SUPERMICRO®

SuperBlade®

Lower TCO than 1U Servers

TwinBlade™

DatacenterBlade™

OfficeBlade™ and Storage Blade

4-way Blade

TwinBlade w/ Two 2.5" Hot-plug Drive Bays per DP node

2-way Intel Processor Blade w/ Six 2.5" Hot-plug Drive Bays

2-way AMD Processor Blade w/ Two 3.5" Hot-plug Drive Bays

4-way AMD Processor Blade

Layer 3 1/10GbE switch

40Gb InfiniBand switch

Chassis Management Module Web-based GUI

CMM IPMI View

Highest Performance per Watt

Up to 40 Processors (240 cores) per 7U Enclosure

Up to 94% Power Efficiency

- Quad-Core Intel® Xeon® DP and Six-Core AMD Opteron® DP/MP
- Up to 20/14/10 server blades
- Six enclosures per 42U standard rack
- High Efficiency N+1 redundant power supplies (100~240VAC Option)
- Chassis management modules
- 1GbE/10GbE Layer 2/3 switch modules
- 40Gb/20Gb InfiniBand switch modules

Application-Optimized for:

Enterprises, Financial Services, Databases, Datacenters, Research Labs, High Performance Computing, Offices

November, 2009

Why SuperBlade®?

Best Density
Up to 40 processors (240 cores) per 7U enclosure
Supports current and next generation processors

Highest Memory Expansion Capability in the Industry
Up to 1.28TB memory in 10 blades per 7U enclosure

Fastest and Most Cost-Effective Networking Solution
20Gbps 4x DDR InfiniBand switch
40Gbps 4x QDR InfiniBand switch
1/10GbE switch - layer 2/3 switch with 3 10Gb uplink ports
1GbE switch - layer 2 switch with 10 external uplink ports
1GbE and 10GbE pass-through modules
Full 10GbE switch coming soon

High Efficiency Power for Earth-Friendly Operations
Up to 94% peak efficiency for 2500W power supply modules
N+1 redundant high efficiency power supplies in - 1620W, 2000W or
2500W options

Outstanding Storage Flexibility
Hot-plug 6Gb/s SAS or 3Gb/s SATA
Two 3.5" SATA hard drive support
Up to six 2.5" SAS(2)/SATA hard drive support
RAID 0, 1, 5, 10, 50, 60 options (for SBI-7125W-S6)

Peace of Mind via Remote Management
Standard with a chassis management module (CMM) for
IPMI 2.0 remote server management, Virtual media over LAN and
KVM over IP capabilities

Lower TCO
Modular design reduces deployment costs
High computational density reduces facility costs
High efficiency power supply reduces electrical costs
Cable reduction reduces cable count and can save thousands of dollars
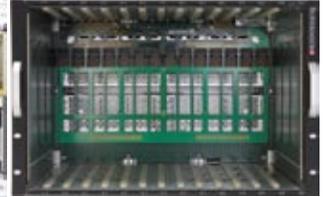Remote management reduces maintainance cost

The New TwinBlade!

SuperBlade® Enclosures and Cabinet

* SBE-710E Shown

* SBE-714D Shown

Part ID	SBE-710E/Q Series	SBE-714D/E Series
Server Blade	Up to 10 hot-plug server blades	Up to 14 hot-plug server blades
Module Support	Supports both Intel and AMD based blades	Supports Intel based blades
LED	Power LED, Fault LED	Power LED, Fault LED
InfiniBand Switch	Hot-plug 4x DDR IB switch (710E) or up to two hot-plug 4x QDR IB switch (710Q)	Hot-plug 4x DDR IB switch (714E only)
Gigabit Ethernet Switch	Up to two hot-plug Gigabit Ethernet switches or pass-through modules	One (714D) or up to two (714E) hot-plug Gigabit Ethernet switches or pass-through modules
Management Module	Up to two hot-plug management modules providing remote KVM and IPMI 2.0 functionalities	One (714D) or up to two (714E) hot-plug management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swap 1620W/2000W power supplies, N+1 redundant	Hot-swap 1620W power supplies, N+1 redundant
Cooling Design	Front to back	Front to back
Dimensions (HxWxD)	12.2" x 17.6" x 29"	12.2" x 17.6" x 29"

