SUPERMICRO®

SuperBlade®

Double Density

TwinBlade®

GPU/MIC SuperBlade®

DP TwinBlade® w/
2 DP Nodes in 1 Blade

GPU/MIC SuperBlade® w/
Two Kepler or Xeon® Phi™

Storage Blade

DatacenterBlade®

DP Blade w/
Six 6Gbps SAS2 HDDs

DP Blade w/
PCI-E 3.0 x16 Expansion Slot
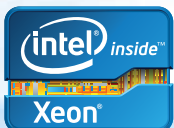
Highest Performance per Watt
20 Xeon® E5-2600 DP Server Nodes per 7U Enclosure
Industry-Leading 94%+ Efficiency Platinum Level Power Supplies

- 20 Xeon® CPU + 20 Kepler / Xeon® Phi™ per 7U
- Six enclosures per 42U standard rack
- High Efficiency N+1 redundant power supplies (100~240VAC Option)
- Chassis management modules
- 10GbE Layer 2/3 and FCoE switch modules
- FDR/QDR InfiniBand switch modules

Layer 2/3 10GbE Switch

Data Center Converged Switch
with FCoE

FDR/QDR InfiniBand Switch

Web-based GUI

Application-Optimized for:
Enterprises, Financial Services, Databases, Datacenters, Research Labs, High Performance Computing & SMB

CMM IPMI View

(intel) inside™
Xeon®

June 2013

Why SuperBlade®?

Best Density
Up to 40 Xeon® E5-2600 processors per 7U enclosure
Up to 60 2.5" SAS2/SATA3 HDDs/SSDs per 7U enclosure

Highest GPU/MIC Expansion in the Industry
Up to 20 NVIDIA® Kepler or Intel® Xeon® Phi™ per 7U enclosure

Fastest and Most Cost-Effective Networking Solution
FDR/QDR InfiniBand switch
10GbE switch - layer 2/3 switch
1/10GbE switch - layer 2/3 switch
1GbE switch - layer 2 switch
1GbE and 10GbE pass-through modules
Data Center Converged Switch with FCoE

High Efficiency Power for Earth-Friendly Operations
94%+ Platinum Level high efficiency 3000W and 2500W power
supplies with N+1 redundancy
Multiple Choices - 1620W, 2500W or 3000W

Outstanding Storage Flexibility
Hot-plug 6Gb/s SAS2 or SATA3 or SSD
2.5" or 3.5" options
Up to six 2.5" SAS2/SATA3 hard drive support
HW RAID with BBU or SW RAID options

Peace of Mind via Remote Management
IPMI 2.0 remote 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 electricity costs
Cable reduction improves cooling
Remote management reduces maintenance cost

SuperBlade® Enclosures and Cabinet

* SBE-710E Shown

* SBE-714D Shown

Model	SBE-710E/Q Series	SBE-714D/E/Q Series
Server Blade	Up to 10 hot-plug server blades	Up to 14 hot-plug server blades
Module Support	Supports Intel based blades	Supports Intel based blades
LED	Power LED, Fault LED	Power LED, Fault LED
InfiniBand Switch	One hot-plug 4x DDR IB switch (710E) or up to two hot-plug 4x QDR IB switches (710Q)	One hot-plug 4x DDR IB switch (714E only) or up to two hot-plug 4x QDR IB switches (714Q)
Gigabit Ethernet Switch	Up to two hot-plug Gigabit Ethernet switches or pass-through modules
Up to two hot-plug 10G pass-through modules (710E)
Up to two hot-plug 10G Ethernet Switches (710Q)	One (714D) or up to two (714E/Q) hot-plug Gigabit Ethernet Switches
Up to two 10G pass-through modules (714E)
Up to two hot-plug 10G Ethernet Switches (714Q)
Management Module	Up to two hot-plug management modules providing remote KVM and IPMI 2.0 functionalities	One (714D) or up to two (714E/Q) hot-plug management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swap 1620W/2500W (710E) or 1620W/2500W/3000W (710Q) power supplies, N+1 redundancy	Hot-swap 1620W (714D/E) or 1620W/2500W (714Q) power supplies, N+1 redundancy
Cooling Design	Front to back	Front to back
Dimensions (HxWxD)	12.2" x 17.6" x 29"	12.2" x 17.6" x 29"

TwinBlade®
Enclosure

* SBE-720E Shown

Model	SBE-720D/E Series
Server Blade	Up to 10 hot-plug server blades and TwinBlades
Module Support	Supports Intel based blades
LED	Power LED, Fault LED
InfiniBand Switch	Up to two hot-plug 4x QDR IB switches (720E only)
Gigabit Ethernet Switch	Up to two hot-plug Gigabit Ethernet switches or Pass thru model
Management Module	One hot-plug management module providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swap 2500W/3000W power supplies, N+1 redundancy
Cooling Design	Front to back
Dimensions (HxWxD)	12.2" x 17.6" x 29"

