SuperBlade SuperBlade

Lower TCO than 1U Servers



Highest Performance per Watt (353 GFLOPS/kW) Up to 40 Processors (160 cores) per 7U Enclosure Up to 93% Power Efficiency

- Quad-Core Intel® Xeon® DP and AMD Opteron® DP/MP
- Up to 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 switch modules
- 4x DDR InfiniBand switch modules (20 Gb/s)

Application-Optimized for:

Enterprises, Financial Services, Databases, Data Centers, Research Labs, High Performance Computing, Offices



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



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



Gigabit Ethernet Switch



4X DDR InfiniBand switch

Chassis Management Module Web-based GUI



CMM IPMI View

March, 2009

Why SuperBlade®?

With advanced product design and uncompromising quality control, Supermicro provides the industry with a wide range of products that feature high-performance, high reliability and cost-effective solutions. Supermicro's first-to-market server platforms offer fully optimized functionality and compatibility for mission-critical applications. All of Supermicro's technologically advanced server solutions pass a strict validation process, providing our customers with peace of mind so they can focus on growing their businesses.

Applying Supermicro's meticulous design philosophy to modular computing, the SuperBlade® is a revolutionary high-performance blade server system featuring both Intel® Xeon® 5500/5400/5300/5200/5100 series and AMD Opteron™ 8000/2000 (incuding Shanghai) series processors. The SuperBlade® is precision-engineered with the utmost in flexibility, high availability and reliability. Chassis management modules, 1GbE/10GbE switch modules, InfiniBand switch modules as well as N+1 redundant high-efficiency power supplies (up to 93% efficiency) keep the system running at peak performance 24 x 7. Offering industry-leading performance and density at a lower total cost, the SuperBlade® is the perfect choice for mission-critical enterprise applications and high-performance computing environments.

SuperBlade® offers many unique advantages that differentiate it from competitors' blade products and traditional rackmount solutions. Customer benefits include maximum affordability, reduced management costs, lower power consumption, optimal ROI, and high scalability - and in most applications, blade servers even reduce acquisition costs.

While other blade vendors only offer general-purpose blade servers, the SuperBlade® is fully optimized for a wide array of mission-critical and computational-intensive applications. Capable of accommodating customer needs rapidly, the SuperBlade® revolutionizes modular computing architecture by offering several advanced application-optimized models such as the DatacenterBlade™, the OfficeBlade™ and the Storage Blade.

Best Density

Up to 40 processors (160 cores) in 10 blades per 7U enclosure Supports current and next generation processors

Highest Memory Expansion Capability in the Industry

Up to 1.28TB DDR2 memory in 10 blades per 7U enclosure

Fastest and Most Cost-Effective Networking Solution

20Gbps 4x DDR 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 93% peak efficiency for all blade power supply modules N+1 redundant high efficiency power supplies in -

Outstanding Storage Flexibility

Hot-plug SAS(2) or SATA

Two 3.5" SATA hard drive support

Three or six 2.5" SAS(2)/SATA hard drive support

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



SuperBlade® Servers

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 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.

To protect the customer's investment, each blade module is fully upgradeable for future CPUs. The common system architecture ensures each blade is fully interchangeable as well.

NEW! Tylersburg Blade w/ SAS2



NEW! Tylersburg DatacenterBlade™



Power Saving 50dB OfficeBlade™



Power Saving DatacenterBlade™





CDI 7106T C6



CDL 740CT CO/TO



CDI 710EC CO/COE/TO



CDL 740EC CO/COE/TO

S3E version photo shown

S3E version photo shown

Model	SBI-7126T-S6	SBI-7426T-S3/T3	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 Rack	120	168	120	168
Chipset	Intel 5520 with QPI up to 6.4GT/s	Intel 5520 with QPI up to 6.4GT/s	Intel 5100	Intel 5100
Memory Support	ECC Registered DDR3 1333/1066/ 800 SDRAM in 12 DIMM sockets	ECC Registered DDR3 1333/1066/ 800 SDRAM in 12 DIMM sockets	ECC Registered DDR2 667/533 SDRAM in 6 DIMM sockets	ECC Registered DDR2 667/533 SDRAM in 6 DIMM sockets
Max Memory	96GB	24(48+)GB (12x 2GB VLP DIMM)	48GB	24GB (6x 4GB VLP DIMM)
Max Storage	876GB SAS2/1.8TB SATA	438GB SAS2*/ 900GB SATA	438GB SAS*/900GB SATA	438GB SAS*/ 900GB SATA
Hard Disk Drive	Six hot-plug 2.5" SAS2/SATA hard disk drives	Three hot-plug 2.5" SAS2/SATA** hard disk drives	Three hot-plug 2.5" SAS/SATA** hard disk drives	Three hot-plug 2.5" SAS/SATA** hard disk drives
Storage RAID	LSI SAS 2008 RAID 0, 1, 10 Optional RAID 5	LSI SAS 2008* RAID 0, 1, 10 Optional RAID 5*	LSI SAS 1068E* RAID 0, 1 Optional RAID 5*	LSI SAS 1068E* RAID 0, 1 Optional RAID 5*
InfiniBand/10GbE Option	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA (S3E version only)	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA (S3E version only)
Ethernet Interface	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82576 dual-port Gigabit Ether- net 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 of SDRAM	ATI ES1000 with 32MB of 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 1.19" x 18.9"

^{*} SAS and optional RAID 5 function for S3 and S3E version only

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^{**} SATA HDD only for T3 version
* Support 4GB VLP DIMM, pending availability

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SuperBlade® Servers

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.

