ports (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM2: RS-422/485 (Supports RS-485 auto flow control) COM3/4: RS-232	
	SMBUS	1	
	PS/2 KB/Mouse	1	
	GPIO	8-bit GPIO	
Expansion	Mini PCI Express Socket	1 (Half-size)	
	PCI-104	1	
	CAN Bus	CANbus, protocol version 2.0B active	
Power	Power Type	ATX / AT (Support ACPI)	
	Power Supply Voltage	Supports single 12V input, ± 10%	
	Power Consumption (Typical)	TBD	
	Power Consumption (Max, test in HCT)	TBD	
	Power Management	ACPI	
Battery		3V/610mA	
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (operational humidity: 40° C @ 95% RH Non-Condensing)	
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing	
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")	
	Weight	0.85 kg (1.87 lb), weight of total package	

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part No.	CPU	L2 Cache	Onboard Memory	LVDS1	LVDS2	VGA	GbE1	GbE2	CAN Bus	Audio	RS-422/485	RS-232	USB 2.0	USB Client	SATAII	Cfast	mini PCIe	Thermal Solution	Operational Temp.
PCM-9364-M0A1E	Intel Atom 600 MHz	512 KB L2	512 MB	18/24-bit	-	1	1	-	1	1	1	3	4	1	1	1	1	Passive	0 ~ 60° C
PCM-9364-S0A1E	Intel Atom 1.0 Hz	512 KB L2	1 GB	18/24-bit	-	1	1	-	1	1	1	3	4	1	1	1	1	Passive	0 ~ 60° C
PCM-9364-S3A1E	Intel Atom 1.3 Hz	512K B L2	1 GB	18/24-bit	24/48-bit	-	1	1	1	1	1	3	4	1	1	1	1	Passive	0 ~ 60° C

Note1: Extended temperature P/N TBD.

Packing List

Part No.	Description	Quantity
	PCM-9364 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	
1700008941	SATA Cable w/ lock 30cm	1
1703060191	PS/2 cable 19cm	1
1700001795	COM3/4 20P-2.0/D-SUB-9P(M)*2 19CM cable	1
1703100152	Audio Cable 20cm	1
1703100121	USB 2 x 5P-2.0 12CM W/BKT cable	1
1703150102	SATA 10cm Power cable	1
1960046414N001	CPU E6xx series heatsink, 50x50x10cm for PCM-9364	1

Optional Accessories

Part No.	Description
TBD	Heat spreader

Embedded OS/API

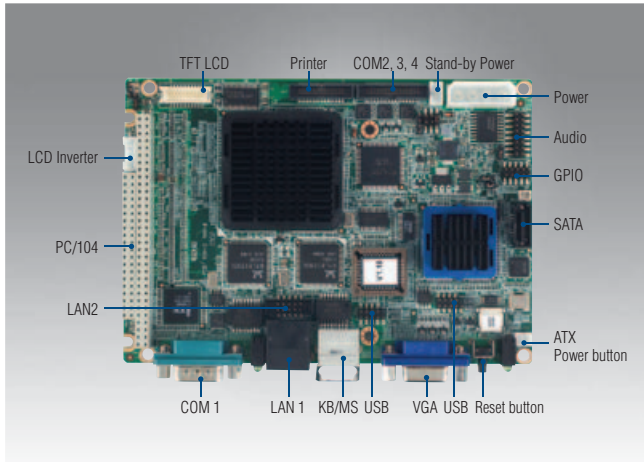
Embedded OS/API	Description
Win XPE	XPE WES 2009
WinCE	CE 6.0 R3
WES 7	WES 7
Linux	Ubuntu V10.04
QNX	V6.5
Vxwork	V6.8
Software API	SUSI V3.0

Rear I/O View



PCM-9375

AMD Geode™ LX800 3.5" SBC, VGA, LVDS, LCD, 2 Ethernet, IDE, SATA, PC/104



Features

- AMD Geode™ low power LX800 500 MHz processor
- 24-bit TFT LCD interface, 18-bit LVDS LCD display
- Dual 10/100 Mbps Fast Ethernet
- Supports up to 4 COM ports, 4 USB ports, PC/104 expansion
- Supports embedded software APIs and utilities

Software APIs:

- GPIO
- H/W Monitor
- Watchdog
- Brightness
- SMBus
- Backlight On/Off

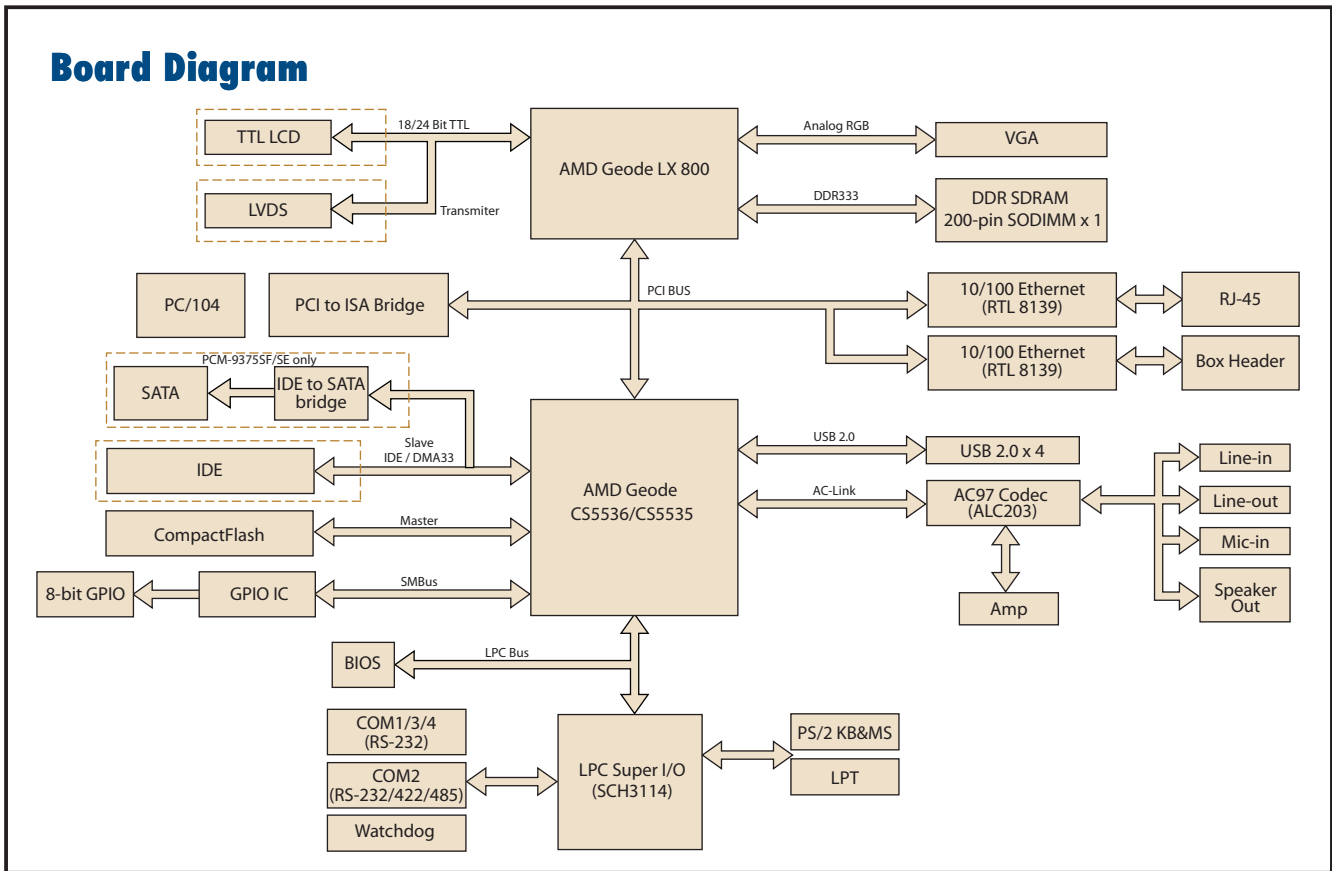
Utilities:

- BIOS flash
- Monitoring

Specifications

Processor System	CPU	AMD Geode LX800 processor, up to 500 MHz
	Frequency	500 MHz
	L2 Cache	128 KB
	System Chipset	AMD Geode LX800
	BIOS	Award 4 Mb Flash ROM BIOS
Memory	Technology	DDR 333/400 MHz
	Max. Capacity	512 MB
	Socket	1 x 200-pin SODIMM
Display	Chipset	AMD Geode LX800
	VRAM	Optimized shared memory architecture up to 64 MB system memory
	Graphics Engine	AMD CS5536 2D engine
	LVDS	1 x Single channel 18-bit LVDS (PCM-9375E), up to 1600 x 1200 x 32 bpp at 60 Hz
	VGA	VGA: up to 1920 x 1440 @ 32 bpp (85 Hz)
	TTL LCD	1 x 24-bit TTL (PCM-9375F), up to 1600 x 1200 x 32 bpp at 60 Hz
Ethernet	Dual Display	VGA+TTL, VGA+LVDS
	Speed	10/100 Mbps (Supports Wake on LAN)
	Controller	Ethernet1 Realtek RTL3139 10/100 Mbps Ethernet2 Realtek RTL8139 10/100 Mbps
	Connector	RJ-45 on Ethernet1, box header on Ethernet2
Audio	Chipset	Realtek ALC203 AC97 Line-in, Line-out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	1
	SATA	1 x SATA (Max. Data Transfer Rate 150 MB/s) (only for PCM-9375S)
	IDE	1 (only for PCM-9375F/9375E)
	Floppy	1 (Shared with LPT)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	1 (10/100 Mbps)
	PS/2 KB/Mouse	1
	VGA	1
	Reset Button	1
Internal I/O	USB	4 x USB 2.0
	Serial	3 x COM (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM3/COM4 supports RS-232 COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	IDE	1 UDMA 33/66
	Parallel (LPT)	1 (Shared with LPT)
	FDD	1 (Shared with LPT)
	GPIO	8-bit GPIO
	I2C	optional
Expansion	PC/104 Slot	PC/104 Expansion(8/16-Bit ISA)
Power	Power Type	AT/ATX
	Power Supply Voltage	5V + 5% (+12V option for LCD, PC/104)
	Power Consumption (Typical)	Typical: 0.6 A @ 5 V, 0.03 A @ 12 V
	Power Consumption (Max, test in HCT)	MAX: 1.2 A @ 5 V, 0.23 A @ 12 V
	Power Management	APM 1.2, ACPI
	Battery	Lithium 3 V/196 mAH
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
	Total Height	25.2mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	VGA	LVDS	TTL	10/100 Ethernet	IDE/SATA	USB2.0	RS-232	RS-232/422/485	LPT	GPIO	CF	PC/104	Thermal Solution	Operating Temp.
PCM-9375F-JOA1E	AMD LX800	1	-	1	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	0 ~ 60° C
PCM-9375E-JOA1E	AMD LX800	1	1	-	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	0 ~ 60° C
PCM-9375SF-JOA1E	AMD LX800	1	-	1	2	1 SATA	4	3	1	1	8-bit	1	1	Passive	0 ~ 60° C
PCM-9375SE-JOA1E	AMD LX800	1	1	-	2	1 SATA	4	3	1	1	8-bit	1	1	Passive	0 ~ 60° C
PCM-9375FZ-JOA1E	AMD LX800	1	-	1	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	-20 ~ 80° C
PCM-9375EZ-JOA1E	AMD LX800	1	1	-	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	-20 ~ 80° C
PCM-9375FZ2-JOA1E	AMD LX800	1	-	1	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	-40 ~ 85° C
PCM-9375EZ2-JOA1E	AMD LX800	1	1	-	2	1 IDE	4	3	1	1	8-bit	1	1	Passive	-40 ~ 85° C

Packing List

Part No.	Description	Quantity
	PCM-9375 SBC	
	Startup Manual	
	Utility CD	
1701440351	IDE cable (44p/44p) 35cm (PCM-9375F/E series only)	1
1700060202	KB/MS cable 20cm	1
1701100202	LAN cable 20cm	1
1700001971	COM 2/3/4 RS-232 cable 21 cm	1
1700001977	Parallel Port cable 25cm	1
1703160160	Audio cable 16 cm	1
1703100121	USB cable (2 ports) w/ bracket 12cm	1
1700008894	SATA data cable 30cm (PCM-9375SF/SE only)	1
1703150102	SATA power cable 10cm (PCM-9375SF/SE only)	1
1960004868	LX800 heatsink for PCM-9375 39.5 x 39.6 x 9.8 mm	
1960004869	CS5536 heatsink for PCM-9375 22.6 x 22.6 x 14.5 mm	

Optional Accessories

Part No.	Description
1703040157	COM2 cable for RS-422/485
1703200201	ATX power control cable

Embedded OS/API

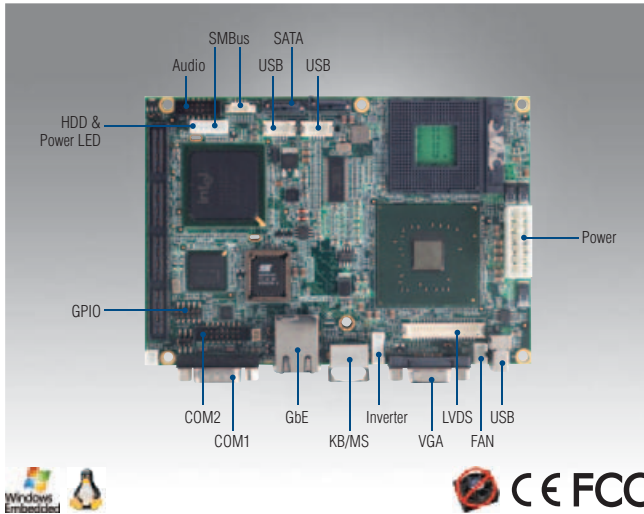
Embedded OS/API	Part No.	Description
WinCE	2070000729	Image PCM-9375 CE 5.0 Pro Plus Eng
	2070001612	CE 6.0 Pro GX3 4Com V1.0 ENG
	2070007509	CE 6.0 Pro PCM-9375_4COM V1.1 JPN
Win XPE	2070007810	CE 6.0 Pro GX3 4COM V1.2 ENG
	2070007790	WES2009 ENG V4.0
QNX	2070007910	WES2009 24MUJ V4.0
		QNX 6.3.2, QNX 6.4.1
Vxwork		V5.5
Linux	205E375000	Linux WDT Driver Ubuntu8.04 PCM-9375 V1.0 ENG
Software API	2066002300	CD SUSI Library V1.0

Rear I/O View



PCM-9382

Intel® Core™2 Duo Processor 3.5" SBC,
VGA, LVDS, GbE, USB, SATA, SSD



Features

- Embedded Intel® Core™ 2 Duo /Core™ Duo processor LV/ ULV
- Supports 48-bit LVDS/ VGA display
- Supports GbE and HD audio
- Supports five USB 2.0 ports and one SATA II
- Supports embedded software API and utility

Software APIs:

- GPIO
- H/W Monitor
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

Utilities:

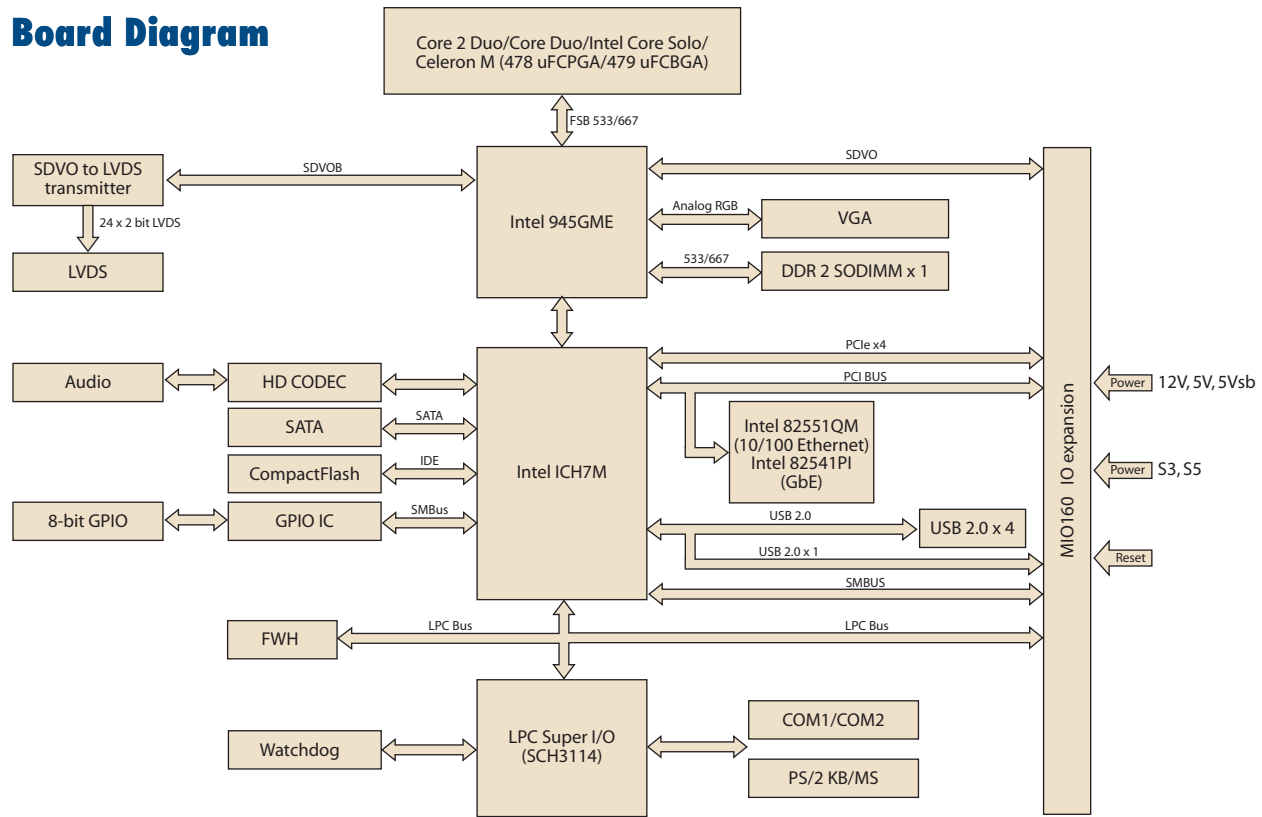
- BIOS flash
- Monitoring

Specifications

Processor System	CPU	Intel Core 2 Duo/Core Duo/Core Solo FSB667 MHz socket 478 type, up to Intel Core 2 Duo T 7400 Intel Celeron M 1.06 GHz (423) Onboard CPU
	Front Side Bus	533/667 MHz
	Frequency	Depends on processor
	System Chipset	Intel 945GME + ICH7M
	BIOS	Award 4 Mb Flash ROM BIOS
Memory	Technology	DDRII 533/667 MHz SO-DIMM
	Max. Capacity	2 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	Intel 945GME
	VRAM	DVMT 4.0 supports up to 224 MB
	Graphics Engine	Mobile Intel GMA 950 3D/2D engine
	LVDS	1 x LVDS (single channel 24-bit or dual channel 48-bit LVDS)
	VGA	VGA: up to 2048 x 1536 @ 32bpp (85 Hz)
Ethernet	Dual Display	VGA + LVDS
	Speed	10/100 Mbps (Supports Wake on LAN)
	Controller	Intel 82551QM 10/100 Mbps Ethernet Intel 82541PI 10/100/1000 Mbps GbE (Optional)
Audio	Connector	RJ-45 on Ethernet
	Chipset	Realtek ALC888, High Definition Audio (HD), Line-in, Line out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	1
	SATA	1 x SATA (Max. Data Transfer Rate 150 MB/s)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	1 (10/100 Mbps)
	KB/Mouse	1
	VGA	1
	USB	1
Internal I/O	USB	4 x USB 2.0
	Serial	1 x COM (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	SMBUS	Supported
	PS/2 KB/Mouse	1
	GPIO	8-bit GPIO
Expansion	MIO 160	1
Power	Power Type	AT/ATX
	Power Supply Voltage	5V + 5% (12V option for LCD, MIO I/O & CPU FAN)
	Power Consumption (Typical)	Typical: 4.64 A @ 5 V, 0.09 A @ 12 V (Core Duo 2.16 G/DDRII 533/512 MB)
	Power Consumption (Max, test in HCT)	MAX: 5.14 A @ 5 V, 0.15 A @ 12 V (Core Duo 2.16 G/DDRII 533/512 MB)
	Power Management	APM1.2, ACPI2.0, wake on LAN, and modem ring-in functions
Environment	Battery	Lithium 3 V / 210 Mah
	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 85% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
Physical Characteristics	Total Height	30.9mm for PCM-9382F-S0A1E 44.1mm for PCM-9382F-00A1E, PCM-9382FG

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Board Diagram



Ordering Information

Part No.	CPU	VGA	LVDS	Ethernet	SATA	USB	RS-232	RS-232/422/485	CF	MIO	Power Supply	Thermal Solution	Operating Temp.
PCM-9382F-00A1E	Socket	1	1	1 FE	1	5	1	1	1	1	5 V/12 V	Active	0 ~ 60° C
PCM-9382F-S0A1E	1.06 GHz	1	1	1 FE	1	5	1	1	1	1	5 V or 5 V/12 V	Passive	0 ~ 60° C
PCM-9382FG-00A1E	Socket	1	1	1 GbE	1	5	1	1	1	1	5 V/12 V	Active	0 ~ 60° C

Packing List

Part No.	Description	Quantity
	PCM-9382 SBC	
	Startup Manual	
	Utility CD	
1700006291	SATA cable 30cm	2
1700060202	KB/MS cable 20cm	1
1701140201	RS-232/422/485 cable 20cm	1
1703100152	Audio cable 20cm	1
1700006292	USB cable (2 ports) 17cm	1
1750001940	Cooler (Socket type CPU using)	1
1703150102	SATA Power cable 10cm	1
1700000265	ATX power cable 10cm	1
9689000002	mini Jumper pack	1
1750001940	CPU+945GME cooler 101.6 x 79 x 31.8 cm, 12 V, PCM-9382F-00A1E, PCM-9382FG-00A1E only	1
1960011977T100	CPU+945GME heatsink 101.6 x 79 x 20.1 mm for PCM-9382F-S0A1E only	1
1960009814	ICH7M heatsink for PCM-9382, 30.6 x 30.6 x 9.8 mm	1

Optional Accessories

Part No.	Description
MIO-6250-00A1E	MIO2.0 module w/ 3 10/100 Fast Ethernet (RTL8139)
MIO-6260-00A1E	MIO2.0 IO module w/2 COM, 4 USB
MIO-6260L-00A1E	MIO2.0 IO module w/2 COM, 4 USB, 1 10/100 Ethernet
1700016161	AT Power cable, 2 x 6P to 3 x 4P 10 cm
1700016141	AT power cable, 2 x 6P to 2 x 10P 10 cm

Embedded OS

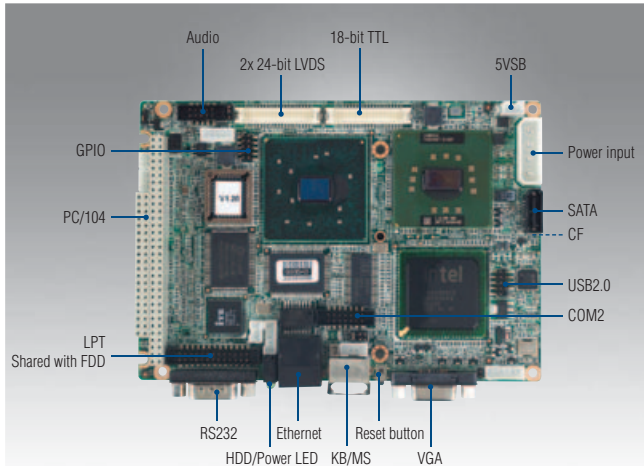
Embedded OS	Part No.	Description
Win XPE	2070001575	XPE FP2007 P4&PM-B (from 945) V3.0 ENG
Linux		Ubuntu V8.10

Rear I/O view



PCM-9388

Intel® Celeron® M Processor ULV 3.5" SBC,
VGA, LCD, Ethernet, USB, PC/104



Features

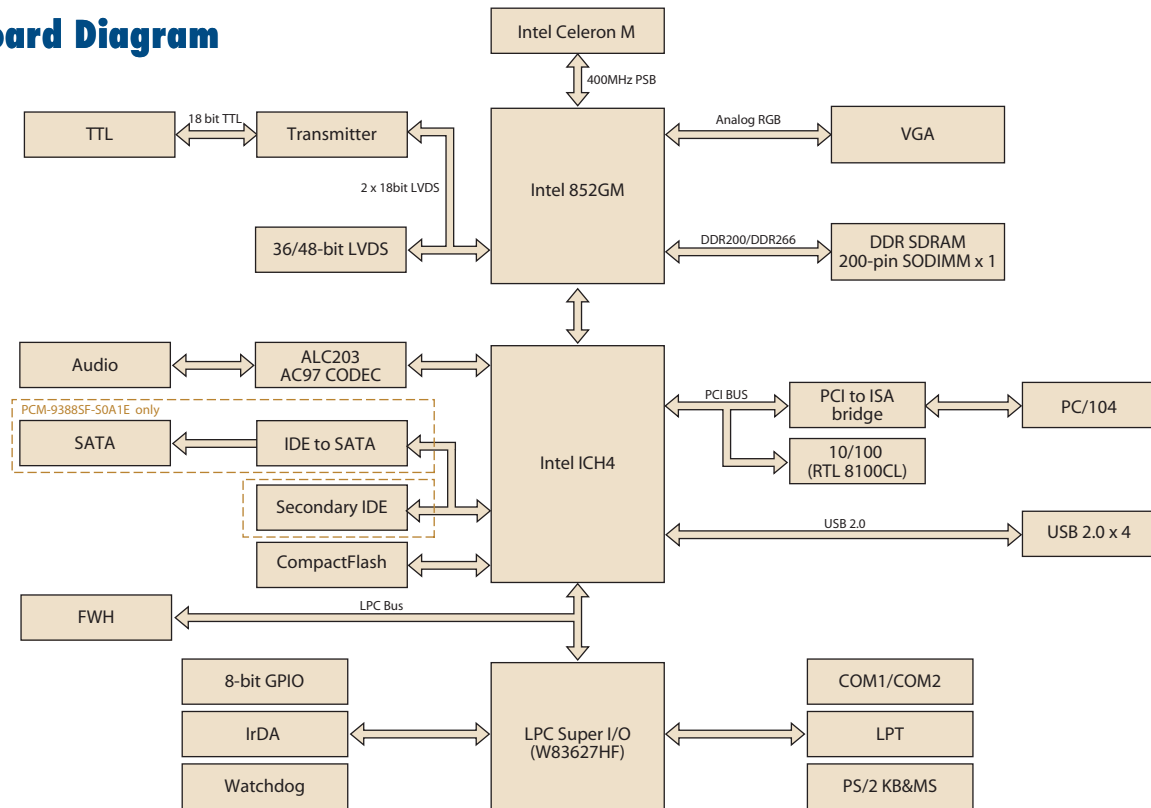
- Supports Intel® Celeron® M processor
- Supports 18-bit TTL/36-bit LVDS (48-bit LVDS optional)/ VGA Dual independent display by VGA + LVDS/VGA + TTL
- Low profile heatsink support with total height under 18mm
- Fanless support with low profile heatsink
- Full LCD support for 18-bit TTL/2-channel LVDS supports up to 48-bit (Optional)
- Supports embedded software APIs and utilities



Specifications

Processor System	CPU	Intel Celeron M 600 MHz and 1.0 GHz on board type
	Front Side Bus	400 MHz
	Frequency	600 MHz and 1.0 GHz
	L2 Cache	512 KB on 600 MHz, 0L2 on 1.0 GHz
	System Chipset	Intel 852GM + ICH4
	BIOS	Award 4 Mb Flash ROM BIOS
Memory	Technology	DDR266 MHz SO-DIMM supports
	Max. Capacity	1 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	Intel 852 GM
	VRAM	Supports 64 MB frame buffer shared system memory
	Graphics Engine	Mobile Intel 852 GM integrated 3D/2D engine
	LVDS	1 x LVDS (single channel 18/24-bit or dual channel 36/48-bit LVDS)
	VGA	VGA: up to 1600 x 1200 @ 32 bpp (85 Hz)
	TTL LCD	1 x 18-bit TTL
Ethernet	Dual Display	VGA + TTL, VGA + LVDS
	Speed	10/100 Mbps (Supports Wake on LAN)
	Controller	Realtek RTL 8100CL
Audio	Connector	RJ-45 on Ethernet
	Chipset	Realtek ALC203 AC97, Line-in, Line-out, Mic-in
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	1
	SATA	SATA (Max. Data Transfer Rate 150 MB/s) (only for PCM-9388S)
	IDE	1 (only for PCM-9388F)
	Floppy	1 (Shared with LPT)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	1 (10/100 Mbps)
	PS/2 KB/Mouse	1
	VGA	1
	Reset Button	1
Internal I/O	USB	2 x USB 2.0
	Serial	1 x COM (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	IDE	COM2 supports RS-232/422/485
	Parallel(LPT)	1 (Shared with FDD)
	FDD	1 (Shared with LPT)
	SMBUS	Supported
	GPIO	8-bit GPIO
	IrDA	115 kbps
Expansion	PC/104 Slot	PC/104 Expansion(8/16-Bit ISA)
Power	Power Type	AT/ATX
	Power Supply Voltage	5V + 5% (12V option for LCD)
	Power Consumption (Typical)	Typical: 1.56 A @ 5 V, 0.16 A @ 12 V (Celeron M 600/DDR 256 MB)
	Power Consumption (Max, test in HCT)	MAX: 2.11 A @ 5 V, 0.17 A @ 12 V (Celeron M 600/DDR 256 MB)
	Power Management	APM, ACPI S1, S5
Environment	Battery	3 V / 210 Mah
	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package
	Total Height	26.3mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	Memory	VGA	LVDS	TTL	10/100 Ethernet	IDE/ SATA	USB	RS-232	RS-232/ 442/485	LPT	CF	PC/104	Thermal Solution	Operating Temp.
PCM-9388F-M0A1E	Celeron M 600 MHz (512 KB)	DDR SODIMM	1	1	1	1	1 IDE	2	1	1	1	1	1	Passive	0 ~ 60° C
PCM-9388F-S0A1E	Celeron M 1 GHz (0 KB)	DDR SODIMM	1	1	1	1	1 IDE	2	1	1	1	1	1	Passive	0 ~ 60° C
PCM-9388SF-S0A1E	Celeron M 1 GHz (0 KB)	DDR SODIMM	1	1	1	1	1 SATA	2	1	1	1	1	1	Passive	0 ~ 60° C
PCM-9388Z-512S0A1E	Celeron M 1 GHz (0 KB)	512 MB bundle	1	1	1	1	1 SATA	2	1	1	1	1	1	Passive	-20 ~ 80° C

Packing List

Part No.	Description	Quantity
	PCM-9388 SBC	
	Startup Manual	
	Utility CD	
1701440504	IDE cable (44p/44p/40p) 50cm (PCM-9388F series only)	1
1700060202	KB/MS cable 20cm	1
1701140201	RS-232/422/485 cable 20cm	1
1700260250	Parallel Port cable 25cm	1
1703100152	Audio cable 20cm	1
1703100121	USB cable (2 ports) w/ bracket 12cm	1
1700008894	SATA data cable 30cm (PCM-9388SF,PCM-9388Z only)	1
1703150102	SATA power cable 10cm (PCM-9388SF,PCM-9388Z only)	1
9689000002	mini Jumper pack	1
1961001530T100	heatsink for PCM-9388F-M0A1E and PCM-9388F-S0A1E, 87 x 85 x 6.24 cm	1

Optional Accessories

Part No.	Description
1703200201	ATX power cable
1700001531	LTP to FDD cable

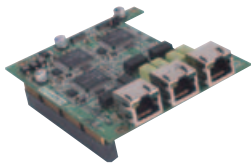
Embedded OS

Embedded OS	Part No.	Description
WinCE	20700007811	CE 6.0 Pro Intel (852/855/915/945) 2 COM V1.2 ENG
Win XP	20700007789	XPE WES2009 Intel-Multitprocess V4.0 ENG
QNX		V6.4.1
Vxwork		V5.5
Linux		Ubuntu V10.04

Rear I/O view



I/O Modules



MIO-6250
3 x 10/100 Mbps with Bypass Ethernet Ports

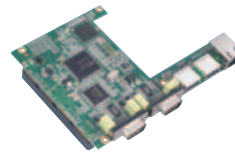
Specifications

Chipset	3 x RealTek® RTL8139
Speed	10/100 Mbps
Interface	3 x RJ-45
Standard	IEEE 802.3 u (100Base-T) Compatible
Bypass	Ethernet Bypass in Port 2 and Port 3
Dimension	102 x 85 mm, (4.7" x 3.3")
Environment	0 ~ 60° C, operation
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

P/N	Description
MIO-6250-00A1E	MIO Module with 3 10/100 Ethernet

MIO base board: PCM-9380, PCM-9386, PCM-9382, PCM-9362 (PCM-9362 MIO by request)



MIO-6260
Multi I/O Module with 1 Ethernet, 2 COM, 4 USB

Specifications

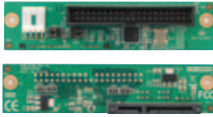
Chipset	Intel® 82551ER (MIO-6260L) NEC uD720101 PCI USB 2.0 controller SMSC SCH-3114 LPC I/O with multiple serial ports Controller
I/O Interface	1 x RJ-45 (MIO-6260L), 2 x USB connector, 2 x box header, 2 x RS-232/422/485 by D-Sub connector Serial ports jumperless, with auto flow control
Standard	USB 2.0 compliant; IEEE 802.3u 100 Mbps Fast Ethernet compatible
Dimensions	102 x 146 mm, (4.7" x 5.7")
Environment	0 ~ 60° C, operating temperature
Operating Humidity	10% ~ 90% relative humidity, non-condensing

Ordering Information

P/N	Description
MIO-6260-00A1E	MIO module with 2 COM, 4 USB
MIO-6260L-00A1E	MIO module with 1 10/100 Ethernet, 2 COM, 4 USB

MIO base board: PCM-9380, PCM-9386, PCM-9382, PCM-9362 (PCM-9362 MIO by request)

Riser Cards



PCM-233A

SATA to IDE Module for SATA Device



Specifications

General	
Chipset	ACARD ARC772N
Power Input	+3.3 V, +5 V, +12 V
PATA Connector	40-pin IDE connector
SATA Connector	7+15P SATA connector
External Power	+5 V, +12 V
Mechanical and Environmental	
Dimensions (L x W)	98 x 32 mm (3.8" x 0.9")
Weight	30g
Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Storage Temperature	-45 ~ 85° C (-40 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

Standard

Part Number	Description
PCM-233A-00A1E	SATA to IDE module for SATA device



PCM-233C

IDE (44-pin) to SATA Converter Module



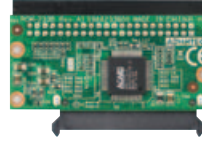
Specifications

General	
Chipset	ACARD ARC772N
PATA Connector	44-pin IDE Connector
SATA Connector	7P SATA Connector
Mechanical and Environmental	
Dimensions (L x W)	53 x 25 mm
Weight	30g
Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Storage Temperature	-45 ~ 85° C (-40 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

Ordering Information

Standard

Part Number	Description
PCM-233C-00A1E	IDE (44-pin) to SATA converter module



PCM-233B

SATA to IDE (44-pin) Converter Module



Specifications

General	
Chipset	ACARD ARC772N
PATA Connector	44-pin IDE connector
SATA Connector	7+15P SATA connector
Mechanical and Environmental	
Dimensions (L x W)	53 x 25 mm (2.1" x 1.0")
Weight	30g
Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Storage Temperature	-45 ~ 85° C (-40 ~ 185° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing

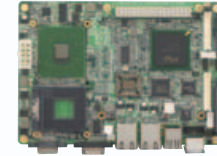
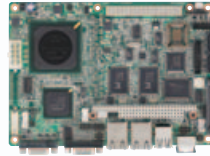
Ordering Information

Standard

Part Number	Description
PCM-233B-00A1E	SATA to IDE (44-pin) converter module

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/EBK/5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

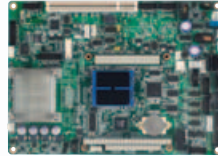
EPIC Single Board Computers



Selection Guide

Model Name		PCM-4373	PCM-4381
Model Type		EPIC SBC	EPIC SBC
Processor System	CPU	AMD Geode LX800 Processor, up to 500 MHz	Intel Celeron M Processor 600 MHz/1 GHz/Socket type
	Front Side Bus	400 MHz	400 MHz (910GMLE)/533 MHz (915GME)
	Frequency	500 MHz	C-M 600 MHz/C-M 1.0 GHz/Socket type
	L2 Cache	128 KB L2 cache	512 KB/0KB/depends on CPU
	System Chipset	AMD Geode LX800 + AMD Geode CS5536	Intel 910GMLE/915GME + ICH6M
Memory	BIOS	Award 4-Mbit	Award 4-Mbit
	Technology	DDR 266/333/400 MHz	DDR2 400 MHz (910GMLE), 400/533 MHz (915GME)
	Max. Capacity	1 GB	2 GB
Display	Socket	1 x 200-pin SODIMM	1 x 200-pin SODIMM
	Chipset	AMD Geode LX800	Intel 910GMLE/915GME
	VRAM	64 MB	DVMT 3.0 supports up to 128MB
	Graphics Engine	AMD 2D engine	Mobile Intel GMA 900 2D/3D Engine
	LVDS	18-bit LVDS	1 x 48-bit LVDS1, 1 x 48-bit LVDS2
	VGA	Up to 1920 x 1440 x 32 bpp at 85 Hz and up to 1600 x 1200 x 32 bpp at 100 Hz	Up to QXGA (2048 x 1536)
	TTL LCD	24-bit TTL	-
	Dual Display	VGA + 18-bit LVDS, or VGA + 24-bit TTL	VGA + LVDS, LVDS1 + LVDS2
Ethernet	Interface	2 x RJ-45	2 x RJ-45
	Controller	2 x Realtek RTL8100CL-LF	2 x Realtek RTL8111B-GR
Audio	Chipset	AC97, Line-in, Line-out, Mic-in	AC97, Line-in, Line-out, Mic-in
	Output	System reset	System reset
WatchDog Timer	Interval	Programmable 1 ~ 255 level	Programmable 1 ~ 255 level
	CompactFlash	Card Type I, Type II	Card Type I, Type II
Storage	SATA	2	2
	IDE	-	-
	Floppy	1 x FDD (Optional)	1 x FDD (Optional)
Rear I/O	Serial	1 x RS-232/422/485 (Supports Auto flow control)	1 x RS-232
	Ethernet	2	2
	PS/2 KB/Mouse	1	1
	VGA	1	1
	USB	2	2
Internal I/O	USB	2 x USB 2.0 (2 via USB DOM connector)	4 x USB 2.0 (2 via USB DOM connector)
	Serial	4 x RS-232, 1 x RS-232/422/485 (Supports Auto flow control)	2 x RS-232, 1 x RS-232/422/485
	IDE	-	-
	Parallel (LPT)	1	1
	FDD	Share with LPT (Optional)	Share with LPT (Optional)
	GPIO	16-bit GPIO	16-bit GPIO
	Expansion	PC/104 Slot	-
PCI-104 Slot		-	1
PC/104-Plus Slot		1	-
Mini PCI Express		-	-
Mini PCI Socket		-	-
Power	Power Type	AT / ATX	AT / ATX
	Power Supply Voltage	ATX: +5 V ± 5%, 12 V ± 10%, 5 VSB AT: 5 V only to boot up, 12 V option for LCD Inverter and PC/104+	ATX: +5 V ± 5%, 12 V ± 10% AT: 5 V only to boot up, 12 V optional for LCD Inverter and PC/104+
	Power Consumption (Typical)	5 V: 1.45 A (Geode LX800 with DDR333 1 GB)	2.59 A @ 5 V, 0.01 A @ 12 V (Celeron M 1G with DDR2 256 MB)
	Power Consumption (Max, test in HCT)	5 V: 1.66 A (Geode LX800 with DDR333 1 GB)	3.22 A @ 5 V, 0.01 A @ 12 V (Celeron M 1G with DDR2 256 MB)
Environment	Operating	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
	Non-Operating	95% @ 60° C Relative Humidity	95% @ 60° C Relative Humidity
Physical Characteristics	Dimensions (L x W)	115 x 165 mm (4.5" x 6.5")	115 x 165 mm (4.5" x 6.5")
	Weight	0.35 kg (0.77 lb) (with Heatsink)	0.35 kg (0.77 lb) (with Heatsink)
Reference Page		5-4	5-6

EBX & 5.25" Single Board Computers



Selection Guide

Model Name	PCM-9562	PCM-9584	
Model Type	EBX SBC	EBX SBC	
Processor System	CPU	Intel Atom Processor N450/D510 1.66 GHz	Embedded Intel Pentium M/ Celeron M Processor Pentium M 1.4 GHz Celeron M 1.0 GHz uFCPGA2 (478-pin)
	Front Side Bus	667 MHz	400/533 MHz
	Frequency	Atom N450/D510 1.66 GHz	C-M 1.0 GHz/ P-M 1.4 GHz/ Socket type
	L2 Cache	512 KB/1 MB	512 KB ~ 2 MB
	System Chipset	N450/D510 + ICH8M	Intel 915GME + ICH6M
Memory	BIOS	AMI 16 Mbit	Award 4 Mbit
	Technology	DDR2 667	DDR2 400/533 MHz
	Max. Capacity	2 GB	4 GB
Display	Socket	1 x 200-pin SODIMM	2 x 200-pin SODIMM
	Chipset	N450/D510	Intel 915GME chip integrated. (Extreme Graphics 2)
	VRAM	Optimized Shared Memory Architecture up to 224 MB	DVMT 3.0 supports up to 128 MB
	Graphics Engine	Embedded Gen3.5+ GFX Core, HW MPEG2 decoder	Mobile Intel GMA 900 2D/3D Engine
	LVDS	Single channel 18-bit LVDS up to WXGA 1366 x 768	LVDS1: 18/36-bit LVDS2: 24/48-bit
Ethernet	VGA	N450: Up to SXGA 1400 x 1050 @ 60 Hz (SXGA) D510: up to 2048 x 1536 (QXGA)	Up to 1600 x 1200 at 85-Hz and 2048 x 1536 at 75-Hz
	TTL LCD	-	-
	DVI	-	-
	TV Out	-	-
	Dual Display	VGA+ LVDS	VGA + 48-bit LVDS2, 36-bit LVDS1 + 48-bit LVDS2, VGA + 36-bit LVDS1
Audio	Interface	3 (RJ-45 connector through the cable and GbE3 is optional)	1 (RJ-45 connector through the cable)
	Controller	GbE1 Intel 82567, GbE2 Intel 82583V, Optional GbE3 Intel 82583V (UL60601 Compliant) 10/100/1000 Mbps	BroadCOM BCM5721
WatchDog Timer	Connector	Box header	Box header
	Chipset	ALC888 HD Codec, Speaker out, CD-input, Line-in, Line-out, Mic-in	ALC650, Speaker out, CD-input, Line-in, Line-out, Mic-in
Storage	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load	Max 2.2W/ch Stereo into a 3Ω Load
	Output	System reset	System reset
Internal I/O	Interval	Watchdog timer1 (IWT): monitor the system status before OS is ready (programmable 10ms, disable, 1s, 60s) Watchdog timer2 (PWT): monitor the application status after OS is ready (programmable 1 - 255 sec/min) (Full version only)	Programmable 1 ~ 255 level
	CompactFlash	Card Type I, Type II	Card Type I, Type II (shared 2nd IDE Channel)/USB-DOM (Option)
	SATA	3 x SATAII	2 x SATA
	IDE	-	1
	Floppy	Share with LPT (Optional)	1 x FDD (Optional)
Expansion	SPI Flash	16 Mbit	-
	Serial	4 x RS-232 (isolation design COM6 is Full version only) 2 x RS-422/485	3 x RS-232, 1 x RS-232/422/485
	Ethernet	3 x GbE (RJ-45 connector through the cable and GbE3 is Full version only optional)	2 x GbE (RJ-45 connector through the cable)
	PS/2 KB/Mouse	1	1
	CRT	1	1
	Reset Button	1	1
	USB	8 x USB 2.0	6 x USB 2.0
	IDE	-	1
	Parallel (LPT)	1	1
	FDD	Share with LPT (Optional)	Share with LPT (Optional)
	GPIO	16-bit GPIO	8-bit GPIO
	SMBUS	1	-
	I ² C	1	-
Power	PC/104 Slot	-	-
	PC/104 Slot	-	-
	PC/104-Plus Slot	1	1
	Mini PCI Express	1	-
	Mini PCI Socket	-	1
Environment	PCI Slot	1	1
	Power Type	AT / ATX (Both AT/ATX can support ACPI)	AT / ATX
	Power Supply Voltage	ATX: 12V ±10%, 5VSB ±5% (5V stand-by power is only for auto power off function) AT: 12V ±10% only	AT +5V ±5%, +12V ±10% ATX +5V ±5%, +12V ±10%
Physical Characteristics	Power Consumption (Typical)	PCM-9562N-S6A1E: 10.8W (893 mA @ 12V, 8 mA @ 5 VSB) PCM-9562D-S6A1E: 13.6W (1130 mA @ 12V, 10 mA @ 5 VSB)	Suspend: 1.86 A @ 5 V, 0.48 A @ 12 V (Pentium M with 1.4 GHz) Suspend: 1.87 A @ 5 V, 0.75 A @ 12 V (Pentium M with 2.0 GHz)
	Power Consumption (Max, test in HCT)	PCM-9562N-S6A1E: 13.9W (1159mA @ 12V, 6mA @ 5VSB) PCM-9562D-S6A1E: 16.9W (1404mA @ 12V, 8mA @ 5VSB)	2.42 A @ 5 V, 1.01 A @ 12 V (Pentium M with 1.4 GHz) 2.43 A @ 5 V, 1.65 A @ 12 V (Pentium M with 2.0 GHz)
Physical Characteristics	Operating	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
	Non-Operating	95% @ 60° C Relative Humidity	95% @ 60° C Relative Humidity
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (with Heatsink)	0.85 kg (1.87 lb) (with Heatsink)

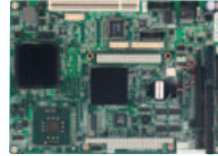
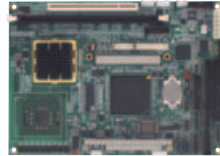
Reference Page

