

AMD-Based Platforms

- Cloud Platforms
- HPC / GPU Platforms
- Embedded & SMB Platforms







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www.tyan.com



Specifications are subject to change without notice. Items pictured may only be representative.



To be the leader in providing servers, technical workstations and supercomputer clusters through worldwide channels.



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♦ About TYAN

Created in 1989, TYAN designs, manufactures and markets advanced x86 server/workstation platforms. TYAN's products are sold to OEMs, VARs, System Integrators, and Resellers around the world for a wide range of applications. As a leading server brand asset owned by MiTAC International Corporation, TYAN is to be deeply enhanced and further developed through the synergy and innovation of the new MiTAC.

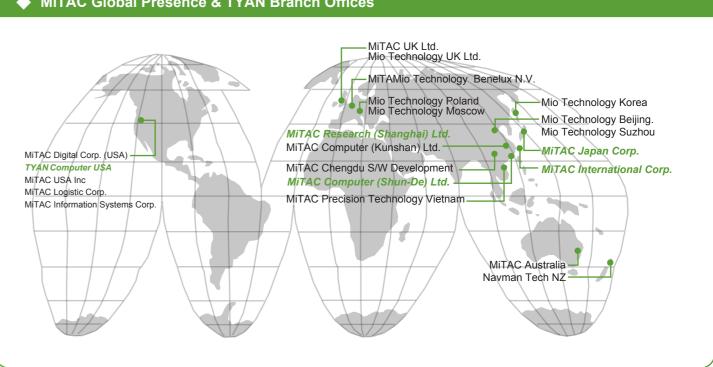
Products from TYAN feature design enhancements specifically developed for enterprise computer room and data center environments. These highly stable, space-efficient products are very attractive to OEMs and System Integrators designing next generation rackmount server solutions for a wide array of applications.

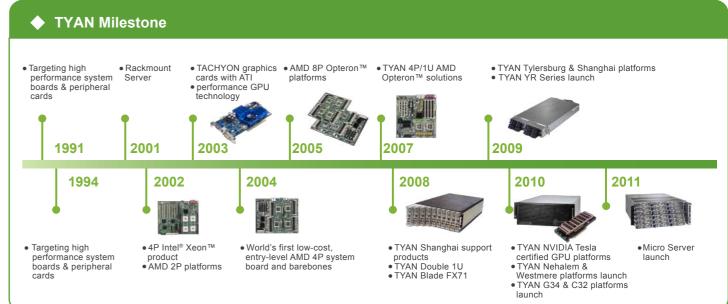
With design and engineering centers located in the U.S., China, and Taiwan, TYAN holds a distinct advantage over the competition. TYAN's engineers are well-positioned to assist customers with the development of tailored solutions that meet their requirements. Customers are assured that TYAN products meet the highest quality and reliability standards available.

TYAN enables its customers to be technology leaders by providing scalable, highly-integrated, reliable platforms for a wide range of applications such as high-end server and workstation usage in markets such as CAD, DCC, E&P and HPC. TYAN's time-to-market strategies and cutting-edge engineering processes distinguish them from the competition. Many TYAN customers have had their TYAN-based products recognized within their industries, garnering a multitude of distinguished awards.

♦ Recent	t Wins on the 1	TOP 500
Jun. 2010	#19 of Top 500	8.5 Mole, IPE, CAS, China
Nov. 2008	#10 of Top 500	Dawning 5000A, Dawning, China
Jun. 2008	#16 of Top 500	T2K Open Supercomputer , Hitachi, Japan
Jun. 2006	#34 of Top 500	PACS-CS, Hitachi-Fujitsu, Japan
Jun. 2004	#10 of Top 500	Dawning 4000A, Dawning, China

MITAC Global Presence & TYAN Branch Offices







TZANO **AMD-BASED CLOUD PLATFORMS**

he majority of cloud computing infrastructure consists of reliable services delivered through data centers and built on lots of servers. Data centers have to install, operate, and manage huge number of servers so the topics of server density, power-efficiency, and serviceability are heavily emphasized. TYAN provides a full array of cloud platforms offering scalability, reliability, remote management ability and high performance that is designed for Cloud Computing environments.