NEW! TwinBlade Enclosure

Part ID	SBE-720E Series
Server Blade	Up to 10 hot-plug server blades and TwinBlade
Module Support	Supports both Intel and AMD based blades
LED	Power LED, Fault LED
InfiniBand Switch	Up to two hot-plug 4x QDR IB switches
Gigabit Ethernet Switch	Up to two hot-plug layer 3 Gigabit Ethernet switches
Management Module	Up to two hot-plug management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swap 1620W/2500W power supplies, N+1 redundant
Cooling Design	Front to back
Dimensions (HxWxD)	12.2" x 17.6" x 29"

Personal Supercomputing Mini Rack Cabinet - CSE-RACK14U

Mobility, Protection and Security - Ideal for Office Application/Environment or Personal Supercomputing

Key Features
• Mobile 14U Rack Space
• Ideal for Office Environments - The same height as standard office furniture (30.64"H)
• Upgradeable - Rear frame mounting
• Mobile - casters for easy mobility

Specifications
• 14U height; 21.65" W x 34.65"D x 30.64"H
• Supports standard 19" rackmount servers with standard mounting holes
• Front door lock, casters with brakes
• Stability support
• Optional air filter

The innovative SuperBlade® features enhanced system computing density leveraged from years of rackmount server design experience. Applying Supermicro's application-optimized engineering philosophy, each SuperBlade® module delivers true server functionality including up to two Quad-Core Intel® Xeon® processors, optional InfiniBand mezzanine HCA, and support for up to 6 SATA or SAS(2) hard drives. For more computational-intensive applications, the SuperBlade® also offers 4-way six-core AMD® Opteron™ blades.

Supermicro also offers low-noise blade solutions that are optimized for offices and SMB. The OfficeBlade™ is ideal for SMB as well as personal supercomputing applications. With acoustically optimized thermal and cooling technologies it achieves < 50dB with 10 DP server blades and features 100-240VAC, ultra high-efficiency (93%), N+1 redundant power supplies.

NEW! TwinBlade 2 DP Nodes in 1 Blade

NEW! 4-way Opteron Blade featuring PCI-E 2.0 and QDR InfiniBand

Tylersburg/Nehalem Storage Blade w/ 6 SAS2.0 HDD Support and QDR InfiniBand
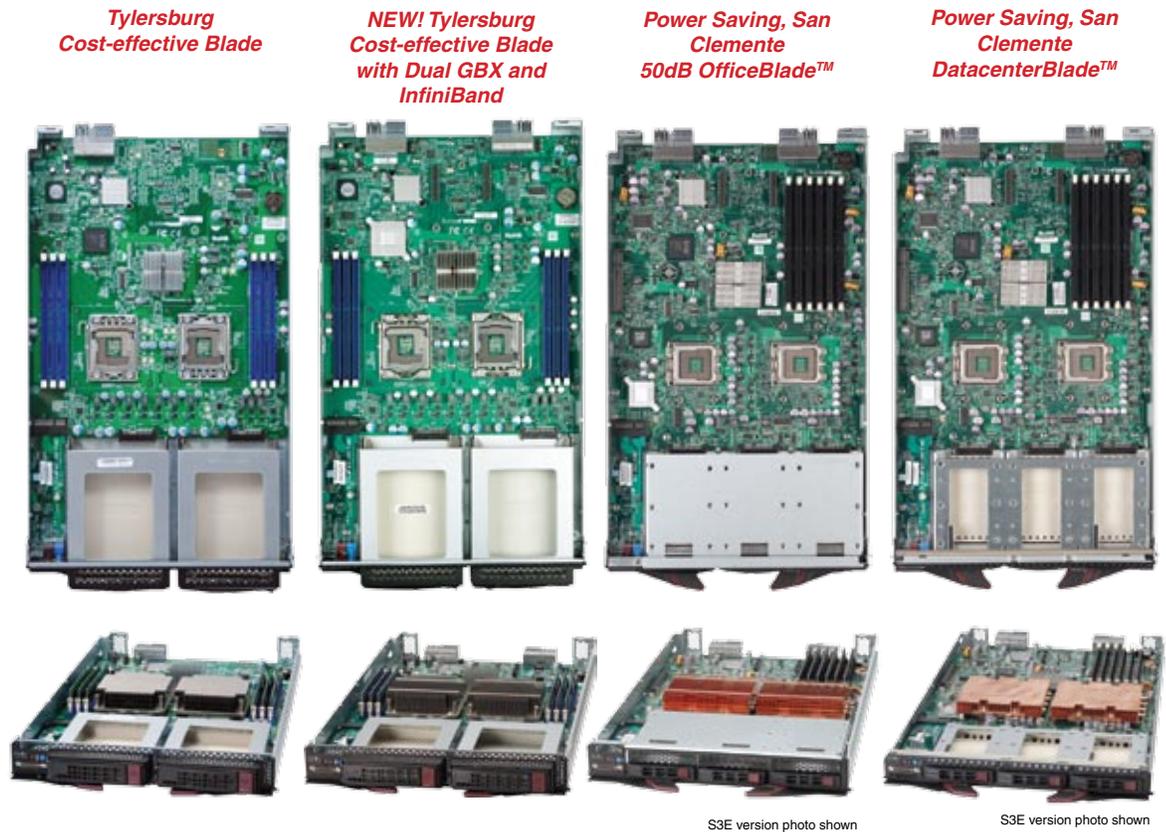
Tylersburg/Nehalem DatacenterBlade™ with SAS2.0