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- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

EBX & 5.25" Single Board Computers



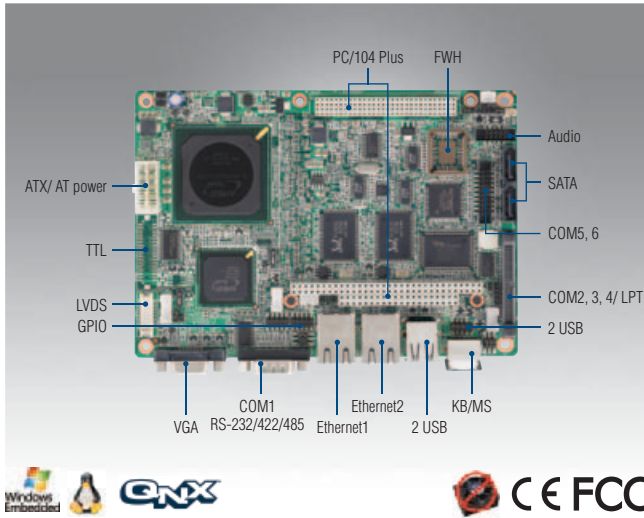
Selection Guide

Model Name		PCM-9587	PCM-9588	PCM-9590
Model Type		EBX SBC	EBX SBC	EBX SBC
Processor System	CPU	Embedded Intel Celeron M Processor supported Celeron M 600 MHz Celeron M 1.0 GHz	Embedded Intel Celeron M Processor supported Celeron M 600 MHz Celeron M 1.0 GHz	Embedded Intel Core2 Duo Duo/Core Duo Processor supported, Socket 478 Core Duo 1.2 GHz Core Duo 1.66 GHz uFCPGA2 (478-pin)
	Front Side Bus	400 MHz	400 MHz	533/667 MHz
	Frequency	C-M 600 MHz/C-M 1.0 GHz	C-M 600 MHz/C-M 1.0 GHz	Core Duo 1.2 GHz/Socket type
	L2 Cache	512 KB/0 KB	512 KB/0 KB	2 ~ 4 MB
	System Chipset	Intel 852GM + 6300ESB	Intel 910GMLE + ICH6M	Intel 945GME + ICH7M
Memory	BIOS	Award 4-Mbit	Award 4-Mbit	Award 4-Mbit
	Technology	DDR 200/266, ECC	DDR2 400 Downward compatible for DDR2 533/667/800 MHz	DDR2 400/533/667
Memory	Max. Capacity	1 GB	2 GB	4 GB
	Socket	1 x 184-pin DIMM	1 x 200-pin SODIMM	2 x 200-pin SODIMM
Display	Chipset	Intel 852GM chip integrated. (Extreme Graphics 2)	Intel 910GMLE	Intel 945GME
	VRAM	Optimized Shared Memory Architecture up to 64MB	DVMT 3.0 supports up to 128 MB	224 MB
	Graphics Engine	Intel 852GM integrated 2D/3D Engine	Mobile Intel GMA 900 2D/3D Engine	Intel Gen 3.5 Integrated Graphics Engine
	LVDS	1 x 36-bit LVDS(up to 48-bit LVDS by request)	1 x 48-bit LVDS	LVDS1: 18/36-bit LVDS2: 24/48-bit (optional)
	VGA	Up to 1600 x 1200 at 85-Hz and 2048 x 1536 at 75-Hz	up to QXGA (2048 x 1536)	Up to QXGA (2048 x 1536)
	TTL LCD	-	18/36-bit TTL (PCM-9588T)	-
	DVI	1 (Supports DVI display up to 165 MHz, UXGA resolution)	Yes (PCM-9588F)	-
	TV Out	-	-	Yes (No Macrovision support)
Ethernet	Dual Display	VGA + LVDS, DVI + LVDS, DVI + VGA	VGA + LVDS / DVI + LVDS/ DVI + VGA/ VGA + TTL	VGA + LVDS1, VGA + LVDS2, LVDS1 + LVDS2 (by IEGD driver); LVDS2 is optional
	Interface	1 (RJ-45 connector through the cable)	1 (RJ-45 connector through the cable)	2 x GbE (RJ-45 connector through the cable)
Ethernet	Controller	Intel 82551ER, optional 82541PI (GbE)	Realtek RTL8100CL-LF (Optional RTL8110SCL-LF for Giga LAN)	2 x Intel 82573L
	Connector	Box header	Box header	Box header
Audio	Chipset	ALC650, Speaker out, CD-input, Line-in, Line-out, Mic-in	AC97, Line-in, Line-out, Mic-in, speaker out (R/L)	HD Audio, supports 7.1 channel: CD-input, Line-in, Line-out, Mic-in
	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load	Max 2.2W/ch Stereo into a 3Ω Load	Max 2.2W/ch Stereo into a 3Ω Load
WatchDog Timer	Output	System reset	System reset	System reset
	Interval	Programmable 1 ~ 255 level	Programmable 1 ~ 255 level	Programmable 1 ~ 255 level
Storage	CompactFlash	Card Type I, Type II (shared 2nd IDE Channel)	Card Type I, Type II	Card Type I, Type II
	SATA	2 (Supports SATA RAID function (0,1))	2 x SATA	2 x SATAII
	IDE	1 x EIDE (UDMA 100)	1 x EIDE (UDMA 33/66/100)	1 x EIDE (UDMA 100)
	Floppy	1 x FDD (Optional)	1 x FDD (Optional)	1 x FDD (Optional)
	SPI Flash	-	-	-
Internal I/O	Serial	3 x RS-232, 1 x RS-232/422/485	4 x RS-232, 2 x RS-422/485	3 x RS-232, 1 x RS-232/422/485
	Ethernet	1 x Ethernet (RJ-45 connector through the cable)	1 x Ethernet (RJ-45 connector through the cable)	2 x GbE (RJ-45 connector through the cable)
	PS/2 KB/Mouse	1	1	1
	VGA	1	1	1
	Reset Button	1	1	1
	USB	4x USB 2.0	6 x USB 2.0	6 x USB 2.0
	IDE	2 x EIDE (UDMA 100)	1 x EIDE (UDMA 33/66/100)	1 x EIDE (UDMA 100)
	Parallel (LPT)	1	1	1
	FDD	Share with LPT (Optional)	Share with LPT (Optional)	Share with LPT (Optional)
	GPIO	8-bit GPIO	16-bit GPIO	16-bit GPIO
	SMBUS	-	-	-
	FC	-	-	Yes
	Expansion	PC/104 Slot	-	-
PCI-104 Slot		-	-	1
PC/104-Plus Slot		1	1	-
Mini PCI Express		-	-	-
Mini PCI Socket		1	-	1
PCI Slot		1	1	1
Power	Power Type	ATX/AT (Optional)	AT / ATX	AT / ATX
	Power Supply Voltage	AT: +5 V ±5%, +12 V ±10% ATX: +5 V ±5%, +12 V ±10%	ATX: 5 V STB, +5 V ± 5%, +12 V ± 10%, external 12 V option for LCD Inverter, PCI & PCI-104 Plus AT: 5 V only to boot up, external 12 V option for LCD Inverter, PCI & PC/104 Plus	ATX, +5 V ± 5%, +12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power) AT, +5 V ± 5%, +12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power)
	Power Consumption (Typical)	2.62 A @ 5 V, 0.03 A @ 12 V (Celeron M 600 with 256 MB DDR266)	5 V:3.67 A (C-M M 1 G with DDR2 400 1 GB)	Suspend: 1.01 A @ 5 V, 0.76 A @ 12 V (CPU U2500 1.2 GHz)
Environment	Power Consumption (Max, test in HCT)	2.63 A @ 5 V, 0.03 A @ 12 V (Celeron M 600 with 256 MB DDR266)	5 V:3.67 A (C-M M 1 G with DDR2 400 1 GB)	1.05 A @ 5 V, 0.98 A @ 12 V (CPU U2500 1.2 GHz)
	Operating	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)
Physical Characteristics	Non-Operating	95% @ 60° C Relative Humidity	95% @ 60° C Relative Humidity	95% @ 60° C Relative Humidity
	Dimensions (L x W)	203 x 146 mm (8" x 5.75")	203 x 146 mm (8" x 5.75")	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (with Heatsink)	0.85 kg (1.87 lb) (with Heatsink)	0.85 kg (1.87 lb) (with Heatsink)
Reference Page		5-12	5-14	5-16



PCM-4373

AMD LX800 EPIC SBC with LVDS, TTL, VGA, Dual Ethernet, 6 COM, 2 SATA, PC/104-Plus



Features

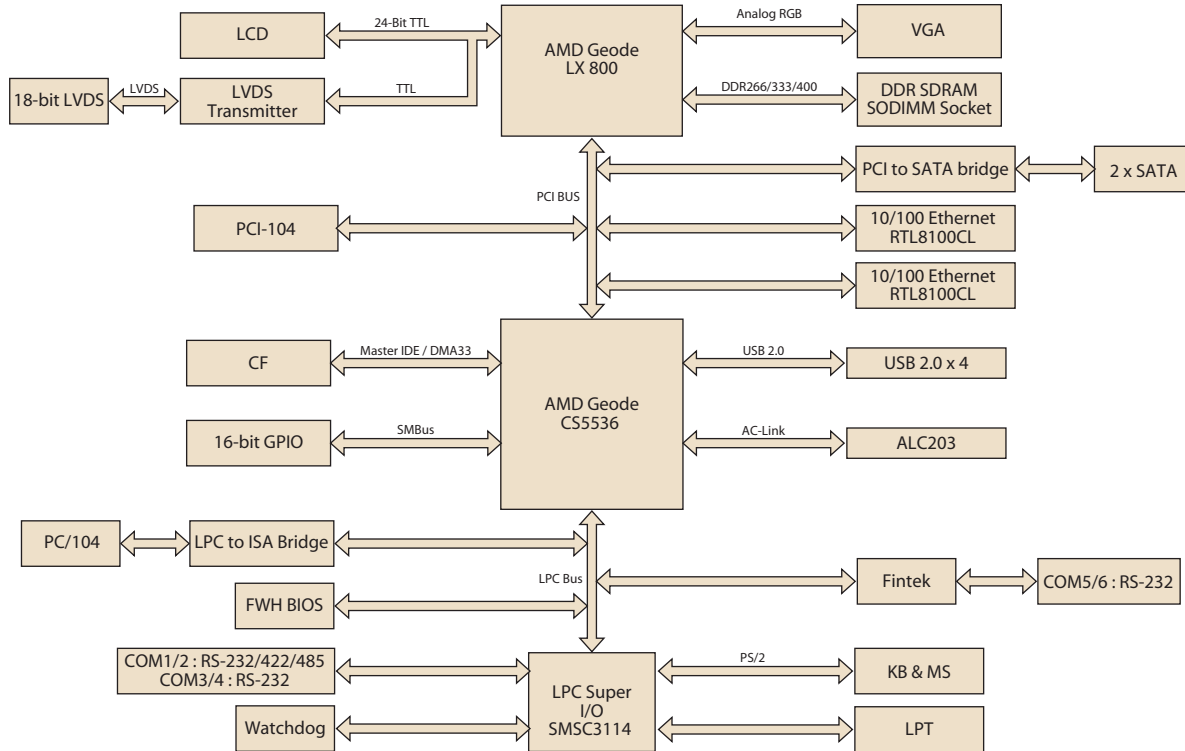
- AMD low power LX800 500 MHz processor
- Total platform power consumption under 8 watts
- Display combination: VGA + 18-bit LVDS, or VGA + 24-bit TTL
- 6 COM ports (4 x RS-232/2 x RS-232/422/485, supports auto flow control)
- Supports embedded software APIs and utilities



Specifications

Processor System	CPU	AMD Geode LX800 processor, up to 500 MHz
	Frequency	500 MHz
	L2 Cache	128 KB
	System Chipset	AMD Geode LX800 + AMD Geode CS5536
Memory	BIOS	Award 4-Mbit
	Technology	DDR 333/400 MHz
	Max. Capacity	1 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	AMD Geode LX800
	VRAM	64 MB
	Graphics Engine	AMD 2D engine
	LVDS	1 x 18-bit LVDS
	VGA	1
	TTL LCD	1 x 24-bit TTL
Ethernet	Dual Display	VGA + 18-bit LVDS, or VGA + 24-bit TTL
	Speed	10/100 Mbps on Ethernet1, Ethernet2
	Controller	2 x Realtek RTL8100CL-LF
	Connector	RJ-45
Audio	Chipset	AC97, Line-in, Line-out, Mic-in
WatchDog Timer		255-level interval timer, programmable 1 ~ 255 sec, setup by software, jumperless selection, generates system reset
Storage	CompactFlash	Card Type I, Type II
	SATA	2 (Max. Data Transfer Rate 150 MB/s)
	Floppy	1 x FDD (Optional, share with LPT through customized cable)
Rear I/O	Serial	COM1: RS-232/422/485 (Supports Auto flow control)
	Ethernet	2
	PS/2 KB/Mouse	1
	VGA	1
	USB	2
Internal I/O	USB	2 x USB 2.0 (2 via USB DOM connector)
	Serial	COM3/4/5/6: RS-232, COM5/6 are only for PCM-4373F COM2: RS-232/422/485 (Supports Auto flow control)
	Parallel (LPT)	1
	FDD	Share with LPT (Optional)
Expansion	GPIO	16-bit GPIO
	PC/104-Plus slot	1
Power	Power Type	AT / ATX
	Power Supply Voltage	ATX: +5 V ± 5%, 12 V ± 10%, 5 VSB AT: 5 V only to boot up, 12 V option for LCD Inverter and PC/104+
	Power Consumption (Typical)	5 V: 1.45 A (Geode LX800 with DDR333 1 GB)
	Power Consumption (Max, test in HCT)	5 V: 1.66 A (Geode LX800 with DDR333 1 GB)
	Power Management	APM, ACPI
Environment	Battery	Lithium 3 V / 196 mAh
	Operating	0 ~ 60° C (32 ~ 140° F), Operating humidity: 40° C @ 95% RH non-condensing
Physical Characteristics	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	115 x 165 mm (4.5" x 6.5")
	Weight	0.35 kg (0.77 lb) (with Heatsink)
	Total Height	27.0mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Number	Chipset	L2 Cache	10/100 Ethernet	TTL	LVDS	VGA	USB 2.0	RS-232	RS-232/422/485	GPIO	LPT	CF	SATA	Audio	PC/104-Plus	Thermal Solution	Operation Temp.
PCM-4373L-J0A1E	AMD LX800	128 KB	1	24-bit	-	1	4	2	2	-	1	1	2	-	1	Passive	0 ~ 60° C
PCM-4373F-J0A1E	AMD LX800	128 KB	2	-	18-bit	1	4	4	2	16-bit	1	1	2	Yes	1	Passive	0 ~ 60° C

Packing List

Part No.	Description	Quantity
	PCM-4373 SBC	1
9689000002	Mini Jumper Pack	1
2006437300	Startup Manual	1
2066437300	Utility CD	1
1700002034	3 COM ports and LPT cable	1
1700002055	ATX power cable	1
1700003931	AT power cable	1
1700060202	6P-6P-6P PS/2 KB/MS	1
1700001267	cable USB x 2/10-2.0 mm 29 cm	1
1700008894	cable serial ATA 7P/7P 30 cm	2
1700008902	Audio Cable IDC-10P 2.0 mm 15 cm	1
1703150102	Wire BIG4P/Series ATA power 15P 10 cm	1
1960004868	Heatsink 39.5x39.6x9.8mm	1
1960004869	Heatsink 22.6x22.6x14.5mm	1

Optional Accessories

Part No.	Description
1701200220	Cable for 2 COM ports 20P 22 cm
1703040157	Wire RS-422/485 4P to D-SUB 15 cm

Embedded OS/API

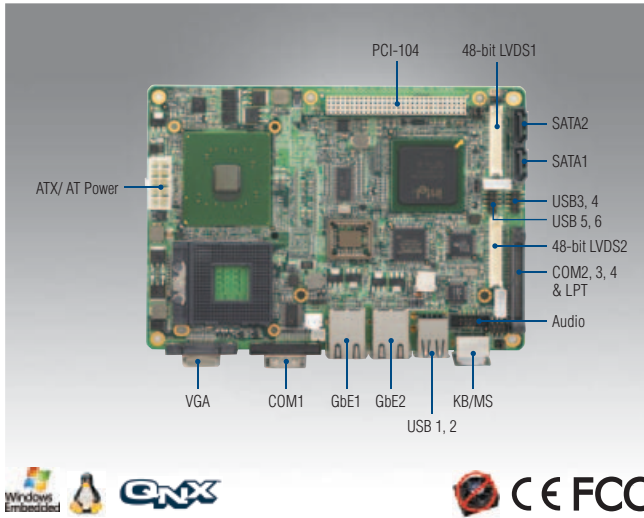
Embedded OS	Part No.	Description
WinCE	2070005350	CE 5.0 PP PCM-4373 V5.00 ENG
Win XPE	2070005349	PCM-4373 XPE V3.01 ENG/CHT/CHS/JPN (677.86 MB) V6.4.1
QNX		
Software API	205E000019	

Rear I/O View



PCM-4381

Intel® Pentium® M EPIC SBC with
VGA, 2 LVDS, GbE, PCI-104



Features

- Intel® Pentium® M/ Celeron® M Processor on board/ Socket type
- Display combination: 48-bit LVDS1 + 48-bit LVDS2, VGA + 48-bit LVDS
- Dual 10/100/1000 Mbps Ethernet
- 16-bit GPIO, 4 COM (Supports Auto flow control), 2 SATA, 6 USB 2.0
- Supports embedded software APIs and utilities

Software APIs:

- GPIO
- H/W Monitor
- Brightness
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

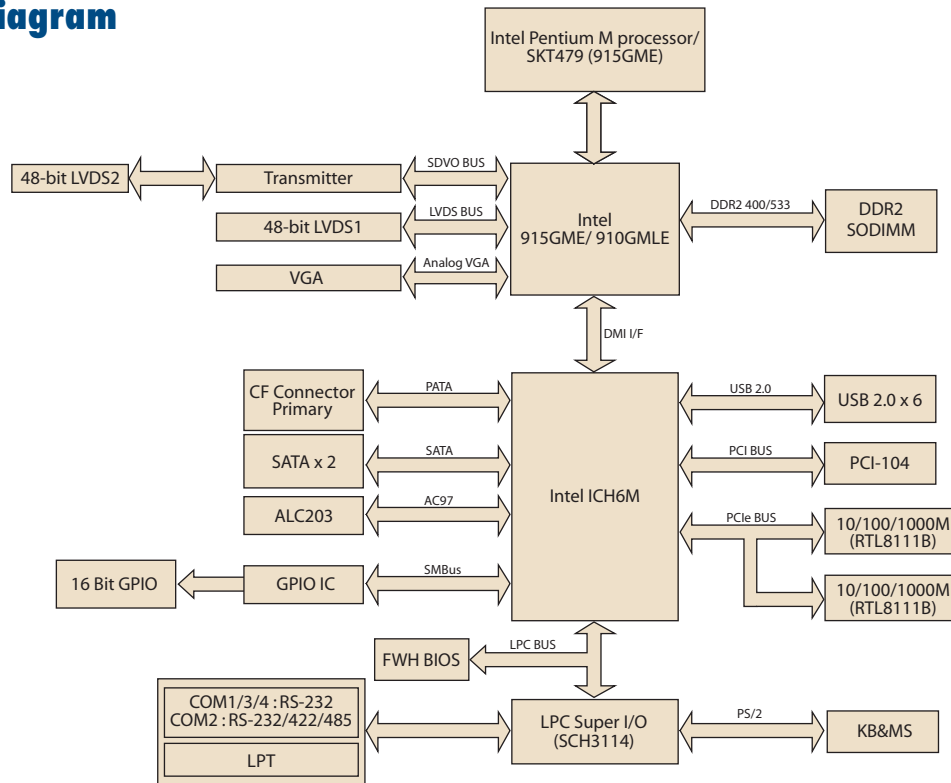
Utilities:

- BIOS Flash Monitoring

Specifications

Processor System	CPU	Celeron M 600 MHz	Celeron M 1.0 GHz	Pentium M Socket type 479
	Front Side Bus	400 MHz	400 MHz	400/533 MHz
	L2 Cache	512 KB	0 KB	depends on CPU
	Chipset	Intel 910GMLE + ICH6M	Intel 910GMLE + ICH6M	Intel 915GME + ICH6M
	BIOS	Award 4-Mbit		
Memory	Technology	DDR2 400 MHz (910GMLE), 400/533 MHz (915GME)		
	Max. Capacity	2 GB		
	Socket	1 x 200-pin SODIMM		
Display	Chipset	Intel 910GMLE/ 915GME		
	VRAM	DVMT 3.0 supports up to 128 MB		
	Graphics Engine	Mobile Intel GMA 900 3D/2D engine		
	LVDS	1 x LVDS1 (single channel 18/24-bit or dual channel 36/48-bit LVDS), 1 x LVDS2 (single channel 18/24-bit or dual channel 36/48-bit LVDS) (PCM-4381F)		
	VGA	Up to QXGA (2048 x 1536)		
Ethernet	Dual Display	VGA + LVDS, LVDS1 + LVDS2		
	Speed	10/100/1000 Mbps on GbE1, GbE2		
	Controller	2 x Realtek RTL8111B-GR		
Audio	Connector	RJ-45		
	Chipset	AC97, Line-in, Line-out, Mic-in		
WatchDog Timer		255-level interval timer, Programmable 1 ~ 255 sec, setup by software, jumperless selection, generates system reset		
Storage	CompactFlash	Card Type I, Type II		
	SATA	2 (Max. Data Transfer Rate 150 MB/s)		
	Floppy	1 x FDD (Optional, share with LPT through customized cable)		
Rear I/O	Serial	COM1: RS-232		
	Ethernet	2		
	PS/2 KB&Mouse	1		
	VGA	1		
	USB	2		
Internal I/O	USB	4 x USB 2.0 (2 via USB DOM connector)		
	Serial	COM3/4: RS-232, COM2: RS-232/422/485		
	Parallel(LPT)	1		
	FDD	Share with LPT (Optional)		
	GPIO	16-bit GPIO		
Expansion	PCI-104 slot	1		
Power	Power Type	AT / ATX		
	Power Supply Voltage	ATX: +5 V ± 5%, 12 V ± 10% AT: 5 V only to boot up, 12 V optional for LCD Inverter and PC/104+		
	Power Consumption (Typical)	2.59 A @ 5 V, 0.01 A @ 12 V (Celeron M 1G with DDR2 256 MB)		
		2.24 A @ 5 V, 0.01 A @ 12 V (Celeron M 600M with DDR2 256 MB)		
	Power Consumption (Max, test in HCT)	3.22 A @ 5 V, 0.01 A @ 12 V (Celeron M 1G with DDR2 256 MB)		
	Power Management	2.68 A @ 5 V, 0.01 A @ 12 V (Celeron M 600M with DDR2 256 MB)		
Battery	APM, ACPI			
Environment	Battery	Lithium 3 V 196 mAh		
	Operating	0 ~ 60° C (32 ~ 140° F), Operating humidity: 40° C @ 95% RH non-condensing		
Physical Characteristics	Non-Operating	95% @ 60° C Relative Humidity, Operating humidity: 40° C @ 95% RH non-condensing		
	Dimensions (L x W)	115 x 165 mm (4.5" x 6.5")		
	Weight	0.35 kg (0.77 lb) (with Heatsink)		
Total Height	37.1mm for PCM-4381F-00A1E			
	40.1mm for PCM-4381L and PCM-4381F-S0A1E			

Board Diagram



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- Embedded Touch Modules 9

Ordering Information

Number	CPU	L2 Cache	Chipset	Memory	GbE	LVDS1	LVDS2	VGA	USB 2.0	COM	GPIO	LPT	CF	SATA	Audio	PCI-104	Thermal Solution	Operating Temp.
PCM-4381L-M0A1E	Celeron M 600 MHz	512 KB	910 GML E	SODIMM	1	48-bit	-	1	6	4	16	1	Yes	2	Yes	Yes	Passive	0 ~ 60° C
PCM-4381F-S0A1E	Celeron M 1.0 GHz	0 KB	910 GML E	SODIMM	2	48-bit	48-bit	1	6	4	16	1	Yes	2	Yes	Yes	Passive	0 ~ 60° C
PCM-4381F-00A1E	SKT 479	-	915GME	SODIMM	2	48-bit	48-bit	1	6	4	16	1	Yes	2	Yes	Yes	Active	0 ~ 60° C

Packing List

Part No.	Description	Quantity
	PCM-4381 SBC	1
9689000002	Mini Jumper Pack	1
2006438100	Startup Manual	1
2066438101	Utility CD	1
1700002034	3 COM ports and LPT cable	1
1700002055	ATX power cable	1
1700060202	6P-6P-6P PS/2 KB/MS	1
1700001267	USB cable 2 port/10-pin	1
1700003931	AT power cable	1
1700008902	Audio cable 10P 2.0 mm 15 cm	1
1700008894	SATA cable 7P/7P 30 cm	1
1703150102	SATA power cable B4P 10 cm	1
1960018234S000	Cooler 50 x 50 x 23 mm for PCM-4381F-00A1E	1
1960019486T000	Heatsink 109 x 52 x 27.6 mm for PCM-4381L and PCM-4381F-S0A1E	1
1960004868	Heatsink 39.5 x 39.6 x 9.8 mm for PCM-4381F-00A1E	1
1960003924	Heatsink 35x35x4.5mm	1

Optional Accessories

Part No.	Description
PCM-410C-00A1E	COM/LPT daughter board for EPIC
1700004891	USB cable 20 Pin TO 2 Port L= 30 cm PCM-43 series
1700090301	Cable ASSY COM Port 30 cm D-SUB 9P TO 4P 2.0 mm

Embedded OS/API

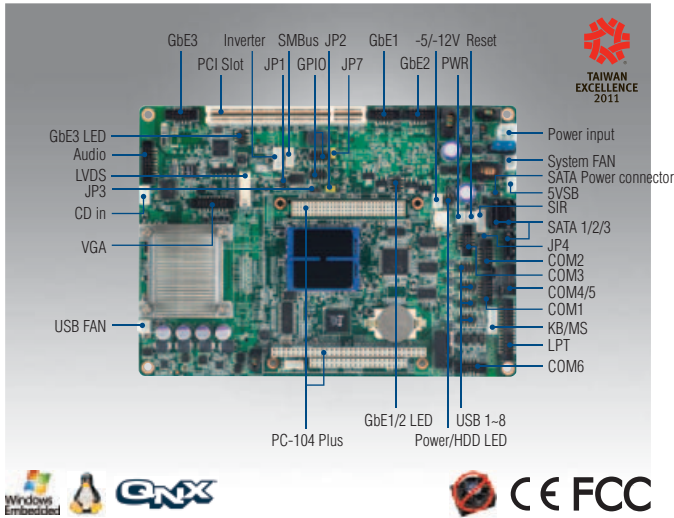
Embedded OS	Part No.	Description
WinCE	2070004209	CE 6.0 Pro PCM-4381 V3.01 ENG
Win XPE	2070006749	XPE FP2007 PCM-4381 V3.01 ENG (621.19 MB)
QNX		V6.4.1
Linux		Ubuntu V8.10
Software API	205E000019	

Rear I/O View



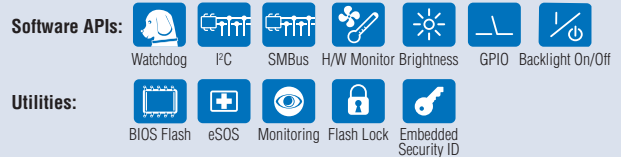
PCM-9562

Intel® Atom™ N450/D510 EBX SBC with 3 GbE, 6 COM, 3 SATA, 8 USB 2.0, 2 Watchdog



Features

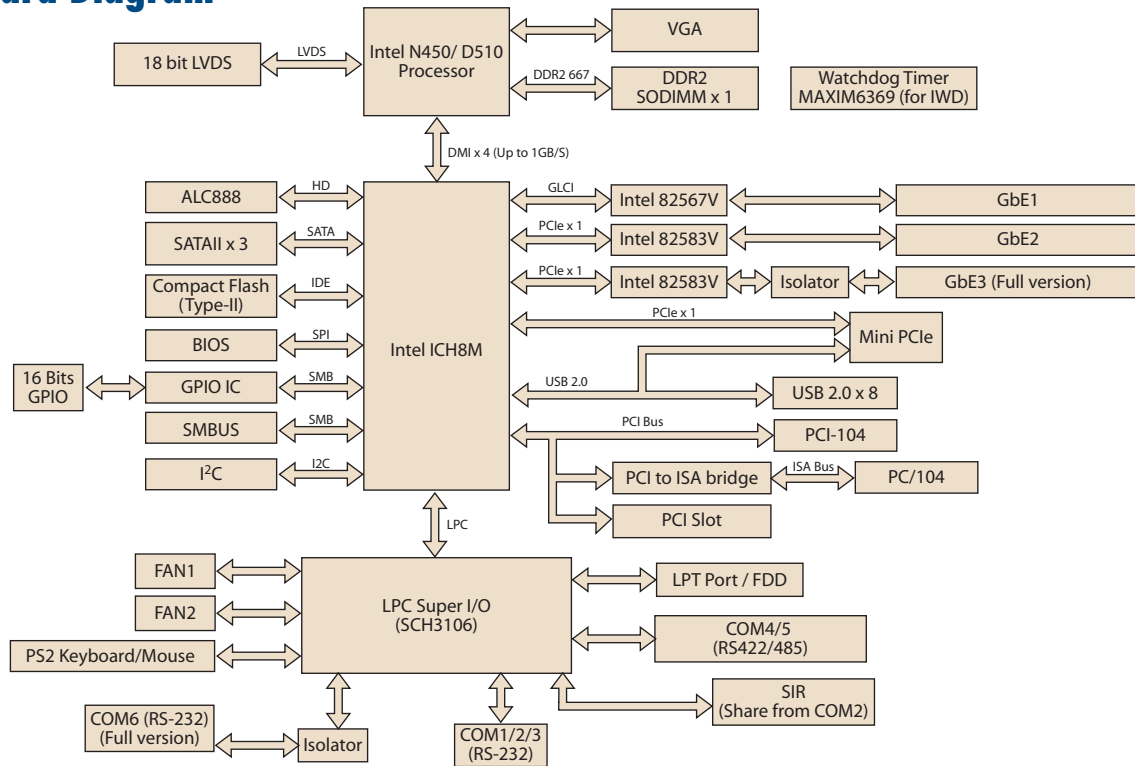
- Embedded Intel® Atom™ processor N450 Single Core/D510 Dual Core 1.66 GHz + ICH8M
- Supports up to 3 Intel GbE, 6 COM, and 2 Watchdog timer
- Design complies with UL60601 on GbE3 and COM6 port isolation (PCM-9562F full version series only)
- Power off protection and Software I²C API support
- Supports embedded software APIs and Utilities



Specifications

Processor System	CPU	Intel Atom N450/D510 1.66 GHz
	Front Side Bus	667MHz
	Frequency	Atom N450/D510 1.66 GHz
	L2 Cache	512 KB/1 MB
	System Chipset	N450/D510 + ICH8M
Memory	BIOS	AMI 16 Mbit
	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
Display	Socket	1 x 200-pin SODIMM
	Chipset	N450/D510
	VRAM	Optimized Shared Memory Architecture up to 224 MB
	Graphics Engine	Embedded Gen3.5+ GFX Core, HW MPEG2 decoder
	LVDS	Single channel 18-bit LVDS up to WXGA 1366 x 768
Ethernet	VGA	N450: Up to SXGA 1400 x 1050 @ 60 Hz (SXGA) D510: up to 2048 x 1536 (QXGA)
	Dual Display	VGA+ LVDS
	Interface	3 (RJ-45 connector through the cable and Ethernet3 is Full version only)
Audio	Controller	GbE1 Intel 82567, GbE2 Intel 82583V, GbE3 Intel 82583V (UL60601 Compliant)
	Connector	Box header
	Chipset	ALC888 HD Codec, Speaker out, CD-input, Line-in, Line-out, Mic-in
WatchDog Timer	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load
	Output	System reset
	Internal	Watchdog timer1 (IWT): monitor the system status before OS is ready (programmable 10ms, disable, 1s, 60s) Watchdog timer2 (PWT): monitor the application status after OS is ready (programmable 1 - 255 sec/min) (Full version only)
Storage	CompactFlash	Card Type I, Type II
	SATA	3 SATA II (Max. Data Transfer Rate 300 MB/s)
	Floppy	Share with LPT (Optional)
	SPI Flash	16 Mbit
Internal I/O	Serial	4 x RS-232 (COM1/2/3/6, isolation design in COM6 is Full version only) 2 x RS-422/485 (COM4/5, default RS-422/485, RS-232 with TX/RX only is optional by request) ESD protection for RS-232: Air gap ±15kV, Contact ±8kV
	Ethernet	GbE x 3 (RJ-45 connector through the cable and GbE3 is Full version)
	PS/2 KB/Mouse	1
	VGA	1
	Reset Button	1
	USB	8 x USB 2.0
	Parallel (LPT)	1
	FDD	Share with LPT (Optional)
	GPIO	16-bit GPIO
	SMBUS	1
Expansion	I2C	1
	PC/104-Plus slot	1
	Mini PCI Express	1
Power	Power Type	AT / ATX (Both AT/ATX can support ACPI)
	Power Supply Voltage	ATX: 12V ±10%, 5VSB ±5% (5V stand-by power is only for auto power off function) AT: 12V ±10% only
	Power Consumption (Typical)	PCM-9562N-S6A1E: 10.8 W (893 mA @ 12 V, 8 mA @ 5 VSB) PCM-9562D-S6A1E: 13.6 W (1130 mA @ 12 V, 10 mA @ 5 VSB)
	Power Consumption (Max. test in HCT)	PCM-9562N-S6A1E: 13.9 W (1159 mA @ 12 V, 6 mA @ 5 VSB) PCM-9562D-S6A1E: 16.9 W (1404 mA @ 12 V, 8 mA @ 5 VSB)
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (with Heatsink)
	Total Height (with cooler + PCB + Bottom)	29.6mm (PCM-9562N/NF), 38.6mm (PCM-9562D/DF), 44.6mm (PCM-9562Z/Z2)

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
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- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Model	CPU	Memory	VGA	LVDS	GbE1	GbE2	GbE3 UL60601	HD Audio	USB 2.0	Watchdog Timer	RS-232	RS-422/ 485	PC/104- Plus	Mini PCIe	CF	Thermal	Operating Temperature
PCM-9562N-S6A1E	Atom N450	SO-DIMM	1	18-bit	1	1	-	Yes	8	1	3	2	Yes	1	1	Passive	0 ~ 60° C
PCM-9562D-S6A1E	Atom D510	SO-DIMM	1	18-bit	1	1	-	Yes	8	1	3	2	Yes	1	1	Active	0 ~ 60° C
PCM-9562NF-S6A1E	Atom N450	SO-DIMM	1	18-bit	1	1	1	Yes	8	2	3+1	2	Yes	1	1	Passive	0 ~ 60° C
PCM-9562DF-S6A1E	Atom D510	SO-DIMM	1	18-bit	1	1	1	Yes	8	2	3+1	2	Yes	1	1	Active	0 ~ 60° C
PCM-9562NZ-1GS6A1E	Atom N450	Bundle 1GB	1	18-bit	1	1	Optional	Yes	8	1	3	2	Yes	1	1	Passive	-20 ~ 80° C
PCM-9562Z2-1GS6A1E	Atom N450	Bundle 1GB	1	18-bit	1	1	Optional	Yes	8	1	3	2	Yes	1	1	Passive	-40 ~ 85° C

* PCM-9562NF-S6A1E and PCM-9562DF-S6A1E are designed with UL60601 isolation GbE3, COM6, and Watchdog Timer2. Both COM6 and GbE3 are optional by request for extended temperature products.

Packing List

Part No.	Description	Quantity
	PCM-9562 SBC	1
9689000002	Mini Jumper Pack	1
2006956200	Startup Manual	1
2066956200	Utility CD	1
1700015741	ATX 5VSB cable	1
1960020569S000	Heatsink for PCM-9562N/NF (50 x 50 x 10 mm)	1
1960046526N001	Cooler for PCM-9562D/DF (50 x 50 x 24 mm)	1
1960002379	Heatsink for PCM-9562NZ/Z2 (50 x 50 x 30 mm)	1

Optional Accessories

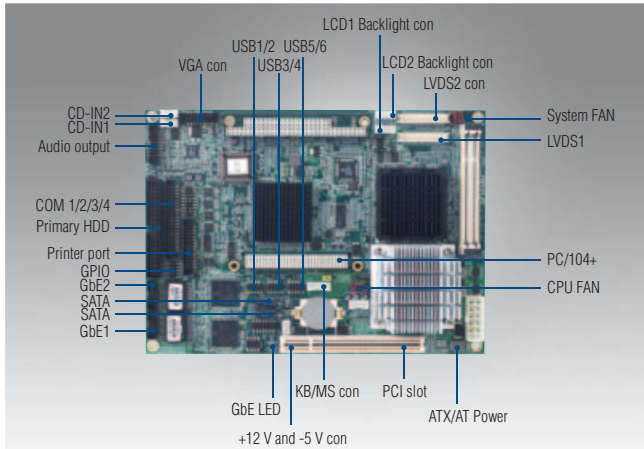
Part No.	Description
PCM-10586-9562E	Wiring kit for PCM-9562
1703100260	USB cable
CF-HDD-ADP	CompactFlash 50-pin to IDE 44-pin adapter
170304015K	AT cable 4P x 2/4200-H-4P 15 cm
1960049954N001	Heatspreader 157.4 x 100 x 24 mm

Embedded OS/API

Embedded OS/API	Part No.	Description
Win XPE	2070009030	XPE WES2009 Luna Pier V4.0 ENG
	2070009031	XPE WES2009 Luna Pier V4.0 MUI24
WES 7	2070009835	Image WES7E Intel Lunar v5.0 ENG
QNX		6.5
Software API	205E956000	SUSI 3.0 SW API for PCM-9562 B:20091009 XP

PCM-9584

Intel® Pentium® M Processor EBX SBC with Audio, VGA, 2 LVDS (36-bit, 48-bit), 2 GbE LAN, PC/104-Plus



Features

- Intel® Pentium® M/Celeron® M processor
- Dual LVDS (48-bit LVDS/36-bit LVDS)/VGA
- 2 Ethernet up to 10/100/1000 Mbps
- 6 x USB 2.0 ports, 4 COM ports, 2 x SATA ports
- PC/104-Plus, One PCI Slot, One Mini-PCI slot, 8-bit GPIO
- Supports embedded software APIs and utilities

Software APIs:

- GPIO
- H/W Monitor
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

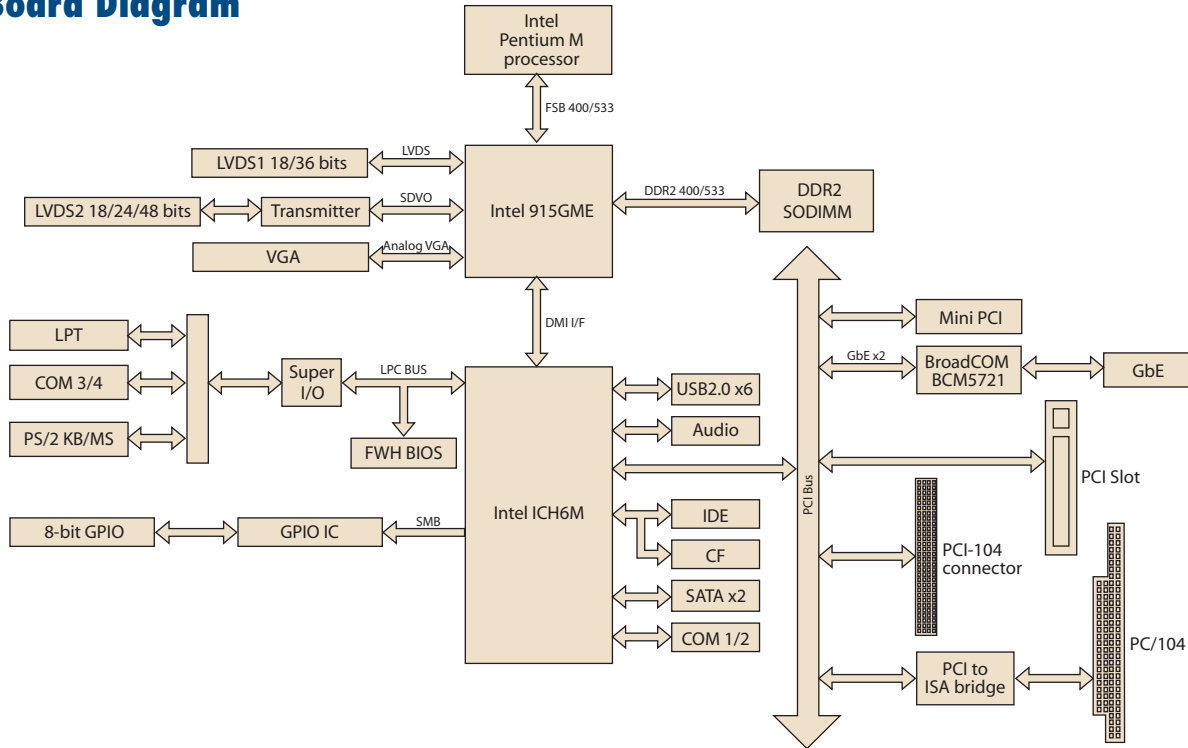
Utilities:

- BIOS Flash
- Monitoring

Specifications

Processor System	CPU	Pentium M 1.4 GHz	Celeron M 1 GHz	Socket Type
	Front Side Bus	400/533 MHz	400/533 MHz	400/533 MHz
	L2 Cache	2 MB	512 KB	Depends on CPU
	Chipset	Intel 915GME + ICH6M		
Memory	BIOS	Award 4-Mbit		
	Technology	DDR2 400/533 MHz		
	Max. Capacity	4 GB		
Display	Socket	2 x 200-pin SODIMM		
	Chipset	Intel 915GME chip integrated. (Extreme Graphics 2)		
	VRAM	DVMT 3.0 supports up to 128 MB		
	Graphics Engine	Mobile Intel GMA 900 3D/2D engine		
	LVDS	LVDS1 (single channel 18-bit or dual channel 36-bit LVDS) LVDS2 (single channel 18/24-bit or dual channel 36/48-bit LVDS)		
	VGA	Up to 1600 x 1200 at 85-Hz and 2048 x 1536 at 75-Hz		
Ethernet	Dual Display	VGA + 48-bit LVDS, 36-bit LVDS1 + 48-bit LVDS2, VGA + 36-bit LVDS		
	Speed	10/100/1000 Mbps on GbE1, GbE2		
	Controller	2 x BroadCOM BCM5721		
Audio	Connector	Box header		
	Chipset	Realtek ALC650 AC97		
WatchDog Timer	Amplifier	Speaker out, CD-input, Line-in, Line-out, Mic-in		
		Max 2.2W/ch Stereo into a 3Ω Load		
Storage		255-level interval timer, Programmable 1 – 255 sec, jumperless selection, generates system reset		
	CompactFlash	Card Type I, Type II (shared 2nd IDE Channel)		
	SATA	2 SATA (Max. Data Transfer Rate 150 MB/s)		
	IDE	1 x EIDE (UDMA 100)		
Internal I/O	Floppy	1 x FDD (Optional)		
	Serial	3 x RS-232 (COM1/3/4), 1 x RS-232/422/485 (COM2) ESD protection for RS-232: Air gap ±15kV, Contact ±8kV		
	Ethernet	GbE x 2 (RJ-45 connector through the cable)		
	PS/2 KB/Mouse	1		
	VGA	1		
	USB	6 x USB 2.0		
	IDE	1		
	Parallel (LPT)	1		
	FDD	Share with LPT (Optional)		
	GPIO	8-bit GPIO		
Expansion	PC/104-Plus slot	1		
	Mini PCI socket	1		
	PCI Slot	1		
Power	Power Type	AT / ATX		
	Power Supply Voltage	AT +5 V ±5%, +12 V ±10% ATX +5 V ±5%, +12 V ±10%		
	Power Consumption (Typical)	Suspend: 1.86 A @ 5 V, 0.48 A @ 12 V (Pentium M with 1.4 GHz) Suspend: 1.87 A @ 5 V, 0.75 A @ 12 V (Pentium M with 2.0 GHz)		
	Power Consumption (Max, test in HCT)	2.42 A @ 5 V, 1.01 A @ 12 V (Pentium M with 1.4 GHz) 2.43 A @ 5 V, 1.65 A @ 12 V (Pentium M with 2.0 GHz)		
	Power Management	APM, ACPI		
	Battery	Lithium 3 V / 196 mAh		
Environment	Operating	0 – 60° C (32 – 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)		
	Non-Operating	-40° C – 85° C and 60° C @ 95% RH non-condensing		
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")		
	Weight	0.85 kg (1.87 lb) (with Heatsink)		
	Total Height (with cooler + PCB + Bottom)	42.6mm (PCM-9584 with CPU cooler) 25.2mm (PCM-9584 W/O CPU cooler)		

Board Diagram



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Ordering Information

Part No.	CPU	L2 Cache	Memory	VGA	LVDS1	LVDS2	GbE	Audio	USB 2.0	RS-232	RS-232/422/485	LPT	CF	KB/MS	PCI Slot	Mini PCI	Thermal Solution	Operating Temp.
PCM-9584F-00A2E	Socket 479	-	SO-DIMM	Yes	36-bit	48-bit	1	Yes	6	3	1	1	Yes	1	1	1	Active	0 ~ 60° C
PCM-9584FG-00A2E	Socket 479	-	SO-DIMM	Yes	36-bit	48-bit	2	Yes	6	3	1	1	Yes	1	1	1	Active	0 ~ 60° C
PCM-9584FG-S0A2E	Celeron M 1.0 GHz	512 KB	SO-DIMM	Yes	36-bit	48-bit	2	Yes	6	3	1	1	Yes	1	1	1	Passive	0 ~ 60° C
PCM-9584FG-S4A2E	Pentium M 1.4 GHz	2 MB	SO-DIMM	Yes	36-bit	48-bit	2	Yes	6	3	1	1	Yes	1	1	1	Passive	0 ~ 60° C
PCM-9584Z-1GS0A2E	Celeron M 1.0 GHz	512 KB	Bundle 1GB	Yes	36-bit	48-bit	2	Yes	6	3	1	1	Yes	1	1	1	Passive	-20 ~ 80° C

Note: For wide temperature, please contact sales rep.