Micro Serve Computing Node

Yellow River Computing Node



The TYAN Micro Server provides high-reliability and scalable performance with 18 removable front-loaded compute nodes, and redundant (2+1) hot-swap power supplies. Each individual node supports a AMD Athlon II X4 / X2 Processors, up to 32 GB of un-buffered ECC DDR3 memory, and two 2.5" SSD or HDD drives. Each node has 1 G-bit network port and features IPMI 2.0 support for out-of-band and remote management.

Higher Density Could Platforms TYAN Yellow River Series

The TYAN Yellow River Series is an ultra high density twin server platform that featured with scalable, modular, space effective, manageable, efficient, flexibility and fast through put.



Cloud Platform – Lower Power & Higher Density

FM65-B8001 B8001F65X18-160V2R



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Most Cost-Effective, High-Density Server Platform for IPDC

• 4U with eighteen (18) front swappable blades

• Up to 32GB main memory supported in single-socket server platform (2+1) hot-swappable redundant, 80-PLUS Platinum rated RPSU for all blades

Model Number	FM65-B8001		
Enclosure Form Factor	4U (27.5" in depth) / 18 Nodes		
Supported CPU (per node)	 (1) AMD 45nm Quad-Core Opteron[™] 1300 Series Processors (Budapest / Suzuka) 		
Chipset (per node)	AMD SR5650 + SP5100		
Number of DIMM Slot (per node)		4	
Memory Type (max. capacity) (per node)	U-DDR3 1333/1066 w/ ECC (32GB)		
Storage Controller		2-port SATA-II	
Networking (per node)	Max. (2) GbE		
RAID Support	RAID 0/1/10		
Multimedia Drive		N/A	
Standard Model		Storage Backplane	Power Supply
B8001F65X18-160V2R	(2) fixed 2.5" SATA-II	N/A	1600W (2+1) RPSU

Cloud Platform – Higher Density



(4) Hot-swap SATA-II (1) 4-port SAS/ SATA-II (1) ERP1U 300W (per node) (per node) (per node) B8028Y190X2-030V4H

Lower Power & Higher Density Cloud Platforms



Cloud Platform – Higher Density



TAN AMD-BASED HPC / GPU PLATFORMS



The TYAN HPC / GPU Intensive Server Platforms are designed for the high performance computing and massive parallel computing environments. These solutions provide superior parallel computing capability and are designed to deliver scalability, reliability and the best price/performance to support complicated computational applications.

Target Applications

- Bio-informatics and Life Sciences,
- Computational Chemistry, Computational Electromagnetics and Electrodynamics

- Computational Finance and Computational Fluid Dynamics
- Data Mining, Analytics and Databases
- Computer Vision, MATLAB Acceleration and Medical
- Imaging, Molecular Dynamics, Weather and Atmospheric
 Ocean Modeling and Space Sciences

Unique GPU Platform Benefits

Support AMD Opteron[™] 4100/6100 Series Processors (Lisbon / Magny-Cours)
Support GPU computing processors
Over 2 Teraflops of Double Precision Performance
Up to 3,584 for massively parallel computing performance
Unique GPU platform design with increased energy efficiency
Optimized design reduces rack space requirements
Cost Effective – Up to 8 GPU computing processors in a 4U system