S3 version photo shown

Model	SBI-7226T-T2 (two nodes)	SBA-7141A-T	SBI-7126T-S6	SBI-7426T-S3/T3
Processors	Two Quad/Dual-Core Xeon 5500 Series per node	Four AMD Six/Quad-Core Opteron™ 8000 Series	Two Quad/Dual-Core Xeon 5500 Series	Two Quad/Dual-Core Xeon 5500 Series
CPUs per 42U Rack	240	240	120	168
Chipset	Intel 5500 with QPI	AMD SR5670/SP5100	Intel 5500 with QPI	Intel 5500 with QPI
Memory Support	RDIMM or UDIMM DDR3 1333/1066/800 in 8 sockets per node	ECC Registered DDR2 800/667 in 16 DIMM sockets	RDIMM or UDIMM DDR3 1333/1066/800 in 12 sockets	RDIMM DDR3 1333/1066/800 in 12 sockets[+]
Max Memory	48GB(RDIMM)/12GB(UDIMM) per node	128GB	96GB(RDIMM)/24GB(UDIMM)	96GB (RDIMM)[+]
Hard Disk Drive	Two hot-plug 2.5" SATA hard disk drives per node	One internal 2.5" SATA hard disk drive	Six hot-plug 2.5" SAS2/SATA hard disk drives	Three hot-plug 2.5" SAS2/SATA** hard disk drives
Max Storage	1TB SATA per node	500GB	3.6TB SAS2 / 3TB SATA	1.8TB SAS2* / 1.5TB SATA
Storage RAID	Intel ICH10R SATA RAID 0, 1	N/A	LSI SAS 2008 RAID 0, 1, 10	LSI SAS 2008* RAID 0, 1
InfiniBand/10GbE Option	4X QDR (40Gb) InfiniBand mezzanine HCA per node	4X QDR/DDR (40Gb/20Gb) InfiniBand or 10GbE mezzanine HCA	4X QDR/DDR (40Gb/20Gb) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel 82576 dual-port Gigabit Ethernet controller per node	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82576 dual-port Gigabit Ethernet controller
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
Graphics	Matrox G200eW	Matrox G200eW	Matrox G200eW	Matrox G200eW
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED per node	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED
Operating Temp.	10-35º C non-condensing	10-35º C non-condensing	10-35º C non-condensing	10-35º C non-condensing
Dimensions	11.32" x 1.67" x 20.5"	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.19" x 18.9"

Space Optimization

When housed within a 19" EIA-310D industry-standard 42U rack, SuperBlade® servers reduce server footprint in the datacenter. Power, cooling and networking devices are removed from each individual server and positioned to the rear of the chassis thereby reducing the required amount of space while increasing flexibility to meet changing business demands. Up to fourteen blade servers can be installed in a 7U chassis. Compared to the rack space required by fourteen individual 1U servers, the SuperBlade® provides over 50% space savings.