Packing List

Part No.	Description	Quantity
	PCM-9584 SBC	1
9689000002	Mini Jumper Pack	1
2006958402	Startup Manual	1
2066958402	Utility	1
1700001112	ATX Power Cable	1
1960007416	Heat sink 50 x 50 x 30 mm x1 (PCM-9584FG-S0A2E, PCM-9584FG-S4A2E only)	1
1750000348	Cooler 50 x 50 x 22 mm x1 (PCM-9584FG-00A2E only)	1

Optional Accessories

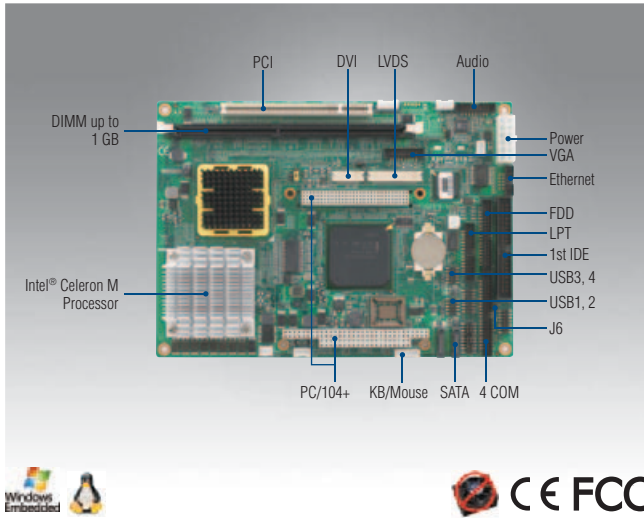
Part No.	Description
PCM-10586-9584E	Wiring kit for PCM-9584
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
PCM-110-00A3E	1-slot PCI riser card for 5.25" biscuits
PCM-120-00A3E	2-slot PCI riser card for 5.25" biscuits
PCM-200-00A2E	PCI-104 to PCI bus module

Embedded OS

Embedded OS	Part No.	Description
Win XPE	2070008810	Image XPE FP2007 PCM-9584 V3.01 ENG
	2070009372	Image XPE WES2009 PCM-9584 V4.0 ENG ECG
	2070009373	Image XPE WES2009 PCM-9584 V4.0 MUI24 ECG
QNX		6.3.2

PCM-9587

Intel® Celeron® M Processor EBX SBC with LAN, LVDS, DVI, VGA, Audio, PC/104-Plus



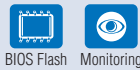
Features

- Intel® Celeron® M Processor ultra low power
- Supports 48-bit LVDS/DVI/VGA
- Supports up to 1000 Mbps Ethernet
- PC/104-Plus (PCI + ISA), Mini PCI and 1 x PCI Slot
- 2 x SATA 150 (RAID 0/1), 4 x COM, 4 x USB 2.0, 8-bit GPIO ports
- Supports embedded software APIs and utilities

Software APIs:



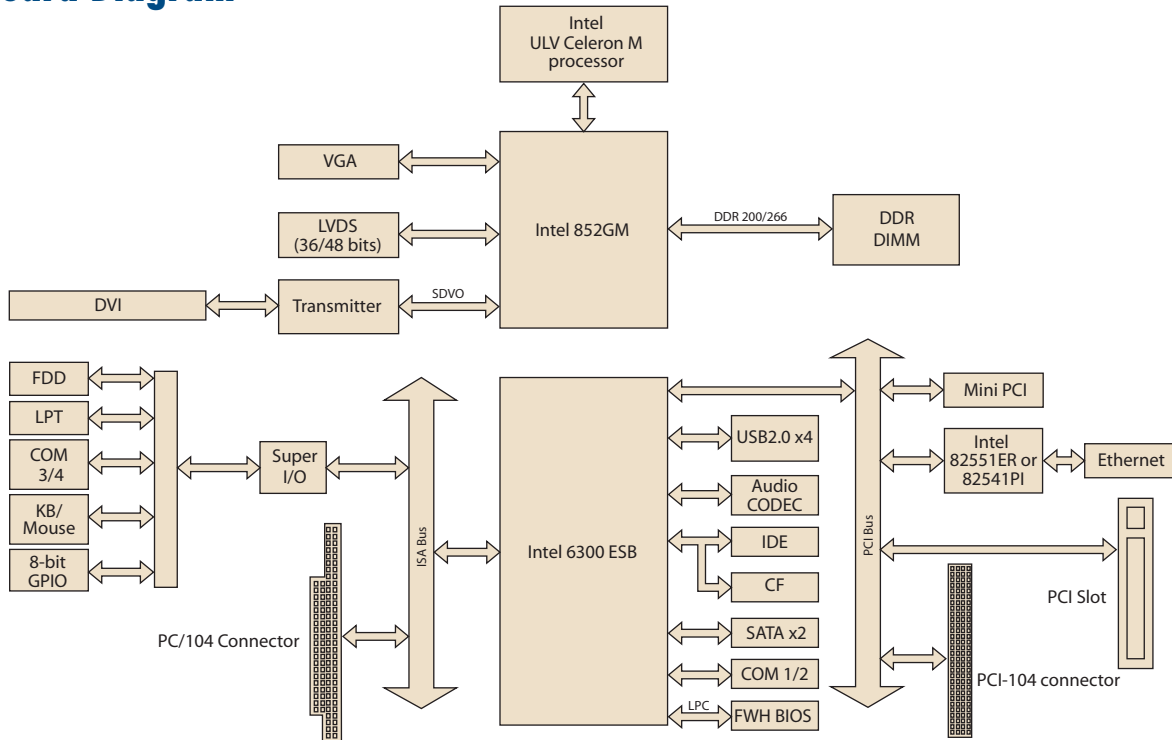
Utilities:



Specifications

Processor System	CPU	Intel Celeron M Processor ULV 600 MHz/ 1.0 GHz
	Front Side Bus	400 MHz
	L2 Cache	512 KB/ 0 KB
	Chipset	Intel 852GM + 6300ESB
	BIOS	Award 4 Mbit
Memory	Technology	DDR 200/266 MHz, ECC
	Max. Capacity	1 GB
Display	Socket	1 x 184-pin DIMM
	Chipset	Intel 852GM chip integrated. (Extreme Graphics 2)
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory
	Graphics Engine	Mobile Intel 852GM integrated 3D/2D engine
	LVDS	1 x LVDS, single channel 18/24-bit or dual channel 36/48-bit LVDS
	VGA	Up to 1600 x 1200 at 85-Hz and 2048 x 1536 at 75-Hz
	DVI	1 (Supports DVI displays up to 165 MHz, UXGA resolution)
Ethernet	Dual Display	VGA + LVDS / DVI + LVDS / DVI + VGA
	Speed	10/100 Mbps on Ethernet (10/100/1000 Mbps is optional)
Audio	Controller	Intel 82551ER (Intel 82541PI is optional, GbE)
	Chipset	Realtek ALC203, AC97
WatchDog Timer	Amplifier	Speaker out, CD-input, Line-in, Line-out, Mic-in
	Output	Max 2.2W/ch Stereo into a 3Ω Load
Storage	Interval	System reset
	CompactFlash	Programmable 1 – 255 sec
	SATA	Card Type I, Type II (shared 2nd IDE Channel)
	IDE	2 SATA (Max. Data Transfer Rate 150 MB/s), supports SATA RAID function (0,1)
	Floppy	1 x EIDE (UDMA 100)
Internal I/O	Serial	1 x FDD (Optional)
	Ethernet	3 x RS-232 (COM1/3/4)
	PS/2 KB/Mouse	1 x RS-422/485 (COM2)
	VGA	ESD protection for RS-232: Air gap ±15kV, Contact ±8kV
	USB	10/100 Ethernet x 1 (RJ-45 connector through the cable)
	IDE	1
	Parallel (LPT)	1
	FDD	Share with LPT (Optional)
	SMBUS	1
	GPIO	8-bit general purpose input/output
Expansion	PC/104-Plus slot	1
	Mini PCI socket	1
	PCI Slot	1
Power	Power Type	AT / ATX
	Power Supply Voltage	AT +5 V ±5%, +12 V ±10%, ATX +5 V ±5%, +12 V ±10%
	Power Consumption (Typical)	2.62 A @ 5 V, 0.03 A @ 12 V (Celeron M 600 with 256 MB DDR266)
	Power Consumption (Max, HCT)	2.63 A @ 5 V, 0.03 A @ 12 V (Celeron M 600 with 256 MB DDR266)
	Power Management	APM, ACPI
Environment	Battery	Lithium 3 V / 196 mAh
	Operating	0 – 60° C (32 – 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
Physical Characteristics	Non-Operating	-40° C – 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (with Heatsink)
	Total Height (with cooler + PCB + Bottom)	42.8mm

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
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- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	L2 Cache	VGA	LVDS	DVI	10/100 Ethernet*	Audio	USB 2.0	RS-232	RS/232/422/485	LPT/ FDD/KB/ MS	CF	SATA	PC/104+	PCI Slot	Mini PCI	Thermal Solution	Operating Temp.
PCM-9587F-M0A2E	Celeron M 600 MHz	512 KB	Yes	36/48-bit*	Yes	1	Yes	4	3	1	Yes	Yes	2	Yes	1	1	Passive	0 ~ 60° C
PCM-9587F-S0A2E	Celeron M 1.0 GHz	0 KB	Yes	36/48-bit*	Yes	1	Yes	4	3	1	Yes	Yes	2	Yes	1	1	Passive	0 ~ 60° C

* GbE is optional by customer request

* 48-bit LVDS request, please confirm with FAE

Packing List

Part No.	Description	Quantity
	PCM-9587 SBC	1
9689000002	Mini Jumper Pack	1
2006958712	Startup Manual	1
2066958702	Utility CD	1
1700001112	ATX Power Cable	1
1700016141	AT Power Cable	1
1960002379	Heat sink 50 x 50 x 30 mm	1

Optional Accessories

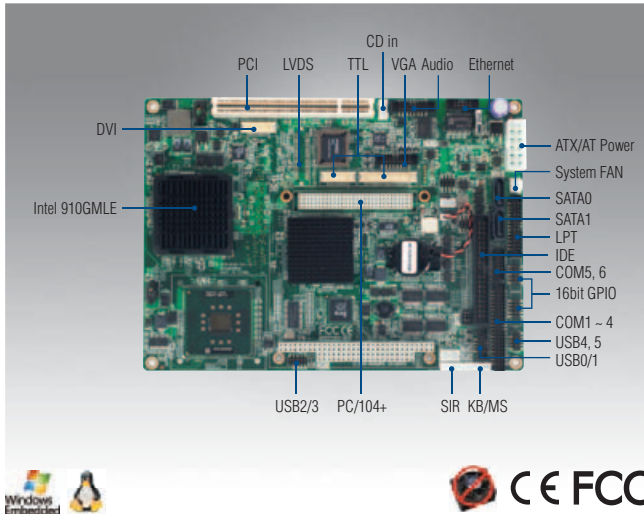
Part No.	Description
PCM-10586-6200E	Wiring kit for PCM-9582/87
PCM-10587-6201E	Wiring kit for PCM-9582/87 without GbE cable
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
PCM-110-00A3E	1-slot PCI riser card for 5.25" biscuits
PCM-120-00A3E	2-slot PCI riser card for 5.25" biscuits
PCM-200-00A2E	PCI-104 to PCI bus module

Embedded OS

Embedded OS	Part No.	Description
Win XPE	2070009927	WES 2009 ENG V1.0 for PCM-9587 A2

PCM-9588

Intel® Celeron® M Processor EBX SBC with DVI, TTL, VGA, LVDS, Ethernet, 6 COM, 2 SATA, 6 USB 2.0, PC/104-Plus



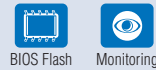
Features

- Intel® Celeron® M Processor ultra low power
- UL60601 Ethernet Port design (GIGA Ethernet is optional by request)
- Display combination: VGA + LVDS / DVI + LVDS/ DVI + VGA/ VGA + TTL
- 6 COM (Supports auto flow control), 2 SATA, 6 USB 2.0, 16-bit GPIO ports
- Supports LCD backlight turn-off, brightness control
- Supports embedded software API and utility

Software APIs:



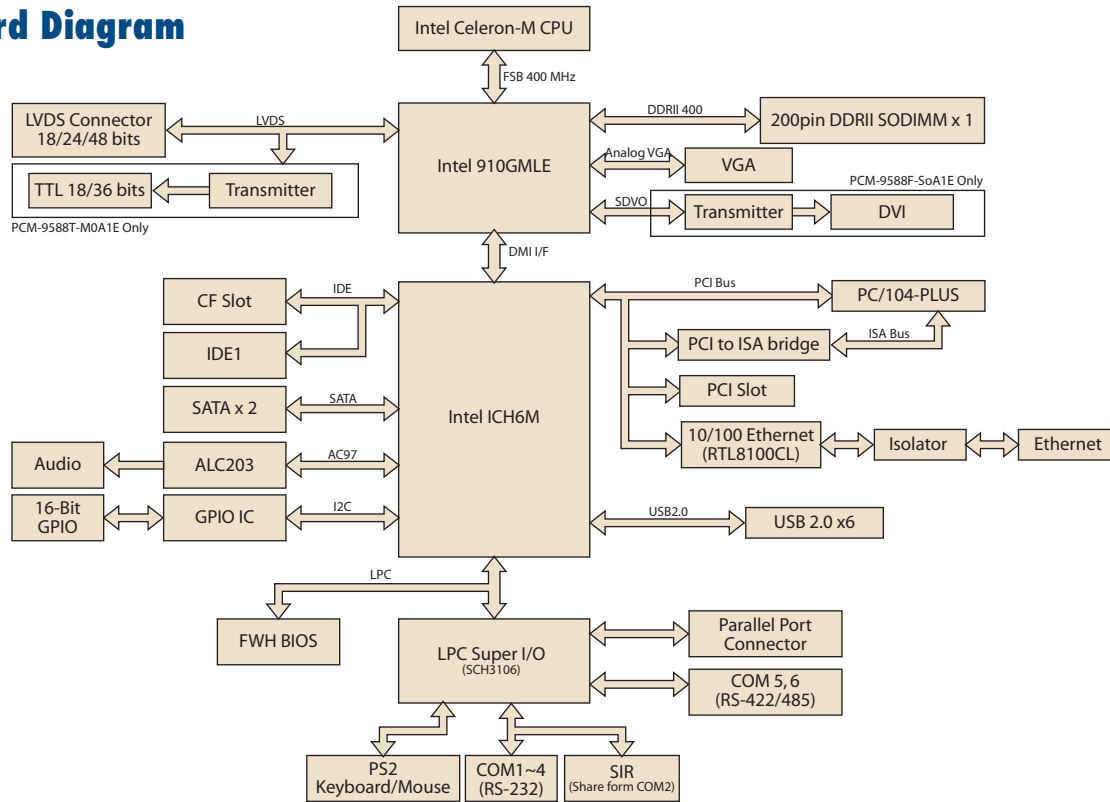
Utilities:



Specifications

Processor System	CPU	Intel Celeron M Processor 600 MHz	Intel Celeron M Processor 1 GHz
	Front Side Bus	400 MHz	400 MHz
	L2 Cache	512 KB	0 KB
	Chipset	Intel 910GMLE + ICH6M	Intel 910GMLE + ICH6M
	BIOS	Award 4-Mbit	Award 4-Mbit
Memory	Technology	DDR2 400 MHz	
	Max. Capacity	2 GB	
	Socket	1 x 200-pin SODIMM	
Display	Chipset	Intel 910GMLE	
	VRAM	DVMT 3.0 supports up to 128 MB	
	Graphics Engine	Mobile Intel GMA 900 3D/2D engine	
	LVDS	1 x LVDS, single channel 18/24-bit or dual channel 36/48-bit LVDS	
	VGA	up to QXGA (2048 x 1536)	
	TTL LCD	18/36-bit TTL (PCM-9588T version)	
	DVI	Yes (PCM-9588F version)	
Dual Display	VGA+ LVDS / DVI+ LVDS/ DVI+ VGA/ VGA+ TTL		
Ethernet	Speed	10/100 Mbps on Ethernet (10/100/1000 Mbps is optional)	
	Controller	Realtek RTL8100CL-LF (Optional RTL8110SCL-LF for GbE)	
	Connector	Box header	
Audio	Chipset	AC97, Line-in, Line-out, Mic-in, speaker out (R/L)	
	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load	
WatchDog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 level	
Storage	CompactFlash	Card Type I, Type II	
	SATA	2 SATA (Max. Data Transfer Rate 150 MB/s)	
	IDE	1 x EIDE (UDMA 33/66/100)	
	Floppy	1 x FDD (Optional)	
Internal I/O	Serial	4 x RS-232 (COM1-4) 2 x RS-422/485 (COM5/6, default RS-422/485, RS-232 with TX/RX only is optional by request) ESD protection for RS-232: Air gap ±15kV, Contact ±8kV	
	Ethernet	Ethernet x 1 (RJ-45 connector through the cable)	
	PS/2 KB/Mouse	1	
	VGA	1	
	USB	6 x USB 2.0	
	IDE	1 x EIDE (UDMA 33/66/100)	
	Parallel(LPT)	1	
	FDD	Share with LPT (Optional)	
	GPIO	16-bit general purpose input/output	
	IrDA	115 kbps (optional by request) shared from COM2	
Expansion	PC/104-Plus Slot	1	
	PCI Slot	1	
Power	Power Type	AT / ATX	
	Power Supply Voltage	ATX: 5 V STB, +5 V ± 5%, +12 V ± 10%, external 12 V option for LCD Inverter, PCI & PCI-104 Plus AT: 5 V only to boot up, external 12 V option for LCD Inverter, PCI & PC/104 Plus	
	Power Consumption (Typical)	3.67 A @ 5 V (C-M M1G with DDR2 400 1 GB)	
	Power Consumption (Max, test in HCT)	3.76 A @ 5 V (C-M M1G with DDR2 400 1 GB)	
	Power Management	APM, ACPI	
	Battery	Lithium 3 V / 196 mAh	
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)	
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75") Top side: The highest is PCI slot (15.4 mm), Bottom side: The highest is CF socket (9.5 mm)	
	Weight	0.85 kg (1.87 lb) (with Heatsink)	
	Total Height	25.4mm	
	(with cooler + PCB + Bottom)	45.4mm (PCM-9588Z/Z2)	

Board Diagram



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- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	L2 Cache	Memory	LVDS	TTL	VGA	DVI	Ethernet UL60601	Audio	USB 2.0	SATA	RS-232	RS-232/422/485	GPIO	LPT	CF	PC/104+	Thermal Solution	Operating Temp.
PCM-9588T-M0A1E	C-M 600 MHz	512 KB	SODIMM	-	36-bit	1	-	1	Yes	6	2	4	2	16	1	1	1	Passive	0 - 60° C
PCM-9588F-S0A1E	C-M 1.0 GHz	0 KB	SODIMM	48-bit	-	1	1	1	Yes	6	2	4	2	16	1	1	1	Passive	0 - 60° C
PCM-9588L-M0A1E	C-M 600 MHz	512 KB	SODIMM	48-bit	-	1	-	1	Yes	6	2	4	2	16	1	1	-	Passive	0 - 60° C
PCM-9588Z-1GM0A1E	C-M 600 MHz	512 KB	Bundle 1 GB	-	36-bit	1	-	1	Yes	6	2	4	2	16	1	1	1	Passive	-20 - 80° C
PCM-9588Z2-1GS0A1E	C-M 1GHz	0 KB	Bundle 1 GB	48-bit	-	1	1	1	Yes	6	2	4	2	16	1	1	1	Passive	-40 - 85° C

*PCM-9588 has isolation feature in Ethernet for UL60601.

Packing List

Part No.	Description	Quantity
	PCM-9588 SBC	1
9689000002	Mini Jumper Pack	1
2006958800	Startup Manual	1
2066958811	Utility CD	1
1700001112	ATX Power Cable	1
1700006196	AT Power Cable	1
1960020569S000	Heatsink (50 x 50 x 10 mm)	1
1960002379	Heat sink 50 x 50 x 30 (PCM/9588Z/Z2)	1

Optional Accessories

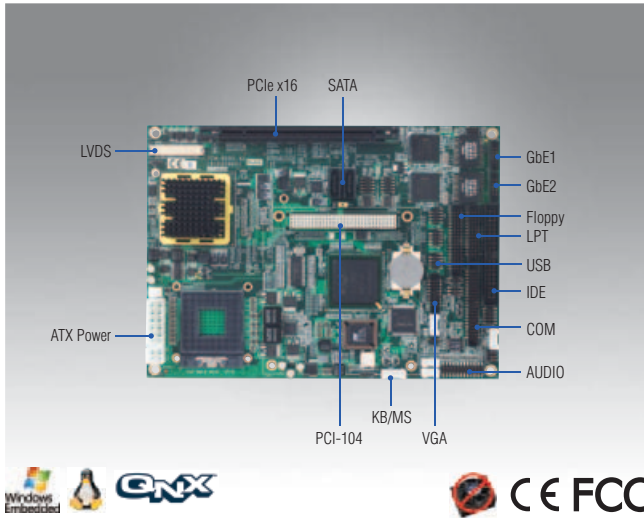
Part No.	Description
PCM-10586-9588E	Wiring kit for PCM-9588
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
PCM-110-00A3E	1-slot PCI riser card for 5.25" biscuits
PCM-120-00A3E	2-slot PCI riser card for 5.25" biscuits
PCM-200-00A2E	PCI-104 to PCI bus module

Embedded OS

Embedded OS	Part No.	Description
Win XPE	2070006672	Image XPE FP2007 PCM-9588 V3.01 ENG
	2070008830	XPE WES2009 for PCM-9588 (Multi) V4.0 ENG

PCM-9590

Intel® Core™2 Duo Processor EBX SBC with
VGA, LVDS, Dual GbE, Audio, PCI-104



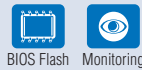
Features

- Supports Intel® Core™2 Duo/ Core™ Duo/ Core™ Solo Processors
- Up to 4 GB DDR2 SODIMM (supports FSB 533/667 MHz)
- Dual independent display (VGA + LVDS1, VGA + LVDS2, LVDS1 + LVDS2)
- Dual GbE (10/100/1000 Mbps)
- One PCI-104, one PCIe x16, one mini PCI
- Supports embedded software API and utility

Software APIs:



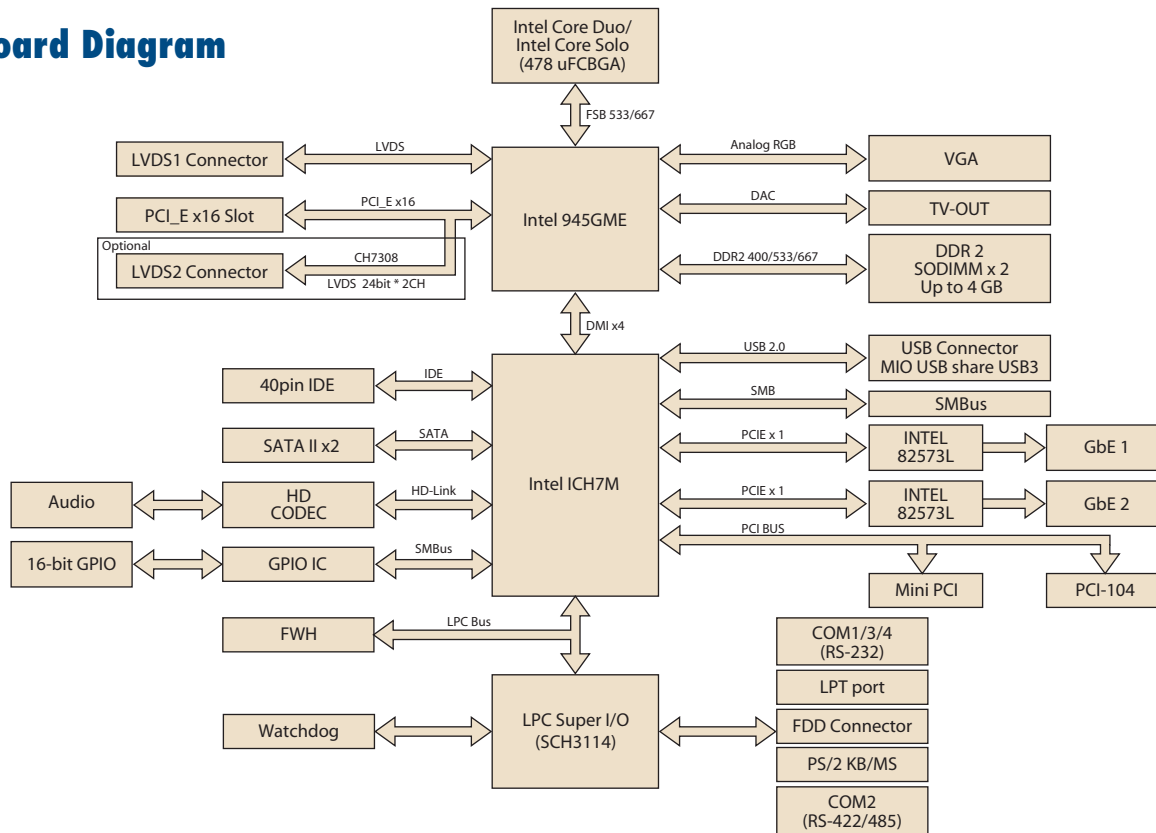
Utilities:



Specifications

Processor System	CPU	Core Duo 1.2 GHz	Core Duo 1.66 GHz	Socket Type (Core Solo/ Core Duo/ Core 2 Duo)
	Front Side Bus	533/667 MHz	533/667 MHz	533/667 MHz
	L2 Cache	2 MB	2 MB	4 MB
	Chipset	Intel 945GME + ICH7M		
	BIOS	Award 4 Mbit		
Memory	Technology	DDR2 400/533/667 MHz		
	Max. Capacity	4 GB		
	Socket	2 x 200-pin SODIMM		
Display	Chipset	Intel 945GME		
	VRAM	DVMT 4.0 supports up to 224 MB		
	Graphics Engine	Mobile Intel GMA 950 3D/2D engine		
	LVDS	LVDS1 (single channel 18-bit or dual channel 36-bit LVDS) LVDS2 (optional) (single channel 18/24-bit or dual channel 36/48-bit LVDS)		
	VGA	Up to QXGA (2048 x 1536)		
	TV Out	Yes (doesn't support Microvision)		
	Dual Display	VGA + LVDS1, VGA + LVDS2, LVDS1 + LVDS2 (by IEGD driver); LVDS2 is optional		
Ethernet	Speed	10/100/1000 Mbps on GbE1, GbE2		
	Controller	2 x Intel 82573L		
Audio	Chipset	HD Audio, supports 7.1 channel: CD-input, Line-in, Line-out, Mic-in		
WatchDog Timer		255-level interval timer, Programmable 1 ~ 255 sec, jumperless selection, generates system reset		
Storage	CompactFlash	Card Type I, Type II		
	SATA	2 SATA II (Max. Data Transfer Rate 300 MB/s)		
	IDE	1 x EIDE (UDMA 100)		
	Floppy	1 x FDD (Optional)		
	Internal I/O	Serial	3 x RS-232 (COM1/3/4) 1 x RS-422/485 (COM2) with auto-flow control ESD protection for RS-232: Air gap ±15kV, Contact ±8kV	
Ethernet		GbE x 2 (RJ-45 connector through the cable)		
PS/2 KB/Mouse		1		
VGA		1		
USB		6 x USB 2.0		
IDE		1 x EIDE (UDMA 100)		
Parallel (LPT)		1		
FDD		Share with LPT (Optional)		
GPIO		16-bit GPIO		
I2C		Yes		
Expansion	PCI-104 Slot	1		
	Mini PCI Socket	1		
	PCI Slot	1		
Power	Power Type	ATX (AT mode is optional by request)		
	Power Supply Voltage	ATX, +5 V ± 5%, 12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power) AT, +5 V ± 5%, 12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power)		
	Power Consumption (Typical)	Suspend: 1.01 A @ 5 V, 0.76 A @ 12 V (CPU U2500 1.2 GHz)		
	Power Consumption (Max, test in HCT)	1.05 A @ 5 V, 0.98 A @ 12 V (CPU U2500 1.2 GHz)		
	Power Management	APM, ACPI		
	Battery	Lithium 3 V / 196 mAh		
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)		
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing		
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")		
	Weight	0.85 kg (1.87 lb) (with Heatsink)		
	Total Height (with cooler + PCB + Bottom)	42.6mm (PCM-9590 with CPU cooler), 36.8mm (PCM-9590 W/O CPU cooler)		

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part No.	CPU	L2 Cache	DDR2 SODIMM	VGA	LVDS1	LVDS2	GbE	Audio	USB 2.0	RS-232	RS-232/422/485	LPT	PCIe x16 Slot	MIO Type I	Mini PCI	Thermal Solution	Operating Temp.
PCM-9590FG-00A2E	Socket 478	-	2	Yes	36-bit	48-bit (Optional)	2	Yes	6	3	1	Yes	1	Yes	1	Active	0 - 60° C
PCM-9590FG-S6A2E	Core Duo 1.66 GHz	2 MB	2	Yes	36-bit	48-bit (Optional)	2	Yes	6	3	1	Yes	1	Yes	1	Active	0 - 60° C

Packing List

Part No.	Description	Quantity
	PCM-9590 A2 SBC	1
9689000002	Mini Jumper Pack	1
2006959001	Startup Manual	1
2066959001	Utility CD	1
1700000265	ATX Power Cable	1
170304015K	12V for CPU Big4P x 2 power cable	1
1960018234S000	Cooler 51 x 51x 40 mm (PCM-9590FG-00A2E only)	1
1750000761	Heatsink 50 x 50 x 40 mm (PCM-9590FG-S6A2E only)	1

Optional Accessories

Part No.	Description
PCM-10586-9590E	Wiring kit for PCM-9590
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
PCM-200-00A2E	PCI-104 to PCI bus module

Embedded OS

Embedded OS/API	Part No.	Description
Win XPE	2070001575	XPE FP2007 P4&PM-B (from 945) V3.0 ENG
	2070003553	Pentium M Multiprocessor Group V3.0 CHS
	2070003694	PentiumM_Multiprocessor V3.01 JPN
QNX		V6.4.1

Cable Kits

PCM-10586-9590E

Installation Wiring Kit for PCM-9590

Part No.	Cable Description	PCM-9590 Connector	Cable Description
1701400452	IDE Cable	CN13	Flat cable 40P gray, for DMA-66 PIN20 I.P. 45 cm
1701340603	FDD	CN12	Flat cable 34P 60 cm FC34/34/HOUSING34 Idiot-Proof
1700001296	VGA	CN18	VGA Cable D-SUB 15P to 16P 2.0 mm L: 150 mm K
1703050106	TV-OUT Cable	CN22	Cable 5P S/TV-Video out 10 cm
1703060191	KB/Mouse Cable	CN28	Cable 6P-2.0 mm Housing/ 6P (PS/2)/6P (K/B) 19 cm
1703100260	USB Cable	CN9, CN11, CN14	Wire 10P 26 cm IDE 2.0 mm For USB 2 PORT 1.9" X 3
1700260250	LPT Cable	CN10	Cable 25 cm 25P to 26P ASSY LPT Port 2.0 mm
1701400181	COM 1 - 4	CN19	Flat cable 18 cm IDC40P 2.0 mm/4COM
1700006199	Audio Cable	CN26	Audio Wire 12 x 2P/audio jack 160 mm PCM-9590
1700090301	RS422/485 Cable	CN15	Cable ASSY COM Port 30 cm D-SUB 9P TO 4P 2.0 mm
1700002142	GbE Cable	CN3, CN8	A Cable IDE#3 10P-2.0/RJ45 15CM
1700002474	SATA Cable	CN4, CN5	M Cable SATA 7P/SATA 7P 18CM C=R 180/180
1703150102	SATA Power Cable	CN46	A Cable B4P-5.08/SATA 15P 10cm

Ordering Information

PCM-10586-9590E	PCM-9590 Series wiring kit
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PCM-10586-9584E

Installation Wiring Kit for PCM-9584

Part no.	Cable Description	PCM-9584 Connector	Terminal Connector
1703060191	KB/Mouse Cable	CN15	Cable 6P-2.0 mm Housing/ 6P (PS/2)/6P (K/B) 19 cm
1703050106	TV-Out Cable	CN8	Cable 5P S/TV-Video out 10 cm
1700260250	Parallel Port Cable	CN17	Cable 25 cm 25P to 26P ASSY LPT Port 2.0 mm
1701400452	IDE Cable	CN18	Flat Cable 40P GRAY FOR DMA-66 PIN20 I.P. 45 cm
1700001296	VGA Cable	CN26	VGA Cable D-SUB 15P to 16P 2.0 mm L: 150 mm K
1700160160	Audio Cable	CN21	Cable 16Pin (2.0 mm) Audio 16 cm PCM-5820/L
1701400181	COM1-4	CN19	Flat Cable 18 cm IDC40P 2.0 mm/4COM PCM-9570 USE
1700002142	Ethernet Cable	CN6.CN10	Ethernet Cable IDC10P 2.0 mm/RJ45 20 cm PCM-9584 x 2
1700071000	SATA Cable	CN7.CN9	Cable Serial ATA 7P/7P 100 cm MOLEX x 2
1703100260	USB Cable	CN12.CN13.CN14	Wire 10P 26 cm IDE 2.0 mm For USB 2 PORT 1.9" x 3"

Ordering Information

PCM-10586-9584E	PCM-9584F/PCM-9584FG wiring kit
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PCM-10586-62E

Installation Wiring Kit for PCM-9582/PCM-9587

Part No.	Cable Description	PCM-9582 Connector	Terminal Connector
1701340603	Dual floppy, 3.5" and 5.25" (34p)	CN14	34-pin dual floppy
1700260250	Parallel port	CN16	23-pin female DSUB
1700001296	VGA	CN7	D-SUB 15-pin to 16-pin 2.0 mm L: 150 mm
1703060191	KB/mouse cable	CN27	5-pin circular DIN, 6-pin circular DIN
1701400181	COM 1-4 cable	CN21	40-pin, 9-pin male DSUB x 4
1700160160	Audio cable	CN4	F3.5 mm 16-pin, 5 female phone jacks
1701400452	3.5" IDE DMA/66 (40p)	CN15	40-pin, 2.54 mm, female IDC (450 mm)
1703100260	USB cable	CN20	10-pin, IDE 2.0 mm, USB x 2 (26 cm)
1700071000	SATA cable	CN23.CN24	7-pin /-pin 100 cm
1703050106	TV-out cable	CN2	Wire 10 cm 5P TV-out
1700000410	TMDS cable	CN9	Cable DVI- 26P/DF13-20P 20 cm
1701100151	Network, 1000 Mbps	CN10	RJ45 8-pin modular jack
1701100202	Ethernet Cable	CN11	F Cable RJ45/IDE#2 10P-2.0 20CM PCM-9570 USE

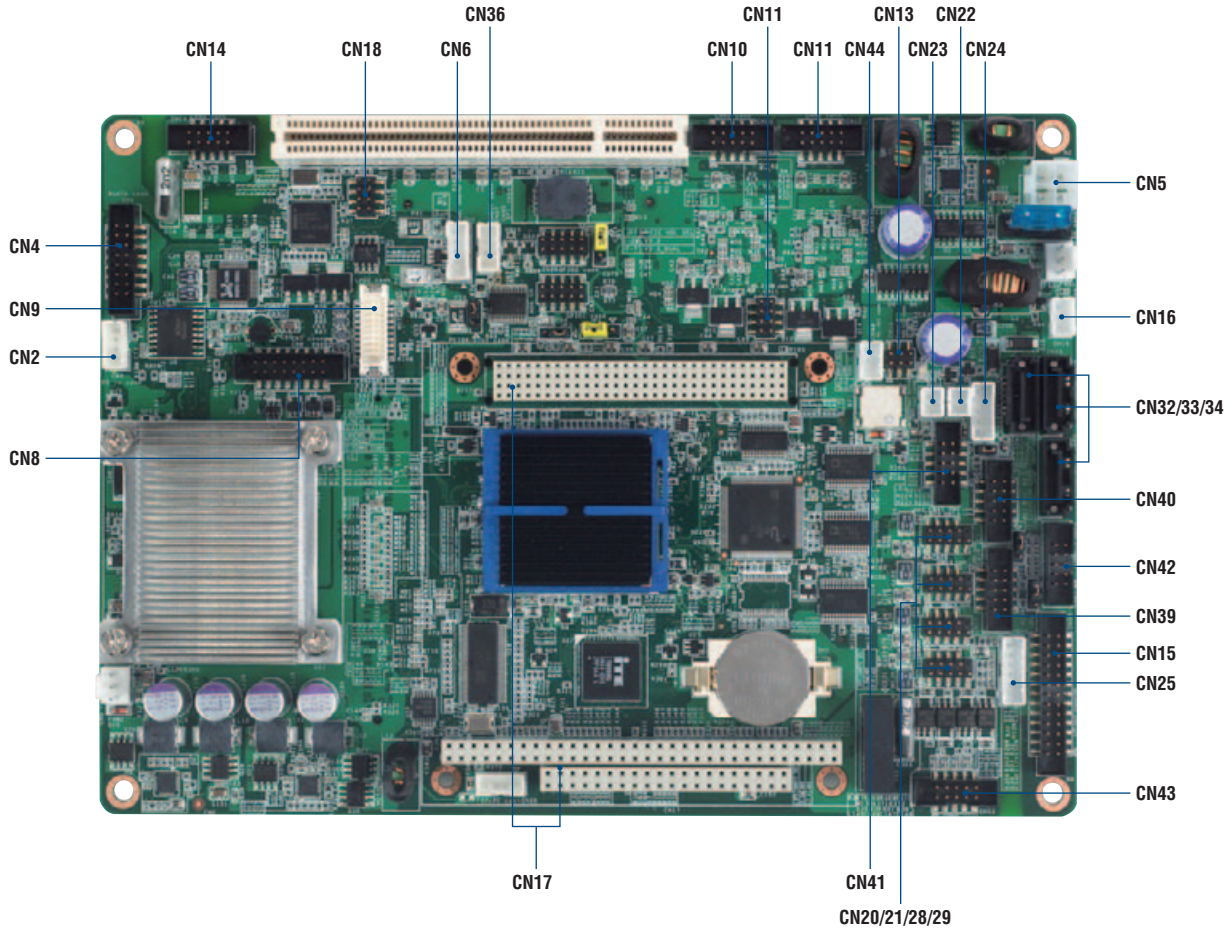
Ordering Information

PCM-10586-6200E	CM-9582/9587 (1000 Mbps) wiring kit
PCM-10586-6201E	PCM-9582/9587 (10/100 Mbps) wiring kit

PS: When using 10/100 Mbps Ethernet with PCM-9582, please use 1701100202 instead of 1701100151
 PS: PCM-10586-6201E is PCM-10586-6200E without GbE Cable 1701100151

PCM-10586-9562E Installation Wiring Kit for PCM-9562

The PCM-10586-9562E cable kit includes cables for the following connectors:



- 1 Computer On Modules
- 2 MIO Extension SBCs
- 3 PC/104 CPU Modules
- 4 3.5" SBCs
- 5 EPIC/EBX/5.25" SBCs
- 6 Industrial Motherboards
- 7 Industrial Storage Modules
- 8 Embedded Wireless Modules
- 9 Embedded Touch Modules

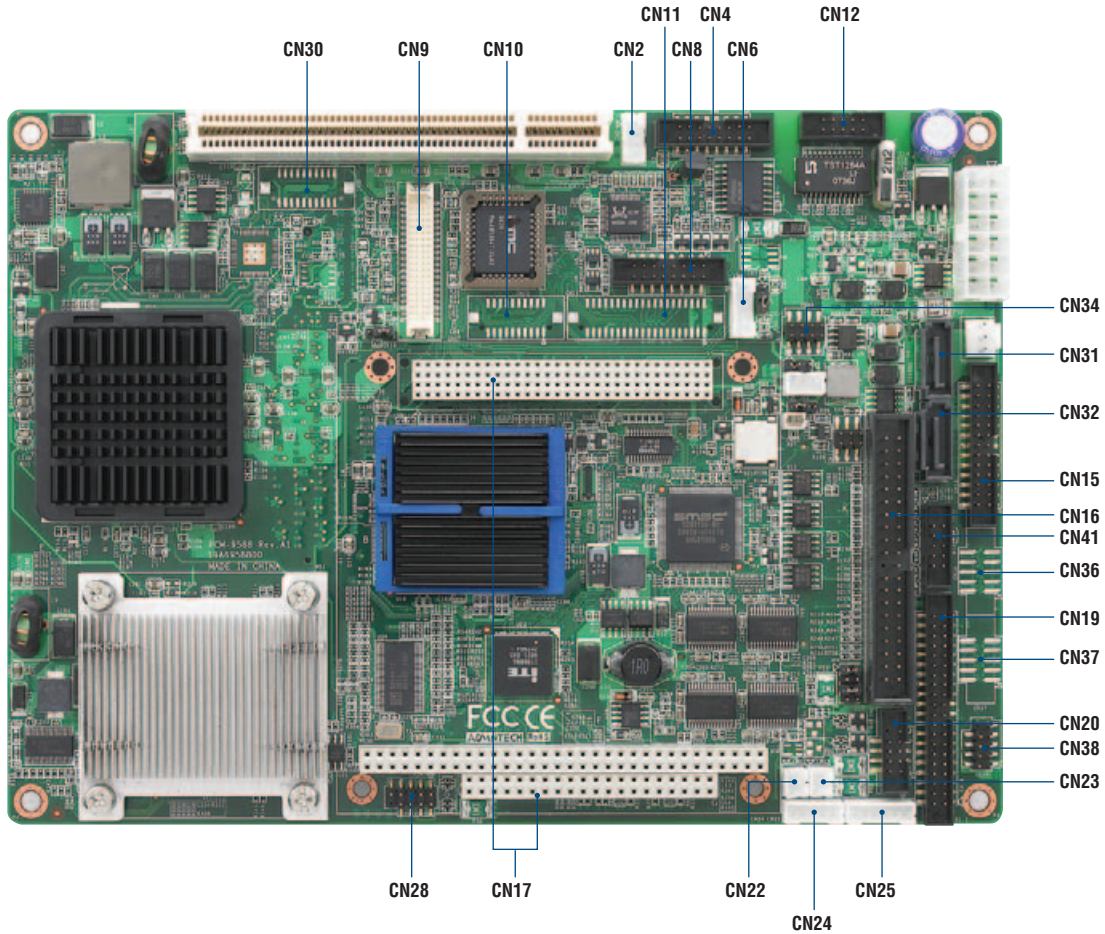
Part No.	Cable Description	Quantity	PPCM-9562 Connector	Terminating Connector
1700160160	Audio cable	1	CN4	Cable 16-Pin (2.0 mm) Audio 16 cm
1700002142	Ethernet cable	2	CN10, CN12	Ethernet Cable IDC10P 2.0 mm/RJ45 15cm
1700260250	LPT port cable	1	CN15	Cable 25 cm 25P to 26P ASS'Y LPT Port 2.0 mm
1700019109	COM 4/5 cable	1	CN42	A Cable 2 x 5P-2.0/D-SUB(M) 9P+D-SUB(M) 9P 25 cm
1703100260	USB Port cable	4	CN20, CN21, CN28, CN29	Wire 10P 26 cm 2.0 mm For USB 2 PORT
1703060191	PS2 KB/MS Cable	1	CN25	Cable 6P-2.0 mm Housing/6P (PS/2)/6P (K/B) 19 cm
1700008941	SATA Cable	3	CN32, CN33, CN34	Cable 7P/7P SATA L=30cm Lock
1700001296	VGA cable	1	CN8	VGA Cable D-SUB 3 x 5P(F)/2x 8P-2.0 15 cm
1700100250	COM1/2/3	3	CN39, CN40, CN41	F Cable IDE#2 10P-2.0/D-SUB 9P(M) 25 cm
1703150102	SATA Power Cable	3	None	SATA Power cable L= 10 cm
170304015K	AT power cable	1	CN5	A Cable 2 x 2P-4.2/B4P-5.08 x 2 15 cm

Ordering Information

PCM-10586-9562E	PCM-9562 cable kit
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PCM-10586-9588E Installation Wiring Kit for PCM-9588

The PCM-10586-9588E cable kit includes cables for the following connectors:



Part No.	Cable Description	Quantity	PCM-9588 Connector	Terminating Connector
1700160160	Audio cable	1	CN4	Cable 16-Pin (2.0 mm) Audio 16 cm
1700001296	VGA cable	1	CN8	A Cable D-SUB 3 x 5P(F)/2 x 8P-2.0 15 cm
1700002142	Ethernet cable	1	CN12	Ethernet Cable IDC10P 2.0 mm/RJ45 15 cm
1700260250	LPT port cable	1	CN15	Cable 25 cm 25P to 26P ASS'Y LPT Port 2.0 mm
1701400452	IDE cable	1	CN16	Flat Cable 40P Gray for DMA-66 PIN20 I.P. 45 cm
1701400181	COM1/2/3/4 cable	1	CN19	Flat Cable 18 cm IDC40P 2.0 mm/4COM
1703100260	USB Port cable	3	CN20, CN28, CN38	Wire 10P 26 cm 2.0 mm For USB 2 PORT
1703060191	PS2 Keyboard/Mouse Connector	1	CN25	Cable 6P-2.0 mm Housing/6P (PS/2)/6P (K/B) 19 cm
1700008941	SATA Cable	2	CN31, CN32	Cable 7P/7P SATA L=30cm Lock
1700019109	COM5/6 cable	1	CN41	A Cable 2 x 5P-2.0/D-SUB(M) 9P+D-SUB(M) 9P 25cm
1703150102	SATA power cable	2	PSU	A Cable B4P-5.08/SATA 15P 10 cm
1700000410	DVI cable	1	CN30	A Cable DVI- 24P(F)/2*10P-1.25+G-TEM. 20CM

Ordering Information

PCM-10586-9588E	PCM-9588 wiring kit
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Riser Cards & I/O Modules

PCI Riser Card



PCM-110
1-Slot PCI Riser Card for 5.25" Biscuit SBCs



Fits in PCM-95XX series
Provides bracket to secure Biscuit SBCs
Size: 103.7 x 56 mm (4.08" x 2.2")