Number of DIMM Slot	32/ (8+8+8+8)		
Memory Type (max. capacity)	R-DDR3 1333/1066/800 w/ ECC (256GB) U-DDR3 1333/1066 w/ ECC (128GB)		
Storage Controller	LSI SAS2008 SAS 6G		
RAID Support	RAID 0, 1, 1E, 10		
Multimedia Drive	N/A		
Networking		(3) GbE	
PCI Expansion Slots	 (1) FH/FL PCI-E Gen.2 x16 slot (w/ x16 or x8 link) (1) FH/FL PCI-E Gen.2 x8 slot (w/ x0 or x8 link) (2) FH/FL PCI-E Gen.2 x8 slots 		
Standard Model	Number of HDD Bay	Storage Backplane	Power Supply
B8812F48W8HR	(8) Hot-Swap SAS/SATA-II	(2) 4-port SAS/ SATA	1540W (2+1) RPSU



S8812	
29912WCM2ND	

Processor	 Quad G34 sockets support AMD Opteron[™] 6100 series
	processors (Magny-Cours)
	 AMD Opteron[™] Next-Gen processors
Chipset	AMD SR5690 + SP5100
Memory	(8+8+8+8) DDR-III DIMM slots
	· Support up to 512GB of R-DDR3 1333/1066/800 w/ ECC memory
	· Support up to 128GB of U-DDR3 1333/1066 w/ ECC memory
Expansion	 (1) PCI-E Gen.2 x16 slot (w/ x16 or x8 link)
	 (1) PCI-E Gen.2 x8 slot (w/ x0 or x8 link)
	 (2) PCI-E Gen.2 x8 slots
Storage	• (1) SATA-II 3.0 Gb/s
	· (8) SAS 6G ports w/ RAID 0, 1, 1E, 10 support (LSI SAS2008)
Network	(3) GbE (via Intel® dual-port 82576EB and Intel® 82574L)
Video	ASPEED AST2050 Integrated graphics
Managemen	t · ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	• MEB (16.2" x 13", 411.48mm x 330mm)

GN70-B8 B8236G70W8HR-HE	236-HE 🔛 🌆 🐼 🐼
Model Number	GN70-B8236-HE
Enclosure Form Factor	2U (27.56" in depth)
Supported CPU	(2) AMD Opteron™ 6100 Series (Magny-Cours) AMD Opteron™ Next-Gen processors
Chipset	AMD SR5690 + SR5650 + SP5100
Chipset Interconnection	HyperTransport [™] Link 3.0
Number of DIMM Slot	16/ (8+8)
Memory Type (max. capacity)	R-DDR3 1333/1066/800 w/ ECC (256GB) U-DDR3 1333/1066 w/ ECC (64GB)
Storage Controller	LSI SAS2008 SAS 6G
RAID Support	RAID 0, 1, 1E, 10
Multimedia Drive	(opt.) Slim DVD-ROM
Networking	(3) GbE
PCI Expansion Slots	(2) FH/FL PCI-E Gen.2 x16 slots (for 2x GPU installation) (2) FH/HL PCI-E Gen.2 x8 slots
Standard Model	Number of HDD Bay Storage Backplane Power Supply
B8236G70W8HR-HE	(8) Hot-swap SAS 8-port SAS/ SATA 770W (1+1) RPSU

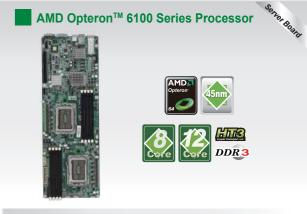


S8232 S8232WGM4NR / S8232WAG2NRF-LE

Processor	 Dual G34 sockets support AMD Opteron [™] 6100 series processors (Magny-Cours)
	AMD Opteron [™] Next-Gen processors
0 1 · · ·	· _ · _ · _ · _ · _ · _ · _ · _
Chipset	· AMD (2) SR5690 + SP5100
Memory	(12+12) DDR-III DIMM slots
	Support up to 256GB of R-DDR3 1333/1066/800 w/ ECC memory
	 Support up to 64GB of U-DDR3 1333/1066 w/ ECC memory
Expansion	(4) PCI-E Gen.2 x16 slots
	 (2) PCI-E Gen.2 x 8 slots (w/ x4 link)
	(1) PCI 32/33MHz slot
Storage	· (6) SATA-II connectors running at 3.0 Gb/s w/ RAID 0, 1, 10, 5
-	support
	· (8) SAS 6G ports w/ RAID 0, 1, 1E, 10 support (LSI SAS2008)
Network	 (4) GbE (via two Intel[®] dual-port NIC 82576EB)
Video	ASPEED AST2050 Integrated graphics
Audio	Realtek ALC262 audio CODEC
Firewire	VIA VT6308P 1394a controller
Managemen	t · ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	• MEB (16.2" x 13", 411.48mm x 330mm)
Form Factor	