	Tylersburg Cost-effective Blade	*NEW! Tylersburg Cost-effective Blade with Dual GBX and InfiniBand*	*Power Saving, San Clemente 50dB OfficeBlade™*	*Power Saving, San Clemente DatacenterBlade™*
			S3E version photo shown	S3E version photo shown
Model	SBI-7126T-T1L	SBI-7126T-T1E	SBI-7125C-S3/S3E/T3	SBI-7425C-S3/S3E/T3
Processors	Two Quad/Dual-Core Xeon 5500 Series	Two Quad/Dual-Core Xeon 5500 Series	Two Quad/Dual-Core Xeon 5400/ 5300/5200/5100 Series	Two Quad/Dual-Core Xeon 5400/5300/5200/5100 Series
CPUs per 42U Rack	120	120	120	168
Chipset	Intel 5500 with QPI	Intel 5500 with QPI	Intel 5100	Intel 5100
Memory Support	RDIMM or UDIMM DDR3 1333/1066/800 in 6 sockets	RDIMM or UDIMM DDR3 1333/1066/800 in 6 sockets	ECC Registered DDR2 667/533 in 6 DIMM sockets	ECC Registered DDR2 667/533 in 6 DIMM sockets[+]
Max Memory	48GB(RDIMM)/12GB(UDIMM)	48GB(RDIMM)/12GB(UDIMM)	48GB	24GB[+]
Hard Disk Drive	Two hot-plug 3.5" SATA hard disk drives	Two hot-plug 3.5" SATA hard disk drives	Three hot-plug 2.5" SAS/SATA** hard disk drives	Three hot-plug 2.5" SAS/SATA** hard disk drives
Max Storage	4TB SATA	4TB SATA	1.8TB SAS* / 1.5TB SATA	1.8TB SAS* / 1.5TB SATA
Storage RAID	Intel ICH10R SATA RAID 0, 1	Intel ICH10R SATA RAID 0, 1	LSI SAS 1068E* RAID 0, 1 Optional RAID 5*	LSI SAS 1068E* RAID 0, 1 Optional RAID 5*
InfiniBand/10GbE Option	N/A	4X QDR/DDR (40Gb/20Gb) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA (S3E version only)	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA (S3E version only)
Ethernet Interface	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82575EB dual-port Gigabit Ethernet controller	Intel 82575EB dual-port Gigabit Ethernet controller
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
Graphics	Matrox G200eW	Matrox G200eW	ATI ES1000 with 32MB SDRAM	ATI ES1000 with 32MB SDRAM
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED
Operating Temp.	10-35º C non-condensing	10-35º C non-condensing	10-35º C non-condensing	10-35º C non-condensing
Dimensions	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.19" x 18.9"

* SAS and optional RAID 5 function for S3 and S3E version only
** SATA HDD only for T3 version
[+] VLP (very low-profile) memory modules

Cable Reduction

The SuperBlade® server chassis greatly simplifies the cabling process by aggregating the cabling of ten/fourteen/twenty servers. Up to 93% of the network, power, and KVM cabling required for ten/fourteen/twenty 1U servers is eliminated by moving to blade servers in a single chassis. These cabling reductions continue across networking, SAN connectivity, and management controllers. Reducing the number of cables speeds up the deployment of servers and helps reduce troubleshooting issues by presenting fewer physical connections to the servers.