Ordering Information

P/N	Description
PCM-110-00A3E	1-slot PCI riser Card for Biscuit SBCs



PCM-120
2-Slot PCI Riser Card for 5.25" Biscuit SBCs

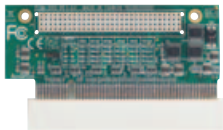


Fits in PCM-95XX series
Provides bracket to secure Biscuit SBCs
Size: 103.7 mm x 75.4 mm (4.08" x 3")

Ordering Information

P/N	Description
PCM-120-00A3E	2-slot PCI riser Card for Biscuit SBCs

I/O Modules



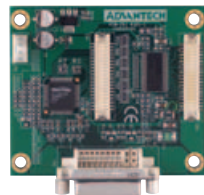
PCM-200
PCI-104 to PCI Bus Module



Fits in PCM-95XX series
Size: 93.3 mm x 40.9 mm (3.7" x 1.6")

Ordering Information

P/N	Description
PCM-200-00A2E	PCI-104 to PCI Bus Module



PCM-261
LVDS/TTL to DVI Module



Supports 18 and 24-bit LVDS to DVI
Supports 18 or 24-bit TTL LCD to DVI (optional)

Specifications

General	
Chipset	Silicon Image Sil 164; NS DS90CF364
LCD Connector	Hirose Output Connector; DVI
Mechanical and Environmental	
Dimensions (L x W)	72 x 62 mm
Weight	0.029 kg (0.064 lb)
Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	
Power Supply Voltage	+5 V, ±5%

Ordering Information

Standard	
PCM-261L-A0A1E	24-bit LVDS to DVI Module
PCM-261L-B0A1E	18-bit LVDS to DVI Module
PCM-261T-A0A1E	24-bit TTL to DVI Module

Optional Accessories

1700000851	24-bit TTL to 24-bit TTL cable
1700000850	18-bit LVDS to 18-bit LVDS FOR 855GME
1700000853	24-bit LVDS to 24-bit LVDS
1700000827	18-bit LVDS TO 18-bit LVDS

Packing List

1 x User manual
1 x PCM-261 board

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/EBX/5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

Mini-ITX Motherboards

NEW

NEW



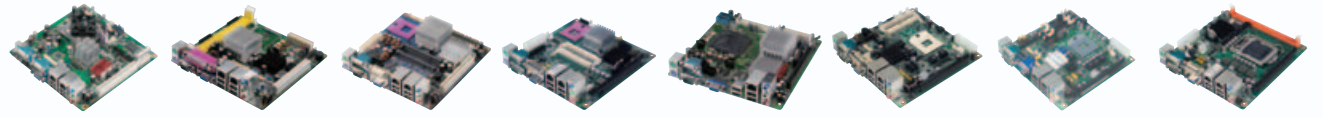
Selection Guide

Model Name		AIMB-210	AIMB-212	AIMB-213	AIMB-221	AIMB-222
Form Factor		Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX
Processor System	CPU	Intel Atom N270	Intel Atom N450/D510	Intel Atom N455/D525	AMD Turion TL-62/AMD Sempron 3700+	AMD Mobile Athlon™ II Neo/Turion™ II Neo
	Socket	FCBGA	FCBGA	FCBGA	S1g1 Socket	FCBGA
	Max. Speed	1.6 GHz	1.66 GHz	1.66/1.8 GHz	2.1 GHz/2.0 GHz	2.2 GHz
	Front Side Bus	533 MHz	-	-	800 MHz/800 MHz	800 MHz
	L2 Cache	512 KB	512 KB/1 MB	512 KB/1 MB	1 MB/512 KB	2 MB
	Chipset	Intel 945GSE + ICH7M	Intel ICH8M	Intel ICH8M	AMD M690E + SB600	AMD RS785E + SB820
	BIOS	Award 16 Mbit, SPI	AMI 16 Mbit, SPI	AMI 16 Mbit, SPI	Award 4 Mbit, FWH	AMI 16 Mbit, SPI
Expansion Slot	PCI	1	1	1	1	-
	MINI PCI	-	-	-	1	-
	PCIe	-	Mini-PCIe, 1 slot	Mini-PCIe, 1 slot	-	Mini-PCIe, 1 slot PCIe x16, 1 slot
	Technology	Single channel DDR2 533 MHz	Single channel DDR2 667 MHz	Single channel DDR3 800 MHz	Dual channel DDR2 533/667/800 MHz	Dual channel DDR3 1066 MHz
Memory	Max. Capacity	2 GB	2 GB	2/4 GB	4 GB	4 GB
	Socket	1 x 200-pin SODIMM	1 x 200-pin SODIMM	2 x 204-pin SODIMM	2 x 200-pin SODIMM	2 x 204-pin SODIMM
Graphics	Controller	Intel GMA 950	Embedded Gen3.5+ GFX Core, 200/400-MHz render clock frequency for N450/ D510	Embedded Gen3.5+ GFX Core, 200/400-MHz render clock frequency for N455/ D525	Integrated ATI Radeon X1250 based GFX Engine	Integrated ATI Radeon HD4200 serial
	VRAM	Shared system memory up to 224 MB	Shared system memory up to 224 MB SDRAM	Shared system memory up to 224 MB SDRAM	Shared system memory up to 512 MB	Shared system memory up to 128 MB SDRAM
	LCD	LVDS1: Dual channel 36-bit LVDS LVDS2: Dual channel 48-bit LVDS (F Version)	Supports 18-bit single channel	Supports 18/24-bit single channel	Dual channel 36/48-bit LVDS	Dual channel 36/48-bit LVDS
	TV-Out	1	-	-	-	-
	HDMI	-	-	-	1	1
	DVI	-	-	1	-	1
	Dual Display	CRT + LVDS, CRT + TV-Out, LVDS + TV-Out	CRT + LVDS, supports extended mode and clone mode	CRT + LVDS, CRT + DVI, supports extended mode and clone mode	CRT + LVDS; CRT + HDMI; HDMI + LVDS	CRT + LVDS; CRT + HDMI; CRT+DVI; HDMI + LVDS; LVDS + DVI
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Dual Realtek RTL8111C	LAN1: Intel 82567V, LAN2: Intel 82583V	LAN1: Intel 82567V, LAN2: Intel 82583V	Dual Realtek RTL8111C	Dual Realtek RTL8111DL
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
TPM	Yes (F Version)	-	Optional	Optional	-	
SATA	Max Data Transfer Rate	300 MB/s	300 MB/s	300 MB/s	300 MB/s	300 MB/s
	Channel	2	2	3	4 (SW RAID 0, 1)	2
EIDE	Mode	EIDE (Ultra DMA 100)	-	-	EIDE (Ultra DMA 133)	-
	Channel	1	-	-	1	-
Rear I/O	VGA/DVI/HDMI	1/-/1	1/-/1	1/1/-	1/1/1	1/1/1
	Ethernet	2	2	2	2	2
	USB	4	4	4	4	4
	Audio	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out
	Parallel	-	-	-	-	-
Internal Connector	Serial	3 (2 x RS-232; 1 x RS-232/422/485)	3 (2 x RS-232; 1 x RS-232/422/485)	2 (1 x RS-232; 1 x RS-232/422/485)	2 (1 x RS-232; 1 x RS-232/422/485)	2 (RS-232)
	PS/2	2	-	-	2	2
	LVDS & Inverter	1	1	1	1	1
	TV-Out	1	-	-	-	-
	DVI	-	-	1	-	1
	USB	4	4	4	4	4
	Serial	3 (RS-232)	3 (RS-232)	4 (1 x RS-232, supplies 5 V & 12 V)	4 (RS-232)	2 (2 x RS-232)
	Parallel	1	-	-	1	-
	IDE	1	-	-	1	-
	SATA	2	2	3	4	2
CompactFlash	1	1	1	1	1	
Watchdog Timer	GPIO	16-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO
	Output	System reset	System reset	System reset	System reset	System reset
Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min
	Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min
Reference Page		6-4	6-6	6-8	6-10	6-12

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/EBK/5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

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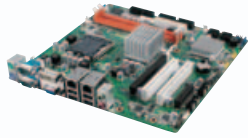
AIMB-223	AIMB-252	AIMB-256	AIMB-258	AIMB-262	AIMB-270	AIMB-272	AIMB-280
Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX
AMD G-series Dual Core/single core processor	Intel Pentium M/ Celeron M	Intel Core 2 Duo/ Celeron M	Intel Core 2 Duo/ Celeron M	Intel Core 2 Duo/ Pentium 4/ Pentium Dual-Core/Celeron D	Intel Core i7/i5/i3/ Pentium	Intel Core i7/i5/i3/ Celeron	Intel Core i7/i5/i3/ Pentium
FCBGA	µFC-PGA 478 Socket/ CPU on board	µFC-PGA 478 Socket/ CPU on board	µFC-PGA 478 Socket	LGA775	µFC-PGA 989 Socket	µFC-PGA 988 Socket	LGA1156
1.65 GHz/1.0 GHz	2.0 GHz/1.5 GHz	2.2 GHz/2.0 GHz	2.53 GHz/2 GHz	2.66 GHz/3.8 GHz/2.2 GHz/ 2.0 GHz	2.66 GHz/2.4 GHz/1.86 GHz	2.1 GHz/2.5 GHz/2.2GHz/1.6 GHz	2.93 GHz/2.66 GHz/3.33 GHz/3.06 GHz/2.8 GHz
-	533 MHz/400 MHz	800 MHz/533 MHz	1066 MHz/ 667 MHz	1066 MHz/800 MHz/533 MHz	-	-	-
512 KB/1 MB	2 MB/1 MB	4 MB/1 MB	6 MB/1 MB	3 MB/2 MB/1 MB/512 KB	4 MB/3 MB/2 MB	6 MB/3 MB/3MB/2 MB	8 MB/4 MB/ 3 MB
AMD eOntario + A55E	Intel 915GME/910GML E + ICH6M	Intel GME965 + ICH8M	Intel GM45 + ICH9M	Intel 945GC + ICH7	Intel QM57	Intel QM67/HM65	Intel Q57
AMI 16 Mbit, SPI	Award 4 Mbit, FWH	AMI 16 Mbit, SPI	AMI 16 Mbit, SPI	Award 16 Mbit, SPI	AMI EFI 64 Mbit, SPI	AMI EFI 64 Mbit, SPI	AMI 64 Mbit, SPI
1	-	1	-	-	-	-	-
-	-	-	-	-	-	-	-
Mini-PCIe, 1 slot PCIe x1, 1 slot	-	-	PCIe x16, 1 slot	PCIe x16, 1 slot	Mini-PCIe, 1 slot, PCIe x16, 1 slot	Mini-PCIe, 1 slot, PCIe x16, 1 slot	PCIe x16, 1 slot
Single channel DDR3 1333 MHz	Dual channel DDR2 400/533 MHz	Dual channel DDR2 533/667 MHz	Dual channel DDR3 800/1066 MHz	Dual channel DDR2 533/667 MHz	Dual channel DDR3 800/1066/1333 MHz	Dual channel DDR3 1066/1333 MHz	DDR3 800/1066/1333 MHz
2 GB	2 GB	4 GB	4 GB	2 GB	8 GB	8 GB	4 GB
1 x 204-pin SODIMM	2 x 240-pin DIMM	2 x 200-pin SODIMM	2 x 204-pin SODIMM	2 x 200-pin SODIMM	2x 204-pin SODIMM	2x 204-pin SODIMM	1 x 240-pin DIMM
Integrated ATI Radeon HD6310	Intel GMA 900	Intel GMA X3100	Intel GMA X4500	Intel GMA 950	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
-	Shared system memory up to 128 MB	Shared system memory up to 384 MB	Shared system memory up to 384 MB	Shared system memory up to 224 MB	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
Dual channel 36/48-bit LVDS	LVDS 1: Dual channel 36-bit LVDS LVDS 2: Dual channel 48-bit LVDS	Dual channel 36/48-bit LVDS	Dual channel 36/48-bit LVDS	-	Dual channel 36/48-bit LVDS	Dual channel 36/48-bit LVDS	-
-	-	-	-	-	-	-	-
1	-	1	1	-	1	1	1
-	-	-	-	-	-	-	-
CRT + LVDS; CRT + HDMI; HDMI + LVDS	CRT + LVDS; Dual LVDS	CRT + LVDS; DVI + LVDS; CRT + DVI	CRT + LVDS; DVI + LVDS; CRT + DVI	-	CRT+LVDS, CRT+DVI, LVDS+DVI	CRT+LVDS, CRT+DVI, LVDS+DVI, HDMI+LVDS, HDMI+CRT, HDMI+DVI	CRT+DVI
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Dual Realtek RTL8111DL	Dual Realtek RTL8111C	Dual Realtek RTL8111B	Dual Realtek RTL8111C	Realtek RTL8111C	LAN1: Intel 82577LM, LAN2: Intel 82583V	LAN1: Intel 82579LM, LAN2: Intel 82583V	LAN1: Intel 82578DM, LAN2: Intel 82583V
RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 1	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
-	-	Optional	iTPM 2.0	-	-	Optional	-
600MB/s	150 MB/s	300 MB/s	300 MB/s	300 MB/s	300 MB/s	600 MB/s, 300 MB/s	300 MB/s
4	2	3	2	2	4	2, 4	4
-	EIDE (Ultra DMA 100)	EIDE (Ultra DMA 100)	-	-	-	-	-
-	1	1	-	-	-	-	-
1/-/1	1/-	1/1/-	1/1/-	1/-	1/1/-	1/-/1	1/1/-
2	2	2	2	1	2	2	2
4	4	4	4	4	4	4	4
Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out
-	1	-	-	-	-	-	-
2 (RS-232)	1 (RS-232/422/485)	2 (RS-232, supply 5 V & 12 V)	2 (1 x RS-232; 1 x RS-232/422/485)	2 (1 x RS-232; 1 x RS-232/422/485)	2 (RS-232)	2 (RS-232)	2 (RS-232)
1	2	2	2	2	2	2	2
1	2	1	1	-	1	1	-
-	-	-	-	-	-	-	-
4	4	6	4	2	1	1	4
4 (3 x RS-232; 1 x RS-232/422/485)	4 (RS-232)	2 (2 x RS-232, supplies 5 V & 12 V)	4 (RS-232)	2 (RS-232)	4 (RS-232)	4 (RS-232)	-
-	-	-	-	1	-	-	-
-	1	1	-	-	-	-	-
4	2	3	2	2	4	4	4
1	1	1	1	-	-	Cfast x 1	-
8-bit GPIO	16-bit GPIO	8-bit GPIO	16-bit GPIO	-	8-bit GPIO	8-bit GPIO	-
System reset	System reset	System reset	System reset	System reset	System reset	System reset	System reset
Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
6-14	6-16	6-18	6-20	6-22	6-24	6-26	6-28

MicroATX Motherboards



Selection Guide

Model Name		AIMB-562 KIOSK	AIMB-564	AIMB-566
Form Factor		MicroATX	MicroATX	MicroATX
Processor System	CPU	Intel Core 2 Duo/Pentium 4/Pentium Dual-Core/Celeron	Intel Core 2 Quad/Core 2 Duo/Pentium Dual-Core/Celeron	Intel Core 2 Quad/Core 2 Duo/Pentium Dual-Core/Celeron
	Socket	LGA775	LGA775	LGA775
	Max. Speed	2.8/3.4/2.2/2.0 GHz	2.66/2.8/2.2/3.2 GHz	2.66/3.16/2.6/2.0 GHz
	Front Side Bus	1066/800/533 MHz	1066/800/533 MHz	1333/1066/800 MHz
	L2 Cache	4 MB/2 MB/1 MB/512 KB	8 MB/3 MB/1 MB/512 KB	6 MB/6 MB/2 MB/512 KB
	Chipset	Intel 945GC + ICH7	Intel Q965 + ICH8 DO	Intel Q35 + ICH8 DO
	BIOS	Award 16 Mbit, SPI	AMI 16 Mbit, SPI	AMI 32 Mbit, SPI
Expansion Slot	PCI	2	2	1
	PCIe x16	-	1	-
	PCIe x4	-	1	1
	PCIe x1	1	-	-
Memory	Technology	Dual channel DDR2 533/667 MHz SDRAM	Dual channel DDR2 533/667/800 MHz SDRAM	Dual channel DDR2 667/800 MHz SDRAM
	Max. Capacity	4 GB	8 GB	8 GB
	Socket	2 x 240-pin DIMM	4 x 240-pin DIMM	4 x 240-pin DIMM
Graphics	Controller	Intel GMA 950	Intel GMA 3000	Intel GMA 3100
	VRAM	Shared system memory up to 224 MB	Shared system memory up to 256 MB	Shared system memory up to 384 MB
	LCD	Dual channel 48-bit LVDS	-	-
	DVI-D	-	-	1
	Dual Display	CRT+LVDS, CRT+CRT	-	CRT+DVI
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Realtek RTL8111C	Intel 82566DM	Intel 82566DM
	Connector	RJ-45 x 1	RJ-45 x 1	RJ-45 x 1
TPM		-	-	-
SATA	Max Data Transfer Rate	300 MB/s	300 MB/s	300 MB/s
	Channel	2	7 (SW RAID)	6 (SW RAID)
EIDE	Mode	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33
	Channel	1	1	1
SSD	CompactFlash	-	-	-
I/O Interface	VGA	2	1	1
	USB	8	10	12
	Serial	10 (8 x RS-232; 2 x RS-232/422/485)	1 (RS-232)	2 (RS-232)
	Parallel	1	1	-
	FDD	-	1	1
	PS/2	2	2	2
	Ethernet (GbE)	1	1	1
	eSATA	-	1	-
	IEEE 1394	-	2 (1 x external & 1 x onboard)	-
	Audio	Mic-in, Line-out	Line-in, Line-out, Mic-in, CD-in, 6 jacks	Mic-in, Line-out
Watchdog Timer	GPIO	16-bit	-	-
	Output	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min
Reference Page		6-30	6-32	6-34



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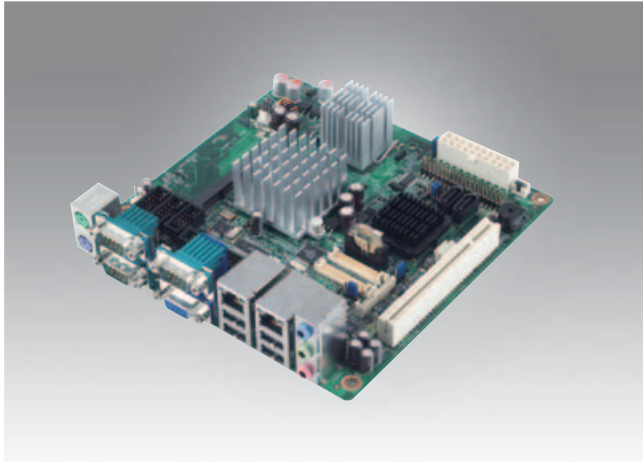


AIMB-567	AKMB-G41M	AIMB-580	AIMB-581
MicroATX	MicroATX	MicroATX	MicroATX
Intel Core 2 Quad/Core 2Duo/ Pentium Dual-Core/Celeron	Intel Core 2 Quad/Core 2Duo/ Pentium Dual-Core/Celeron	Intel Xeon/ Core i7/i5/i3/Pentium	Intel Xeon/ Core i7/i5/i3/Pentium
LGA775	LGA775	LGA1156	LGA1155
2.66/3.16/2.6/2.0 GHz	2.66/3.16/2.6/2.0 GHz	2.93/2.66/3.3/3.06/2.8 GHz	3.4/3.1/3.3/2.9/3.4/3.1/3.3 GHz
1333/1066/800 MHz	1333/1066/800 MHz	-	-
6 MB/6MB/6 MB/512 KB	6 MB/6 MB/2 MB/512 KB	8 MB/8 MB/4 MB/4 MB/3 MB	8MB/6MB/3MB/3MB/8MB/6MB/3MB
Intel G41 + ICH7R/ICH7	Intel G41 + ICH7	Intel Q57/3450	Intel Q67/B65/C206
AMI 16 Mbit, SPI	AMI 8 Mbit, SPI	AMI 64 Mbit, SPI	AMI 64 Mbit, SPI
2	2	2	2
1	1	1	1
1(G2)	0	1	1
1(VG)	1	-	-
Dual channel DDR3 800/1066 MHz SDRAM	Dual channel DDR3 800/1066 MHz SDRAM	Dual channel DDR3 800/1066/1333 MHz SDRAM	Dual channel DDR3 1066/1333 MHz SDRAM
4 GB	4 GB	16 GB	16 GB
4 x 240-pin DIMM	2 x 240-pin DIMM	4 x 240-pin DIMM	4 x 240-pin DIMM
Intel GMA X4500	Intel GMA X4500	Intel HD Graphics	Intel HD Graphics
Shared system memory up to 352 MB	Shared system memory up to 352 MB	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
-	-	-	Dual channel 48-bit LVDS
1	-	1	1
CRT+DVI	-	CRT+DVI	CRT+LVDS, CRT+DVI, LVDS+DVI
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Intel 82583V Intel 82583V	Realtek RTL8111DL	Intel 82578DM Intel 82583V	Intel 82579LM Intel 82583V
RJ-45 x2	RJ-45 x 1	RJ-45 x2	RJ-45 x2
-	-	Optional	Optional
300 MB/s	300 MB/s	300 MB/s	300 MB/s 600 MB/s
4 (SW RAID)	4	6 (SW RAID)	4 (SW RAID) / 2
ATA 100/66/33	ATA 100/66/33	-	-
1	1	-	-
-	-	-	-
1	1	1	1
8	8	10	10 (USB 2.0) 2 (USB 3.0)
4 (3 x RS-232, 1 x RS-232/422/485)	6 (RS-232)	4 (3 x RS-232, 1 x RS-232/422/485)	6 (5 x RS-232, 1 x RS-232/422/485)
1	-	1	1
-	-	1	-
2	2	2	2
2	1	2	2
-	-	-	-
-	-	-	-
Mic-in, Line-out	Line-in, Line-out, Mic-in, CD-in, 6 jacks	Mic-in, Line-out	Mic-in, Line-out
8-bit	-	-	8-bit
System reset	System reset	System reset	System reset
Programmable 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
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- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/EBK/5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

AIMB-210

Intel® Atom™ N270 Mini-ITX with
VGA/LVDS, 6 COM, and Dual LAN



Features

- Intel® Atom™ Mini-ITX motherboard supports N270 1.6 GHz processor
- One 200-pin SODIMM up to 2 GB DDR2 533 MHz SDRAM
- Supports dual display for VGA, LVDS, and TV-Out
- Built with 6 serial ports, 8 USB ports, CF, 2 LAN ports and TPM1.2 (optional)
- Supports embedded software APIs and utilities

Software APIs:

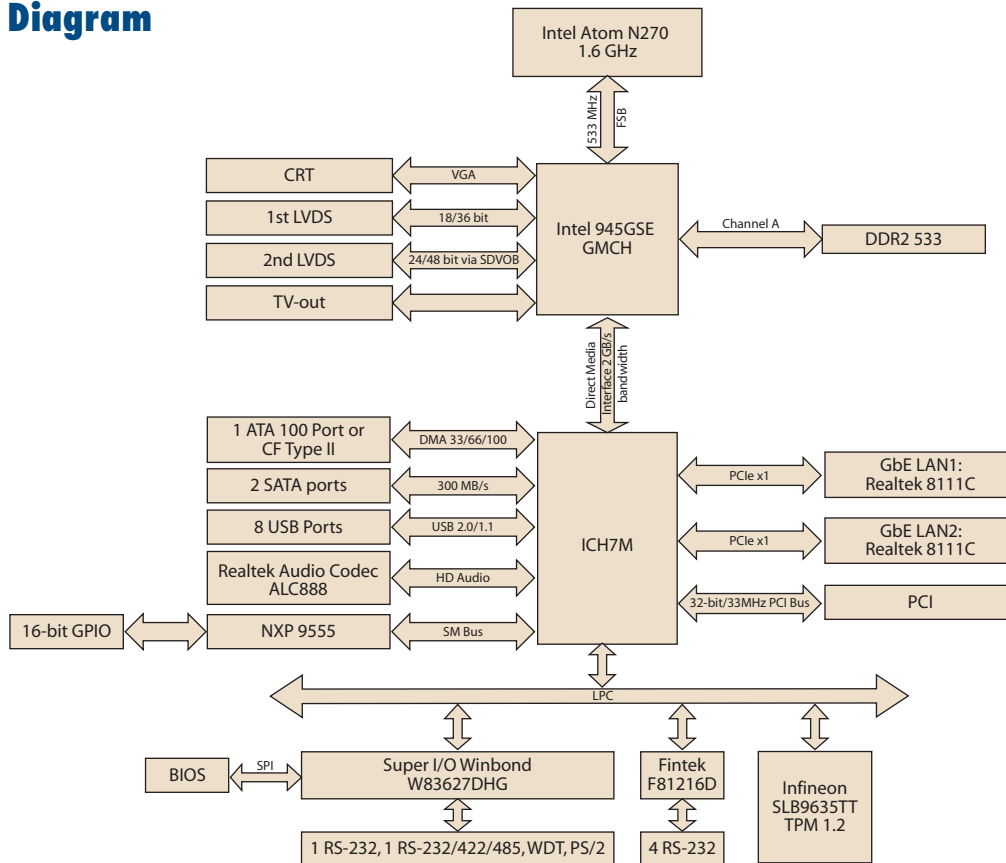
Utilities:

Specifications

Processor System	CPU (45 nm)	Intel Atom N270			
	Max. Speed	1.6 GHz			
	Front Side Bus	533 MHz			
	L2 Cache	512 KB			
	Chipset	Intel 945GSE + ICH7M			
	BIOS	Award 16 Mbit, SPI			
Expansion Slot	PCI	32-bit/33 MHz, 1 slot			
	Mini-PCI	-			
	PCIe	-			
Memory	Technology	Single channel DDR2 533 MHz SDRAM			
	Max. Capacity	2 GB			
	Socket	1 x 200-pin SODIMM			
Graphics	Controller	Intel 945GSE GMCH integrated GMA 950			
	VRAM	Shared system memory up to 224 MB SDRAM			
	1st LVDS	Single channel 18-bit/Dual channel 36-bit LVDS			
	2nd LVDS	Single channel 18/24-bit/Dual channel 36/48-bit LVDS, via Chronitel 7308B SDVO transmitter (F version)			
	TV-Out	Supports both S-video and composite video (TV-Out function is not supported during POST stage)			
Ethernet	Dual Display	CRT + LVDS, CRT + TV-Out, LVDS + TV-Out			
	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek 8111C; GbE LAN2: Realtek 8111C			
SATA	Connector	RJ-45 x 2			
	Max Data Transfer Rate	300MB/S			
EIDE	Channel	2			
	Mode	EIDE (Ultra DMA 100)			
SSD	Channel	1			
	CompactFlash	Supports CompactFlash Type I/II			
Rear I/O	VGA	1			
	Ethernet	2			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	3 (2 x RS-232, 1 x RS-232/422/485)			
	Parallel	-			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connector	LVDS & Inverter	1			
	USB	4 (USB 2.0 compliant)			
	Serial	3 (RS-232)			
	IDE	1			
	SATA	2			
	CompactFlash	1			
	Parallel	1			
Watchdog Timer	DIO	16-bit GPIO			
	Output	System reset			
Power Requirements	Interval	Programmable 1 ~ 255 sec/min			
	Power On	1.6 GHz Atom processor, 2 GB DDR2 SDRAM			
	+5 V	+3.3 V	+12 V	-12 V	+5 VSB
	1.96 A	1.21 A	0.19 A	0.06 A	0.28 A
	Operating	Non-Operating			
Environment	Temperature	0 ~ 60° C (32 ~ 140° F)		-20 ~ 70° C (-4 ~ 158° F)	
	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

* Minimum order quantity is required.

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
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- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	Chipset	GbE	COM	LVDS	TV-out	TPM
AIMB-210G2-S6A1E	Atom 1.6 GHz	945GSE	2	6	1, 18-bit	Yes	None
AIMB-210F-S6A1E	Atom 1.6 GHz	945GSE	2	6	2, 18/24-bit	Yes	Yes

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1700008809	Printer port cable, 25 cm, w/bracket

Packing List

Description	Quantity
AIMB-210 SBC	1
IDE HDD cable (40-pin)	1
SATA HDD cable	2
SATA power cable	2
Serial port cable	3
CPU cooler	1
I/O port bracket	1
Startup manual	1
Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009632	XPE WES2009 AIMB-210 V4.0 ENG
	2070007914	XPE WES2009 AIMB-210 V4.0 24MUI
	2070009651	CE 5.0 Pro AIMB-210 V1.4 ENG
Win CE	2070006271	CE 6.0 Pro AIMB-210 V1.1 ENG (Need ODM BIOS)
QNX	2070006272	IMG QNX V6.4 AIMB-210 V1.0 ENG (Audio is not supported)

I/O View



AIMB-210G2-S6A1E
AIMB-210F-S6A1E

AIMB-212

Intel® Atom™ N450/D510 Mini-ITX
with VGA/LVDS, 6 COM, and Dual LAN



Features

- Supports Intel® Atom™ processor N450 and D510 dual core
- One 200-pin SODIMM up to 2 GB DDR2 667 MHz SDRAM
- Supports 1 PCI and 1 Mini-PCIe expansion, 6 serial ports, 8 USB, and CF
- Lower total cost of ownership with DC12V support
- Supports embedded software APIs and Utilities

Software APIs: SMBus, H/W Monitor, Brightness, Watchdog, GPIO

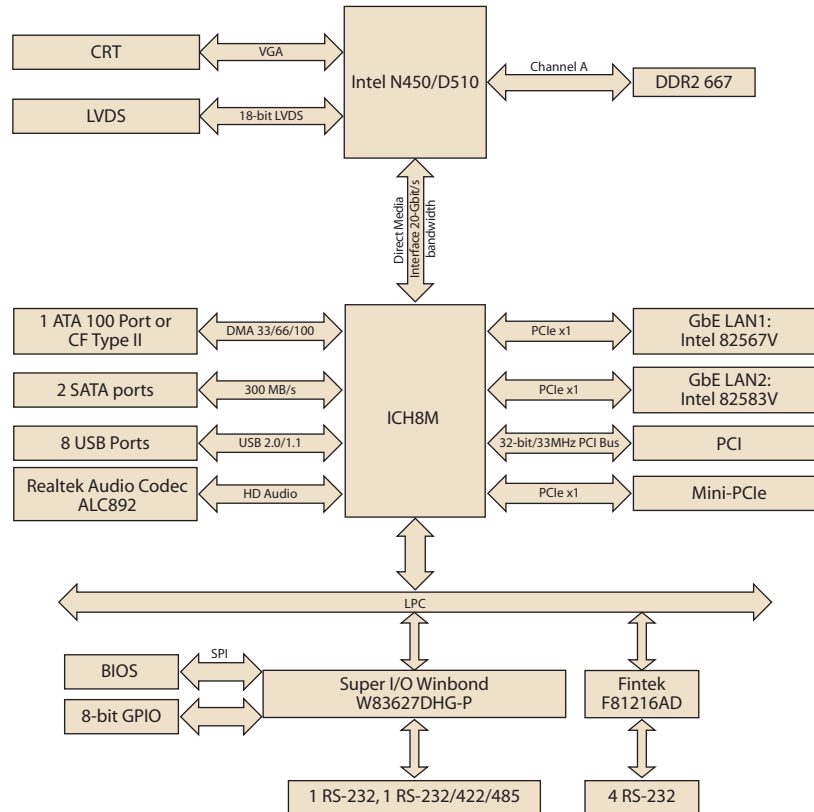
Utilities: BIOS flash, eSOS, Monitoring, Flash Lock, Embedded Security ID

Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU (45 nm)	Intel Atom N450	Intel Atom D510
	Max. Speed	1.6 GHz (single core)	1.66 GHz (dual core)
	L2 Cache	512 KB	1 MB
	Chipset	ICH8M	
	BIOS	AMI 16 Mbit PSI	
Expansion Slot	PCI	32-bit/33 MHz, 1 slot	
	Mini-PCIe	1	
	PCIe	-	
Memory	Technology	Single channel DDR2 667 MHz not compatible with DDR2533 MHz	
	Max. Capacity	2 GB	
	Socket	1 x 200-pin SODIMM	
Graphics	Controller	Embedded Gen3.5+ GFX Core, 200/400-MHz render clock frequency for N450/D510	
	VRAM	Shared system memory up to 224 MB SDRAM	
	VGA	Supports up to SXGA 1400 x 1050 @ 60Hz for Atom N450, up to 2048 x 1536 for Atom D510	
	LVDS	Supports 18-bit single channel and up to WXGA 1366 x 768	
	TV-out	None	
	Dual Display	CRT + LVDS, support extended mode and clone mode	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: Intel 82567V; GbE LAN2: Intel 82583V	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	300 MB/s	
	Channel	2	
EIDE	Mode	None	
	Channel	None	
SSD	CompactFlash	Supports CompactFlash Type I/II	
Rear I/O	VGA	1	
	Ethernet	2	
	USB	4 (USB 2.0 compliant)	
	Audio	3 (Mic-in, Line-out, Line-in)	
	Serial	3 (2 of RS-232, 1 of RS-232/422/485)	
	Parallel	-	
	DC jack	1 (2.5 mm)	
Internal Connector	LVDS & Inverter	1	
	USB	4 (USB 2.0 compliant)	
	Serial	3 (RS-232)	
	IDE	None	
	SATA	2	
	SATA PWR connector	2	
	CompactFlash	1	
	Parallel	None	
DIO	8-bit GPIO		
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Power Requirements	Typical	DC 12V Input (Tolerance ±10%)	
Environment		Operating	Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F)	-40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")	

Board Diagram



- Computer On Modules 1
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- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	SC/DC	GbE	COM	LVDS
AIMB-212N-S6A1E	Atom N450	Single core	2	6	1, 18-bit
AIMB-212D-S6A1E	Atom D510	Dual core	2	6	1, 18-bit

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1757003082	Adapter AC100-240V 60W +12V/5A

Packing List

Part number	Description	Quantity
1700003194	SATA HDD cable	2
1700017461	SATA power cable	2
1700001788	Serial port cable	3
1960046526N001	CPU cooler (For Atom D510 only)	1
1960046435T000	I/O port bracket	1
2002021210	Startup manual	1
2062021200	Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009030	XPE WES2009 AIMB-210 V4.0 ENG
	2070009031	XPE WES2009 AIMB-210 V4.0 24MUI
Software API	205E212000	SUSI 3.0 SW API for AIMB-212 B:20091115 XP

I/O View

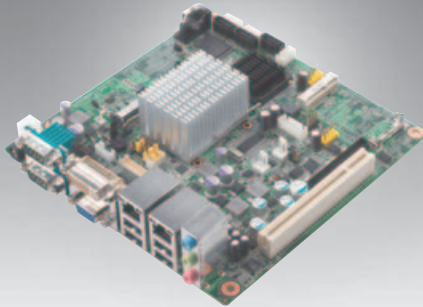


AIMB-212N-S6A1E
AIMB-212D-S6A1E

AIMB-213

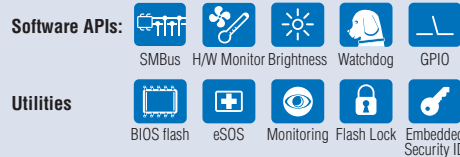
Intel® Atom™ N455/D525 Mini-ITX with
VGA/DVI/LVDS, 6 COM, and Dual LAN

NEW



Features

- Supports Intel® Atom™ processor N455 and D525 dual core
- Two 204-pin SODIMM up to 2 GB/4 GB DDR3 800 MHz SDRAM
- Supports 1 PCI and 1 Mini-PCIe expansion, 6 serial ports, 8 USB, and CF
- Lower total cost of ownership with DC12V support and support 18/24-bit LVDS
- Onboard TPM 1.2 support (optional)
- Supports embedded software APIs and Utilities

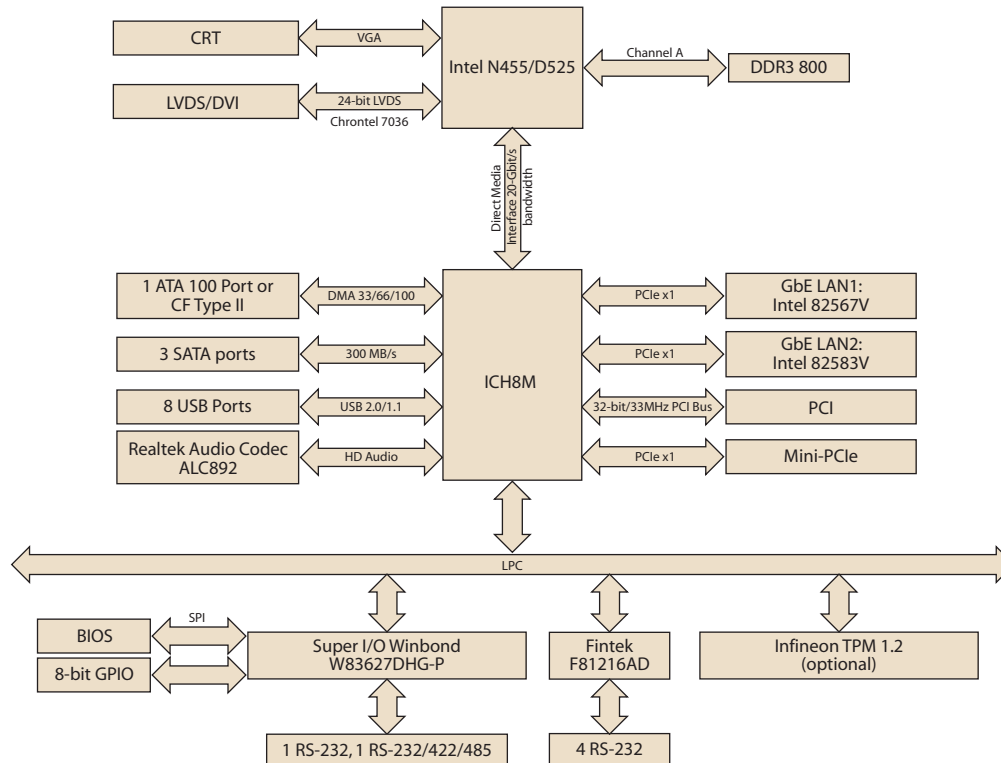


Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU (45 nm)	Intel Atom N455	Intel Atom D525
	Max. Speed	1.66 GHz (single core)	1.8 GHz (dual core)
	L2 Cache	512 KB	1 MB
	Chipset	ICH8M	
	BIOS	AMI 16 Mbit SPI	
Expansion Slot	PCI	32-bit/33 MHz, 1 slot	
	Mini-PCIe	1	
	PCIe	-	
Memory	Technology	Single channel DDR3 800 MHz SDRAM	
	Max. Capacity	2 GB/4 GB	
	Socket	2 x 204 pin SODIMM	
Graphics	Controller	Embedded Gen3.5+ GFX Core, 200/400-MHz render clock frequency for N455/D525	
	VRAM	Shared system memory up to 224 MB SDRAM	
	VGA	Supports up to SXGA 1400 x 1050 @ 60Hz for Atom N455, up to 2048 x 1536 for Atom D525	
	LVDS	Supports 18/24-bit single channel and up to WXGA 1366 x 768 (Chrontel 7036)	
	DVI	Supports up to UXGA 1600 x 1200 @ 60Hz	
Dual Display	VGA + DVI, VGA + LVDS, support extended mode and clone mode		
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: Intel 82567V; GbE LAN2: Intel 82583V	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	300 MB/s	
	Channel	3	
EIDE	Mode	None	
	Channel	None	
SSD	CompactFlash	Supports CompactFlash Type I/II	
Rear I/O	VGA	1	
	DVI	1	
	Ethernet	2	
	USB	4 (USB 2.0 compliant)	
	Audio	3 (Mic-in, Line-out, Line-in)	
	Serial	2 (1 of RS-232, 1 of RS-232/422/485)	
	Parallel	-	
	DC jack	1 (2.5 mm)	
Internal Connector	LVDS & Inverter	1	
	USB	4 (USB 2.0 compliant)	
	Serial	4 (RS-232), only COM6 supply 5V/12V	
	IDE	None	
	SATA	3	
	SATA PWR connector	3	
	CompactFlash	1	
	Parallel	None	
Watchdog Timer	DIO	8-bit GPIO	
	Output	System reset	
Power Requirements	Interval	Programmable 1 ~ 255 sec/min	
	Typical	DC 12V Input (Tolerance ±10%)	
Environment	Operating	Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F) -40 ~ 85° C (-40 ~ 185° F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")	

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	SC/DC	GbE	COM	LVDS
AIMB-213N-S6A1E	Atom N455	Single core	2	6	1, 18/24-bit
AIMB-213D-S6A1E	Atom D525	Dual core	2	6	1, 18/24-bit

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1757003082	Adapter AC100-240V 60 W +12V/5A FSP
1757003062	Adapter AC100-240V 60W +12V/5A(Delta)
1700018699	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm

Packing List

Part number	Description	Quantity
1700003194	SATA HDD cable	3
1700018785	SATA power cable	3
1700008876	Serial port cable 1 to 4	1
1960046526N001	CPU cooler (For Atom D525 only)	1
1960050473T000	I/O port bracket	1
2002021310	Startup manual	1
2062021300	Driver CD	1

Embedded OS/API

OS/API	Description
Win XPE	XPE WES 2009
Software API	SUSI V3.0

I/O View



AIMB-213N-S6A1E
AIMB-213D-S6A1E

AIMB-221

AMD Turion™ and Sempron™ Mini-ITX with VGA/LVDS/HDMI, 6 COM, and Dual LAN Port



Features

- Supports AMD Turion™ 64 X2 and Sempron™ mobile processor-AMD M690E and SB600
- Two 200-pin SODIMMs, up to 4 GB DDR2 533/667/800 MHz SDRAM
- Supports dual display for VGA, HDMI, LVDS
- Supports 6 serial ports, 4 SATA 2.0 ports and TPM (optional)
- Supports embedded software APIs and utilities

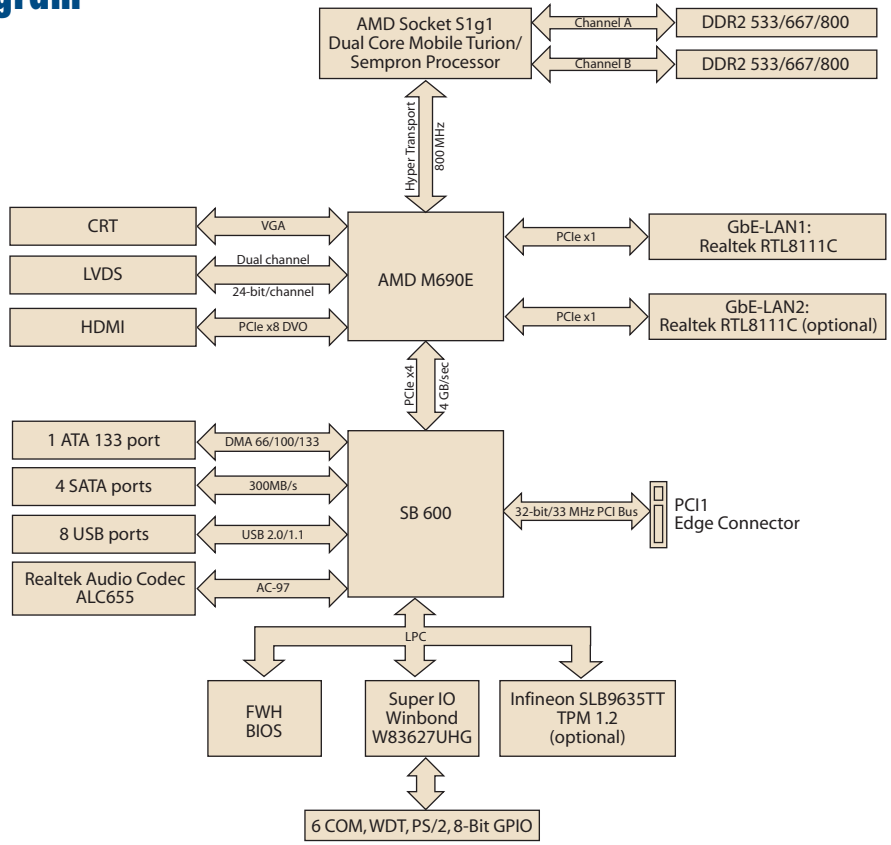
Software APIs:   

Utilities:  

Specifications

Processor System	CPU (65 nm S1g1)	AMD Turion 64 X2 TL-62	AMD Turion 64 X2 TL-56	AMD Sempron 3700+	AMD Sempron 2100+
	Max. Speed	2.1 GHz (dual core)	1.8 GHz (dual core)	2.0 GHz	1.0 GHz
	Hyper Transport Speed	800 MHz	800 MHz	800 MHz	800 MHz
	L2 Cache	1 MB	1 MB	512 KB	256 KB
	Chipset	AMD M690E and SB 600			
	BIOS	Award 4 Mbit via LPC, FWH			
Expansion Slot	PCI	32-bit/33 MHz, 1 slot			
	Mini-PCI	32-bit/33 MHz, 1 slot			
	PCIe	-			
Memory	Technology	Dual channel DDR2 533/667/800 MHz SDRAM			
	Max. Capacity	4 GB			
	Socket	2 x 200-pin SODIMMs			
Graphics	Controller	AMD M690E Integrated ATI Radeon X1250-based graphic engine			
	VRAM	Shared system memory up to 512 MB video memory			
	LVDS	Single channel 18/24-bit Dual channel 36/48-bit LVDS			
	HDMI	Supports HDMI 1.2, 1650 Mbps/channel with 165 MHz			
	DVI	-			
	Dual Display	CRT + LVDS, CRT + HDMI, HDMI + LVDS			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek RTL8111C; GbE LAN2: Realtek RTL8111C			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	300 MB/s			
	Channel	4 (supports software RAID 0 and 1)			
EIDE	Mode	EIDE (Ultra DMA 133)			
	Channel	1			
SSD	CompactFlash	Supports CompactFlash Type I/II			
Rear I/O	VGA	1			
	HDMI	1			
	Ethernet	2			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	2 (COM 1: RS-232; COM 2: RS-232/422/485)			
	PS/2	2 (1 x keyboard and 1 x mouse)			
	LVDS	1			
Internal Connector	DVI	-			
	USB	4 (USB 2.0 compliant)			
	Serial	4 (RS-232)			
	IDE	1			
	SATA	4			
	CompactFlash	1			
	Parallel	1			
	IrDA	-			
	FDD	-			
	DIO	8-bit General Purpose I/O for DI and DO			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Power On	Turion 64 X2 TL-62 2.1GHz HT 800 MHz, 4GB DDR2 SDRAM			
		+5 V	+3.3 V	+12 V	
		3.45 A	0.72 A	2.45 A	
Environment	Operating	0 ~ 60° C (32 ~ 140° F)			Non-Operating
	Temperature				-20 ~ 70° C (-4 ~ 158° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
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- 3.5" SBCs 4
- EPIC/EBX/5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	GbE	Mini PCI	CF	COM
AIMB-221G2-00A1E	2	1	1	6