* For SATA Version or workstation Version, Please Visit TYAN Website for more information.







• Dual G34 sockets support AMD Opteron™ 6100 HE Processor series processors (Magny-Cours) AMD Opteron[™] Next-Gen processors Chipset AMD SR5670+SP5100 Memory (4+4) DDR3 DIMM slots Suport up to 128GB of Registered DDR-3 1333/1066/800 w/ ECC Memory • R-DDR3 1600/1333/1066/800 w/ECC (128GB) Memory Type • U-DDR3 1600/1333/1066 w/ ECC (128GB) (max. capacity) • (1) PCI-E Gen. 2 x 16 Expansion (4) SATA-II ports running at 3.0 Gb/s w/ RAID 0, 1, 10, 5 Storage support · (2) GbE (via 2x Intel 82574)(1) QSFP port/ Mellanox Network ConnectX-2 MT25418B0-FCCR-QIS Video · ASPEED AST 2050 Integrated graphics ASPEED AST 2050 (IPMI v2.0 compliant w/ iKVM) Management • TYAN SFF (6.3" x 18", 160mm x 457.2mm) Form Factor

TAN AMD-BASED SMB PLATFORMS

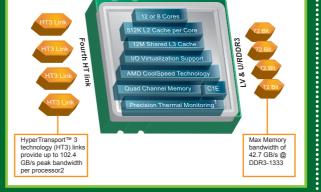
YAN provides various platforms that built for SMB (Small and Medium Business) environments. Featuring with affordable, simple set-up, easy management and fitting in industry standard operation systems, TYAN products are the ideal platforms for small and remote office, entry-lever server, and rack mount server room.



The AMD Opteron[™] 6100 Series Processor

The AMD Opteron $^{\rm TM}$ 6100 Series platform, offering the industry's only twelve-core x86 processor. Built to excel when the workload gets tough.

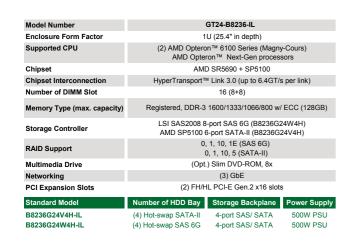




1U Server









S8236-IL S8236GM3NR-IL / S8236WGM3NR-HE-IL (BTO)

Processor	 Dual G34 sockets support AMD Opteron[™] 6100 series
	processors (Magny-Cours)
	 AMD Opteron[™] Next-Gen processors
Chipset	 AMD SR5690 + SP5100
	· AMD SR5690 + SR5650 + SP5100 (S8236WGM3NR-HE-IL)
Memory	(8+8) DDR-3 DIMM slots
	 Support up to 128GB of Registered DDR-3
	1600/1333/1066/800 w/ ECC memory
Expansion	 (2) PCI-E Gen.2 x16 slots (S8236GM3NR/
	S8236WGM3NR-IL)
	 (3) PCI-E Gen.2 x16 slots (S8236WGM3NR-HE-IL)
Storage	(6) SATA-II ports by (1) mini-SAS connector and (2) SATA
	connectors running at 3.0 Gb/s w/ RAID 0, 1, 10, 5 support
	· (8) SAS 6G ports by (2) mini-SAS connectors w/ RAID 0, 1,
	10, 1E support (S8236WGM3NR/S8236WGM3NR-HE-IL)
Network	 (3) GbE (via Intel[®] dual-port 82576EB and Intel[®] 82574L)
Video	ASPEED AST2050 integraed graphics
Management	 ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	 Extended ATX (12" x 13", 305mm x 330mm)