Cable Reduction

The SuperBlade® server chassis greatly simplifies the cabling process by aggregating the cabling of ten/fourteen servers. Up to 93% of the network, power, and KVM cabling required for ten/fourteen 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.

1600MHz FSB 6 SAS/SATA HDDs











11.32" x 1.67" x 18.9"

Dimensions (HxWxD)







11.32" x 1.67" x 18.9"

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 Quad/Dual-Core Opteron™ 2300/2200 Series Processors	Four AMD Opteron™ 8300/ 8200 Series Processors
CPUs per Rack	120	120	120	240
Chipset	Intel 5400	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 800/667/533 SDRAM in 8 DIMM sockets	ECC Registered DDR2 800/667/533 SDRAM in 16 DIMM sockets
Max Memory	64GB	32GB	64GB	128GB
Max Storage	876GB SAS/1.8TB SATA	2TB	2TB	300GB
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
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 DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb/s) InfiniBand or 10GbE mezzanine HCA	4X DDR (20Gb/s) 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 of SDRAM	ATI ES1000 with 16MB of SDRAM	ATI ES1000 with 16MB of SDRAM	ATI ES1000 with 16MB of 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

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 DDR (20 Gbps) 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 new 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

New!

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Part ID	SBM-GEM-001	SBM-GEM-002	SBM-GEM-X2C
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
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
Туре	Layer-2 Ethernet switch	Ethernet pass-through module	Layer-2/3 Ethernet switch
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



Part ID	SBM-IBS-001				
Chipset	Mellanox InfiniScale III				
Internal Ports	Fourteen internal ports: 4x DDR				
External Uplinks	Ten external ports: 4x DDR - copper				
Bandwidth	4X DDR (20Gbps) non-blocking architecture 960Gbps total switch bandwidth (24-port)				
Management	In-band InfiniBand IBML Command-Line Interface (CLI)				

10Gb Ethernet Pass-Through

*AOC-IBH-003 mezzanine card required

New!



Part ID	SBM-XEM-002
Internal Ports	Fourteen 10-Gbps downlink XAUI ports
External Ports	Fourteen 10-Gbps uplink SFP+ ports (speed fixed at 10-Gbps - no auto negotiation)
Туре	Ethernet pass-through module
Connections	10GBASE-SR, 10GBASE-LRM, 10GBASE-ER, 10GBASE-LR, Twinax

InfiniBand Mezzanine HCA



AOC-IBH-001

Mellanox InfiniHost III Ex DDR

Dual 4x DDR IB ports



AOC-IBH-002
Mellanox InfiniHost III Lx DDR
Single 4x DDR IB port



AOC-IBH-003
Mellanox ConnectX
Dual 4x DDR IB/10GbE ports

SuperBlade® Management

The SuperBlade® chassis management module (CMM) provides total remote control managing and monitoring of individual server blades, power supplies, cooling fans, and networking switches. System administrators enjoy 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

SuperBlade® Enclosure, Cabinet & Power









*	SB	E-7	140	Sh	owr

Part ID	SBE-710E 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	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 1400W/1620W/2000W power supplies, N+1 redundant	Hot-swap 1400W/1620W/2000W 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"

Personal Supercomputing Mini Rack Cabinet - CSE-RACK14U

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



- Mobile 14U Rack Space Supports up to 2x 7U blade enclosures or 1x 7U blade enclosure + 7U IT space
- Ideal for Office Environment The same height as regular furniture (30.64"H)
- Upgradeable Rear frame mounting space
- Mobile Available with casters for easy mobility

Specifications

- 14U height; 21.65" W x 34.65"D x 30.64"H
- Support the regular 19" rackmount servers with regular square mounting holes
- · Front door lock, rack casters with brakes
- Stability support
- · Optional air filter

New!





(8300 RPM)

Key Advantages of Supermicro High-efficiency SuperBlade® Power Supply

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

Cost Saving - At 93% 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.

Part ID	PWS-1K41-BR	PWS-1K62-BR	PWS-2K01-BR
Output	1400W	1620W	2000W
Туре	Redundant Module (N+1)	Redundant Module (N+1)	Redundant Module (N+1)
+12V	116A (200~240VAC input) 100A (100~140VAC input)	132A (200~240VAC input) 100A (100-140 VAC input)	167A
5VSB	16A	16A	16A
PFC	Yes	Yes	Yes
Peak Efficiency	93%	93%	90%
Input AC Range	100~240VAC	100~240VAC	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)	2x 90mm fans - PFC0912DE-6L38 (8000 RPM with PWM)	4x 90mm fans - PFB0912DHE-6X39 (8000 RPM) - OFB0912LHE-6F78

SuperBlade® Power Guide

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 plug 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-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
PWS-1K41-BR	1400	200	240	7.2	0.7	8.6	0.9	9.5
PWS-1K41-BR	1200	100	134	10.5	1.0	14.0	1.4	15.4

Table 1 - Power Supply Amperage Draw

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 (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.







Figure 1 - CBL-0223L 2000W Extension Cord

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

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

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	CBL-0239L	CBL-0243L	CBL-0245L	CBL-0244L	CBL-0240L	CBL-0241L	CBL-0247L (2000W)	CBL-0250L (1620W/1400W)
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



















SUPERMICRO® We Keep IT Green®



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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