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1700008809	Printer port cable, 25 cm, w/ bracket

Packing List

Part number	Description	Quantity
1701400452	IDE HDD cable (40-pin)	1
1700003194	SATA HDD cable	2
1700017461	SATA power cable	2
1750001620	CPU cooler	1
1960019192T100	I/O port bracket	1
2006022110	Startup manual	1
2066022100	Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070004329	XPE SP2 FP2007AIMB-221 V3.5 ENG
	2070005291	XPE FP2007 AIMB-221 V3.5.0 JPN_ENG
Software API	205E000021	SUSI 3.0 SW API for AIMB-221 XP

I/O View



AIMB-221G2-00A1E

AIMB-222

AMD Mobile Athlon™ II Neo/Turion™ II Neo Mini ITX with VGA/LVDS/HDMI/DVI, 4 COM and Dual LAN

NEW



Features

- Supports AMD Mobile Athlon™ II Neo/AMD Turion™ II Neo ASB2 BGA processors
- Two 204-pin SODIMM up to 4 GB DDR3 1066 MHz SDRAM
- Supports VGA/LVDS/HDMI, DVI is optional
- Dual LANs, 4COM, Mini PCIe, and CFast
- Supports embedded software APIs and Utilities

Software APIs:

- SMBus
- H/W Monitor
- Watchdog
- GPIO
- Brightness

Utilities:

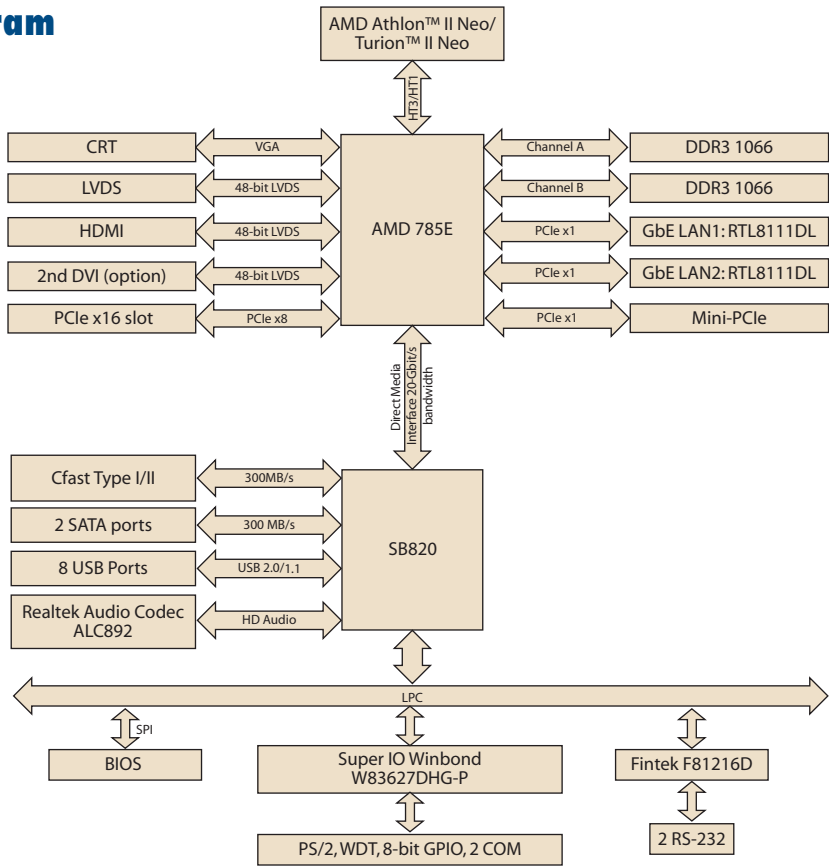
- BIOS flash
- eSOS
- Monitoring
- Embedded Security ID
- Flash Lock

Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	AMD Turion II Neo	AMD Turion II Neo	AMD Athlon II Neo
	Max. Speed	2.2 GHz (dual-core 25W TDP)	1.5 GHz (Dual-Core 15W TDP)	1.7 GHz (Single-Core 12W TDP)
	L2 Cache	2 MB		
	Chipset	AMD 785E + SB820		
	BIOS	AMI 16 Mbit SPI		
Expansion Slot	PCI	-		
	Mini-PCIe	1		
	PCIe	PCIe x8 (PCIe gen 2)		
Memory	Technology	Dual channels DDR3 1066 MHz SDRAM		
	Max. Capacity	4 GB		
	Socket	2 x 204-pin SODIMM		
Graphics	Controller	ATI Radeon™ HD4200 serial, supports OpenGL 2.0, DirectX10, H.264, VC1		
	VRAM	Side port memory 128 MB (Optional)		
	VGA	Supports up to 2560 x 1536 @ 32bpp		
	LVDS	Supports 24-bit dual channel and up to 1920 x 1200		
	DVI (optional)	1920 x 1200 @ 60 MHz		
	HDMI	1920 x 1200 @ 60 MHz		
	Dual Display	Supports dual display of any two display device (CRT, LVDS, HDMI, DVI)		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	GbE LAN1: RTL8111DL; GbE LAN2: RTL8111DL		
	Connector	RJ-45 x 2		
SATA	Max Data Transfer Rate	300 MB/s		
	Channel	2		
EIDE	Mode	None		
	Channel	None		
SSD	CFast compactFlash	CFast type I/II		
Rear I/O	VGA	1		
	DVI	1		
	Ethernet	2		
	USB	4		
	Audio	3 (Mic-in, Line-out, Line-in)		
	Serial	2 (RS-232)		
Internal Connector	LVDS & Inverter	1		
	DVI	1 (optional)		
	USB	4 (USB 2.0 compliant)		
	Serial	2 (RS-232, 5V/12V by jumper selection)		
	IDE	None		
	SATA	2		
	CFast compactFlash	1		
	Parallel	None		
	GPIO	8-bit		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Power Requirement	Power On	AMD Turion II Neo Dual Core Processor, 4GB DDR3 DIMM		
		+5 V	+ 3.3 V	+12 V
		2.88 A	0.89 A	1.79 A
Environment	Operating	Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F)		
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")		

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	Display	LAN	COM
AIMB-222G2-S0A1E	1.7 GHz	CRT/LVDS/HDMI	2	4
AIMB-222G2-S1A1E	1.5 GHz	CRT/LVDS/HDMI	2	4
AIMB-222G2-S2A1E	2.2 GHz	CRT/LVDS/HDMI/DVI	2	4

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm

Packing List

Description	Quantity
AIMB-222 SBC	1
SATA HDD cable	2
Serial port cable	2
CPU cooler	1
I/O port bracket	1
Startup manual	1
Driver CD	1

Embedded OS/API

OS/API	Description
Win XPE	XPE WES 2009
Software API	SUSI V3.0

I/O View



AIMB-222G2-S0A1E
AIMB-222G2-S1A1E
AIMB-222G2-S2A1E

AIMB-223

Mobile AMD G-series Dual Core/Single Core Mini-ITX with VGA/LVDS/HDMI, 6COM and Dual LAN

NEW



Features

- Supports AMD Mobile G-series Dual Core/Single Core processor
- One 204-pin SODIMM up to 2 GB DDR3 1333 MHz SDRAM
- Supports VGA/LVDS/HDMI
- Dual LANs, 6COM, Mini PCIe, and Cfast
- Supports embedded software APIs and Utilities

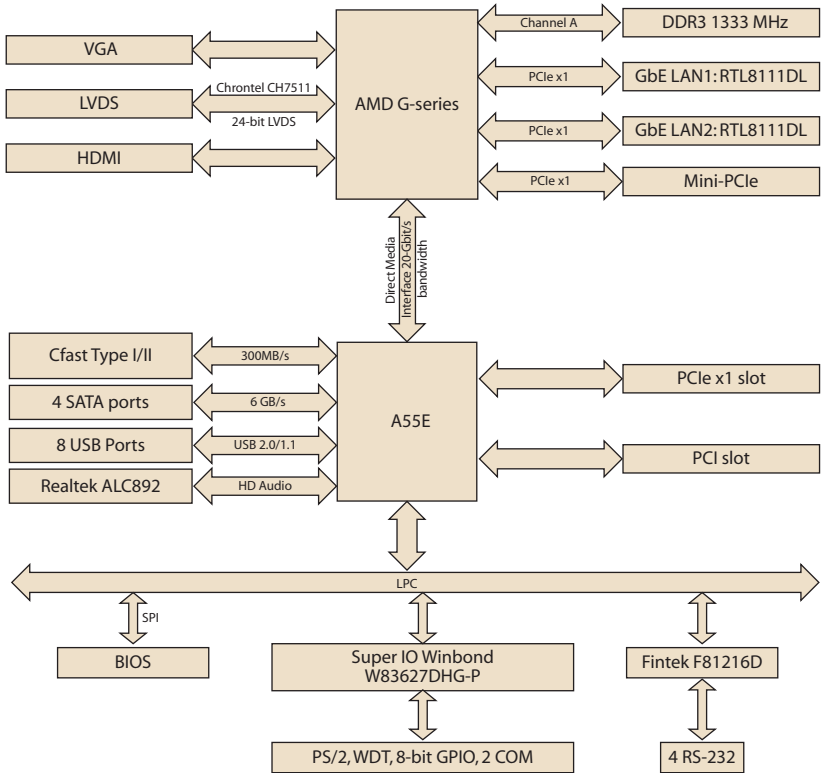


Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	AMD Dual Core T56N	AMD Dual Core T40
	Max. Speed	1.6 GHz (dual core 18W TDP)	1.0 GHz (dual core 5 W TDP)
	L2 Cache	512 KB	
	Chipset	AMD G-series + A55E	
	BIOS	AMI 16 Mbit SPI	
Expansion Slot	PCI	1	
	Mini-PCIe	1	
	PCIe	PCIe x1 (PCIe gen2)	
Memory	Technology	One channels DDR3 1333 MHz	
	Max. Capacity	2 GB	
	Socket	1 x 204 pin SODIMM	
Graphics	Controller	ATI Radeon HD 6310, support DirectX 11, UVD3	
	VRAM	TBD	
	VGA	Supports up to 2560 x 1536 @ 32bpp	
	LVDS	Supports 24-bit dual channel and up to 1920 x 1200	
	HDMI	1920 x 1200 @ 60 MHz	
Dual Display	Supports dual display of any two display device (CRT, LVDS, HDMI)		
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: RTL8111DL; GbE LAN2: RTL8111DL	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	6 GB/s	
	Channel	4	
EIDE	Mode	None	
	Channel	None	
SSD	Cfast compactFlash	Cfast type I/II	
Rear I/O	VGA	1	
	HDMI	1	
	Ethernet	2	
	USB	4 (USB 2.0 compliant)	
	Audio	3 (Mic-in, Line-out, Line-in)	
	Serial	2 (RS-232)	
	DCjack	1 (2.5 mm)	
Internal Connector	LVDS & Inverter	1	
	USB	4 (USB 2.0 compliant)	
	Serial	4 (RS-232, 5V/12V by jumper selection)	
	IDE	None	
	SATA	4	
	Cfast compactFlash	1	
	Parallel	None	
GPIO	8-bit		
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Power Requirement	Typical	TBD	
Environment	Operating		Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F)	-40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")	

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	Display	LAN	COM
AIMB-223G2-S0A1E	1.0 GHz	CRT/LVDS/HDMI	2	6
AIMB-223G2-S1A1E	1.6 GH	CRT/LVDS/HDMI	2	6

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1757003064	Adapter AC100-240V, 84W, +12V/ 7A FSP
1757003062	Adapter AC100-240V, 60W, +12V/ 5A FSP

Packing List

Part Number	Quantity
AIMB-223 SBC	1
SATA HDD cable	2
Serial port cable	2
CPU cooler	1
I/O port bracket	1
Startup manual	1
Driver CD	1

Embedded OS/API

OS/API	Description
Win XPE	XPE WES 2009
Software API	SUSI V3.0

I/O View



AIMB-223G2-S0A1E
AIMB-223G2-S1A1E


AIMB-252

Intel® Pentium® M/Celeron® M Socket 478
Mini-ITX with Dual LVDS, 5 COM, and Dual LAN



Features

- Supports Intel® socket 478 Pentium® M/Celeron® M Processor
- Intel 910GML/915GME and ICH6M
- Two DIMM sockets support up to 2 GB DDR2 400/533 MHz SDRAM
- Supports 5 serial ports, 2 SATA, 8 USB and Dual LVDS display (optional)
- Supports embedded software APIs and utilities

Software APIs:    

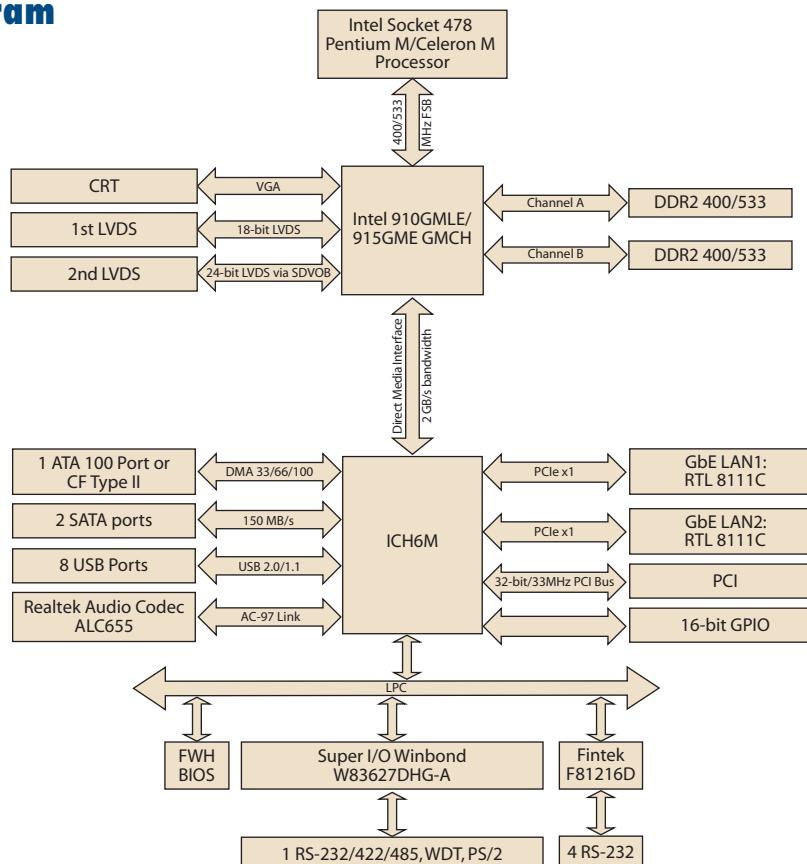
Utilities:  

Specifications

	CPU (130/90 nm, µFC-PGA 478)	Intel Pentium M	Intel Celeron M	Intel ULV Celeron M	Intel ULV Celeron M
Processor System	Max. Speed	760 2.0 GHz	370 1.5 GHz	600 MHz on board	1 GHz on board
	Front Side Bus	400/533 MHz	400 MHz	400 MHz	400 MHz
	L2 Cache	2 MB	1 MB	512 KB	-
	Chipset	Intel 910GML/915GME + ICH6M			
	BIOS	Award 4 Mbit, FWH			
	PCI	32-bit/33 MHz, 1 slot			
Expansion Slot	Mini-PCI	-			
	PCIe	-			
	Technology	Dual channel DDR2 400/533 MHz SDRAM			
Memory	Max. Capacity	2 GB			
	Socket	2 x 240-pin DIMM			
	Controller	Intel 910GML/915GME GMCH integrated Graphics Media Accelerator 900			
Graphics	VRAM	Intel DVMT 3.0 supports up to 128 MB video memory			
	1st LVDS	Single channel 18-bit/Dual channel 36-bit LVDS			
	2nd LVDS (optional)	Single channel 18/24-bit/Dual channel 36/48-bit LVDS, via Chrontel 7308B SDVO transmitter			
	DVI	None			
	Dual Display	CRT + LVDS, LVDS + LVDS			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek RTL8111C; GbE LAN2: Realtek RTL8111C			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	150 MB/s			
	Channel	2			
EIDE	Mode	EIDE (Ultra DMA 100)			
	Channel	1			
SSD	CompactFlash	Supports CompactFlash Type I/II			
Rear I/O	VGA	1			
	Ethernet	1 (for VG version); 2 (for G2 version)			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	1 (RS-232/422/485)			
	Parallel	1			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connector	LVDS & Inverter	1			
	USB	4 (USB 2.0 compliant)			
	Serial	4 (RS-232)			
	IDE	1			
	SATA	2			
	CompactFlash	1			
	IrDA	-			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Power On	Intel 915GME and Pentium M 760 2.0 GHz FSB 533 MHz, 2 GB DDR2 SDRAM			
	+5 V	+3.3 V	+12 V	+5 VSB	
	2.61 A	0.71 A	1.93 A	0.59 A	
	Operating	Non-Operating			
Environment	Temperature	0 ~ 60° C (32 ~ 140° F)		-20 ~ 70° C (-4 ~ 158° F)	
	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

* Intel 910GML only supports FSB 400 processor and DDR2 400 SDRAM

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	Chipset	DDR2	GbE	COM	LVDS
AIMB-252VG-M0A1E	ULV Celeron M 600 MHz	910GML	400	1	5	1
AIMB-252VG-S0A1E	ULV Celeron M 1 GHz	910GML	400	1	5	1
AIMB-252G2-00A1E	-	915GME	400/533	2	5	1

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm

Packing List

Description	Quantity
AIMB-252 SBC	1
IDE HDD cable (40-pin)	1
SATA HDD cable	2
SATA power cable	2
Serial port cable 1-to-2	2
CPU cooler	1
I/O port bracket	1
Startup manual	1
Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070006673	XPE FP2007 AIMB-252 V3.01 ENG
	2070003985	XPE FP2007 AIMB-252 V3.1 ENG
	2070005149	XPE FP2007 AIMB-252 V3.5 JPN_ENG
Software API	205E000021	SUSI 3.0 SW API for AIMB-252 XP

I/O View



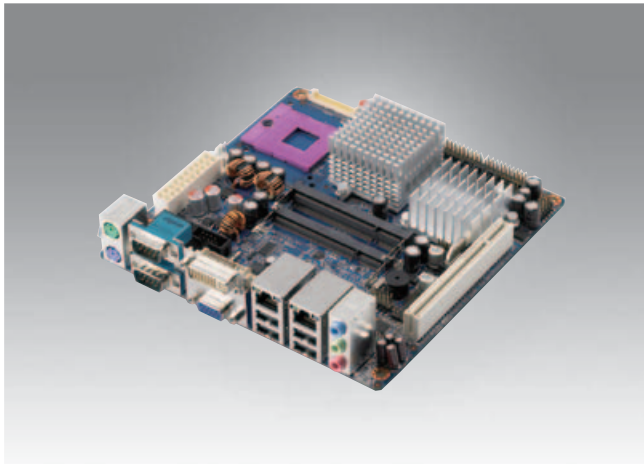
AIMB-252VG-M0A1E
AIMB-252VG-S0A1E



AIMB-252G2-00A1E

AIMB-256

Intel® Core™2 Duo Socket 479 Mini-ITX with VGA/DVI/LVDS, 4 COM and Dual LAN



Features

- Supports Intel® Core™2 Duo/ Celeron® M mobile processor uFC-PGA 478 - GME965 and ICH8M
- Two 200-pin SODIMM sockets support up to 4 GB dual channel DDR2 533/667 MHz SDRAM
- Supports dual display for VGA, LVDS, and DVI
- Supports 4 serial ports, 3 SATA ports, 2 LAN ,CF and TPM1.2 (optional)
- Supports embedded software APIs and utilities

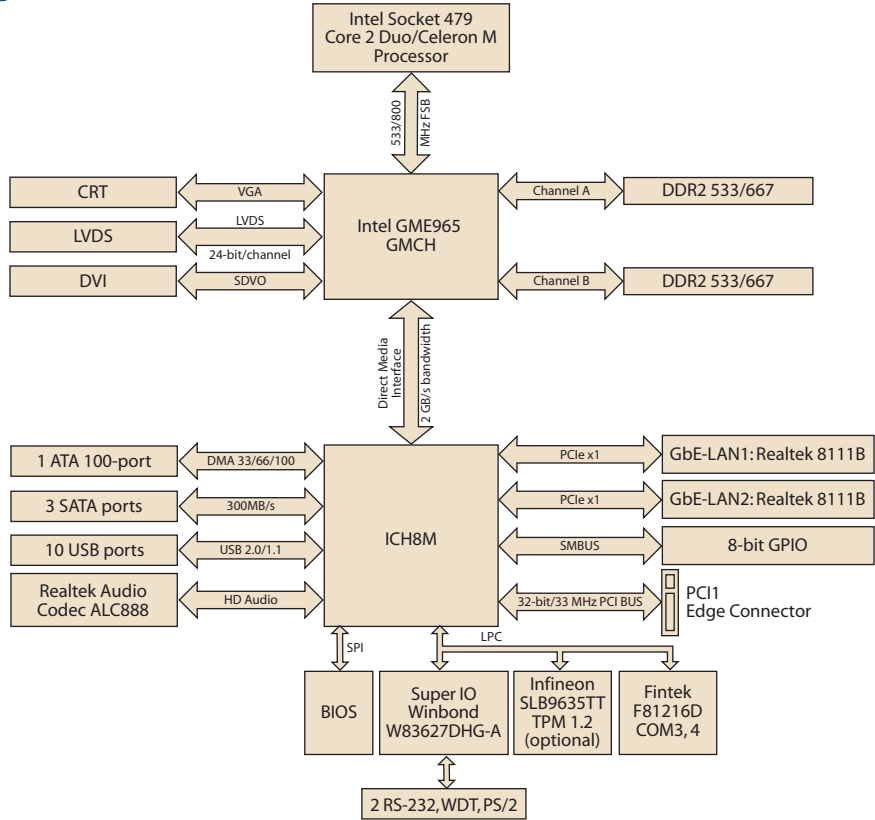
Software APIs:

Utilities:

Specifications

Processor System	CPU (65 nm μFC-PGA 478, Socket P)	Intel Core 2 Duo	Intel Celeron M	Intel ULV Core 2 Duo	
	Max. Speed	T7500 2.2 GHz	550 2.0 GHz	U7500 1.06 GHz on board	
	Front Side Bus	800 MHz	533 MHz	533 MHz	
	L2 Cache	2 x 2 MB	1 MB	1 MB	
	Chipset	Intel GME965 + ICH8M			
	BIOS	AMI 16 Mbit_SPI			
Expansion Slot	PCI	32-bit/33 MHz, 1 slot			
	Mini-PCI	-			
	PCIe	-			
Memory	Technology	Dual channel DDR2 533/667 MHz SDRAM			
	Max. Capacity	4 GB			
	Socket	2 x 200-pin SODIMM			
Graphics	Controller	Intel GME965 GMCH integrated Graphics Media Accelerator X3100			
	VRAM	DVMT 4.0 supports shared system memory up to 384 MB video memory			
	LVDS	Single channel 18/24-bit/Dual channel 36/48-bit LVDS			
	TV-Out	-			
	DVI	Yes, via Chronret CH7307C SDVO transmitter			
	Dual Display	CRT+LVDS, CRT+DVI, LVDS+DVI			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek RTL8111B; GbE LAN2: Realtek RTL8111B			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	300 MB/s			
	Channel	3			
EIDE	Mode	EIDE (Ultra DMA 100)			
	Channel	1			
SSD	CompactFlash	Supports CompactFlash Type I/II			
Rear I/O	VGA	1			
	DVI	1			
	Ethernet	2			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	2 (2 x RS-232, supplies 5 V & 12 V)			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connector	LVDS	1			
	USB	6 (USB 2.0 compliant)			
	Serial	2 (2 x RS-232, supplies 5 V & 12 V)			
	IDE	1			
	SATA	3			
	CompactFlash	1			
	Parallel	-			
	IrDA	-			
	FDD	-			
GPIO	8-bit				
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Power On	Core 2 Duo T7300 2.0 GHz FSB 800 MHz, 2 GB DDR2 SDRAM			
		+5 V	+3.3 V	+12 V	+5 VSB
		2.75 A	1.76 A	4.13 A	1.42 A
Environment	Temperature	Operating		Non-Operating	
		0 ~ 60° C (32 ~ 140° F)		-20 ~ 70° C (-4 ~ 158° F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	CPU	GbE	DVI	SATA
AIMB-256G2-00A1E	-	2	1	3

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm

Packing List

Description	Quantity
AIMB-256 SBC	1
IDE HDD cable (40-pin)	1
SATA HDD data cable	2
SATA HDD power cable	2
Serial cables	2
CPU cooler	1
I/O port bracket	1
Startup manual	1
Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070004369	XPE SP2 FP2007AIMB-256 V3.01 ENG
Software API	205E000021	SUSI 3.0 SW API for AIMB-256 XP

I/O View



AIMB-256G2-00A1E

AIMB-258

Intel® Core™2 Duo Socket 479 Mini-ITX
with VGA/DVI/LVDS, 6 COM and Dual LAN



Features

- Supports Intel® Core™2 Duo mobile processor uFC-PGA 478 dual channel DDR3 800/1066 MHz SDRAM and max. 4 GB dual channel DDR3 800/1066 MHz SDRAM
- Intel GM45 and ICH9M supports FSB 667/800/1066 MHz
- Supports dual display for VGA, LVDS, and DVI
- PCIe x16 expansion for add-on cards
- Supports embedded software APIs and utilities

Software APIs:

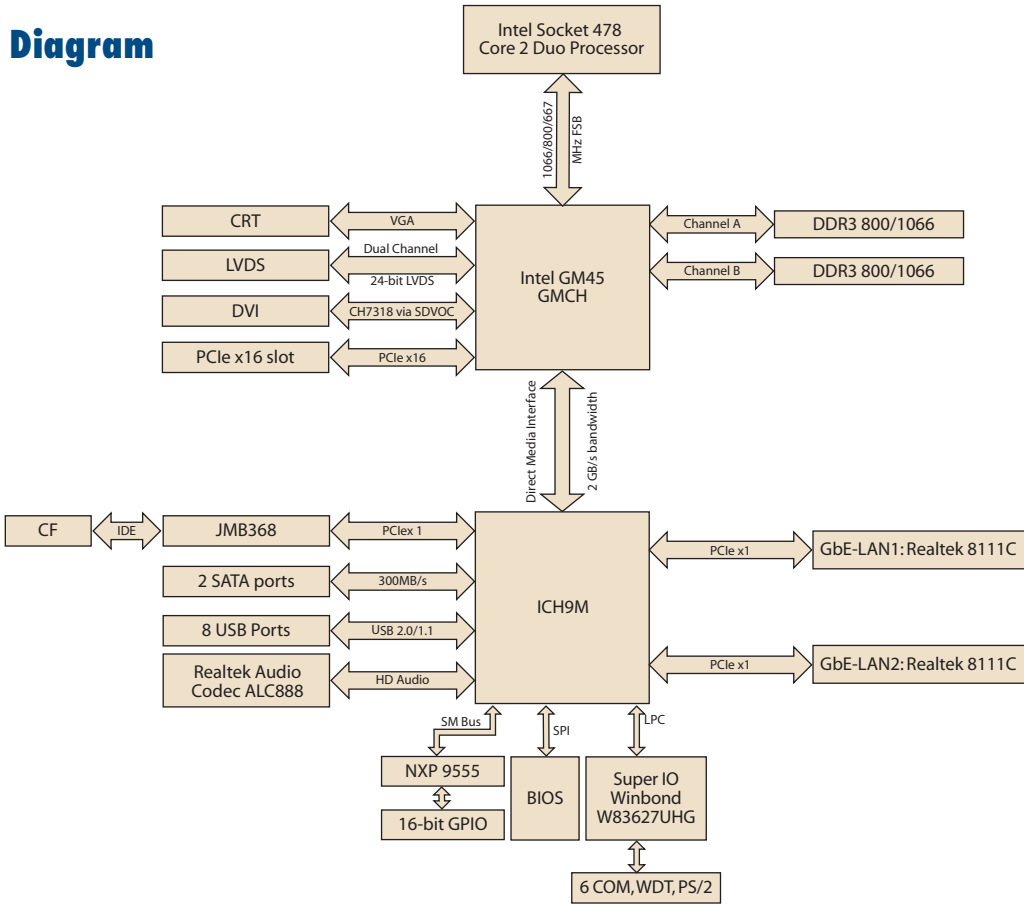
Utilities:

Specifications

Processor System	CPU (45 nm uFC-PGA 478)	Intel Core 2 Duo	Intel Celeron M			
	Max. Speed	T9400 2.53 GHz	575 2.0 GHz			
	Front Side Bus	667/800/1066 MHz	667			
	L2 Cache	6 MB	1 MB			
	Chipset	GM45 + ICH9M				
	BIOS	Award 16 Mbit, SPI				
Expansion Slot	PCI	-				
	Mini-PCI	-				
	PCIe x16	4 GB/s per direction, 1 slot (if PCIe x16 is used, DVI is automatically disabled)				
Memory	Technology	DDR3 800/1066 MHz SDRAM				
	Max. Capacity	4 GB				
	Socket	2 x 204-pin SODIMM				
Graphics	Controller	Intel GM45 GMCH integrated Graphics Media Accelerator X4500				
	VRAM	Shared system memory up to 384 MB video memory				
	LVDS	Single channel 18/24-bit/Dual channel 36/48-bit LVDS				
	TV-Out	-				
	DVI	Yes (if DVI is used, PCIe x16 is automatically disabled)				
	Dual Display	CRT + DVI; CRT + LVDS; DVI + LVDS				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Realtek RTL8111C; GbE LAN2: Realtek RTL8111C				
	Connector	RJ-45 x 2				
SATA	Max Data Transfer Rate	300 MB/s				
	Channel	2				
SSD	CompactFlash	Supports CompactFlash Type I/II				
Rear I/O	VGA	1				
	DVI	1				
	Ethernet	2				
	USB	4 (USB 2.0 compliant)				
	Audio	3 (Mic-in, Line-in, Line-out)				
	Serial	2 (1 of RS-232, 1 of RS-232/422/485)				
	PS/2	2 (1 x keyboard and 1 x mouse)				
Internal Connector	LVDS	1				
	USB	4 (USB 2.0 compliant)				
	Serial	4 (RS-232)				
	IDE	-				
	SATA	2				
	CompactFlash	1				
	Parallel	-				
	IrDA	-				
	FDD	-				
	GPIO	16-bit				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirements	Power On	5 V	3.3 V	12 V	5 Vsb	-12 V
		0.99 A	2.67 A	2.07 A	0.17 A	0.08 A
Environment	Temperature	Operating	Non-Operating			
		0 ~ 60° C (32 ~ 140° F)	-20 ~ 70° C (-4 ~ 158° F)			
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")				

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Board Diagram



Ordering Information

Part Number	Display	GbE	SATA	Serial	CF
AIMB-258G2-00A1E	VGA/DVI/ LVDS	Dual	2	6	1

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm

Packing List

Part number	Description	Quantity
1700003194	SATA HDD cable	2
1700017461	SATA power cable	2
1750000348	CPU cooler	1
1960019193T100	I/O port bracket	1
2006025810	Startup manual	1
2066025800	Driver CD	1
1701400181	Cable kits for 4 serial ports	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009518	Image WES2009 AIMB-258 V4.0 ENG
	2070009657	XPE WES2009 AIMB-258 V4.0 CHT
	2070009658	XPE WES2009 AIMB-258 V4.0 MUI24
Software API	205E000021	SUSI 3.0 SW API for AIMB-258 XP

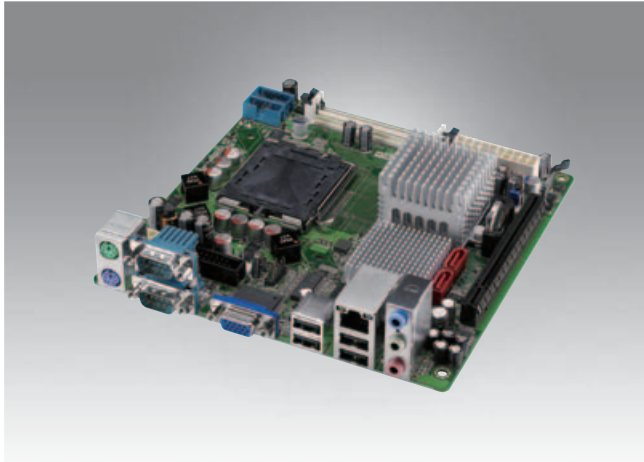
I/O View



AIMB-258G2-00A1E

AIMB-262

Intel® LGA775 Core™2 Duo LGA775
Mini-ITX with VGA, 4 COM, and LAN



Features

- Supports Intel® LGA775 Core 2™ Duo/Pentium® Dual-Core/Pentium® 4/Celeron® processors with FSB 533/800/1066 MHz
- Intel 945GC and ICH7
- Two SODIMM sockets support up to 2 GB DDR2 533/667 MHz SDRAM
- Supports onboard VGA and PCIe x16 expansion for additional graphics card
- Supports embedded software APIs and utilities

Software APIs:  
H/W Monitor Watchdog

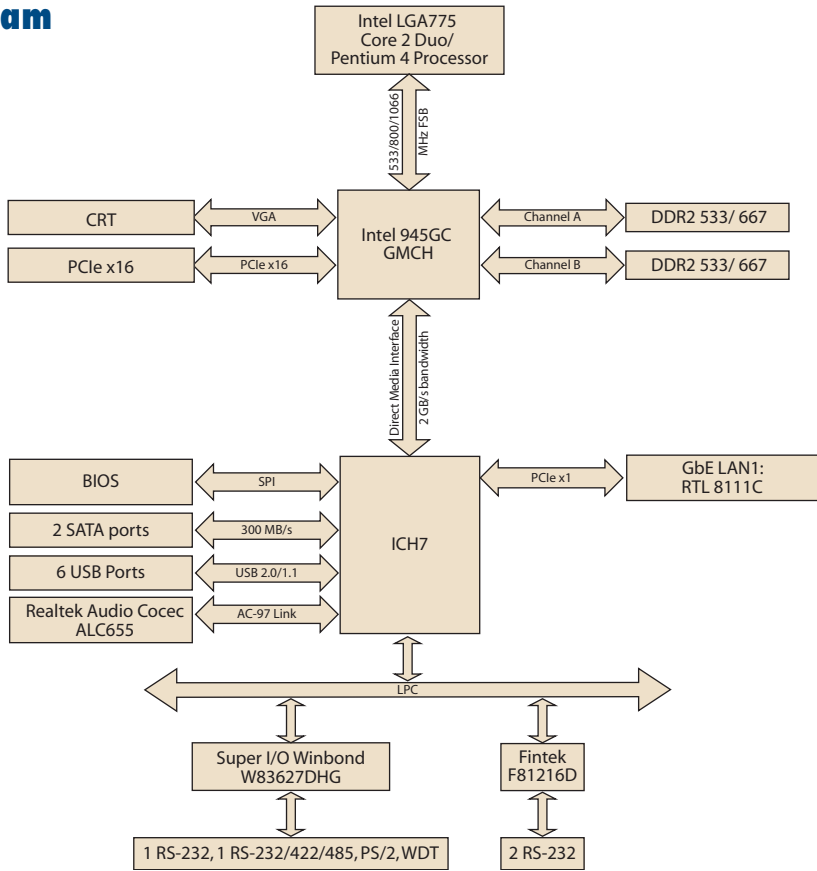
Utilities:  
BIOS flash Monitoring

Specifications

Processor System	CPU	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Pentium 4	Intel Celeron
	Max. Speed	E7400/E6700, 2.8/2.66 GHZ	E2200 2.2GHz	651 3.4 GHz	440 2.0 GHz
	Front Side Bus	1066 MHz	1066/800 MHz	800 MHz	800 MHz
	L2 Cache	3 MB/2 MB	1 MB	2 MB	512 K
	Chipset	Intel 945GC + ICH7			
BIOS	Award 16 Mbit, SPI				
Expansion Slot	PCI	-			
	Mini-PCI	-			
	PCIe x16	4 GB/s per direction, 1 slot			
Memory	Technology	Dual channel DDR2 533/ 667 MHz SDRAM			
	Max. Capacity	2 GB			
	Socket	2 x 200-pin SODIMM			
Graphics	Controller	Intel Integrated Graphics Media Accelerator 950			
	VRAM	Shared system memory up to 224 MB			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek RTL8111C			
	Connector	RJ-45 x 1			
SATA	Max Data Transfer Rate	300 MB/s			
	Channel	2			
Rear I/O	VGA	1			
	Ethernet	1			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	2 (1 x RS-232, 1 x RS-232/422/485)			
	Parallel	-			
Internal Connector	PS/2	2 (1 x keyboard and 1 x mouse)			
	USB	2 (USB 2.0 compliant)			
	Serial	2 (RS-232)			
	IDE	-			
	SATA	2			
	CompactFlash	-			
	Parallel	1			
	IrDA	-			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Power On	5 V	3.3 V	12 V	5 Vsb
		4 A	1.02 A	2.35 A	0.26 A
Environment		Operating		Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		-20 ~ 70° C (-4 ~ 158° F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/EBX/5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Board Diagram



Ordering Information

Part Number	VGA	GbE LAN	COM
AIMB-262VG-00A1E	Yes	1	4

Packing List

Description	Quantity
SATA HDD cable	2
SATA Power cable	2
Serial cable	2
I/O port bracket	1
Startup manual	1
Driver CD	1

Optional Accessories

Part Number	Description
1700008809	Parallel port cable with bracket
1700002204	Dual port USB cable (27 cm) with bracket
1960022033T000	LGA775 CPU cooler for 2U and wallmount chassis
AIMB-LVDS-00A1E	ADD2 LVDS expansion card
AIMB-VGA-00A1E	ADD2 VGA expansion card

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070005409	XPE FP2007 AIMB-262 V3.01 ENG
	2070005410	XPE FP2007 AIMB-262 V3.01 CHT

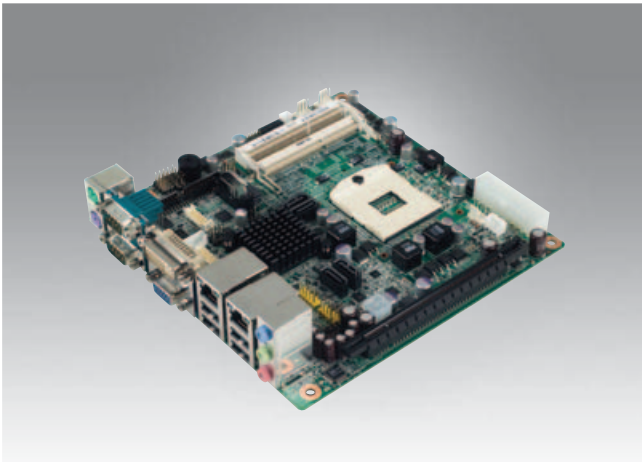
I/O View



AIMB-262VG-00A1E

AIMB-270

Intel® Core™ i7/i5/Celeron uFC-PGA989 Mini-ITX with VGA/2DVI/LVDS, 6 COM, Dual LAN, PCIe x16



Features

- Supports Intel® Core™ i7 and i5 mobile processor (PGA) with Intel QM57 chipset
- Supports dual display of 2 DVI, LVDS, and VGA
- Supports PCIe x16 (Gen 2) and mini PCIe
- Supports, AMT6.0 and software RAID 0, 1, 5, 10
- Supports embedded software APIs and Utilities

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO, Brightness

Utilities: BIOS flash, eSOS, Monitoring, Embedded Security ID, Flash Lock

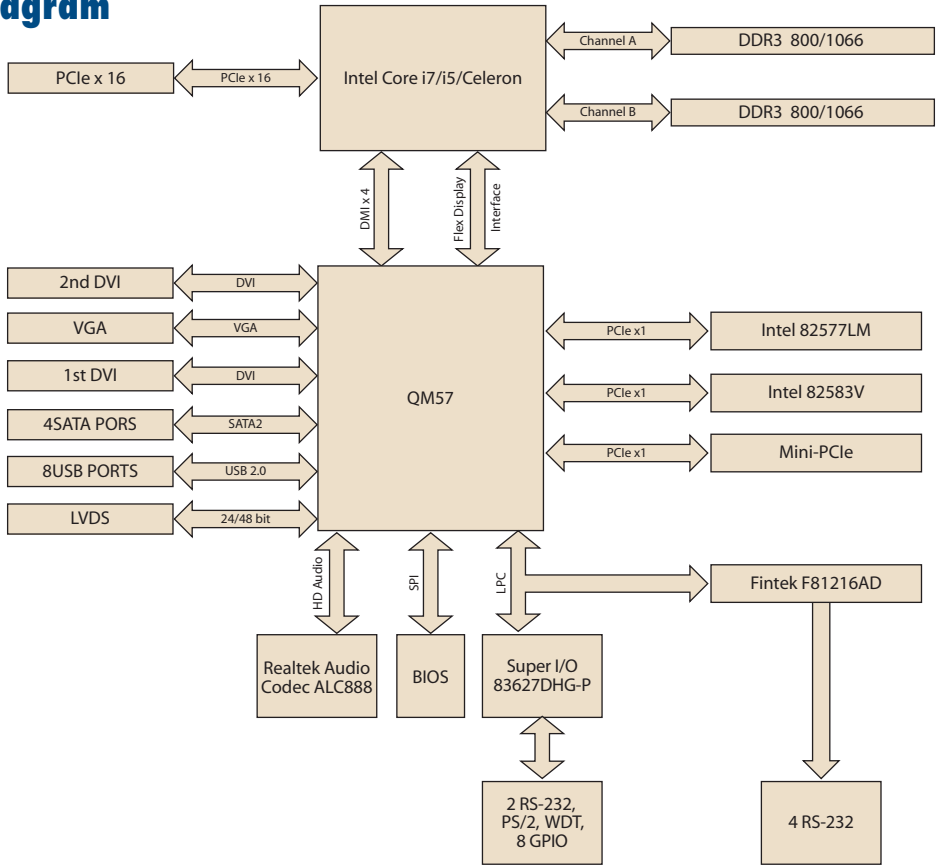
Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	Intel Core i7	Core i5	Intel Celeron		
	Max. Speed	2.66 GHz	2.4 GHz	1.86 GHz		
	DMI/FDI	DMI/FDI				
	L2 Cache	4 MB	3 MB	2 MB		
	Chipset	Intel 5 series Chipset (QM57)				
	BIOS	AMI EFI 64 Mbit SPI				
Expansion Slot	PCI	-				
	Mini-PCIe	1				
	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot				
Memory	Technology	DDR3 800/1066 MHz SDRAM				
	Max. Capacity	8 GB				
	Socket	2x 204 PIN DDR3 Socket				
Graphics	Controller	Integrated Gfx Gen5.75, supports DirectX 10 and OpenGL 2.1				
	VRAM	1GB maximum shared memory with 2GB and above system memory installed				
	VGA	Yes, supports max. resolution 2048 x 1536				
	LVDS	Single channel 18/24-bit/Dual channel 36/48-bit LVDS, supports max resolution 1920 x 1200				
	1st DVI	Yes, supports max. resolution 1920 x 1200				
	2nd DVI	Yes, with internal pin header, supports max. resolution 1920 x 1200				
Dual Display	CRT+LVDS, CRT+DVI, LVDS+DVI					
Ethernet	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Intel 82577LM, LAN2: Intel 82583V				
	Connector	RJ-45 x 2				
SATA	Max Data Transfer Rate	300 MB/s				
	Channel	4				
Rear I/O	VGA	1				
	DVI	1				
	Ethernet	2				
	USB	4 (USB 2.0 compliant)				
	Audio	3 (Mic-in, Line-out, Line-in)				
	Serial	2 (RS-232)				
	PS/2	2 (1 x keyboard and 1 x mouse)				
Internal Connector	USB	4 (USB 2.0 compliant)				
	LVDS/inverter	1				
	2nd DVI	1				
	Serial	4 (RS-232)				
	IDE	-				
	SATA	4				
	Mini-PCIe	1				
	Parallel	-				
	IrDA	-				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirements	Power On	5 V	3.3 V	12 V	5 Vsb	-12 V
		3.42 A	1.1 A	1.19 A	0.5 A	0.07A
Environment		Operating		Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		-20 ~ 70° C (-4 ~ 158° F)		
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")				

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Board Diagram



Ordering Information

Part Number	VGA	2 DVI	GbE LAN	COM
AIMB-270G2-00A1E	Yes	Yes	2	6

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1700008822	DVI cable

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960051292N001	CPU cooler	1
1701400181	Cable kit for 4 serial ports	1
1960019193T100	I/O port bracket	1
20060270010	Startup manual	1
20660270000	Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009655	XPE WES2009 QM57 AIMB-270 V4.0 ENG
	2070009656	XPE WES2009 QM57 AIMB-270 V4.0 MUI24
Software API	205E270001	SUSI 3.0 SW API for AIMB-270 XP

I/O View



AIMB-270G2-00A1E

AIMB-272

Intel® Core™ i7/i5/i3/Celeron uFC-PGA988
Mini-ITX with VGA/DVI/HDMI/LVDS, 6 COM,
Dual LAN, PCIe x16

NEW



Features

- Supports Intel® Core™ i7/i5/i3 mobile processor (PGA) with Intel QM67/HM65 chipset
- Supports dual display of DVI, HDMI, LVDS, VGA
- Supports PCIe x16 (Gen 2) and mini PCIe
- Supports Intel vPro, AMT 7.0, PECL 3.0, Software RAID 0,1,5,10, TPM 1.2 (optional)
- Supports embedded software APIs and Utilities