1U Server





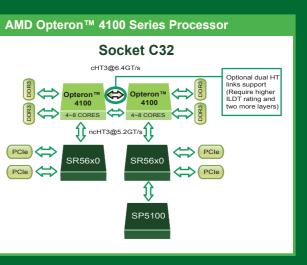


Model Number	GT24-B8226		
Enclosure Form Factor	1U (25.4" in depth)		
Supported CPU	(2) AMD O	pteron™ 4100 Series (Li	sbon)
Chipset	AN	ID SR5690 + SP5100	
Chipset Interconnection	HyperTransport	™ Link 3.0 (up to 6.4GT	/s per link)
Number of DIMM Slot		12 (6+6)	
Memory Type (max. capacity)	Registered, DDF	R-3 1333/1066/800 w/ E0	CC (96GB)
Storage Controller	LSI SAS2008 8-port SAS 6G (B8226G24W4H) AMD SP5100 6-port SATA-II (B8226G24V4H)		
RAID Support	0, 1, 10, 1E (SAS 6G) 0, 1, 10, 5 (SATA-II)		
Multimedia Drive	(Opt.) Slim DVD-ROM, 8x		
Networking	(3) GbE		
PCI Expansion Slots (2) FH/HL PCI-E Gen.2 x16 slots		ts	
Standard Model	Number of HDD Bay	Storage Backplane	Power Supply
B8226G24V4H	(4) Hot-swap SATA-II	4-port SAS/ SATA	500W PSU
B8226G24W4H	(4) Hot-swap SAS 6G	4-port SAS/ SATA	500W PSU

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The AMD Opteron[™] 4100 Series Processor

The AMD Socket C32 is the server processor socket for AMD's single-CPU and dual-CPU Opteron™ 4100 series CPUs.





S8225

S8225WAGM4NRF / S8225AGM4NRF

Processor	 Dual C32 sockets support AMD Opteron[™] 4100 series processors (Lisbon)
Chipset	AMD (2) SR5690 + SP5100
Memory	(4+4) DDR-III DIMM slots
	Support up to 128GB of R-DDR3 1333/1066/800 w/ ECC memory
	Support up to 32GB of U-DDR3 1333/1066 w/ ECC memory
Expansion	 (4) PCI-E Gen.2 x16 slots
	 (1) PCI-E Gen.2 x8 slot (x4 link)
	 (1) PCI-E Gen.2 x4 slot
	 (1) PCI 32/33MHz slot
Storage	(6) SATA-II connectors running at 3.0 Gb/s w/ RAID 0, 1, 10, 5
	support
	 (8) SAS 6G ports w/ RAID 0, 1, 1E, 10 support (LSI SAS2008)
Network	· (4) GbE (via Intel® dual-port NIC 82576EB and two Intel® 82574L)
Video	ASPEED AST2050 Integrated graphics
Audio	Realtek ALC262 audio CODEC
Firewire	VIA VT6308P 1394a controller
Management	 ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	• EATX (12" x 13", 305mm x 330mm)

TYAN () AMD-BASED EMBEDDED PLATFORMS









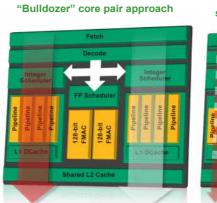




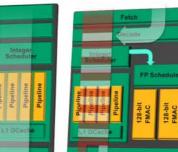
- No platform transitions are required for the first "Bulldozer" products
- "Bulldozer" dynamically switches between shared and dedicated components to maximize performance per watt
- New "Bulldozer" instructions including SSSE3, SSE 4.1, SSE 4.2, AES, XSAVE, AVX, FMAC, XOP and more
- "Bulldozer" adds Flex FP: the world's ONLY flexible 256-bit FPU
- "Bulldozer" has Turbo CORE: The industry's BEST full-core boost
- "Bulldozer" technology provides up to 50% memory throughput increase compared to current products with LR-DIMM and LV-DDR3 support and new memory management features
- "Bulldozer" results in unprecedented performance gains: up to 50% more throughput in the same power and thermal envelope as today's 12-core AMD Opteron[™] processors

Today's TYAN G34 and C32 platforms are ready for "Bulldozer" technology!