	Storage Blade 6 Hard Drives		*DP 6-core Opteron (Istanbul) Blade*	*MP 6-core Opteron (Istanbul) Blade*
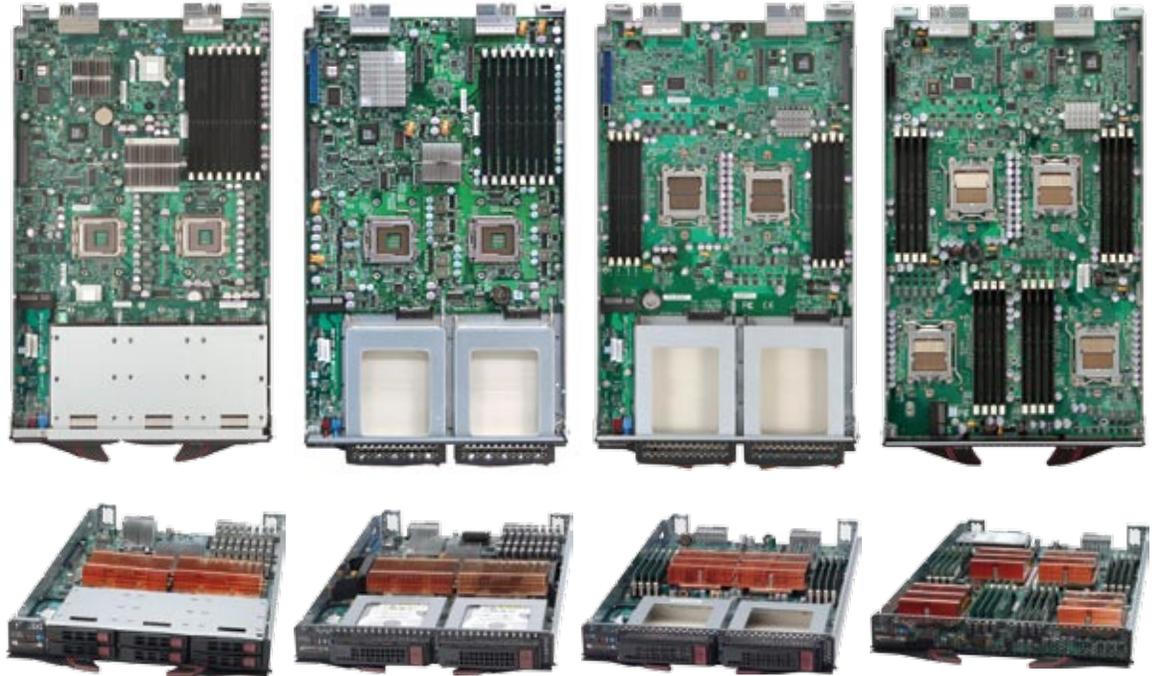
Model	SBI-7125W-S6	SBI-7125B-T1	SBA-7121M-T1	SBA-7141M-T
Processors	Two Quad/Dual-Core Xeon 5400/5300/5200/5100 Series	Two Quad/Dual-Core Xeon 5400/5300/5200/5100 Series	Two AMD Six/Quad-Core Opteron™ 2000 Series	Four AMD Six/Quad-Core Opteron™ 8000 Series
CPUs per 42U Rack	120	120	120	240
Chipset	Intel 5400 (1600MHz FSB)	Intel 5000P	NVIDIA MCP55 Pro	NVIDIA MCP55 Pro
Memory Support	Fully Buffered DIMM DDR2 800/667 in 8 DIMM sockets	Fully Buffered DIMM DDR2 667/533 in 8 DIMM sockets	ECC Registered DDR2 800/667 in 8 DIMM sockets	ECC Registered DDR2 800/667 in 16 DIMM sockets
Max Memory	64GB	32GB	64GB	128GB
Hard Disk Drive	Six hot-plug 2.5" SAS/SATA hard disk drives	Two hot-plug 3.5" SATA hard disk drives	Two hot-plug 3.5" SATA hard disk drives	One internal 2.5" SATA hard disk drive
Max Storage	3.6TB SAS / 3TB SATA	4TB	4TB	500GB
Storage RAID	LSI SAS 1078 RAID 0, 1, 5, 6, 10, 50, 60	Intel ESB2 SATA RAID 0, 1	NVIDIA MCP55-Pro SATA RAID 0, 1	N/A
InfiniBand/10GbE Option	4X QDR/DDR (40Gb/20Gb) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb) InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel (ESB2) 82563EB dual-port Gigabit Ethernet controller	Intel (ESB2) 82563EB dual-port Gigabit Ethernet controller	Intel 82571EB dual-port Gigabit Ethernet controller	Intel 82571EB dual-port Gigabit Ethernet controller
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
Graphics	ATI ES1000 with 16MB SDRAM	ATI ES1000 with 16MB SDRAM	ATI ES1000 with 16MB SDRAM	ATI ES1000 with 16MB SDRAM
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED
Operating Temp.	10-35° C non-condensing	10-35° C non-condensing	10-35° C non-condensing	10-35° C non-condensing
Dimensions	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 18.9"