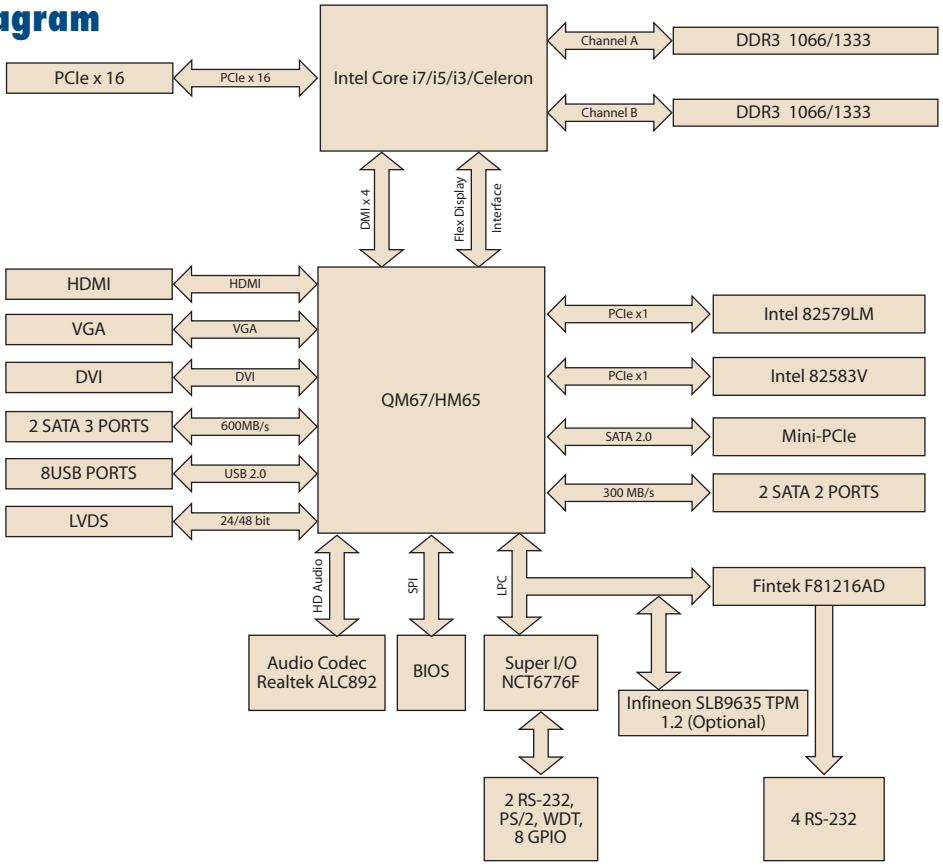
Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	Intel Core i7-2710QE	Core i5-2510E	Core i3-2330E	Celeron B810
	Core Number	4	2	2	2
	Max Speed	2.1 GHz	2.5 GHz	2.2 GHz	1.6 GHz
	L3 Cache	6 MB	3 MB	3 MB	2 MB
	Chipset	QM67/HM65			
	BIOS	AMI EFI 64 Mbit SPI			
Expansion Slot	PCI	-			
	Mini-PCIe	1			
	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot			
Memory	Technology	Dual Channel DDR3 1066/1333 MHz SDRAM			
	Max. Capacity	8 GB			
	Socket	2x 204 PIN DDR3 SODIMM			
Graphics	Controller	Integrated Gfx Gen5.75, supports DirectX 10 and OpenGL 2.1			
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory			
	VGA	Yes, supports max. resolution 2048 x 1536			
	LVDS	Single channel 24-bit/dual channel 48-bit LVDS			
	HDMI	Supports HDMI 1.4, 1650 Mbps/channel with 165 MHz			
	DVI	Yes, supports max resolution 1920 x 1200			
Dual Display	CRT+LVDS, CRT+DVI, DVI+HDMI, LVDS+HDMI, CRT+HDMI, DVI+LVDS				
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Intel 82579LM, LAN2: Intel 82583V			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ 300 MB/s (SATA 2.0)			
	Channel	2/2			
Rear I/O	VGA	1			
	HDMI	1			
	Ethernet	2			
	USB	4 (USB 2.0 compliant)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	2 (RS-232)			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connector	USB	4 (USB 2.0 compliant)			
	LVDS/inverter	1			
	DVI	1			
	Serial	4 (RS-232)			
	IDE	-			
	SATA	2 (SATA 3.0), 2 (SATA 2.0)			
	Mini-PCIe	1			
	Cfast	1			
	Parallel	-			
	IrDA	-			
Watchdog Timer	GPIO	8-bit			
	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Power On	5 V	3.3 V	12 V	5 Vsb
		3.42 A	1.1 A	1.19 A	0.5 A
Environment	Operating	-			Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution			-20 ~ 70° C (-4 ~ 158° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Board Diagram



Ordering Information

Part Number	Chipset	VGA	DVI	LVDS	HDMI	GbE LAN	COM
AIMB-272G2-00A1E	QM67	Yes	Yes	Yes	Yes	2	6
AIMB-272VG-00A1E	HM65	Yes	Yes	No	Yes	1	6

Optional Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1700008822	DVI cable

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960051292N001	CPU cooler	2
1701400181	Cable kit for 4 serial ports	1
1960019192T100	I/O port bracket	1
20060272010	Startup manual	1
20660272000	Driver CD	1

Embedded OS/API

OS/API	Description
Win XPE	XPE WES 2009
Software API	SUSI V3.0

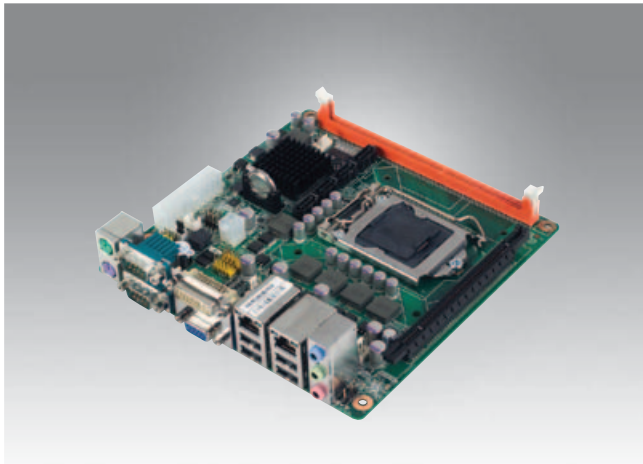
I/O View



AIMB-272G2-00A1E
AIMB-272VG-00A1E

AIMB-280

Intel® Core™ i7/i5/i3/Pentium® LGA1156 Mini-ITX with VGA/DVI, 2 COM, Dual LAN, PCIe x16



Features

- Supports Intel® Core™ i7/i5/i3/Pentium® processor with Q57 chipset
- One DIMM socket supports up to 4 GB DDR3 800/1066/1333 MHz SDRAM
- Supports dual display, VGA and DVI, and dual GbE LAN
- Supports 2 COM, 8 USB, and 4 SATA ports
- Supports embedded software APIs and Utilities

Software APIs:

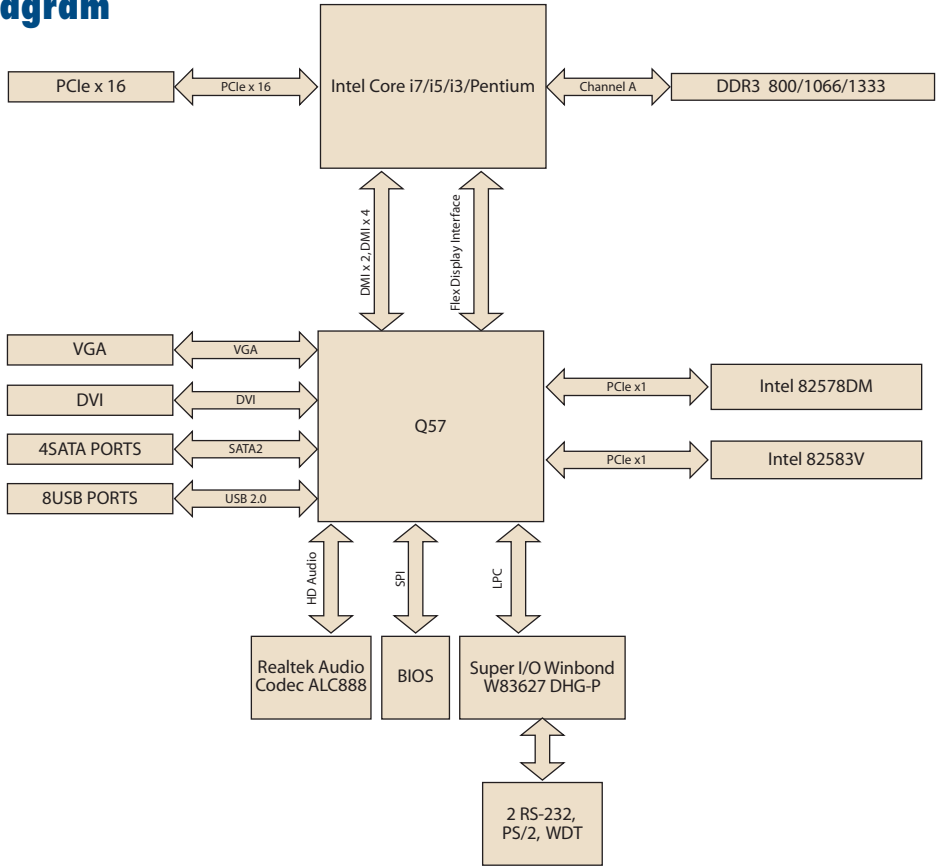
Utilities:

Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	Core i7	Core i5 700	Core i5 600	Core i3	Pentium
	Max. Speed	4	4	2	2	2
	Max. speed	2.93 GHz	2.66 GHz	3.3 GHz	3.06 GHz	2.8 GHz
	Integrated Graphics	No	No	Yes	Yes	Yes
	L3 Cache	8 MB	8 MB	4 MB	4 MB	3 MB
	Chipset	Q57				
Expansion Slot	BIOS	AMI 64 Mbit SPI				
	PCI	-				
	Mini-PCI	-				
Memory	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot				
	Technology	DDR3 800/1066/1333 MHz SDRAM				
	Max. Capacity	4 GB				
Graphics	Socket	1 x 240-pin DIMM				
	Controller	Intel HD Graphics				
Ethernet	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed				
	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Intel 82578DM, LAN2: Intel 82583V				
SATA	Connector	RJ-45 x 2				
	Max Data Transfer Rate	300 MB/s				
Rear I/O	Channel	4				
	VGA	1				
	DVI	1				
	Ethernet	2				
	USB	4 (USB 2.0 compliant)				
	Audio	3 (Mic-in, Line-out, Line-in)				
	Serial	2 (RS-232)				
	PS/2	2 (1 x keyboard and 1 x mouse)				
Internal Connector	USB	4 (USB 2.0 compliant)				
	Serial	-				
	IDE	-				
	SATA	4				
	CompactFlash	-				
	Parallel	-				
	IrDA	-				
Watchdog Timer	GPIO	-				
	Output	System reset				
Power Requirements	Interval	Programmable 1 ~ 255 sec/min				
	Power On	5 V	3.3 V	12 V	5 Vsb	-12 V
		1.85 A	0.73 A	3.14 A	0.31 A	0.11 A
Environment	Operating				Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution			-20 ~ 70° C (-4 ~ 158° F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")				

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	Chipset	VGA	DVI	SW RAID	USB	COM	GbE LAN
AIMB-280QG2-00A1E	Q57	Yes	Yes	Yes	8	2	2

Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047670N001	LGA1156 CPU cooler for 2U and wallmount chassis

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA Power cable	2
1960019193T100	I/O port bracket	1
2002028010	Startup manual	1
2062028000	Driver CD	1

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009652	XPE WES2009 Q57 AIMB-280/580/780 V4.0 ENG
	2070009653	XPE WES2009 Q57 AIMB-280/580/780 V4.0 MUJ24
Software API	205E280000	SUSI 3.0 SW API for AIMB-280 XP

I/O View



AIMB-280G2-00A1E

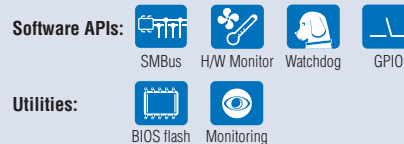
AIMB-562 KIOSK

Intel® Core™2 Duo LGA 775
MicroATX with Dual VGA/
LVDS, 10 COM, Single LAN



Features

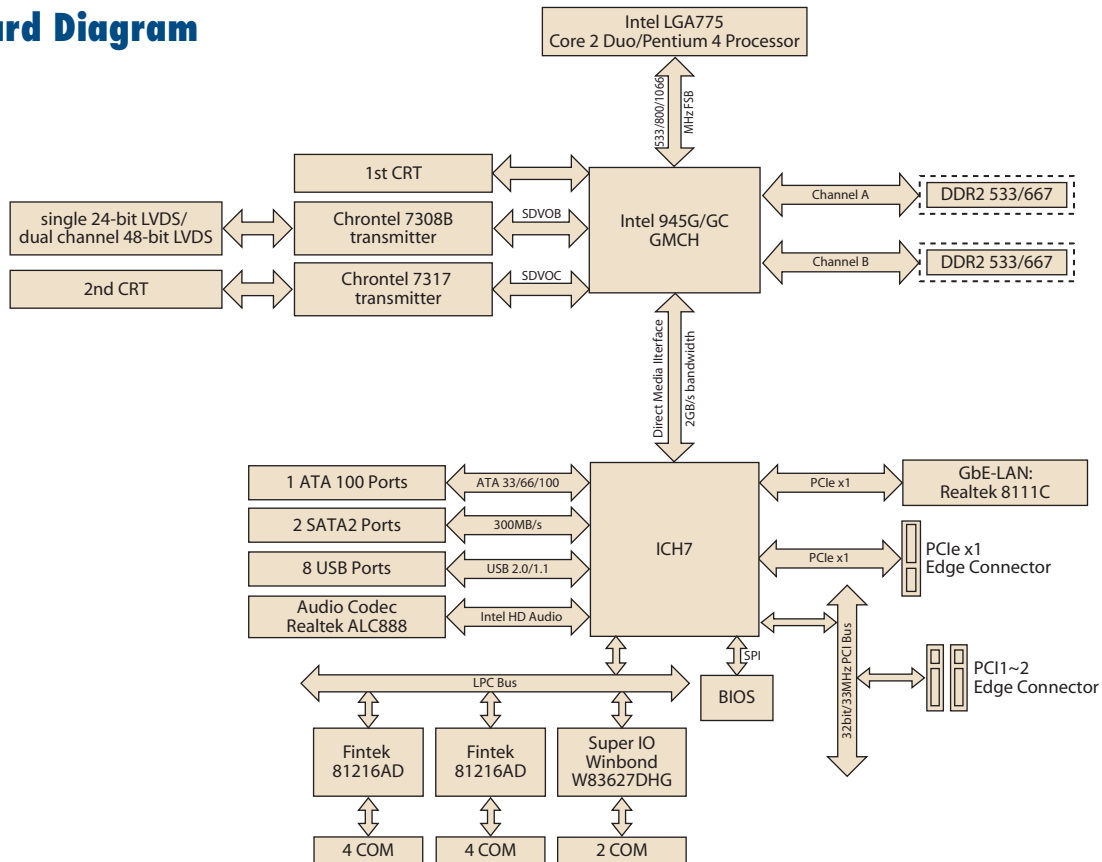
- Intel® 945G/945GC chipset supports 533/800/1066 MHz FSB
- Dual channel DDR2 533/667 MHz SDRAM up to 4 GB
- Supports dual VGA and 24-bit LVDS panel, dual channel 3 W amplifier
- Supports 10 serial ports, 8 USB, 16-bit GPIO
- Supports embedded software APIs and utilities



Specifications

Processor System	CPU (65 nm/90 nm)	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Pentium 4	Intel Celeron	
	Max. Speed	E7400 2.8 GHz	E2200 2.2 GHz	651 3.4 GHz	440 2.0 GHz	
	L2 Cache	4 MB	1 MB	2 MB	512 KB	
	Chipset	Intel 945G/945GC + ICH7				
	BIOS	Award 16 Mbit, SPI				
	Front Side Bus	533/800/1066 MHz				
Expansion Slot	PCIe x16	-				
	PCIe x1	250 MB per direction, 1 slot				
	PCI	32-bit/33 MHz, 2 slots				
Memory	Technology	Dual channel DDR2 533/667 MHz SDRAM				
	Max. Capacity	4 GB				
	Socket	2 x 240-pin DIMM				
Graphics	Embedded	Intel GMA 950 sharing 224 MB system memory				
	LVDS	Supports single channel 24-bit/dual channel 48-bit LVDS, via Chronitel 7308B SDVO transmitter				
	2nd VGA	Supports 2nd CRT, via Chronitel 7317 SDVO transmitter				
	Dual Display	CRT + LVDS, CRT + CRT				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	GbE LAN: Realtek 8111C				
	Connector	RJ-45 x 1				
SATA II	Max. Data Transfer Rate	300 MB/s				
	Channel	2				
EIDE	Mode	ATA 100/66/33				
	Channel	1 (max. 2 devices)				
I/O Interface	VGA	2				
	USB	8				
	Audio	2 (Line-out, Mic-in)				
	Serial	10 (8 of RS-232; 2 of RS-232/422/485 supports auto flow control)				
	Parallel	1 (SPP/EPP/ECP)				
	FDD	-				
	PS/2	2 (1 x keyboard and 1 x mouse)				
	GPIO	16-bit GPIO				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirements	Power On	Intel Core 2 Duo E4300 1.8 GHz FSB 800 MHz, 1 GB DDR2 667 SDRAM				
		3.3 V	5 V	12 V	5 Vsb	-12 V
		1.02 A	4 A	2.35 A	0.26 A	0.12 A
Environment		Operating		Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		-20 ~ 70° C (-4 ~ 158° F)		
Physical Characteristics	Dimensions (W x D)	244 x 244 mm (9.6" x 9.6")				

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	Chipset	Display	COM	GbE LAN
AIMB-562VG-KSA1E	945G	2 CRT/LVDS	10	1
AIMB-562VG-GRA1E	945G	2 CRT	10	1
AIMB-562L-KSA1E	945GC	1 CRT	10	1

*We strongly suggest using only Advantech's certified LGA775 CPU coolers to ensure board reliability under harsh conditions.

Riser Card

Part Number	Description
AIMB-R430P-03A2E	2U riser card for 3 PCI expansion

I/O View



AIMB-562VG-KSA1E
AIMB-562VG-GRA1E



AIMB-562L-KSA1E

Packing List

Description	Quantity
IDE HDD cable	1
Serial ATA HDD data cable	2
Serial ATA HDD power cable	2
COM port cable kit	4
I/O port bracket	1
Startup manual	1
Utility CD	1

Optional Accessories

Part Number	Description
1750000334	LGA775 CPU cooler (115 W)
1960022033T000	LGA775 CPU cooler for 2U chassis (2 VGA)
1960046434T000	LGA775 CPU cooler for 2U chassis (1 VGA)
1700008461	USB cable with four ports, 30.5 cm
1700002204	USB cable with dual ports, 27 cm
1700003195	USB cable with dual ports, 17.5 cm
1700008809	Printer port cable

AIMB-564

Intel® Core™2 Quad/Core™2 Duo LGA775
MicroATX with VGA, PCIe, SW RAID, and LAN



Features

- Intel® Q965 chipset 533/800/1066 MHz FSB
- Supports Intel® Core™ 2 Quad/Core™ 2 Duo processor
- Dual channel DDR2 533/667/800 MHz SDRAM up to 8 GB
- Chipset integrated VGA sharing 256 MB system memory
- PCIe x16 slot expansion
- Supports SATA RAID 0, 1, 5, and 10
- Supports single 10/100/1000 Mbps Ethernet via dedicated PCIe x1 bus

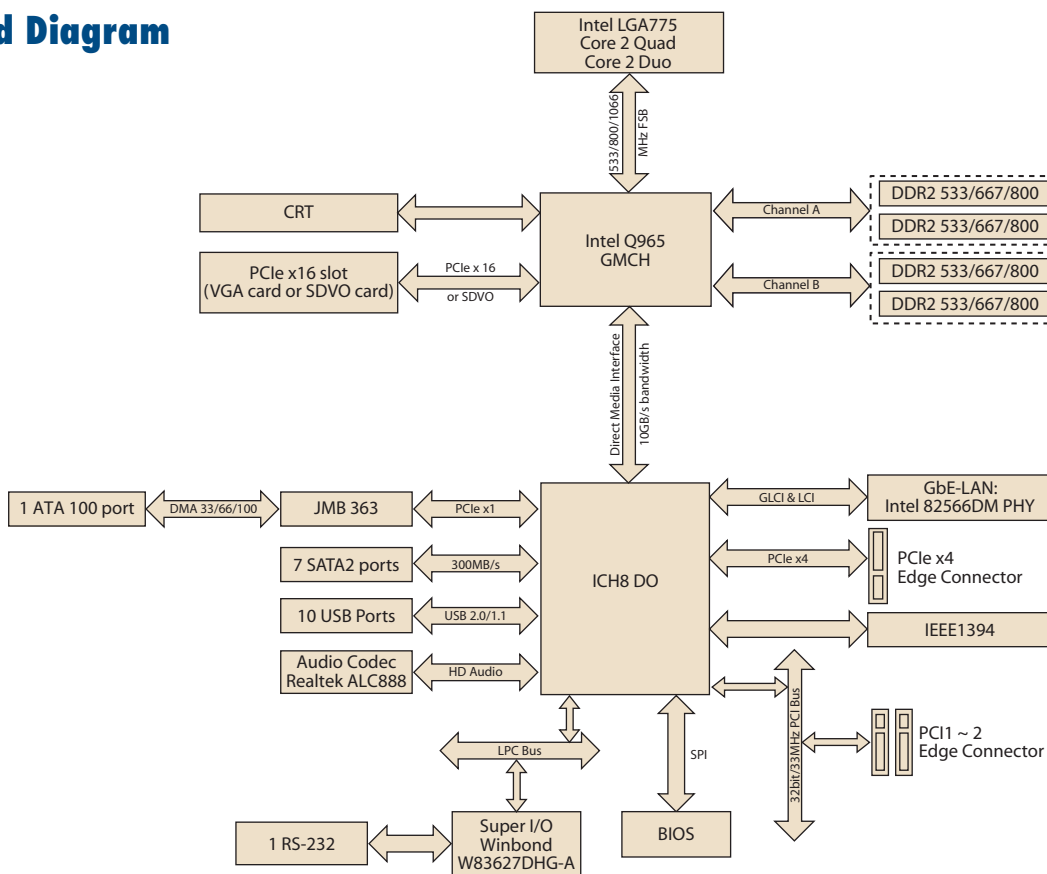
Software APIs:  

Utilities:  

Specifications

	CPU (65nm/ 90nm)	Intel Core 2 Quad	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Pentium 4	Intel Celeron D	
Processor System	Max. Speed	Q6700 2.66 GHz	E7400 2.8 GHz	E2200 2.2 GHz	672 3.8 GHz	352 3.2 GHz	
	L2 Cache	8 MB	3 MB	1 MB	2 MB/1 MB	512 KB	
	Chipset	Intel Q965+ICH8 DO					
	BIOS	AMI 16 Mbit, SPI					
	Front Side Bus	533/800/1066 MHz					
Expansion Slot	PCIe x16	4.0 GB/s per direction, 1 slot					
	PCIe x4	1.0 GB/s per direction, 1 slot					
	PCI	32-bit/33 MHz, 2 slots					
Memory	Technology	Dual channel DDR2 533/667/800 MHz SDRAM					
	Max. Capacity	8 GB					
	Socket	4 x 240-pin DIMM					
Graphics	Embedded	Intel GMA 3000 sharing 256 MB system memory					
	Add-on	PCIe x 16 slot					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	GbE LAN: Intel 82566DM					
	Connector	RJ-45 x 1					
SATA II	Max. Data Transfer Rate	300 MB/s					
	Channel	7					
EIDE	Mode	ATA 100/66/33					
	Channel	1 (max. 2 devices)					
I/O Interface	VGA	1					
	USB	10					
	Audio	8-CH HD Audio (Mic-in, Line-in, Line-out, CD-in, 6 jacks)					
	Serial	1 (RS-232)					
	Parallel	1 (SPP/EPP/ECP)					
	FDD	1					
	PS/2	2 (1 x keyboard and 1 x mouse)					
	eSATA	1					
	IEEE 1394	2 (1 on rear panel, 1 on internal connector)					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1~255 sec/min					
Power Requirements	Power On	Pentium 4 3.4 GHz, 1 GB SDRAM, 80 GB HDD					
		+12 V	+5 V	+3.3 V	5 Vsb		
		3.07A	10.37A	2.83A	0.46A		
Environment	Temperature	Operating			Non-Operating		
		0 ~ 60° C (32 ~ 131° F), depends on CPU speed and cooler solution			-20 ~ 70° C (-4 ~ 158° F)		
Physical Characteristics	Dimensions (W x D)	244 x 244 mm (9.6" x 9.6")					

Board Diagram



Ordering Information

Part Number	VGA	GbE LAN
AIMB-564VG-00A1E	Yes	Single

*AIMB-564 cannot be installed in ACP-2000MB and 1U chassis.

**We strongly suggest using only Advantech's certified LGA 775 CPU coolers to ensure board reliability under harsh conditions.

Riser Card

Part Number	Description
AIMB-RP3PF-21A1E	2U riser card for 1 PCIe x16 and 2 PCI expansion

I/O View



AIMB-564VG-00A1E

Packing List

Description	Quantity
IDE HDD cable	1
Serial ATA HDD data cable	4
Serial ATA HDD power cable	2
I/O port bracket	1
Startup manual	1
Utility CD	1

Optional Accessories

Part Number	Description
1750000334	LGA775 CPU cooler (115 W)
1960022033T000	LGA775 CPU cooler for 2U chassis
1700006915	Power relay cable to activate ACP-4000 LED indicators
1700006916	Power relay cable to activate IPC-610H LED indicators

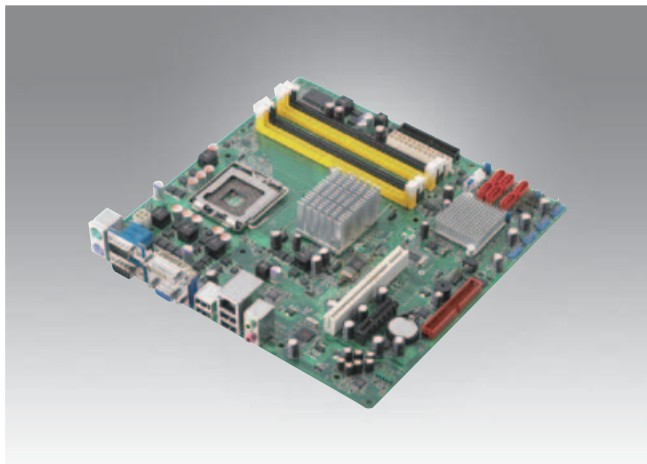
Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070003977	XPE SP2 FP2007 AIMB-564 V3.1 ENG 792.81 MB
	2070006570	XPE FP2007 AIMB-564 V3.01 CHT
Software API	205E564010	SUSI 3.0 SW API for AIMB-564 XP

- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBK/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

AIMB-566

Intel® Core™2 Quad/Core™2 Duo LGA775
MicroATX with VGA/DVI, 2 COM, and LAN



Features

- Intel® Q35 and ICH9 DO supporting 800/1066/1333 MHz FSB
- Supports dual core and quad core processors with 45nm processing
- Dual channel DDR2 667/800 MHz SDRAM up to 8 GB
- Supports dual display, VGA and DVI-D
- Supports embedded software APIs and utilities

Software APIs:



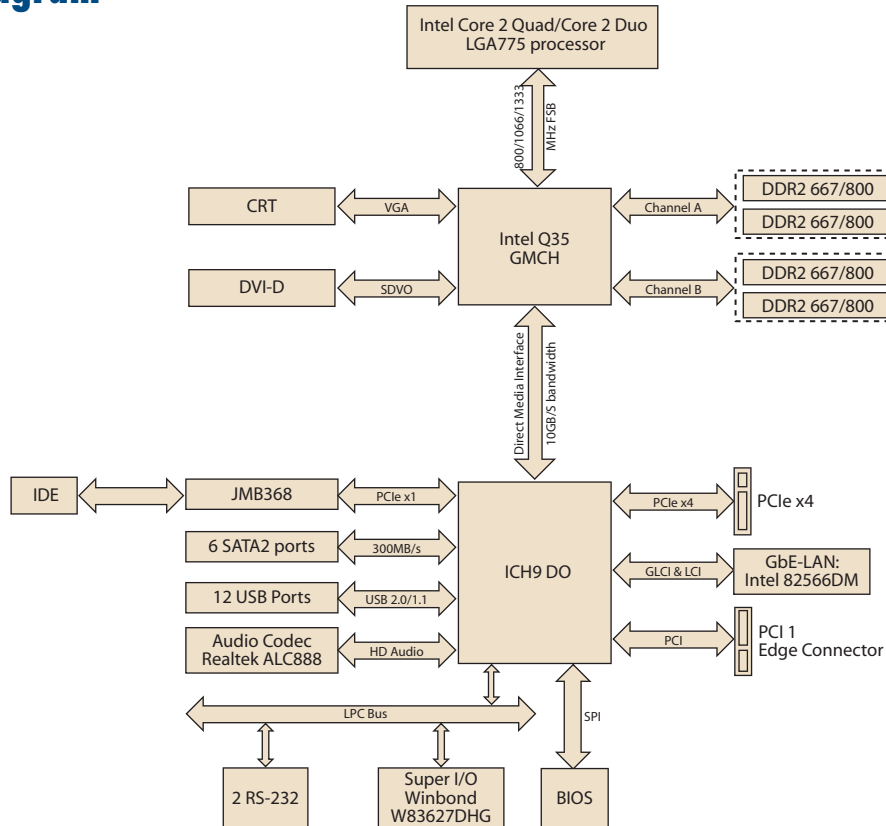
Utilities:



Specifications

Processor System	CPU (45/65/90nm)	Intel Core 2 Quad	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Celeron	
	Max. Speed	Q9400 2.66 GHz	E8500 3.16 GHz	E5300 2.6 GHz	440 2.0 GHz	
	L2 Cache	6 MB	6 MB	2 MB	512 KB	
	Chipset	Intel Q35 + ICH9 DO				
	BIOS	AMI 32 Mbit, SPI				
	Front Side Bus	800/1066/1333 MHz				
Expansion Slot	PCIe x4	1 GB/s per direction, 1 slot				
	PCI	32-bit/33 MHz, 1 slot				
Memory	Technology	Dual channel DDR2 667/800 MHz SDRAM				
	Max. Capacity	8 GB				
	Socket	4 x 240-pin DIMM				
Graphics	Embedded	Chipset integrated VGA controller				
	DVI	Yes, via Chrontel 7307C SDVO transmitter				
	Dual Display	CRT + DVI				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	Intel 82566DM				
	Connector	RJ-45 x 1				
SATA II	Max. Data Transfer Rate	300 MB/s				
	Channel	6				
EIDE	Mode	ATA 100/66/33				
	Channel	1 (max. 2 devices)				
I/O Interface	VGA	1				
	DVI-D	1				
	USB	12				
	Audio	2 (Mic-in, Line-out)				
	Serial	2 (RS-232)				
	FDD	1				
	PS/2	2 (1 x keyboard and 1 x mouse)				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1~ 255 sec/min				
Power Requirements	Power On	Intel Core 2 Quad 9300 2.5 GHz, 8 GB DDR2 800 SDRAM				
		+12 V	+5 V	+3.3 V	5 Vsb	-12 V
		3.36 A	3.15 A	2.01 A	0.88 A	0.08 A
Environment		Operating			Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution			-20 ~ 70° C (-4 ~ 158° F)	
Physical Characteristics	Dimensions (W x D)	244 mm x 244 mm (9.6" x 9.6")				

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

	VGA	DVI	GbE	COM	SATA
AIMB-566VG-00A1E	1	1	1	2	6

*We strongly suggest using only Advantech's certified LGA775 CPU coolers to ensure board reliability under harsh conditions.

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card for 1 PCI expansion
AIMB-RP30P-03A1E	2U riser card for 3 PCI expansion

I/O View



AIMB-566VG-00A1E

Packing List

Description	Quantity
IDE HDD cable	1
Floppy cable	1
Serial ATA HDD data cable	2
Serial ATA HDD power cable	2
I/O port bracket	1
Startup manual	1
Utility CD	1

Optional Accessories

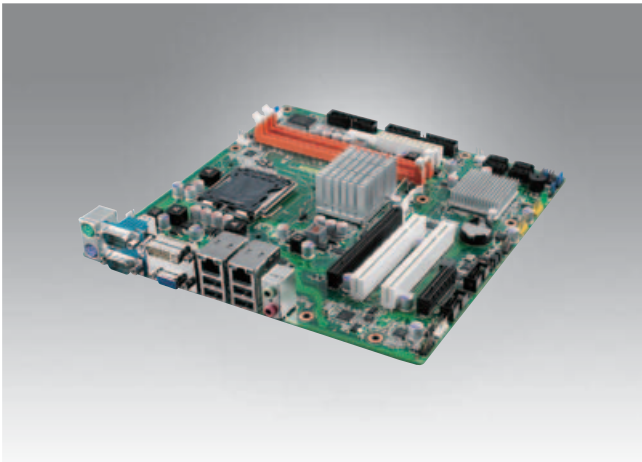
Part Number	Description
1750000334	LGA775 CPU cooler (115 W)
1960022033T000	LGA775 CPU cooler for 2U chassis
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070005289	XPE FP2007 AIMB-566 V3.01 ENG
	2070005290	XPE FP2007 AIMB-566 V3.01 CH
Software API	205E000021	SUSI 3.0 SW API for AIMB-566 XP

AIMB-567

Intel® Core™2 Quad LGA 775 MicroATX
with Dual VGA/DVI, 4 COM, dual LAN



Features

- Intel® G41 chipset supports 800/1066/1333 MHz FSB
- Dual channel DDR3 800/1066/1333 MHz SDRAM up to 4 GB
- Supports dual display, VGA and DVI-D
- Supports dual core and quad core processors with 45nm processing
- Supports SATA RAID 0,1,5,10 for G2 version
- Supports Embedded Software APIs and Utilities

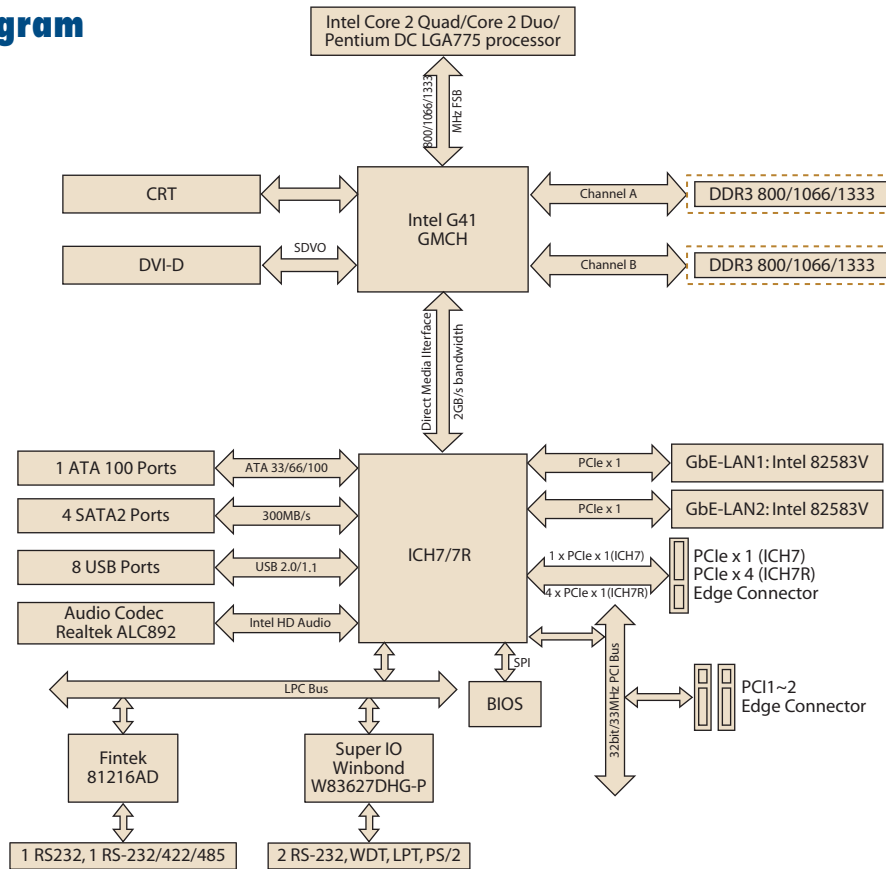
Software APIs:    

Utilities:  

Specifications

Processor System	CPU (45 nm/65 nm)	Intel Core 2 Quad	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Celeron	
	Max. Speed	Q9400 2.66 GHz	E8500 3.16 GHz	E6500 2.6 GHz	E1500 2.2 GHz	
	L2 Cache	6 MB	6 MB	6 MB	512 KB	
	Chipset	Intel G41+ICH7(VG), Intel G41+ICH7R(G2)				
	BIOS	AMI 16 Mbit, SPI				
	Front Side Bus	800/1066/1333 MHz				
Expansion Slot	PCIe x16 (Gen2)	4.0 GB/s per direction, 1 slot				
	PCIe x4	1 GB/s per direction, 1 slot (G2)				
	PCIe x1	250 MB per direction, 1 slot (VG)				
	PCI	32-bit/33 MHz, 2 slots				
Memory	Technology	Dual channel DDR3 800/1066/1333 MHz SDRAM				
	Max. Capacity	4 GB				
	Socket	2 x 240-pin DIMM				
Graphics	Embedded	Intel GMA X4500 shared 352 MB system memory				
	DVI	Yes (If DVI is used, PCIe x16 is automatically disabled), via Chrontel 7318C Transmitter				
	Dual Display	CRT+DVI				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Intel 82583V, GbE LAN2: Intel 82583V				
	Connector	RJ-45 x 2				
SATA II	Max. Data Transfer Rate	300 MB/s				
	Channel	4				
EIDE	Mode	ATA 100/66/33				
	Channel	1 (max. 2 devices)				
Rear I/O	VGA	1				
	DVI	1				
	Ethernet	2				
	USB	4 (USB 2.0)				
	Audio	2 (Mic-in, Line-out)				
	Serial	2 (RS-232)				
	PS/2	2 (1 x keyboard and 1 x mouse)				
Internal Connector	USB	4 (USB 2.0)				
	Serial	2 (1 x RS-232, 1 x RS-232/422/485 to support auto flow control)				
	IDE	1				
	SATA	4				
	FDD	-				
	Parallel	1				
	GPIO	8-bit GPIO				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	Intel Core 2 Quad Q9400 2.66 GHz FSB 1333 MHz, 4 GB DDR3 1066 SDRAM				
		3.3 V	5 V	12 V	5 Vsb	-12 V
		0.19 A	2.98 A	3.48 A	0.18 A	0.18 A
Environment		Operating		Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		-40 ~ 85° C (-40 ~ 185° F)		
Physical Characteristics	Dimensions (W x D)	244 x 244 mm (9.6" x 9.6")				

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/EBX/5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	Chipset	Display	GbE	SW RAID	PCIe x4	PCIe x1
AIMB-567G2-00A1E	G41/ICH7R	VGA/DVI	2	Yes	1	-
AIMB-562VG-00A1E	G41/ICH7	VGA	1	No	-	1

*We strongly suggest using only Advantech's certified LGA775 CPU coolers to ensure board reliability under harsh conditions.

Riser Card

Part Number	Description
AIMB-RP3PF-21A1E	2U riser card with 1 PCIe x16 & 2 PCI slot expansion
AIMB-RP30P-03A1E	2U riser card for 3 PCI expansion
AIMB-RP10P-01A1E	1U riser card for 1 PCI expansion

I/O View



AIMB-567G2-00A1E



AIMB-567VG-00A1E

Packing List

Description	Quantity
IDE HDD cable	1
Serial ATA HDD data cable	2
Serial ATA HDD power cable	2
COM port cable kit	2
I/O port bracket	1
Startup manual	1
Utility CD	1

Accessories

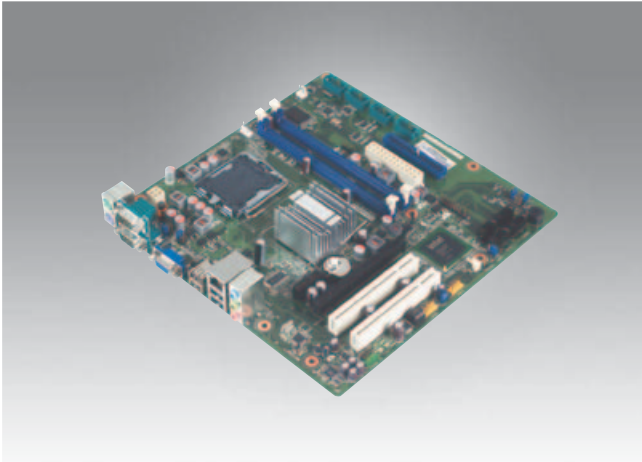
Part Number	Description
1750000334	LGA775 CPU cooler (115 W)
1960022033T000	LGA775 CPU cooler for 2U chassis
1700008461	USB cable with four ports, 30.5 cm
1700002204	USB cable with dual ports, 27 cm
1700003195	USB cable with dual ports, 17.5 cm
1700008809	Printer port cable
1700018699	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070010378	XPE WES 2009 AIMB-567 V4.0 JPN
Software API		SUSI V3.0

AKMB-G41

Intel® Core™2 Quad LGA 775 MicroATX
with VGA, 6 COM, single LAN



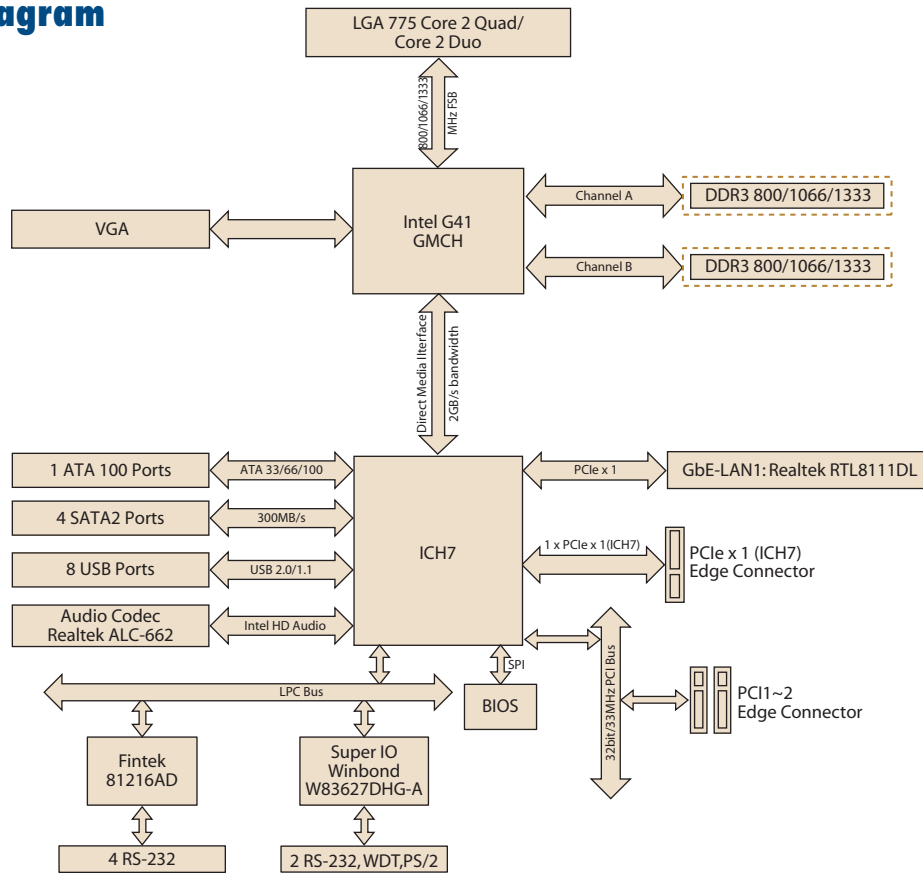
Features

- Intel® G41 chipset supports 800/1066/1333 MHz FSB
- Dual channel DDR3 800/1066/1333 SDRAM up to 4 GB
- Supports single display VGA
- Supports dual core and quad core processors with 45 nm processing

Specifications

Processor System	CPU (45 nm/65 nm)	Intel Core 2 Quad	Intel Core 2 Duo	Intel Pentium Dual-Core	Intel Celeron	
	Max. Speed	Q9400 2.66 GHz	E8500 3.16 GHz	E6500 2.6 GHz	E1500 2.2 GHz	
	L2 Cache	6 MB	6 MB	6 MB	512 KB	
	Chipset	Intel G41+ICH7				
	BIOS	AMI 8 Mbit, SPI				
	Front Side Bus	800/1066/1333 MHz				
Expansion Slot	PCIe x16 (Gen2)	4.0 GB/s per direction, 1 slot				
	PCIe x1	250 MB per direction, 1 slot				
	PCI	32-bit/33 MHz, 2 slots				
Memory	Technology	Dual channel DDR3 800/1066/1333 MHz SDRAM				
	Max. Capacity	4 GB				
	Socket	2 x 240-pin DIMM				
Graphics	Embedded	Intel GMA X4500 shared 352 MB system memory				
	DVI	-				
	Dual Display	CRT only				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Realtek RTL8111DL				
	Connector	RJ-45 x 1				
SATA II	Max. Data Transfer Rate	300 MB/s				
	Channel	4				
EIDE	Mode	ATA 100/66/33				
	Channel	1 (max. 2 devices)				
I/O Interface	VGA	1				
	USB	8				
	Audio	3 (Line-in, Line-out, Mic-in)				
	Serial	6 (2 RS-232 with 5V/12V, 4 RS-232)				
	Parallel	-				
	FDD	-				
	PS/2	2 (1 x keyboard and 1 x mouse)				
	GPIO	-				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	Intel Core 2 Quad Q9400 2.66 GHz FSB 1333 MHz, 4 GB DDR3 1066 SDRAM				
		3.3 V	5 V	12 V	5 Vsb	-12 V
		0.19 A	2.98 A	3.48 A	0.18 A	0.18 A
Environment		Operating		Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		-40 ~ 85° C (-40 ~ 185° F)		
Physical Characteristics	Dimensions (W x D)	244 x 244 mm (9.6" x 9.6")				

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	MOQ	Chipset	GbE	COM
AKMB-G41MF-00A1E	300 pcs	G41/ICH7	1	6