AMD's New Bulldozer Core Delivering Better Scalability for Multithreading



Hyperthreaded, single-core approach





Embedded AMD Athlon[™] II XLT Processors Embedded AMD AMD Phenom[™] II XLT Processors





S8005 S8005WAGM2NR / S8005AGM2NR / S8005GM2NR-LE

Processor	 Single AM3 socket support AMD Athlon ™ II XLT & AMD Phenom[™] II XLT processors
Chipset	 AMD SR5670 + SP5100 (S8005WAGM2NR/ S8005AGM2NR)
	 AMD SR5650 + SP5100 (S8005GM2NR-LE)
Memory	(4) DDR-III DIMM slots
	 Support up to 16GB of Un-buffered DDR-3 1333/1066
	 (1) PCI-E Gen.2 x16 slot
Expansion	 (1) PCI-E Gen.2 x8 slot (S8005WAGM2NR/ S8005AGM2NR)
	 (2) PCI 32/33MHz slots
Storage	· (4) SAS connectors running at 3.0 Gb/s w/ RAID 0, 1, 10
	support (S8005WAGM2NR)
	· (6) SATA-II connectors running at 3.0 Gb/s w/ RAID 0, 1, 10
	support
Network	 (2) GbE (via 2x Intel[®] 82574L)
Audio	 Realtek ALC262 audio CODEC (S8005WAGM2NR/
	S8005AGM2NR)
TPM	Infineon SLB9635 (TPM v1.2)
Video	ASPEED AST2050 Integrated graphics
Managemen	t · ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	r · ATX (12" x 9.6", 305mm x 243.8mm)

Ready for "Bulldozer"



- Adopting the latest AMD technology
- Available with customized features, BOM enhancement or modified designs
- Platforms designed to meet high reliability, safety and environmental requirements
- Lower-power consumption options available • Designed for continuous operation (7x24x365)
- Designed for longer operational life cycle (7+ years)
- Platforms and CPU longevity aligned for embedded use
- JTAG header option available for use with SAGE Engineering's integrated software development and debug tool

The Benefits of TYAN's AMD Based Embedded Platforms

Embedded AMD Opteron[™] 4100 Series Processors





S8010 S8010GM2NR / S8010WGM2NR / S8010G2NR-LE

Processor	 Single C32 socket support AMD Opteron[™] 4100 series processors (Lisbon)
Chipset	 AMD SR5670 + SP5100
	 AMD SR5650 + SP5100(-LE SKU)
Memory	(6) DDR-III DIMM slots
	 Support up to 48GB of R-DDR3 1333/1066/800 w/ ECC memory
	Support up to 16GB of U-DDR3 1333/1066 w/ ECC memory
Expansion	 (1) PCI-E Gen.2 x16 slot (x8 link)
	 (2) PCI-E Gen.2 x8 slot (x8 link)(-LE SKU w/o one slot)
	 (1) PCI 32/33MHz slot
Storage	 (6) SATA-II 3.0 Gb/s w/ RAID 0, 1, 10, 5 support
	 (8) SAS 6G ports w/ RAID 0, 1, 1E, 10 support (LSI SAS2008)
Network	 (2) GbE (via Intel[®] Intel[®] 82574L)
	 (1) BMC Port (via Broadcom BCM5221)
Video	ASPEED AST2050 Integrated graphics
Managemen	t · ASPEED AST2050 (IPMI v2.0 compliant w/ iKVM)
Form Factor	 ATX (12" x 9.6", 305mm x 244mm)

Ready for "Bulldozer"