SuperBlade® Networking

SuperBlade® networking options include four different modules for Ethernet connectivity. In addition Supermicro offers a powerful InfiniBand switch for connecting Blades to 4X QDR/DDR (40Gb/20Gb) InfiniBand networks. All SuperBlade® networking options are hot-pluggable.
The Ethernet modules can also be configured for redundant or dual load-sharing connections (or both). The 1/10 GbE switch and the 10GbE pass-through modules offer even higher bandwidth connectivity for the most demanding applications.

	1Gb Ethernet Switch	*1Gb Ethernet Pass-Through*	*1Gb/10Gb Ethernet Switch*	*10Gb Ethernet Pass-Through*
Part ID	SBM-GEM-001	SBM-GEM-002	SBM-GEM-X2C	SBM-XEM-002
Internal Ports	Fourteen 1-Gbps downlink ports for LAN interfaces of the server blades	Fourteen 1-Gbps downlink ports for LAN interfaces of server blades	Fourteen 1-Gbps downlink ports for LAN interfaces of server blades	Fourteen 10-Gbps downlink XAUI ports
External Uplink Ports	Ten 1-Gbps uplink RJ-45 ports	Fourteen 1-Gbps uplink RJ-45 ports (speed fixed at 1-Gbps - no auto negotiation)	Three 10-Gbps uplink ports , stackable (Two CX4 & One SFP+) Two 1-Gbps RJ-45 uplink ports	Fourteen 10-Gbps uplink SFP+ ports (speed fixed at 10-Gbps - no auto negotiation)
Type	Layer-2 Ethernet switch	Ethernet pass-through module	Layer-2/3 Ethernet switch	Ethernet pass-through module
Bandwidth	Up to 24 Gbps non-blocking		Up to 46 Gbps non-blocking	
Trunking	Link aggregation support - static (802.3ad)		Link aggregation support - full (802.3ad)	
Jumbo Frame Support	Up to 9k bytes		Up to 9k bytes	
Remote Management	Browser-based management		Browser-based management/CLI	
Layer 2 Capabilities	STP, RSTP, 802.1x		STP, RSTP, MSTP, IGMP snooping, 802.1x	
Layer 3 Capabilities			BGP, DVMRP, IGMP, IPv6, OSPF, PIM, RIP	
OS	Firmware upgradeable		Firmware upgradeable	

	20Gb InfiniBand Switch	*20Gb InfiniBand Pass-Through*	*40Gb InfiniBand Switch* Coming Soon!
Part ID	SBM-IBS-001	SBM-IBP-D14	SBM-IBS-Q3618/Q3616
Internal Ports	14 internal ports: 4x DDR	14 internal 4x DDR Ports (20Gbps)	18/20 4x QDR downlink ports
External Uplinks	10 external ports: 4x DDR - copper	14 external 4x DDR copper ports (20Gbps - CX-4 Connectors)	18/16 4x QDR QSFP uplink ports
Type	4x DDR InfiniBand switch	4x DDR InfiniBand pass-through module	4x QDR InfiniBand switch
Bandwidth	4X DDR (20Gbps) non-blocking architecture 960Gbps total switch bandwidth (24-port)		4X QDR (40Gbps) non-blocking architecture 2.88Tbps total switch bandwidth (36-port)
Management	In-band InfiniBand IBML, Command-Line Interface (CLI)		In-band InfiniBand IBML, Command-Line Interface (CLI)

InfiniBand Mezzanine HCA   Coming Soon!