I/O View



AKMB-G41MF-00A1E

Packing List

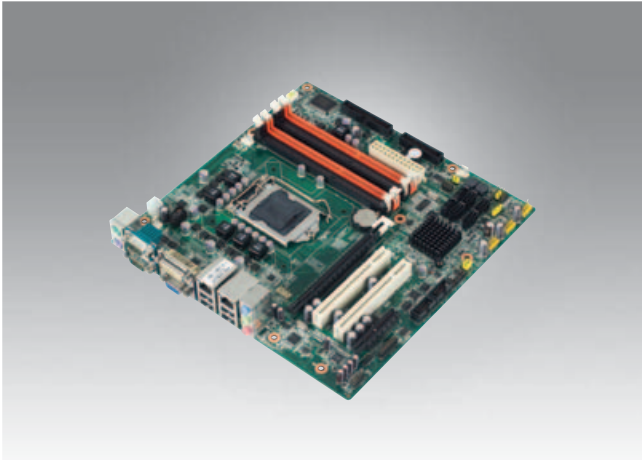
Description	Quantity
Serial ATA HDD data cable	2
Serial ATA HDD power cable	2
I/O port bracket	1
Startup manual	1
Utility CD	1

Accessories

Part Number	Description
1750000334	LGA775 CPU cooler (115 W)
1960022033T100	LGA775 CPU cooler for 2U chassis
1700008461	USB cable with four ports, 30.5 cm
1700002204	USB cable with dual ports, 27 cm
1700003195	USB cable with dual ports, 17.5 cm

AIMB-580

Intel® Core™ i7/i5/i3/Pentium®/Xeon LGA1156
mATX with VGA/DVI, 4 COM, Dual LAN, DDR3



Features

- Supports Intel® Core™ i7/i5/i3/Pentium/Xeon processor with Q57/3450 chipset
- Four DIMM socket supports up to 16 GB DDR3 800/1066/1333 MHz SDRAM
- Supports dual display of VGA and DVI and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT 6.0, TPM 1.2 (optional)
- Supports embedded software APIs and utilities

Software APIs:

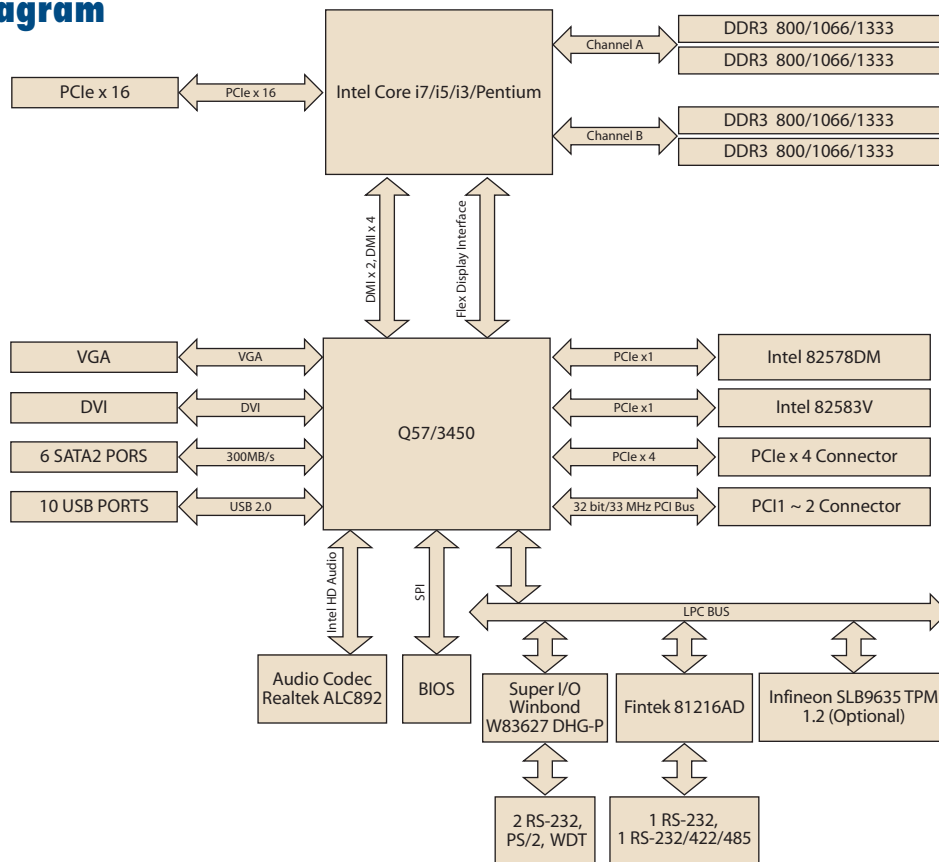
Utilities:

Note: eSOS requires ODM BIOS, available by request

Specifications

	CPU.	Xeon 34xx	Intel Core i7 8xx	Intel Core i5 7xx	Intel Core i5 6xx	Intel Core i3 5xx	Intel Pentium G69xx	
Processor System	Core number	4	4	4	2	2	2	
	Max.speed	2.93 GHz	2.93 GHz	2.66 GHz	3.3 GHz	3.06 GHz	2.8 GHz	
	Integrated Graphic	No	No	No	Yes	Yes	Yes	
	L3 Cache	8 MB	8 MB	8 MB	4 MB	4 MB	3 MB	
	Support model	WG2	QG2	QG2	WG2/QG2	WG2/QG2	WG2/QG2	
	Chipset	Q57/3450						
	BIOS	AMI 64 Mbit SPI						
Expansion Slot	PCI	32-bit/33 MHz, 2 slots						
	PCIe x4	1.0 GB/s per direction, 1 slot						
	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot						
Memory	Technology	Dual Channel DDR3 800/1066/1333 MHz SDRAM						
	Max. Capacity	16 GB						
	Socket	4 x 240-pin DIMM						
Graphics	Controller	Intel HD Graphics						
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed						
Ethernet	Interface	10/100/1000 Mbps						
	Controller	GbE LAN1: Intel 82578DM, GbE LAN2: Intel 82583V						
	Connector	RJ-45 x 2						
SATA	Max Data Transfer Rate	300 MB/s						
	Channel	6						
Rear I/O	VGA	1						
	DVI	1						
	Ethernet	2						
	USB	4 (USB 2.0 compliant)						
	Audio	2 (Mic-in, Line-out)						
	Serial	2 (RS-232)						
	PS/2	2 (1 x keyboard and 1 x mouse)						
Internal Connector	USB	6 (USB 2.0 compliant)						
	Serial	2 (1 x RS-232, 1 x RS-232/422/485 to support auto flow control)						
	IDE	-						
	SATA	6						
	FDD	1						
	Parallel	1						
	IrDA	-						
Watchdog Timer	Output	System reset						
	Interval	Programmable 1 ~ 255 sec/min						
Power Requirements	Power On	5V	3.3V	12V	5Vsb	-12V		
		3.9A	0.67A	3.84A	0.23A	0.24A		
Environment	Temperature	Operating				Non-Operating		
		0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution				-40 ~ 85° C (-40 ~ 185° F)		
Physical Characteristics	Dimensions	244 mm x 244 mm (9.6" x 9.6")						

Board Diagram



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

Ordering Information

Part Number	Chipset	Memory	VGA	DVI	USB	COM	GbE LAN
AIMB-580QG2-00A1E	Q57	Non-ECC	Yes	Yes	10	4	2
AIMB-580WG2-00A1E	3450	ECC/Non-ECC	Yes	Yes	10	4	2

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card with 1 PCI expansion
AIMB-RP30P-03A1E	2U riser card with 3 PCI expansion
AIMB-RP3PF-21A1E	2U riser card for 1 PCIe x 16 abd 2 PCI expansion
AIMB-RP3P8-12A1E	2U riser card with 2 PCIe x 8 & 1 PCI slots expansion (For WG2 Sku)

I/O View



AIMB-580QG2-00A1E
AIMB-580WG2-00A1E

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	1
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960019193T100	I/O port bracket	1
2002058000	Startup manual	1
2062058000	Driver CD	1

Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1156 CPU cooler for 1U and wallmount chassis
1700008809	Printer port cable kit

Note: Purchasing AIMB-580's proprietary CPU cooler from Advantech is a must. Other brands' CPU cooler are NOT compatible with AIMB-580.

Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070009652	XPE WES2009 Q57_AIMB-280/580/780 V4.0 ENG
	2070009653	XPE WES2009 Q57_AIMB-280/580/780 V4.0 MUI24
Software API	205E580000	SUSI 3.0 SW API for AIMB-580 XP

AIMB-581

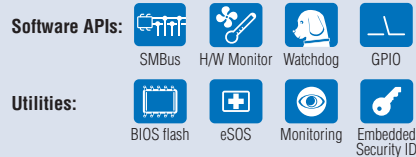
Intel® Xeon® E3/ Core™ i7/i5/i3
LGA1155 MicroATX with VGA/DVI/LVDS,
6 COM, Dual LAN, DDR3 and SATAIII

NEW



Features

- Supports Intel® Xeon®/ Core™ i7/i5/i3 processor with Q67/B65/C206 chipset
- Four DIMM socket supports up to 16 GB DDR3 1066/1333 MHz SDRAM
- Supports dual display of VGA, DVI, LVDS and dual GbE LAN
- Supports Intel vPro, AMT 7.0, PECI 3.0, USB 3.0, Software RAID 0, 1, 5, 10, TPM 1.2 (optional)
- Supports embedded software APIs and utilities

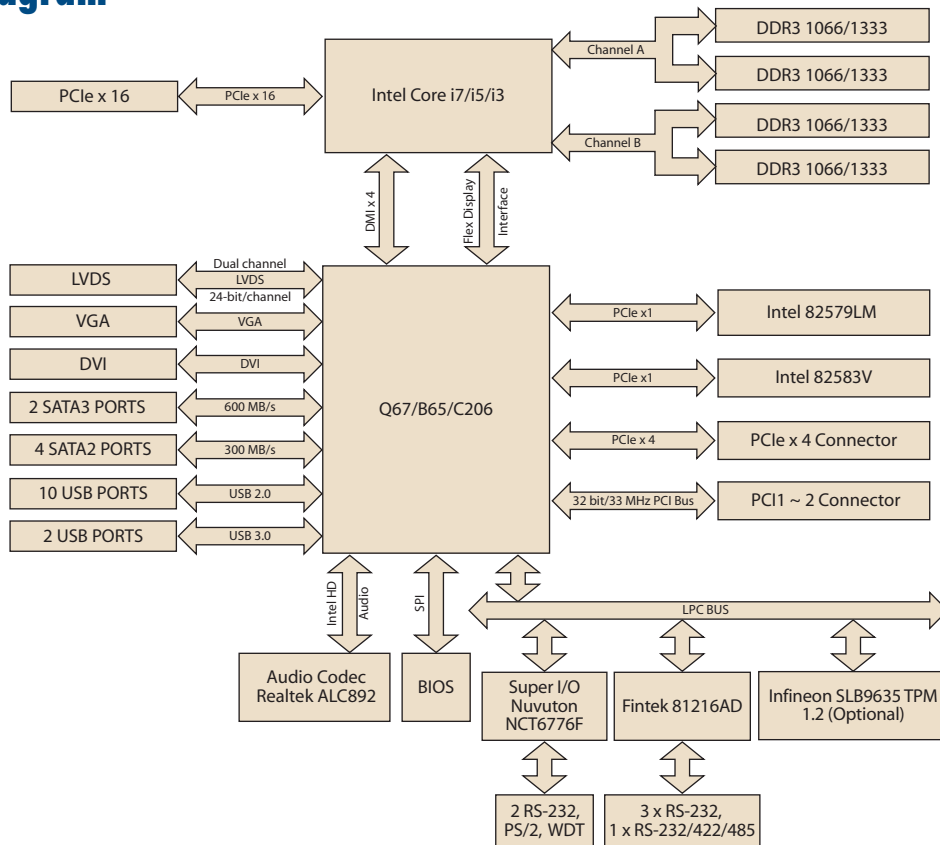


Note: eSOS requires ODM BIOS, available by request

Specifications

Processor System	CPU	Intel Xeon E3-1275	Intel Xeon E3-1225	Intel Core i3-2120	Intel Pentium G850	Intel Core i7-2600	Intel Core i5-2400	Intel Core i3-2120	
	Core Number	4	4	2	2	4	4	2	
	Max. Speed	3.4 GHz	3.1 GHz	3.3 GHz	2.9 GHz	3.4 GHz	3.1 GHz	3.3 GHz	
	Integrated Graphic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8 MB	6 MB	3 MB	3 MB	8 MB	6 MB	3 MB	
	Support Model	WG2	WG2	WG2	WG2	QG2/QVG	QG2/QVG	QG2/QVG	
	Chipset	Q67/B65/C206							
Expansion Slot	BIOS	AMI64 Mbit SPI							
	PCI	32-bit/33 MHz, 2 slots							
	PCIe x4 (Gen2)	2.0 GB/s per direction, 1 slot							
Memory	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot							
	Technology	Dual Channel DDR3 1066/1333 MHz SDRAM							
	Max. Capacity	16 GB							
Graphics	Socket	4 x 240-pin DIMM							
	Controller	Intel HD Graphics							
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed							
	LVDS	Single channel 24-bit/dual channel 48-bit LVDS							
	1st DVI	Yes, supports max. resolution 1920 x 1200							
	2nd DVI	Yes, with internal pin header, supports max. resolution 1920 x 1200							
Ethernet	Dual Display	CRT+LVDS, CRT+DVI, LVDS+DVI							
	Interface	10/100/1000 Mbps							
	Controller	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V							
SATA	Connector	RJ-45 x 2							
	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ 300 MB/s (SATA 2.0)							
Rear I/O	Channel	2/4							
	VGA	1							
	DVI	1							
	Ethernet	2							
	USB	4 (2 USB 2.0, 2 USB 3.0)							
	Audio	2 (Mic-in, Line-out)							
	Serial	2 (RS-232)							
	PS/2	2 (1 x keyboard and 1 x mouse)							
Internal Connector	USB	8 (USB 2.0 compliant)							
	Serial	4 (3 x RS-232, 1 x RS-232/422/485 to support auto flow control)							
	IDE	-							
	SATA	2 x 600 MB/s (SATA 3.0)/4 x 300 MB/s (SATA 2.0)							
	LVDS & Inverter	1							
	Parallel	1							
	IrDA	-							
Watchdog Timer	GPIO	8-bit GPIO							
	Output	System reset							
Power Requirements	Interval	Programmable 1 ~ 255 sec/min							
	Power On	Intel Core i5-660 3.33GHz, 2GB DDR3 1333 MHz x 4pcs							
Environment	Temperature	5V	3.3V	12V	5Vsb	-12V			
	Dimensions	3.9A	0.67A	3.84A	0.23A	0.24A			
Physical Characteristics	Operating	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution					Non-Operating		
	Temperature						-20 ~ 70° C (-4 ~ 158° F)		

Board Diagram



- Computer On Modules **1**
- MIO Extension SBCs **2**
- PC/104 CPU Modules **3**
- 3.5" SBCs **4**
- EPIC/ EBX/ 5.25" SBCs **5**
- Industrial Motherboards **6**
- Industrial Storage Modules **7**
- Embedded Wireless Modules **8**
- Embedded Touch Modules **9**

Ordering Information

Part Number	Chipset	Memory	VGA	DVI	LVDS	USB	COM	GbE LAN
AIMB-581QG2-00A1E	Q67	Non-ECC	Yes	Yes	Yes	12	4	2
AIMB-581QVG-00A1E	B65	Non-ECC	Yes	Yes	No	12	4	1
AIMB-581WG2-00A1E	C206	ECC/Non-ECC	Yes	Yes	Yes	12	4	2

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960050472T000	I/O port bracket	1
2002058100	Startup manual	1
2062058100	Driver CD	1

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card with 1 PCI expansion
AIMB-RP30P-03A1E	2U riser card with 3 PCI expansion
AIMB-RP3PF-12A1E	2U riser card for 1 PCIe x 16 abd 2 PCI expansion
AIMB-RP3P8-12A1E	2U riser card with 2 PCIe x 8 & 1 PCI slots expansion (For WG2 Sku)

Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1156 CPU cooler for 1U and wallmount chassis
1700008809	Printer port cable kit
1700018699	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm

Note. Purchasing AIMB-581's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-581.

I/O View



AIMB-581QG2-00A1E
AIMB-581QVG-00A1E
AIMB-581WG2-00A1E

Embedded OS/API

OS/API	Description
Win XPE	XPE WES 2009
Software API	SUSI V3.0

PCA-5612

Value Industrial PCI Graphics Card with Low Power Consumption



Features

- Industrial graphics card with long term support
- 32 MB DDR2 SDRAM
- Supports mirror mode dual display
- Supports VGA and DVI outputs

Specifications

Processor System	GPU	XGI Volari Z9s	
Bus	PCI	PCI 2.2	
Memory	Memory Clock	250 MHz	
	Memory Interface	16-bit	
	Memory Size	32 MB DDR2 SDRAM	
Video Output	CRT	1600 x 1200, up to 60 Hz vertical rate	
	DVI	Single Link TMDS up to UXGA (1600 x 1200 @ 60 Hz).	
Display Mode	Dual Display	CRT + DVI in Windows XP/2K/Linux, supporting mirror only, NOT supporting extension mode.	
Power Requirements	Voltage	+3.3V	+5V
	Typical Current	0.658A	0.294A
Environment	Temperature	Operating	Non-Operating
		0 ~ 60° C (32 ~ 140° F)	-20 ~ 70° C (-4 ~ 158° F)
Physical	Dimensions	150 x 105 mm (5.91" x 4.13")	
OS Support		Windows XP/2K, Linux, Unix, FreeBSD	

Ordering Information

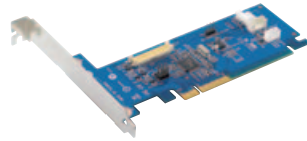
Part Number	VGA	TV-Out	DVI
PCA-5612-00A1E	Yes	-	Yes

Packing List

Part Number	Quantity
PCA-5612 Industrial VGA card	1
PCA-5612 Startup Manual	1
Warranty Certificate	1
CD with driver Utility	1

ADD2 Cards

PCIe Based Graphic Expansion Card



AIMB-LVDS-00A1E

- Supports single channel 24-bit/ dual channel 48-bit
- Chrontel CH7308A
- Max. resolution 1600 x 1200
- LCD/VCC voltage supports 3V or 5V

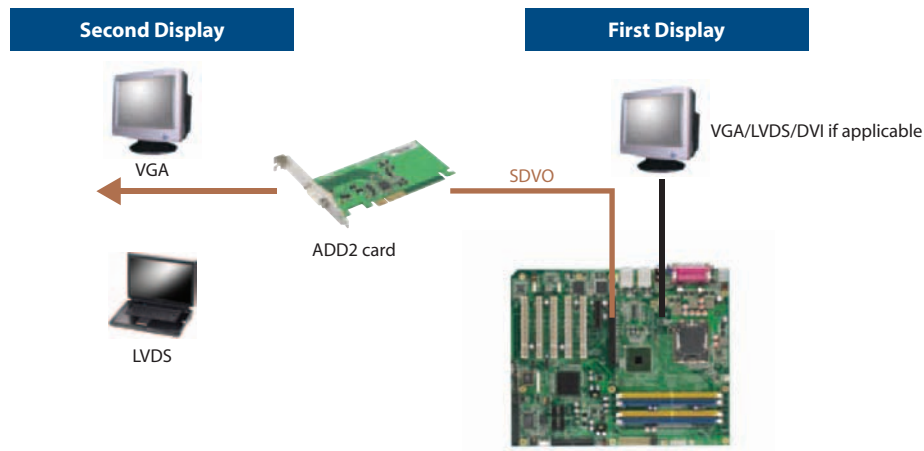


AIMB-VGA-00A1E

- Supports external CRT display
- Chrontel CH7317A
- Max. resolution 1024 x 768

Introduction

An ADD2 card is an adapter card that can be inserted into the PCIe port of Intel based systems. ADD2 cards utilize the PCIe x16 port to receive SDVO signals from the North Bridge. They provide several display options, such as VGA and LVDS. Versatile ADD2 cards allow configurations to have single or dual display mode without hardware customization. ADD2 cards provide the most cost-effective and fastest time-to-market solution for applications that require dual display devices.



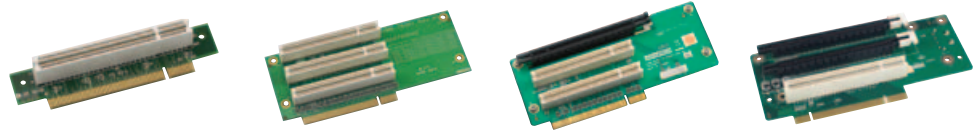
Selection Guide

Model Name	AIMB-LVDS-00A1E	AIMB-VGA-00A1E
Display Device	LVDS	VGA
Interface	PCIe x16/SDVO	PCIe x16/SDVO
Video Output	Single LVDS (internal)	Single VGA (external)
Resolution	1600 x 1200 (UXGA)	1024 x 768 (XGA)
Transmitter	Chrontel CH7308A-TF	Chrontel CH7317A-TF
Applicable Motherboard (with default BIOS)	-	-
Applicable Motherboard (requires BIOS customization)*	AIMB-262/562/564/762/763/764	AIMB-262/562/564/762/763/764/766
Bracket Height	Full/Low Profile	Full/Low Profile
Dimensions	16 x 12 cm (6.30" x 4.72")	16 x 12 cm (6.30" x 4.72")
Operating Temperatures	0 ~ 60° C (32 ~ 140° F)	0 ~ 60° C (32 ~ 140° F)

* Please contact Advantech technical support team for custom BIOS

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/ EBK/ 5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

Riser Card Selection Guide



Selection Guide

Model Name		AIMB-RP10P-01A1E	AIMB-RP30P-03A1E	AIMB-RP3PF-21A1E	AIMB-RP3P8-12A1E
Interface		PCI	PCI	PCIe x 16 / PCI	PCIe x 16 / PCI
Expansion Slots		1 PCI	3 PCI	1 PCIe x16 + 2 PCI	2 PCIe x16 + 1 PCI
Chassis	1U	Yes	-	-	-
	2U	-	Yes	Yes	Yes
ATX	AIMB-780	Yes	Yes	Yes	Yes (WG2 Only)
	AIMB-767	Yes	Yes	Yes	-
	AIMB-766	Yes	Yes	Yes	-
	AIMB-763	-	-	Yes	-
MicroATX	AIMB-581	Yes	Yes	Yes	Yes (WG2 Only)
	AIMB-580	Yes	Yes	Yes	Yes (WG2 Only)
	AIMB-567	Yes	Yes	Yes	-
	AIMB-566	Yes	Yes	-	-
	AIMB-564	-	-	Yes	-
	AIMB-562	-	-	Yes	-



Selection Guide

Model Name		AIMB-R4104-01A1E	AIMB-R430P-03A2E	AIMB-R430P-03A2E	AIMB-R431F-21A1E	AIMB-R43PF-21A1E
Interface		PCIe x4	PCIe x4	PCIe x4	PCIe x 16 / PCIe x 4	PCIe x 16 / PCIe x 4
Expansion Slots		1 PCIe x4	3 PCI	3 PCIe x1	1 PCIe x16 + 2 PCIe x1	1 PCIe x16 + 2 PCI
Chassis	1U	Yes	-	-	-	-
	2U	-	Yes	Yes	Yes	Yes
ATX	AIMB-781	Yes	Yes	Yes	-	-
	AIMB-769	Yes	Yes	△	-	-
	AIMB-764	Yes	Yes	Yes	Yes	Yes
	AIMB-762	Yes	Yes	△	△	Yes
Micro ATX	AIMB-562 KIOSK	-	Yes	-	-	-
	AIMB-556	Yes	Yes	Yes	Yes	Yes
	AIMB-554	Yes	Yes	△	△	Yes

Yes: Fully compatible

△: Only one PCIe x1 connector works (bottom slot).



Industrial Storage Modules



Model Name	SQF-P10	SQF-P25	SQF-PDM	SQF-S10	SQF-S10 (Extreme)	SQF-SLM	SQF-SLM (Extreme)
Interface	IDE / PCMCIA	IDE	IDE	SATA	SATA	SATA	SATA
Transfer Protocol	PIO Mode-6 MwDMA Mode-2 UDMA Mode-5	PIO Mode-4 MwDMA Mode-2 UDMA Mode-4	PIO Mode-4 MwDMA Mode-2 UDMA Mode-4	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)
Connector Type	CF Type-I	44-pin 2.0mm pitch Receptacle Housing Connector	40-pin 2.54mm pitch/ 44-pin 2.0mm pitch Receptacle Housing Connector	CFast Type-I	CFast Type-I	Standard 7+15 pin SATA Connector	Standard 7+15 pin SATA Connector
Flash Type	SLC	SLC / MLC	SLC	SLC	SLC / MLC	SLC	SLC / MLC
Capacity	256MB and 1/2/4/8/16/32 GB	SLC: 4/8/16/32/64 GB MLC: 8/16/32/64/128 GB	1/2/4/8/16 GB	2/4/8/16 GB	SLC: 4/8/16 GB MLC: 8/16/32/64 GB	2/4/8/16 GB	SLC: 4/8/16/32 GB MLC: 4/8/16/32/64 GB
Performance (MB/s)	4 channel: 83/87 2 channel: 43/40 1 channel: 22/15	SLC: 4 channel: 65/55 MLC: 4 channel: 63/28	2 channel: 40/29	4 channel: 95/50 2 channel: 45/25	SLC: 105/90 MLC: 95/30	4 channel: 95/50 2 channel: 45/25	SLC 4 channel: 145/100, up to 210/175 MLC 4 channel: 135/90, up to 200/175
Operating Temp	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant
Reference Page	7-1	7-2	7-2	7-3	7-3	7-4	7-4



Model Name	SQF-S25	SQF-S25 (Extreme)	SQF-SDM	SQF-PCM	SQF-UDM	SQF-JSD
Interface	SATA	SATA	SATA	Mini PCIe	USB	SD
Transfer Protocol	SATA II (3.0G)	SATA II (3.0G)	SATA II (3.0G)	PCI express Gen. 2	USB 2.0, downward compatible with 1.1	SD 2.0
Connector Type	Standard 7+15 pin SATA Connector	Standard 7+15 pin SATA Connector	7-pin Female SATA Connector, optional Vcc@Pin7	Standard Mini PCIe	10-pin 2.54mm pitch Receptacle Housing Connector	Standard 9-pin SD Connector
Flash Type	SLC	SLC / MLC	SLC	SLC / MLC	SLC	SLC
Capacity	8/16/32 GB	SLC: 8/16/32/64/128 GB MLC: 32/64/128/256/512 GB	2/4/8/16/32 GB	SLC: 16/32/64 GB MLC: 32/64/128 GB	1/2/4/8 GB	SDC: 1GB, 2GB SDHC: 4GB, 8GB
Performance (MB/s)	4 channel: 95/50	SLC 8 channel: 250/210 MLC 8 channel: 230/210	4 channel: 95/50 2 channel: 45/25	SLC 4 channel: 300/150 MLC 4 channel: 300/80	32/26	25/12.5
Operating Temp	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial) -40 ~ 85° C (Industrial)	0 ~ 70° C (Commercial)	0 ~ 70° C (Commercial)	-20 ~ 85° C (Industrial)
Environmental Regulations	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant
Reference Page	7-5	7-5	7-6	7-6	7-7	7-7

Software Features



Flash Security ID

Flash Security ID gives the ability to protect Intellectual Property. The maximum security ID length is up to 256 bytes so users can define their own security strings.



Life Monitoring

Life Monitoring helps users to check the health of the Flash. Endurance check from S.M.A.R.T. attributes provides Flash life-span estimation information.



Flash Lock

Flash Lock utility locks the SQFlash to a corresponding platform so it cannot be accessed by another platform. Based on the CF 3.0 specification, users can lock SQFlash via this utility and unlock it via the BIOS while booting.



Emergency Erase

Emergency Erase is a military level security feature. User can destroy all data and corrupt controller firmware based on utility or API under OS.

SQF-P10

Industrial CompactFlash



RoHS CE FCC

Specifications

Capacity	256MB/1G/2G/4G/8G/16G/32G
Flash Type	Toshiba 43nm SLC
Compatibility	CF 3.0, PC Card, Socket's Services
Form Factor	CF Type-I
Voltage	3.3 V / 5.0 V
Data Transfer Mode	PIO Mode-6 MWDMA Mode-2 UDMA Mode-5
Sustained R/W Performance (*)	4 channel: 83/87 MB/sec 2 channel: 43/40 MB/sec 1 channel: 22/15 MB/sec
Operation Temperature	Commercial Grade: 0 to +70° C Extended Grade: -40 to +85° C
Host interface	8/16 bit access
ECC (BCH)	Correct up to 6/12 random bits/sector
Endurance	> 5,000,000 program/erase cycles
MTBF	> 6,000,000 hours
Shock resistance	1,500 G, Peak / 0.5 ms
Vibration resistance	20 G, Peak / 80 ~ 2000 Hz

(*)The values are for reference only; they may change according to the flash memory used.

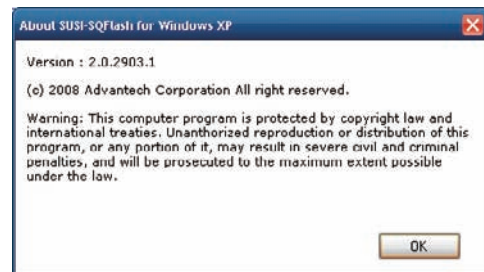
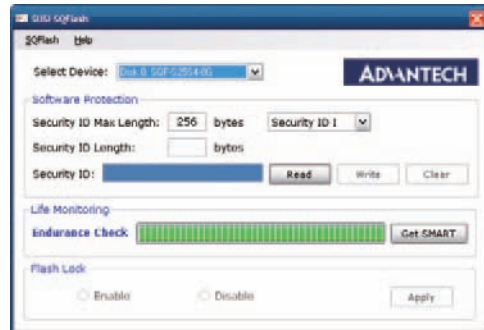
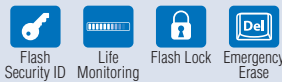
Ordering Information

Part No.	Product Description
SQF-P10S1-256M-CT2	SQFlash 256MB CF 43nm, 1-CH, DMA (0 ~ 70° C)
SQF-P10S1-1G-CT2	SQFlash 1G CF 43nm, 1-CH, DMA (0 ~ 70° C)
SQF-P10S2-2G-CT2	SQFlash 2G CF 43nm, 2-CH, DMA (0 ~ 70° C)
SQF-P10S2-4G-CT2	SQFlash 4G CF 43nm, 2-CH, DMA (0 ~ 70° C)
SQF-P10S2-8G-CT2	SQFlash 8G CF 43nm, 2-CH, DMA (0 ~ 70° C)
SQF-P10S2-16G-CT2	SQFlash 16G CF 43nm, 2-CH, DMA (0 ~ 70° C)
SQF-P10S4-32G-CT2	SQFlash 32G CF 43nm, 4-CH, DMA (0 ~ 70° C)
SQF-P10S1-1G-ET2	SQFlash 1G CF 43nm, 1-CH, DMA (-40 ~ 85° C)
SQF-P10S2-2G-ET2	SQFlash 2G CF 43nm, 2-CH, DMA (-40 ~ 85° C)
SQF-P10S2-4G-ET2	SQFlash 4G CF 43nm, 2-CH, DMA (-40 ~ 85° C)
SQF-P10S2-8G-ET2	SQFlash 8G CF 43nm, 2-CH, DMA (-40 ~ 85° C)
SQF-P10S2-16G-ET2	SQFlash 16G CF 43nm, 2-CH, DMA (-40 ~ 85° C)
SQF-P10S4-32G-ET2	SQFlash 32G CF 43nm, 4-CH, DMA (-40 ~ 85° C)

Features

- Compliant with CFA 3.0 specification
- Built-in EDC/ECC up to 12 random bit errors per 512 bytes
- Advanced wear-leveling and block management
- Shock resistance, anti-vibration and low power consumption
- GUI Management Tool & Software API Package

GUI Management Tool & Software API Package



- Computer On Modules 1
- MIO Extension SBCs 2
- PC/104 CPU Modules 3
- 3.5" SBCs 4
- EPIC/ EBX/ 5.25" SBCs 5
- Industrial Motherboards 6
- Industrial Storage Modules 7
- Embedded Wireless Modules 8
- Embedded Touch Modules 9

SQF-P25

2.5" PATA SSD



RoHS
CE FCC



Features

- Capacity SLC 4 GB ~ 64 GB/MLC 8 GB ~ 128 GB
- Supports SLC (single level cell) and MLC (multi level cell) NAND Flash memory
- Supports PIO mode 4/ multi word DMA mode 2/ ultra DMA mode 4
- GUI Management Tool & Software API Package

Specifications

Capacity	SLC: 4 to 64GB MLC: 8 to 128GB
Compatibility	ATA command set
Voltage	3.3 V / 5.0 V
Data Transfer Mode	PIO Mode 4 MWDMA Mode 2 UDMA Mode 4
Sustained R/W Performance (*)	SLC: 65/55 MB/sec MLC: 63/28 MB/sec
Operating Temperature	Commercial Grade : 0 to +70° C Industrial Grade: -40 to +85° C
Host Interface	8/16 bit access
ECC (BCH)	Correct up to 6/12 random bits/sector
Endurance	> 5,000,000 program/erase cycles
MTBF	> 2,000,000 hours
Shock Resistance	2,500 G (0.5 msec)
Vibration Resistance	20 G, Peak / 80 ~ 2000 Hz

(*)The values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-P25S4-XG-CTE	Advantech SQFlash 2.5" PATA SSD SLC, DMA, 4/8/16/32/64 GB, (0 ~ 70° C)
SQF-P25S4-XG-ETE	Advantech SQFlash 2.5" PATA SSD SLC, DMA, 4/8/16/32/64 GB, (-40 ~ 85° C)
SQF-P25M4-XG-CTE	Advantech SQFlash 2.5" PATA SSD MLC, DMA, 8/16/32/64/128 GB, (0 ~ 70° C)
SQF-P25M4-XG-ETE	Advantech SQFlash 2.5" PATA SSD MLC, DMA, 8/16/32/64/128 GB, (-40 ~ 85° C)

SQF-PDM

PATA Disk Module



RoHS
CE FCC



Features

- Capacity 1GB ~ 16GB
- Supports SLC (single level cell) NAND Flash Memory
- Supports for PIO Mode 4/Multi Word DMA Mode 2/Ultra DMA Mode 4
- GUI Management Tool & Software API Package

Specifications

Capacity	1 to 16GB
Flash Type	SLC
Compatibility	ATA command set
Connector Type	40-pin 2.54 mm pitch/44-pin 2.0 mm pitch Receptacle Housing Connector
Voltage	3.3 V / 5.0 V
Data Transfer Mode	PIO Mode 4 MWDMA Mode 2 UDMA Mode 4
Sustained R/W Performance (*)	40/29 MB/sec
Operation Temperature	Commercial Grade : 0 to +70° C Extended Grade : -40 to +85° C
Host interface	8/16 bit access
ECC (BCH)	Correct up to 6/12 random bits/sector
Endurance	> 5,000,000 program/erase cycles
MTBF	> 4,000,000 hours
Shock Resistance	1,500 G (0.5 msec)
Vibration Resistance	20 G, Peak / 80 ~ 2000 Hz

(*)The values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-PDMS2-XG-HACE	Advantech SQFlash PDM 44-pin Hor. 2/4/8/16 GB, (0 ~ 70° C)
SQF-PDMS2-XG-HAEE	Advantech SQFlash PDM 44-pin Hor. 2/4/8/16 GB, (-40 ~ 85° C)
SQF-PDMS2-XG-VACE	Advantech SQFlash PDM 44-pin Vert. 2/4/8/16 GB, (0 ~ 70° C)
SQF-PDMS2-XG-VAEE	Advantech SQFlash PDM 44-pin Vert. 2/4/8/16 GB, (-40 ~ 85° C)
SQF-PDMS2-XG-HBCE	Advantech SQFlash PDM 40-pin Hor. Top 2/4/8/16 GB, (0 ~ 70° C)
SQF-PDMS2-XG-HBEE	Advantech SQFlash PDM 40-pin Hor. Top 2/4/8/16 GB, (-40 ~ 85° C)
SQF-PDMS2-XG-HCCE	Advantech SQFlash PDM 40-pin Hor. Bottom 2/4/8/16 GB, (0 ~ 70° C)
SQF-PDMS2-XG-HCEE	Advantech SQFlash PDM 40-pin Hor. Bottom 2/4/8/16 GB, (-40 ~ 85° C)
SQF-PDMS2-XG-VBCE	Advantech SQFlash PDM 40-pin Vert. 2/4/8/16 GB, (0 ~ 70° C)
SQF-PDMS2-XG-VBEE	Advantech SQFlash PDM 40-pin Vert. 2/4/8/16 GB, (-40 ~ 85° C)
SQF-PDMS1-1G-44CE	Advantech SQFlash PDM 44-pin Vert. 1 GB, Housing, (0 ~ 70° C)
SQF-PDMS2-XG-44CE	Advantech SQFlash PDM 44-pin Vert. 2/4/8/16 GB, Housing, (0 ~ 70° C)
SQF-PDMS1-1G-44EE	Advantech SQFlash PDM 44-pin Vert. 1 GB, Housing, (-40 ~ 85° C)
SQF-PDMS2-XG-44EE	Advantech SQFlash PDM 44-pin Vert. 2/4/8/16 GB, Housing, (-40 ~ 85° C)

SQF-S10

CFast

SQF-S10 (Extreme)

CFast



Features

- Compliant with standard CFast card Type 1 specifications
- Interface: SATA Gen. 2
- Built-in EDC/ECC up to 15bit random bits error per 512 bytes
- Universal Wear-leveling and Bad Block Management
- Shock resistance, anti-vibration and Low power consumption
- GUI Management Tool & Software API Package

Features

- Compliant with standard CFast card Type 1 specifications
- Interface: SATA Gen. 2
- Built-in EDC/ECC up to 15bit random bits error per 512 bytes
- Universal Wear-leveling and Bad Block Management
- Shock resistance, anti-vibration and Low power consumption
- GUI Management Tool & Software API Package

Specifications

Connector Type	CFast Type 1 Connector
Flash Type	SLC
Capacity	2 to 16GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	4 channel: 95/50 MB/sec 2 channel: 45/25 MB/sec
Operating Temperature	Commercial Grade: 0 to +70° C Industrial Grade: -40 to +85° C
Shock Resistance	1,500 G, Peak / 0.5 ms
Vibration Resistance	20G, Peak / 10 ~ 2000 Hz
Humidity	5% ~ 95%
Endurance	> 5,000,000 program/erase cycles
MTBF	2,000,000 hours
Dimensions (mm)	42.8 x 36.4 x 3.3

(*) The values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-S10S2-2G-CTE	Advantech SQFlash CFAST SLC, DMA, 2 GB, (0 ~ 70° C)
SQF-S10S2-2G-ETE	Advantech SQFlash CFAST SLC, DMA, 2 GB, (-40 ~ 85° C)
SQF-S10S4-XG-CTE	Advantech SQFlash CFAST SLC, DMA, 4/8/16 GB, (0 ~ 70° C)
SQF-S10S4-XG-ETE	Advantech SQFlash CFAST SLC, DMA, 4/8/16 GB, (-40 ~ 85° C)

Specifications

Connector Type	CFast Type 1 Connector
Flash Type	SLC / MLC
Capacity	SLC: 4 to 16GB MLC: 8 to 64GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	SLC: 105/90 MB/sec MLC: 95/30 MB/sec
Operating Temperature	Commercial Grade: 0 to +70° C Industrial Grade: -40 to +85° C
Shock Resistance	1,500 G, Peak / 0.5 ms
Vibration Resistance	20G, Peak / 10 ~ 2000 Hz
Humidity	5% ~ 95%
Endurance	> 5,000,000 program/erase cycles
MTBF	1,000,000 hours
Dimensions (mm)	42.8 x 36.4 x 3.3

(*) The values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-S10S2-4G-M2C	Advantech SQFlash CFAST SLC, DMA, 2CH, 4 GB, (0 ~ 70° C)
SQF-S10S2-4G-M2E	Advantech SQFlash CFAST SLC, DMA, 2CH, 4 GB, (-40 ~ 85° C)
SQF-S10S4-XG-M2C	Advantech SQFlash CFAST SLC, DMA, 4CH, 8/16 GB, (0 ~ 70° C)
SQF-S10S4-XG-M2E	Advantech SQFlash CFAST SLC, DMA, 4CH, 8/16 GB, (-40 ~ 85° C)
SQF-S10M2-8G-M2C	Advantech SQFlash CFAST MLC, DMA, 2CH, 8 GB, (0 ~ 70° C)
SQF-S10M4-XG-M2C	Advantech SQFlash CFAST MLC, DMA, 4CH, 16/32/64 GB, (0 ~ 70° C)

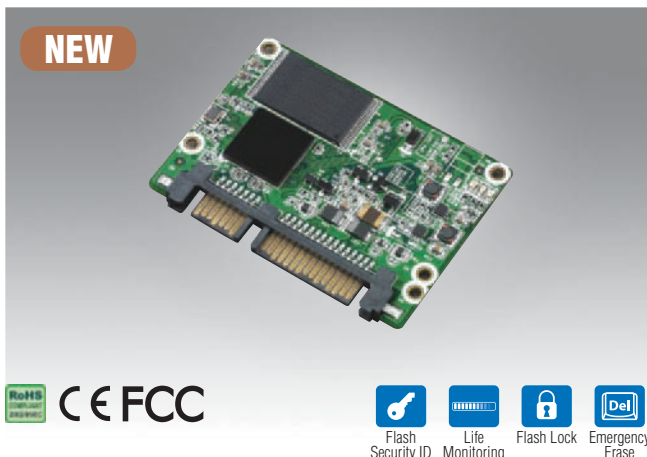
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SQF-SLM

Half-Slim SATA Module

SQF-SLM (Extreme)

Half-Slim SATA Module



Features

- MO-297 Half-Slim SATA Module
- Compliant with SATA II and SATA v 2.6 standard
- Built-in EDC/ECC up to 15-bit random bits error per 512 bytes
- Universal wear-leveling and bad block management
- Shock resistance, anti-vibration and low power consumption
- GUI management tool & software API package

Features

- MO-297 Half-Slim SATA Module
- Compliant with SATA II and SATA v 2.6 standard
- Support 48/32/28 bit ECC correct per 2K Byte data
- Universal wear-leveling and bad block management
- Shock resistance, anti-vibration and low power consumption
- GUI management tool & software API package

Specifications

Connector Type	Standard 7+15-pin SATA connector
Flash type	SLC
Capacity	2 to 16GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	4 channel: 95/50 MB/sec 2 channel: 45/25 MB/sec
Operating Temperature	Commercial grade: 0 to +70° C Industrial grade: -40 to +85° C
Shock Resistance	1,500 G, peak / 0.5 ms
Vibration Resistance	20 G, peak / 80 ~ 2000 Hz
Endurance	2,000,000 program/erase cycles
MTBF	> 2,000,000 hours
Dimension (mm)	54.0 x 39.0 x 4.5

(*) These values are for reference only; they may change according to the flash memory used.

Ordering Information

PN	Description
SQF-SLMS2-2G-R2C	Advantech SQFlash SATA Slim 2 GB SLC, 2-CH (0 ~ 70° C)
SQF-SLMS4-XG-R2C	Advantech SQFlash SATA Slim 4/8/16 GB SLC, 4-CH (0 ~ 70° C)
SQF-SLMS2-2G-R2E	Advantech SQFlash SATA Slim 2 GB SLC, 2-CH (-40 ~ 85° C)
SQF-SLMS4-XG-R2E	Advantech SQFlash SATA Slim 4/8/16 GB SLC, 4-CH (-40 ~ 85° C)

Specifications

Connector Type	Standard 7+15-pin SATA connector
Flash type	SLC / MLC
Capacity	SLC: 4 to 32GB MLC: 4 to 64GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	SLC: 145/100 MB/sec (32GB up to 210/175) MLC: 135/90 MB/sec (64GB up to 200/175)
Operating Temperature	Commercial grade: 0 to +70° C Industrial grade: -40 to +85° C
Shock Resistance	1,500 G, peak / 0.5 ms
Vibration Resistance	20 G, peak / 80 ~ 2000 Hz
Endurance	2,000,000 program/erase cycles
MTBF	> 2,000,000 hours
Dimension (mm)	54.0 x 39.0 x 4.5

(*) These values are for reference only; they may change according to the flash memory used.

Ordering Information

PN	Description
SQF-SLMS4-XG-S5C	Advantech SQFlash SATA Slim 4/8/16/32 GB SLC, 4-CH (0 ~ 70° C)
SQF-SLMS4-XG-S5E	Advantech SQFlash SATA Slim 4/8/16/32 GB SLC, 4-CH (-40 ~ 85° C)
SQF-SLMM4-XG-S5C	Advantech SQFlash SATA Slim 4/8/16/32/64/128 GB MLC, 4-CH (0 ~ 70° C)
SQF-SLMM4-XG-S5E	Advantech SQFlash SATA Slim 4/8/16/32/64/128 GB MLC, 4-CH (-40 ~ 85° C)

SQF-S25

2.5" SATA SSD

SQF-S25 (Extreme)

2.5" SATA SSD



Features

- Compliant with SATA II and SATA v2.6 standard
- Built-in EDC/ECC up to 15-bit random bits error per 512 bytes
- Universal Wear-leveling and Bad Block Management
- Shock resistance, anti-vibration and Low power consumption
- GUI Management Tool & Software API Package

Features

- Compliant with SATA II and SATA v2.6 standard
- Support 48/32/28 bit ECC correct per 2K Byte data
- Universal Wear-leveling and Bad Block Management
- Shock resistance, anti-vibration and Low power consumption
- GUI Management Tool & Software API Package

Specifications

Connector Type	Standard 7+15-bit SATA connector
Flash Type	SLC
Capacity	8 to 32GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	Up to 95/50 MB/sec
Operating Temperature	Commercial Grade: 0 to +70° C Industrial Grade: -40 to +85° C
Shock Resistance	1,500 G, Peak / 0.5 ms
Vibration Resistance	20 G, Peak / 80 ~ 2000 Hz
MTBF	> 2,000,000 hours
Dimensions (mm)	100.20 x 69.85 x 9.50

(*) The values are for reference only; they may change according to the flash memory used.