Part ID	AOC-IBH-XQS	AOC-IBH-XDD	AOC-IBH-XDS	AOC-IBH-002
Chipset	Mellanox ConnectX IB QDR	Mellanox ConnectX IB DDR	Mellanox ConnectX IB DDR	Mellanox InfiniHost III Lx DDR
Ports	Single port 4x QDR/DDR IB or 10GbE	Dual port 4x DDR IB or 10GbE	Single port 4x DDR IB or 10GbE	Single port 4x DDR IB

SuperBlade® Management

The SuperBlade® chassis management module (CMM) provides total remote control management and monitoring of individual server blades, power supplies, cooling fans, and networking switches. System administrators will appreciate the management ease and reassurance of continuous onboard instrumentation monitoring (temperature sensors, power status, voltages and fan speed). Remote power control capabilities to reboot and/or reset the server are available as well as remote access to the BIOS configuration and operating system console information via SOL (Serial over LAN) or embedded KVM capabilities. Because the controller is a separate processor, all monitoring and control functions operate flawlessly regardless of CPU operation or system power-on status.

Key Features
• Remotely manage and monitor server blades, power supplies, cooling fans, and networking switches
• IPMI 2.0 compliant, with KVM over LAN / KVM over IP
• Serial over LAN (SOL)
• Virtual Media Over LAN (Virtual USB Floppy/CD and Drive Redirection)
• LAN Alert-SNMP Trap
• Event Log
• OS Independent
• Hardware Health Monitor
• Remote Power Control
• Management Tools - IPMIView, CLI (Command Line Interface)
• Supports RMCP & RMCP + Protocols

Specifications
• VGA port, 2x USB ports
• Remote Management Processor and sub-system
• 1x LAN port
• Video ADC, Video Compress FPGA
• IPMI Management
• Hot-Swap Capable
• GBX Backplane Connector

SBM-CMM-001

Key Advantages of Supermicro High-efficiency SuperBlade® Power Supplies

Availability - Non-stop power with N+1 redundant power supply modules

Cost Saving - At 94% peak efficiency, power consumption is significantly reduced, providing a planet-friendly, real-world advantage for our environment

Investment protection - Power capacity headroom for future generation processors

Easy installation - Snap-in installation from the back of the chassis, hot-swappable in operation

Intelligent power infrastructure - Each power enclosure includes a power management module that monitors the power supplies and the power enclosure that connects to the blade management.

NEW!

Part ID	PWS-1K62-BR	PWS-2K01-BR	PWS-2K53-BR
Output	1620W	2000W	2500W
Type	Redundant Module (N+1)	Redundant Module (N+1)	Redundant Module (N+1)
+12V	132A (200~240VAC input) 100A (100-140 VAC input)	167A	208A
5VSB	16A	16A	16A
PFC	Yes	Yes	Yes
Peak Efficiency	93%	90%	94%
Input AC Range	100~240VAC	200~240VAC	200~240VAC
Operating Conditions	Temp: -5 to 50° C Humidity: 5 to 95% RH	Temp: -5 to 50° C Humidity: 5 to 95% RH	Temp: -5 to 50° C Humidity: 5 to 95% RH
Fan Type	2x 90mm fans - PFC0912DE-6L38 (8000 RPM with PWM)	4x 90mm fans - PFB0912DHE-6X39 (8000 RPM) - QFR0912UHE-6F78 (8300 RPM)	4x 90mm fans - PFC0912DE-9E69 (8000 RPM) - QFR0912UHE-9E70 (8800 RPM)

At the current time, the Supermicro® SuperBlade® is shipping with power supplies of 1400 Watts, 1620 Watts, 2000 Watts or larger. Although the Power Distribution Unit (Figure 3) that is recommended by Supermicro supports up to four power connections, only two connections should be made to each PDU. The PDU has a NEMA L6 connector that can plug into a NEMA L6 or equivalent socket. Each PDU, supporting two power supplies, must be plugged into a separate circuit that provides 30 Amps of power and a voltage ranging from 200-240V.