Specifications

Connector Type	Standard 7+15-bit SATA connector
Flash Type	SLC / MLC
Capacity	SLC: 8 to 128GB MLC: 32 to 512GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	SLC: up to 250/210 MB/sec MLC: up to 230/210 MB/sec
Operating Temperature	Commercial Grade: 0 to +70° C Industrial Grade: -40 to +85° C
Shock Resistance	1,500 G, Peak / 0.5 ms
Vibration Resistance	20 G, Peak / 80 ~ 2000 Hz
MTBF	> 2,000,000 hours
Dimensions (mm)	100.20 x 69.85 x 9.50

(*) The values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-S25S4-XG-R2C	Advantech SQFlash S25 SLC, 4-CH, 8/16/32 GB (0~70° C)
SQF-S25S4-XG-R2E	Advantech SQFlash S25 SLC, 4-CH, 8/16/32 GB (-40~85° C)

Ordering Information

Part No.	Product Description
SQF-S25S4-8G-S5C	Advantech SQFlash S25 8G SLC, DMA (0 ~ 70° C)
SQF-S25S4-8G-S5E	Advantech SQFlash S25 8G SLC, DMA (-40 ~ 85° C)
SQF-S25S8-XG-S5C	Advantech SQFlash S25 SLC, DMA, 16/32/64/128 GB, (0 ~ 70° C)
SQF-S25S8-XG-S5E	Advantech SQFlash S25 SLC, DMA, 16/32/64/128 GB, (-40 ~ 85° C)
SQF-S25M8-XG-S5C	Advantech SQFlash S25 MLC, DMA, 32/64/128/256/512 GB, (0 ~ 70° C)
SQF-S25M8-XG-S5E	Advantech SQFlash S25 MLC, DMA, 32/64/128/256/512 GB, (-40 ~ 85° C)

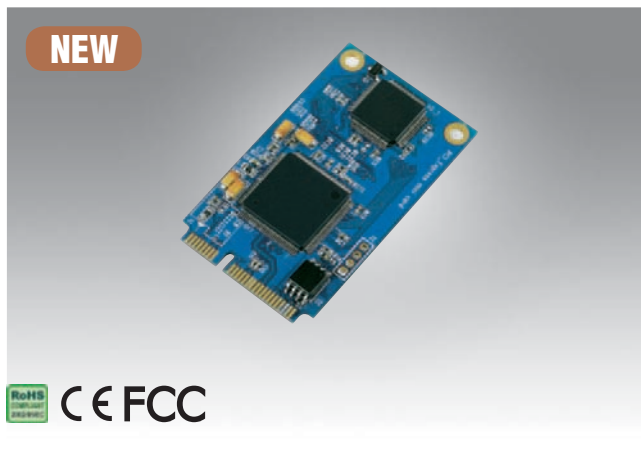
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- Industrial Storage Modules 7
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SQF-SDM

SATA Disk Module

SQF-PCM

Mini PCIe Disk Module



Features

- Vertical type SATA DOM with housing
- Compliant with SATA II and SATA v 2.6 standard
- Built-in EDC/ECC up to 15-bit random bits error per 512 bytes
- Universal wear-leveling and bad block management
- Shock resistance, anti-vibration and low power consumption
- GUI management tool & software API package

Features

- Native PCI express transfer protocol without bridging
- Compliant with PCI express Gen. 2
- High random access performance
- Shock resistance, anti-vibration and low power consumption

Specifications

Connector Type	Standard 7-pin SATA connector
Flash Type	SLC
Capacity	2 to 32GB
Transfer Mode	SATA II (3.0 Gbps)
Sustained R/W Performance (*)	4 channel: 95/50 MB/sec 2 channel: 45/25 MB/sec
Operating Temperature	Commercial grade: 0 to +70° C Industrial grade: -40 to +85° C
Shock Resistance	1500, peak / 0.5 ms
Vibration Resistance	20 G, peak / 80 ~ 2000 Hz
Endurance	> 5,000,000 program/erase cycles
MTBF	> 3,000,000 hours
Dimension (mm)	39.4 (L) x 25 (W) x 6.5 (H)

(*)These values are for reference only; they may change according to the flash memory used.

Ordering Information

PN	Description
Standard type (non-hook)	
SQF-SDMS2-2G-VNC	SQF SATA DOM V 2GB SLC 2-CH (0 ~ 70° C)
SQF-SDMS2-2G-VNE	SQF SATA DOM V 2GB SLC 2-CH (-40 ~ 85° C)
SQF-SDMS4-XG-VNC	SQF SATA DOM V 4/8/16/32 GB SLC 4-CH (0 ~ 70° C)
SQF-SDMS4-XG-VNE	SQF SATA DOM V 4/8/16/32 GB SLC 4-CH (-40 ~ 85° C)
Hook type	
SQF-SDMS2-2G-VHC	SQF SATA DOM VH 2GB SLC 2-CH (0 ~ 70° C)
SQF-SDMS2-2G-VHE	SQF SATA DOM VH 2GB SLC 2-CH (-40 ~ 85° C)
SQF-SDMS4-XG-VHC	SQF SATA DOM VH 4/8/16/32 GB SLC 4-CH (0 ~ 70° C)
SQF-SDMS4-XG-VHE	SQF SATA DOM VH 4/8/16/32 GB SLC 4-CH (-40 ~ 85° C)
Accessory	
SQF-SDM-SKT-01E	SATA 7PIN MALE SOCKET SDM HOOK TYPE

Advantech SQFlash PCM is a mini storage module operating with native PCI express transfer protocol and fully compatible with standard Mini PCIe form factor. With wide BUS bandwidth of PCI express, the storage module is providing steadily high IOPS for both read and write. This model is especially beneficial for frequent and fragment data processing.

	PATA Interface	PCIe Interface	Δ
IOPS @4KB Write	6	4500	750 times faster

Specifications

Connector Type	Standard Mini PCIe
Flash Type	SLC / MLC
Capacity	SLC: 16 to 64GB MLC: 32 to 128GB
Transfer Mode	PCI express Gen. 2
Sustained R/W Performance (*)	SLC: 300/150 MB/sec MLC: 300/80 MB/sec
IOPS @4KB R/W (*)	SLC: 6000/4500 MLC: 6000/2500
Operation Temp	0 ~ 70° C
Mechanical Specification	Shock: 1,500G, Peak / 0.5ms; Vibration: 20G, Peak / 80 ~ 2000 Hz
Humidity	5% ~ 95%
Endurance	> 5,000,000 program/erase cycles
MTBF	> 2,000,000 hours
Dimensions (mm)	30 x 50.95 x 3.4
Environmental Regulation	RoHS Compliant

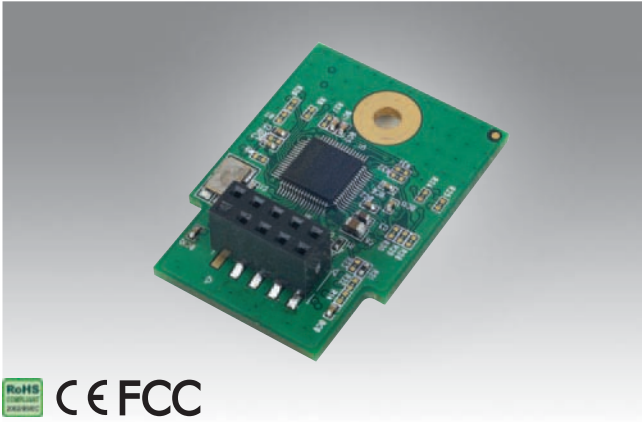
(*)These values are for reference only; they may change according to the flash memory used.

Ordering Information

PN	Description
SQF-PCMS4-XXG-MPC	SQF Mini PCIe DOM 16/32/64 GB SLC (0 ~ 70° C)
SQF-PCMM4-XXG-MPC	SQF Mini PCIe DOM 32/64/128 GB MLC (0 ~ 70° C)

SQF-UDM

Industrial USB Disk Module



RoHS CE FCC

Features

- Compliant with standard USB specifications
- Built-in EDC/ECC up to 12 random bits error per 512 bytes
- Advanced wear-leveling and block management
- Shock resistance, anti-vibration and low power consumption

Specifications

Connector Type	10-pin 2.54 mm pitch receptacle housing connector
Flash Type	SLC
Capacity	1 to 8GB
DC Supply Voltage	5V (±10%)
Power Consumption (*)	Read: 105 mA Suspend: 39 uA
Sustained R/W Performance (*)	30/20 MB MB/sec
Operating Temperature	Commercial Grade: 0 to +70° C
Shock Resistance	2,500 G, Peak / 0.5 ms
Vibration Resistance	20 G, Peak / 80 ~ 2000 Hz
Endurance	> 5,000,000 program/erase cycles
MTBF	> 1,600,000 hours
Dimensions (mm)	26.5 x 37.8 x 10.6 (PCB Size)
Orientation	Horizontal

(*) These values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-UDMS1-1G-HAE	Advantech SQFlash 1 GB UDM HOR LP MOUNTING, NR, Type A
SQF-UDMS2-XG-HAE	Advantech SQFlash UDM HOR LP MOUNTING, NR, Type A, 2/4/8 GB
SQF-UDMS1-1G-HCE	Advantech SQFlash 1 GB UDM HOR LP MOUNTING, NR, Type C
SQF-UDMS2-XG-HCE	Advantech SQFlash UDM HOR LP MOUNTING, NR, Type C, 2/4/8 GB

SQF-ISD

Industrial SD Card



RoHS CE FCC

Features

- SLC NAND Flash and wide range temperature support
- Compliant with SD system specification version 2.0
- Write protection feature using mechanical switch
- Shock resistance, anti-vibration and low power consumption

Specifications

Connector Type	SD Card
Flash Type	SLC
Capacity	SDC: 1 GB, 2 GB SDHC: 4 GB, 8 GB
Sustained R/W Performance (*)	25/12.5 MB/sec
Operating Temperature	Industrial grade: -25 to +85° C
Shock Resistance	1,500 G, Peak / 0.5 ms
Vibration Resistance	5 G, Peak / 10 ~ 2000 Hz
Endurance	> 2,000,000 program/erase cycles
MTBF	> 3,600,000 hours
Dimensions (mm)	32 (L) x 24 (W) x 2.1 (H)

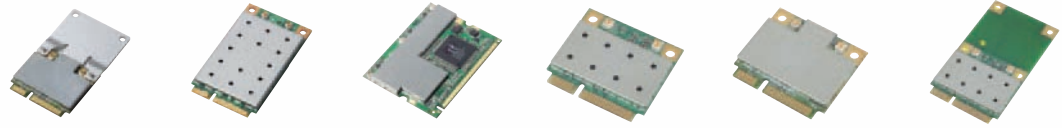
(*) These values are for reference only; they may change according to the flash memory used.

Ordering Information

Part No.	Product Description
SQF-ISDS1-1G-ETE	Advantech SQFlash SD Card SLC 1 G, 1-CH (-25 ~ 85° C)
SQF-ISDS2-2G-ETE	Advantech SQFlash SD Card SLC 2 G, 2-CH (-25 ~ 85° C)
SQF-ISDS2-4G-ETE	Advantech SQFlash SDHC Card SLC 4 G, 2-CH (-25 ~ 85° C)
SQF-ISDS2-8G-ETE	Advantech SQFlash SDHC Card SLC 8 G, 2-CH (-25 ~ 85° C)

Computer On Modules	1
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Embedded Wireless Modules



NEW

Selection Guide

Model Name	WLAN					
	WiFi-105E	WiFi-109E	WiFi-110E	WiFi-112E	WiFi-118E	EWM-W121F
Function	802.11 b/g/n	802.11 a/b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
Interface	PCIe	PCIe	Mini-PCI	PCIe	PCIe	PCIe
Product Type	Full-size Mini Card	Full-size Mini Card	Mini-PCI Card	Half-size Mini Card	Half-size Mini Card	Full-Size Mini Card
Operating Temp.	0 ~ 50° C	0 ~ 65° C	0 ~ 55° C	0 ~ 80° C	0 ~ 80° C	0 ~ 80° C
Antenna Connector	Hirose U.FL	Hirose U.FL	Hirose U.FL	Hirose U.FL	Hirose U.FL	Hirose U.FL
OS/Drivers	XP/Vista/Win7 (32 and 64bit), Linux, and WinCE 6	XP/Vista/Win7 (32 and 64bit), and Linux	XP/Vista/Win7 (32 and 64bit), and Linux	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit), Linux, and WinCE 6	XP/Vista/Win7 (32 and 64bit)
Longevity	2009 ~ 2012	2011 ~ 2014	2011 ~ 2014	2009 ~ 2012	2009 ~ 2012	2009 ~ 2012
Software Add-on Features	<ul style="list-style-type: none"> • WLAN Monitoring Tool • Driver & OS Integration 					
Reference Page	8-1	8-1	8-2	8-2	8-3	8-3

NEW

NEW

NEW

NEW

NEW



Selection Guide

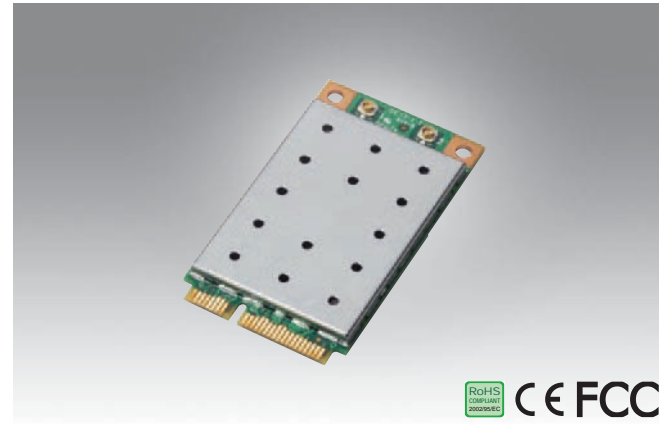
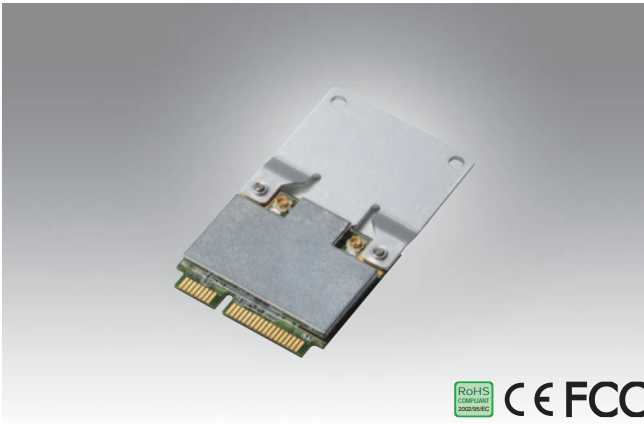
Model Name	WLAN	Bluetooth	GPS		Cellular	
	EWM-W122H	BT-101E	EWM-G107H	EWM-G107F	EWM-C103FD	EWM-C104FT
Function	802.11 b/g/n + Bluetooth HS3.0	Bluetooth	GPS	GPS	3.5G	3.5G
Interface	PCIe	USB	USB	USB	USB	USB
Product Type	Half-size Mini Card	Card	Half-size Mini Card	Full-size Mini Card	Full-size Mini Card	Full-size Mini Card
Operating Temp.	0 ~ 80° C	0 ~ 80° C	-40 ~ 85° C	-40 ~ 85° C	-20 ~ 70° C	-20 ~ 70° C
Antenna Connector	Hirose U.FL	PCB antenna	Hirose U.FL	Hirose U.FL	Hirose U.FL	Hirose U.FL
OS/Drivers	XP/Vista/Win7 (32 and 64bit), and WinCE 5	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit)	XP/Vista/Win7 (32 and 64bit)	XP/Win7/CE/Linux	XP/Win7/CE/Linux
Longevity	2009 ~ 2013	2009~2012	2010 ~ 2015	2010 ~ 2015	2011 ~ 2014	2011 ~ 2014
Software Add-on Features	<ul style="list-style-type: none"> • WLAN Monitoring Tool • Driver & OS Integration 	<ul style="list-style-type: none"> • Driver & OS Integration • Bluetooth Profile Integration 	<ul style="list-style-type: none"> • GPS Parser • Signal Strength API • Satellite Number API • GPS Raw Data API 		<ul style="list-style-type: none"> • Auto Dialing API • Carrier Name API • SIM Status API • SMS API • Signal Strength API • PIN Lock/Unlock API 	
Reference Page	8-4	8-4	8-5	8-7	8-9	8-9

WiFi-105E

802.11 b/g/n Full-size Mini PCIe Card

WiFi-109E

802.11 a/b/g/n Full-size Mini PCIe Card
(Dual-band: 2.4 and 5GHz)



Features

- IEEE 802.11 b/g/n standards
- Full-size Mini PCIe Card Interface
- Up to 300 Mbps data rate
- 64/128 bit WEP, WPA, and WPA2 Encryption
- 1T x 2R MIMO technology
- Low power consumption for embedded systems
- XP/Vista/Win7 (32 and 64bit), Linux, and WinCE 6
- Operating temperature 0 ~ 50° C
- Ralink RT3090

Features

- IEEE 802.11 a/b/g/n dual-band (2.4 and 5 GHz) standards
- Full-size Mini PCIe Card Interface
- Up to 300 Mbps data rate
- 64/128/152 bit WEP, WPA, WPA2, 802.1x, TKIP, and AES Encryption
- 2T x 2R MIMO technology
- XP/Vista/Win7 (32 and 64 bit), and Linux
- Operating temperature -10 ~ 65° C
- Atheros AR9280

Introduction

This module adopts MIMO technology with which effectively doubles the data rate and reduces dead spots in coverage area.

Introduction

This module is dual-band (2.4 GHz and 5 GHz) 2 x 2 MIMO PCIe design and targets enterprise and high-end products.

Packing List

Description	Quantity
802.11 b/g/n Full-size Mini PCIe Card	x 1

Packing List

Description	Quantity
802.11 a/b/g/n Full-size Mini PCIe Card (Dual-band: 2.4 and 5GHz)	x 1

Ordering Information

Part number	Specifications
WiFi-105E	802.11 b/g/n Full-size Mini PCIe Card

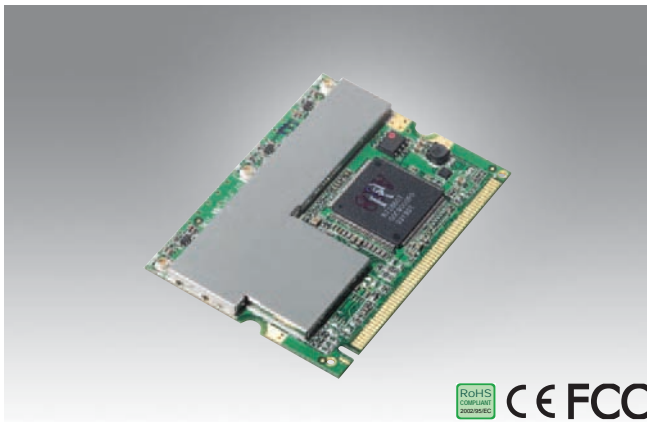
Ordering Information

Part number	Specifications
WiFi-109E	802.11 a/b/g/n Full-size Mini PCIe Card (Dual-band: 2.4 and 5GHz)

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/ EBX/ 5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

WiFi-110E

802.11 b/g/n Mini PCI Card



Features

- IEEE 802.11 b/g/n standards
- Mini PCI Type III B interface
- Up to 300 Mbps data rate
- Qos, WMM, WMM-PS
- 2T x 3R MIMO technology
- XP/Vista/Win7 (32 and 64bit), and Linux
- Operating temperature 0 ~ 55° C
- Ralink RT2860T

Introduction

The module features 2T x 3R MIMO technology with better throughput and receiving distance with effective elimination of dead spots.

Packing List

Description	Quantity
802.11 b/g/n Mini PCI Card	x 1

Ordering Information

Part number	Specifications
WiFi-110E	802.11 b/g/n Mini PCI Card

WiFi-112E

802.11 b/g/n Half-size Mini PCIe Card



Features

- IEEE 802.11 b/g/n Standard
- Up to 150 Mbps Data Rate
- 64/128 bit WEP, WPA, & WPA2 Encryption
- 1T x 1R
- XP/Vista/Win7 (32 and 64bit)
- Operating temperature 0 ~ 80° C
- Atheros AR9285

Introduction

WiFi-112E is compliant with IEEE 802.11 b/g/n standard. The PCIe Mini Card is a highly integrated WLAN solution that lets users enjoy digital content through the latest wireless technology.

Packing List

Description	Quantity
802.11 b/g/n Half-size Mini PCIe Card	x 1

Ordering Information

Part number	Specifications
WiFi-112E	802.11 b/g/n Half-size Mini PCIe Card

WiFi-118E

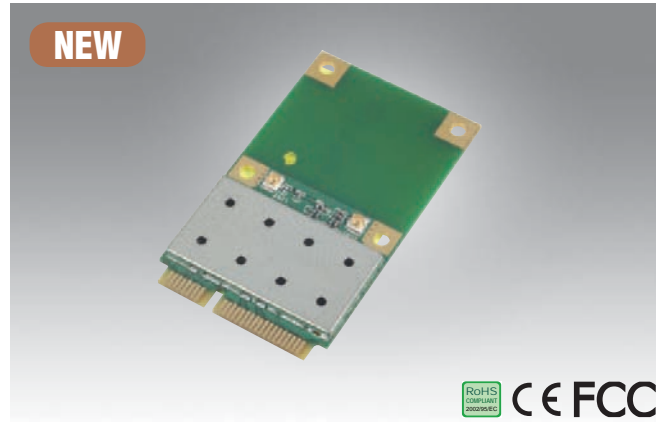
802.11 b/g/n Half-size Mini PCIe Card

EWM-W121F

802.11 b/g/n Full-size Mini PCIe Card



RoHS Compliant CE FCC



RoHS Compliant CE FCC

Features

- IEEE 802.11 b/g/n Standard
- Up to 300 Mbps data rate
- 64/128-bit WEP, WPA & WPA2 Encryption
- 1T x 2R MIMO Technology
- XP/Vista/Win7 (32 and 64bit), Linux, and WinCE 6
- Operating Temperature 0 ~ 80° C
- Ralink RT3091

Features

- 802.11 b/g/n Standard
- Up to 150 Mbps Data Rate
- 64/128 bit WEP, WPA, WPA2 Encryption
- 1T x 1R
- XP/Vista/Win7 (32 and 64bit)
- Operating temperature 0 ~ 80° C
- Atheros AR9285

Introduction

WiFi-118E is compliant with IEEE 802.11 b/g/n standard. The PCIe Mini Card is a highly integrated WLAN solution that lets users enjoy digital content through the latest wireless technology.

Introduction

EWM-W121F is compliant with 802.11 b/g/n standard. The PCIe Mini Card is a highly integrated WLAN solution that lets users enjoy digital content through the latest wireless technology.

Packing List

Description	Quantity
802.11 b/g/n Half-size Mini PCIe Card	x 1

Packing List

Description	Quantity
802.11 b/g/n Full-size Mini PCIe Card	x 1

Ordering Information

Part number	Specifications
WiFi-118E	802.11 b/g/n Half-size Mini PCIe Card

Ordering Information

Part number	Specifications
EWM-W121F01E	802.11 b/g/n Full-size Mini PCIe Card

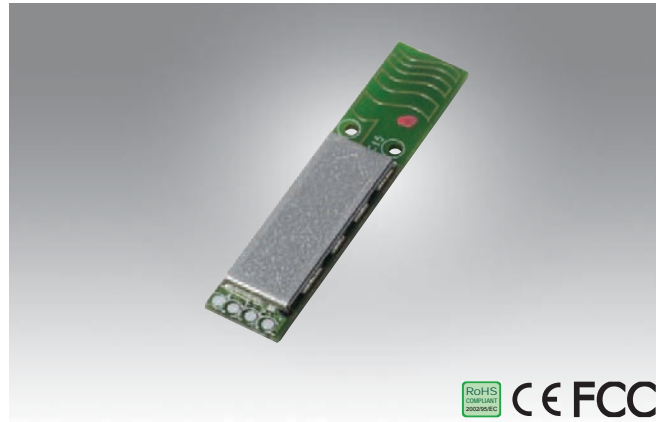
Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/ EBX/ 5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

EWM-W122H

802.11 b/g/n + Bluetooth 3.0 Half-size Mini PCIe Card

BT-101E

Embedded Bluetooth Module



Features

- IEEE 802.11 b/g/n + Bluetooth 3.0 HS Standard
- Up to 150 Mbps Data Rate
- 64/128 bit WEP, WPA, and WPA2 Encryption
- 1T x 1R
- XP/Vista/Win7 (32 and 64bit), and WinCE 5
- Operating temperature 0 ~ 80° C
- Ralink RT 3090BC4

Features

- Bluetooth v2.1 standard
- Enhanced Data Rate (EDR) of 2 Mbps and 3 Mbps
- Embedded PCB antenna
- Electrically compliant to USB 1.1/2.0 standards via 6-pin connector
- Ultra-low power consumption
- Slim module with 30 x 6.5 mm
- XP/Win7
- Operating temperature 0 ~ 80° C

Introduction

EWM-W122H is compliant with 802.11 b/g/n standard and also integrates Bluetooth technology for data and voice transfer between devices over a short distance.

Introduction

This module is Bluetooth 2.1 Class II which provides a high performance, cost effective, low power and compact embedded solution.

Packing List

Description	Quantity
802.11 b/g/n + Bluetooth 3.0 Half-size Mini PCIe Card	x 1

Packing List

Description	Quantity
6-pin Bluetooth v2.1 module	x 1

Ordering Information

Part number	Specifications
EWM-W122H01E	802.11 b/g/n + Bluetooth 3.0 Half-size PCIe Mini Card

Ordering Information

Part number	Specifications
BT-101E	6-pin Bluetooth v2.1 module

EWM-G107H

Embedded GPS/GALILEO Half-size Mini PCIe Card

NEW



Features

- 50-channel u-blox-5 engine with over 1 million effective correlators
- <1 second TTFF for Hot and Aided Starts
- -160dBm SuperSense® Indoor GPS acquisition and tracking sensitivity
- Receives GPS and GALILEO signals
- SBAS (WAAS, EGNOS, MSAS, GAGAN)
- PCI-Express Half Mini Card
- XP/Vista/Win7 (32 and 64bit)
- Operating temperature -40 ~ +85° C
- RoHS compliant
- Software NMEA Parser & API Support

Introduction

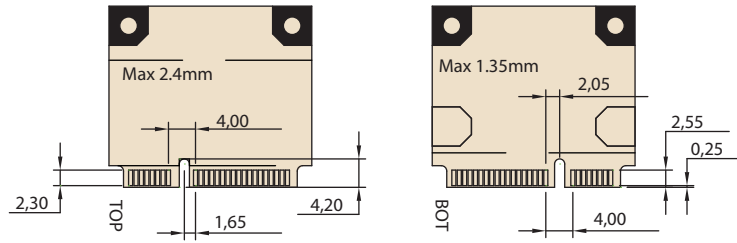
The EWM-G107H enables simple integration of GPS functionality into rugged tablet PCs, vehicle computers and similar handheld devices. The EWM-G107H is a ready-to-use solution, composed of a GPS chipset incorporated into a PCI Express Half-size Mini Card platform.

Specifications

Receiver Type	50 Channels GPS L1 frequency, C/A code GALILEO Open Service L1 frequency
Time-To-First-Fix	Cold Start 29 s
	Warm Start 29 s
	Hot Start < 1 s
Sensitivity	Tracking & Navigation -160 dBm
	Reacquisition -160 dBm
	Cold Start -144 dBm
Horizontal Position Accuracy	Autonomous < 2.5m
	SBAS < 2.0m
Accuracy of Time Pulse Signal	RMS 30ns
	Time Pulse Configurable $f = 0.25 \dots 999 \text{ Hz}$ ($T_p = 1/f - 1\text{ms}$)
Max Navigation Update Rate	< 4Hz
Velocity Accuracy	0.1 m/s
Heading Accuracy	0.5 degrees
Dynamics	< 4g
Operational Limits	Velocity 515 m/s (1000 knots)
Operating Temperature	-40 ~ +85° C

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/EBX/5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

Board Diagram



Packing List

Description	Quantity
Embedded GPS/GALILEO Half-size Mini PCIe Card	x 1

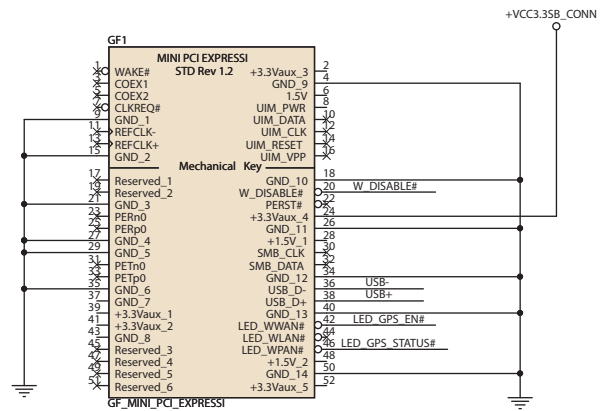
Ordering Information

Part Number	Specifications
EWM-G107H01E	Embedded GPS/GALILEO Half-size Mini PCIe Card

Optional Accessories

Part Number	Specifications
1750006120	GPS antenna 1575 Mhz, Antenna 4.5 dBi, LNA 28 dBi, Cubic antenna 4.3x3.5x1.6, RHCP and SMA male (MM)
1750005885	WiFi Coaxial Cable, 23 cm, and U.FL female/RP-SMA male

Pin Definitions



EWM-G107F

Embedded GPS/GALILEO Full-size Mini PCIe Card

NEW



Features

- 50-channel u-blox-5 engine with over 1 million effective correlators
- <1 second TTFF for Hot and Aided Starts
- -160dBm SuperSense® Indoor GPS acquisition and tracking sensitivity
- Receives GPS and GALILEO signals
- SBAS (WAAS, EGNOS, MSAS, GAGAN)
- PCI-Express Half Mini Card
- XP/Vista/Win7 (32 and 64bit)
- Operating temperature -40 ~ +85° C
- RoHS compliant
- Software NMEA Parser & API Support

Introduction

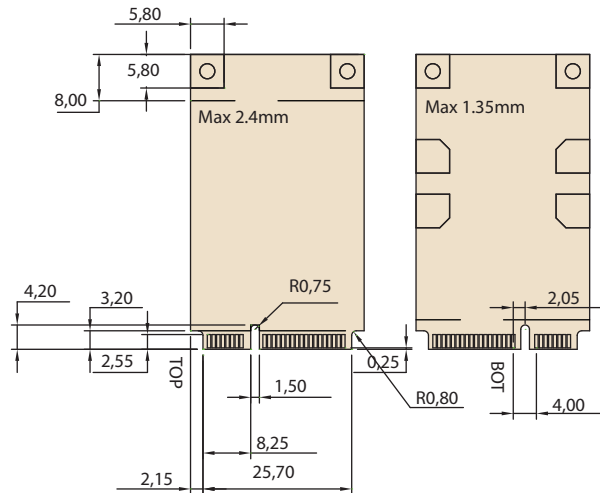
EWM-G107F enables simple integration of GPS functionality into rugged tablet PCs, vehicle computers and similar handheld devices. The EWM-G107F is a ready-to-use solution, composed of a GPS chipset incorporated into the PCI Express Full-size Mini Card platform.

Specifications

Receiver Type	50 channel GPS L1 frequency, C/A code GALILEO Open Service L1 frequency
Time-To-First-Fix	Cold Start 29 s
	Warm Start 29 s
	Hot Start < 1 s
Sensitivity	Tracking & Navigation -160 dBm
	Reacquisition -160 dBm
	Cold Start -144 dBm
Horizontal Position Accuracy	Autonomous < 2.5m
	SBAS < 2.0m
Accuracy of Time Pulse Signal	RMS 30ns
	Time Pulse Configurable $f = 0.25 \dots 999 \text{ Hz (} T_p = 1/f - 1\text{ms)}$
Max Navigation Update Rate	< 4 Hz
Velocity Accuracy	0.1 m/s
Heading Accuracy	0.5 degrees
Dynamics	< 4g
Operational Limits	Velocity 515 m/s (1000 knots)
Operating Temperature	-40 ~ +85° C

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/EBX/5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

Board Diagram



Packing List

Description	Quantity
Embedded GPS/GALILEO Full-size Mini PCIe Card	x 1

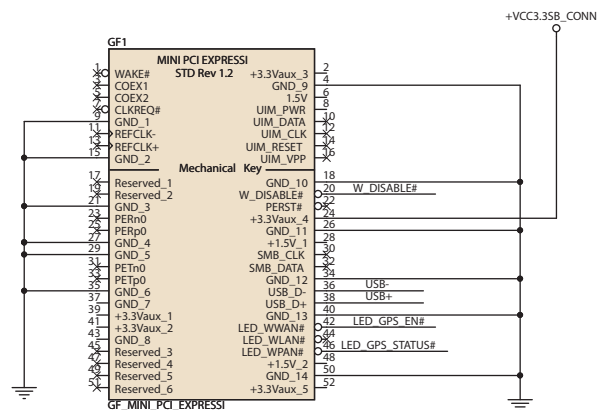
Ordering Information

Part Number	Specifications
EWM-G107F01E	Embedded GPS/GALILEO Full-size Mini PCIe Card

Optional Accessories

Part Number	Specifications
1750006120	GPS antenna 1575 Mhz, Antenna 4.5 dBi, LNA 28 dBi, Cubic antenna 4.3x3.5x1.6, RHCP and SMA male (MM)
1750005885	WiFi Coaxial Cable, 23 cm, and U.FL female/RP-SMA male

Pin Definitions

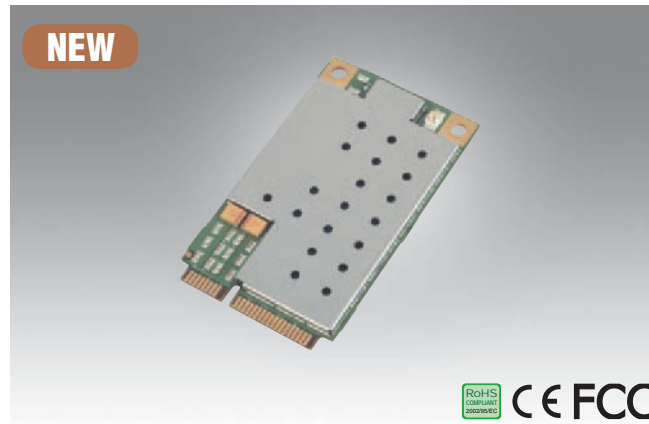
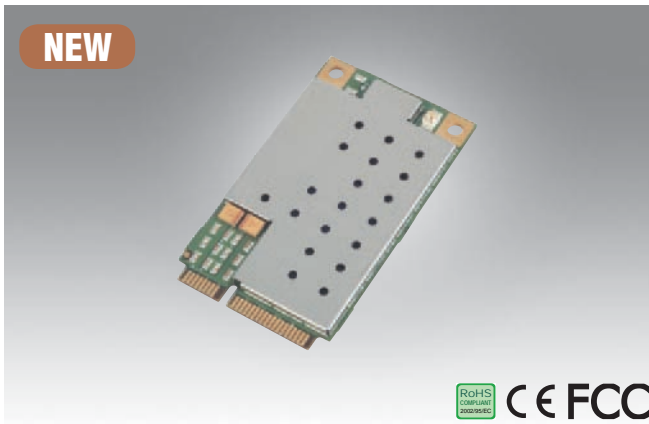


EWM-C103FD

HSDPA Full-size Mini PCIe Card

EWM-C104FT

HSDPA Full-size Mini PCIe Card



Features

- 900/2100 MHz WCDMA network
- 850/900/1800/1900 MHz for EDGE/GPRS/GSM network
- HSDPA Downlink: 3.6 Mbps, HSDPA Uplink: 384 Kbps
- Graphical connection manager
- XP/Win7/CE/Linux
- Operating temperature -20 ~ 70° C
- GCF, CE, FCC,

Features

- 850/1900/2100 MHz WCDMA network
- 850/900/1800/1900 MHz for EDGE/GPRS/GSM network
- HSDPA Downlink: 3.6 Mbps, HSDPA Uplink: 384 Kbps
- Graphical connection manager
- XP/Win7/CE/Linux
- Operating temperature -20 ~ 70° C
- GCF, CE, FCC, PTCRB, KCC

Introduction

EWM-C103FD enables the deployment of high-speed cellular networks and is designed to enhance industrial PCs with high-bandwidth, long-distance communication.

Introduction

EWM-C104FT module supports WWAN (HSDPA, WCDMA, and EGPRS) connectivity for any device with a PCI Express Full-size Mini Card slot.

Software Specifications

- Detect Carrier Information
- Connection/Disconnection
- Pin Number Key-in
- Logo Customization
- Signal Strength Detection

Software Specifications

- Detect Carrier Information
- Connection/Disconnection
- Pin Number Input
- Logo Customization
- Signal Strength Detection

Packing List

Description	Quantity
HSPA Full-size Mini PCIe Card	x 1

Packing List

Description	Quantity
HSPA Full-size Mini PCIe Card	x 1

Ordering Information














Part Number	Specification
EWM-C103FD01E	HSDPA Full-size Mini PCIe Card

Order Information

Part number	Specifications
EWM-C104FT01E	HSDPA Full-size Mini PCIe Card

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/ EBK/ 5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9

Antenna & Cables Selection Table

Part Number	Frequency	Antenna Gain	Length (cm)	Polarization	Connector
 1750005865	Cellular dipole antenna 900/1800/1900 MHz	- 10 ~ - 6dBi @ 824 ~ 960 MHz - 8 ~ + 1dBi @ 1710 ~ 2170 MHz	10.9±0.2	Linear	SMA male (MM)
 1750006119	Cellular dipole antenna 900/1800/1900 MHz	2.0 ± 0.7dBi @ 900 MHz 2.0 ± 0.7dBi @ 1900 MHz	16.95±0.3	Linear	SMA male (MM)
 1750000820	Notebook WiFi embedded antenna 2.4GHz	2.0 ± 0.7dBi @ 2450 MHz	antenna 3.9 wire-1 15.5 wire-2 35.5	Linear	U.FL female
 1750000900	Notebook WiFi embedded antenna 2.4GHz	2.0 ± 0.7dBi @ 2450 MHz	antenna 3.9 wire-1 25 wire-2 39	Linear	U.FL female
 1750000318	WiFi dipole antenna 2.4GHz	2.0 ± 0.5dBi @ 2450 MHz	10.9 ± 0.2	Linear	RP-SMA male
 1750003418	WiFi dipole antenna 2.4GHz	change 0.5dBi to 0.7dBi	39.4 ± 0.4	Linear	RP-SMA male
 1750002842	WiFi Dual band antenna 2.4GHz and 5GHz	2.5 ± 0.7 dBi @ 2400 MHz 1.0 ± 0.7 dBi @ 2500 MHz 1.5 ± 0.7 dBi @ 4900 MHz 0.5 ± 0.7 dBi @ 5900 MHz	10.9 ± 0.2	Linear	RP-SMA male
 1750005866	Cellular/ GPS Coaxial Cable	-	10	-	U.FL female/ SMA female
 1750005885	WiFi Coaxial Cable	-	23	-	U.FL female/ RP-SMA female
 1750006009	Cellular/ GPS Coaxial Cable	-	25	-	U.FL female/ SMA female
 1750006010	WiFi Coaxial Cable	-	20	-	U.FL female/ RP-SMA female
 1750006043	WiFi Coaxial Cable	-	15	-	U.FL female/ RP-SMA female
 1750006120	GPS antenna 1575MHz	Antenna 4.5 dBi LNA 28 dBi	Cubic antenna 4.3x3.5x1.6 wire length:500	RHCP	SMA male (MM)



Embedded Touch Modules

NEW



NEW



Selection Guide

Model Name	ETM-RES02C	ETM-SAW01C
Touch Technology	Resistive type, Single Touch	Surface Acoustic Wave type, Single Touch
Interface	USB & RS-232	USB & RS-232
Interface Connector	USB Port: 2.0 mm, 4-pin, male header RS-232 Port: 2.0 mm, 4-pin, male header Power Port: 2.0 mm, 2-pin, male header	MOLEX 53505-2090, 1.25 mm, 20-pin
Supported Touchscreen Type	4-wire: 1.0 mm, 4-pin, FPC type, double contact type 5-wire: 2.54 mm, 5-pin, male header 5-wire: 2.0 mm, 8-pin, male header	Mounted male header, 1.0 mm, 2x6-pin LIF type, 10-pin
Operating Temperature	-20 to +85°C	0 to +65°C
Storage Temperature	-40 to +85°C	-25 to +85°C
Software Add-on Features		
TouchWare	Yes	Yes
Reference Page	9-1	9-1

Software Features



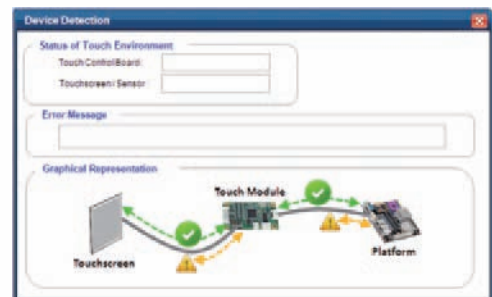
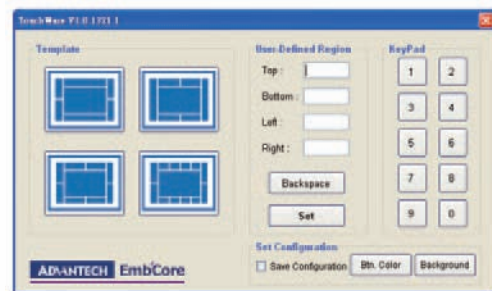
Device Detection can detect the status of the Touch control board and Touchscreen. This function will forward the abnormal status conditions of the touch system to a service site.



Hot Key Definition can divide the screen into segments or frames, and provides four default templates for easy to use.



Screen Configuration can define the function into each segment or frames, with the ability to be individually configured to function as the user wants.



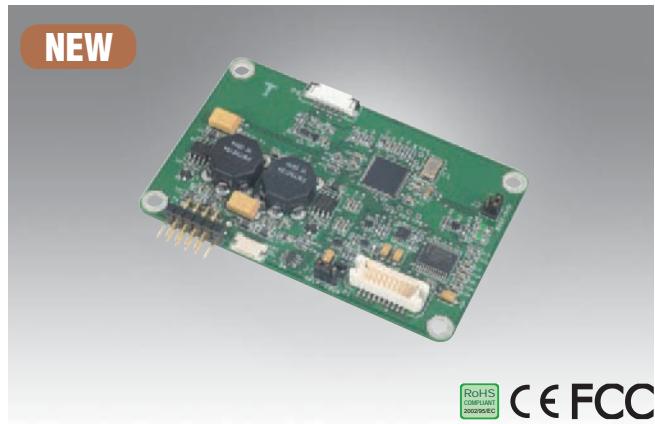
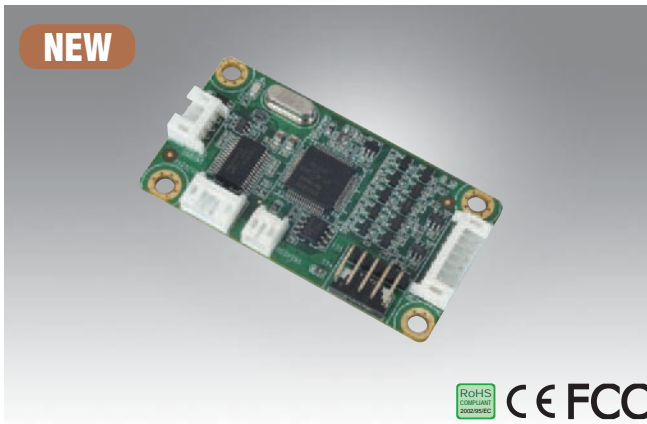
ETM-RES02C

Resistive Touch Control Board

ETM-SAW01C

Surface Acoustic Wave Touch Control Board

Computer On Modules	1
MIO Extension SBCs	2
PC/104 CPU Modules	3
3.5" SBCs	4
EPIC/ EBK/ 5.25" SBCs	5
Industrial Motherboards	6
Industrial Storage Modules	7
Embedded Wireless Modules	8
Embedded Touch Modules	9



- ### Features
- Resistive touch technology, supports 4/5-wire touchscreen
 - USB & RS-232 interface
 - Quick conversion time approximately 10 ms
 - High resolution support to 4096 x 4096
 - TouchWare, touch software package

- ### Features
- Surface Acoustic Wave touch technology
 - USB & RS-232 interface
 - Quick conversion time approximately 10 ms
 - High resolution support to 4096 x 4096
 - TouchWare, touch software package

Specifications

Touch Technology	Resistive type
Host Site Interface	USB: Conforms to USB 1.1 RS-232 serial: 8 data bits, 1 stop bit, no parity, and full duplex.
Communication Baud Rate	9,600 (default) and 19,200
Host Site Connector	USB Port: 2.0 mm, 4-pin, male header RS-232 Port: 2.0 mm, 4-pin, male header Power Port: 2.0 mm, 2-pin, male header
Touchscreen Connector	4-wire: 1.0 mm, 4-pin, FPC type, double contact type 5-wire: 2.54 mm, 5-pin, male header 5-wire: 2.0 mm, 8-pin, male header
Supported Voltage and Current	+ 5.0 V, 500 mA
Touch Resolution	4096 x 4096, Size independent
Conversion Time	Approximately 10 ms per coordinate set
LED Status	Touch activated LED indicator
Temperature Ranges	Operating: -20 to +85° C Storage: -40 to +85° C
MTBF	> 4,000,000 hours
Vibration & Shock	Three axis sine wave, 5 ~ 500 Hz, 3.5 G, 2 minutes/ Octave with dwell on resonances
Dimensions (L x W x H)	62 x 33 x 10.26 mm

Ordering Information

Part No.	Product Description
ETM-RES02C-ADH3EE	Touch Control Board, Horizontal, 4/5-wire RES, -20 ~ +85° C

Specifications

Touch Technology	Surface Acoustic Wave type
Host Site Interface	USB: Conforms to USB 1.1 RS-232 serial: 8 data bits, 1 stop bit, no parity, and full duplex.
Communication Baud Rate	9,600 (default) and 19,200
Host Site Connector	MOLEX 53505-2090, 1.25 mm, 20-pin
Touchscreen Connector	Mounted male header, 1.0 mm, 2 x 6-pin LIF type, 10-pin
Supported Voltage and Current	+ 5.0 V, 500 mA
Touch Resolution	4096 x 4096, Size independent
Conversion Time	Approximately 10 ms per coordinate set
LED Status	Touch activated LED indicator
Temperature Ranges	Operating: 0 to +65° C Storage: -25 to +85° C
MTBF	> 1,543,000 hours
Vibration & Shock	Three axis sine wave, 50 ~ 2 KHz, 1G, 2 minutes/ Octave with dwell on resonances
Dimensions (L x W x H)	83.82 x 53.3 x 10.16 mm

Ordering Information

Part No.	Product Description
ETM-SAW01C-ELH0CE	Touch Control Board, Horizontal, SAW, 0 ~ +65° C



Product Index

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