Table 1 below illustrates the various Power Supplies offered by Supermicro. This table shows the maximum power requirement of each model.

SKU	Watts	Low Volts	High Volts	Low Amps	10% Reserve	High Amps	10% Reserve	Max Amps
PWS-2K53-BR	2500	200	240	12.9	1.3	15.4	1.5	17
PWS-2K01-BR	2000	200	240	10.3	1.0	12.3	1.2	13.6
PWS-1K62-BR	1620	200	240	8.3	0.9	9.8	1.0	10.8
PWS-1K62-BR	1200	100	134	10.5	1.0	14.0	1.4	15.4

Table 1 - Power Supply Amperage Draw

Figure 1 - CBL-0223L 2000W/2500W Extension Cord

Figure 2 - CBL-0248L 1400W/1620W Extension Cord

Figure 3 - MCP-520-00036-0N Power Distribution Unit (PDU) with NEMA L6 plug

As an example, the 2000 Watt power supply can draw up to 13.6 Amps. Thus, for a single 30 Amp circuit supplying a PDU, no more than 2 power supplies may be connected to the PDU.

The Supermicro SuperBlade® product includes a power extension cord CBL-0223L for 2000W/2500W (Figure 1) or CBL-0248L for 1400W/1620W (Figure 2) system. The power cord typically connects the power supply to a Power Distribution Unit (Figure 3 - optional PDU) in an IT room. The PDU should supply input voltage ranging from 200V to 240V AC. As stated above, the circuit that the PDU plugs into should provide 30 Amps that is not shared by any other device.

Before beginning receptacle installation, consider the following:

- Observe all local electrical codes and practices.
- Ensure that the AC power receptacle is wired to the site AC power via conductors routed through flexible metal conduit or via approved AC power cable before installation.
- Ensure that AC power cord is properly sized, service rated, temperature rated, and complies with all applicable codes and regulations.
- Ensure that the conductors in conduit are properly sized, service rated, temperature rated, color coded, and comply with all applicable codes and regulations.
- Ensure that the AC power cord or conduit is long enough to reach from the site AC power junction box to a location within the distance required for the connection.
- Ensure that the number of power supplies connected to one circuit do not exceed the rated amperage of the circuit.

Please see table below which lists some examples of international power cords that are compatible with Supermicro.

Country	Australia	China	Isreal	India / S. Africa	Italy	Euro	UK	US	US
Part Number	CBL-0238L (2000W/2500W)	CBL-0239L (2000W/2500W)	CBL-0243L (2000W/2500W)	CBL-0245L (2000W/2500W)	CBL-0244L (2000W/2500W)	CBL-0240L (2000W/2500W)	CBL-0241L (2000W/2500W)	CBL-0247L (2000W/2500W)	CBL-0250L (1620W)
Length	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	6ft
Inlet	AS 3112	GB-2099-1-1996	SI32	BS 546	CEI 23-16	"Schuko" CEE 7/7	BS 1363	NEMA L6-20 or equivalent	IEC-60320-C20
Equip Outset	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C19	IEC-60320-C13
Certificate	SAA	CCEE	SII	SABS	VDE, HAR	VDE, KEMA, CEBEC, NEMKO, DEMKO, SETI, OVE, SEV	BSI	UL	UL/CUL
Current	15A	16A	16A	16A	16A	15A	15A	20A	15A
Voltage	250V	250V	250V	250V	250V	250V	250V	250V	250V
Image									

SUPERMICRO®

We Keep IT Green™

94% Power Efficiency
For Improved TCO and Earth-Friendly Computing

Electromagnetic Compatibility (EMC)

United States / Canada	FCC - Emissions (US) Verification
Europe	EN55022 - Emissions EN55024 - Immunity EN61000-3-2 - Harmonics EN61000-3-3 - Voltage Flicker CE- EMC Directive 89/336/EEC

Safety Compliance

United States / Canada	UL60950-1 - CSA/CUL 60950-1
Europe	TUV, EN60950-1, CE- Low Voltage Directive 73/23/EEE

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