Personal Supercomputing Mini Rack Cabinet - CSE-RACK14U

*Not Recommended for SBI-7227R-T2 &
SBI-7127RG/RG-E

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

SuperBlade® Management

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

BMB-CMM-002
Mini CMM Installs in SBM-XEM-002M,
SBM-IBS-Q3616M, SBM-IBS-Q3618M
and SBM-XEM-X10SM

CMM (Chassis Management Module)

SBM-CMM-001

SBM-CMM-003
TwinBlade® CMM Module

The Supermicro SuperBlade® family of blade server systems deliver many unique customer advantages including maximum density, affordability, reduced management costs, lower power consumption, optimal ROI, and high scalability - and in many applications, blade servers can reduce TCO (Total Cost of Ownership). Leveraging years of rackmount server design engineering experience, Supermicro SuperBlade® servers are optimized for a wide array of mission-critical and compute-intensive applications, including DatacenterBlade® (HPC, Data Centers, Appliances, Manufacturing), GPU/MIC SuperBlade® (HPC, Graphics, Image Processing, Medical, Engineering and Scientific Research), Storage Blade (Database/Storage/Big Data, Virtualization, Financial Services, SMB), and TwinBlade® (HPC, Data Centers, Cloud Computing, Research).

	Sandy Bridge GPU/MIC SuperBlade® (2 CPUs + 2 GPU/MIC cards)	**Sandy Bridge TwinBlade®** 2 DP Nodes in 1 Blade	**Sandy Bridge Storage Blade**	**Sandy Bridge DatacenterBlade®**

Model	SBI-7127RG/RG-E	SBI-7227R-T2 (two nodes)	SBI-7127R-S6	SBI-7427R-S3/T3
Processors	Two Eight/Six/Four-Core Xeon® E5-2600 Series	Two Eight/Six/Four-Core Xeon® E5-2600 Series /node	Two Eight/Six/Four-Core Xeon® E5-2600 Series	Two Eight/Six/Four-Core Xeon® E5-2600 Series
CPUs per 42U Rack	120 (+120 GPU/MIC cards)	240	120	168
Chipset	Intel® C602	Intel® C602J	Intel® C602J	Intel® C602J(S3)/C602(T3)
Memory Support	RDIMM or UDIMM DDR3 1600/1333/1066 in 8 slots	RDIMM or UDIMM DDR3 1600/1333/1066 in 8 slots /node	RDIMM or UDIMM DDR3 1600/1333/1066 in 16 slots	VLP RDIMM or UDIMM DDR3 1600/1333/1066 in 16 slots
Max Memory	256GB(RDIMM)/64GB(UDIMM)	256GB(RDIMM)/64GB(UDIMM) /node	512GB (RDIMM)/128GB (UDIMM)	256GB(RDIMM)/64GB(UDIMM)
Expansion & Hard Disk Drive	RG-E Series: - Two Tesla Kepler K10/K20/K20X, GRID K1/K2, or Xeon® Phi ™ - One SSD RG Series: - Two Tesla M2090/M2075 - One SATA DOM	Two hot-plug 2.5" SATA3 hard disk drives /node	Six hot-plug 2.5" SAS2/SATA3 hard disk drives	Three hot-plug 2.5" SAS2*/SATA3 hard disk drives
Storage RAID	N/A	Intel PCH SATA RAID 0,1	LSI 2208 controller HW RAID 0, 1, 5, 6, 10, 50 Battery Backup Option	LSI 2208 controller HW RAID 0, 1, 5 (S3 version only) Intel PCH SATA RAID 0,1,5 (T3 version)
InfiniBand/10GbE Option	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA /node	4X FDR/QDR(40Gb) InfiniBand or 10GbE mezzanine HCA	4X QDR (40Gb) / DDR (20Gb) InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 dual-port Gigabit Ethernet controller /node	Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 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	Power LED, UID/KVM LED, Network ing LED, Fault LED /node	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 20.5"	11.32" x 1.67" x 20.5"	11.32" x 1.67" x 18.9"	11.32" x 1.19" x 18.9"

* SAS HDD for S3 version only

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 twenty DP blade nodes can be installed in a 7U chassis. Compared to the rack space required by twenty individual 1U servers, the SuperBlade® provides over 65% space savings.

PCI-E 3.0 x16
Expansion Slot
Workstation Blade

PCI-E 3.0 x16
Expansion Slot
Workstation Blade

PCI-E 2.0 x16
Expansion Slot
Workstation Blade

PCI-E 2.0 x16
Expansion Slot
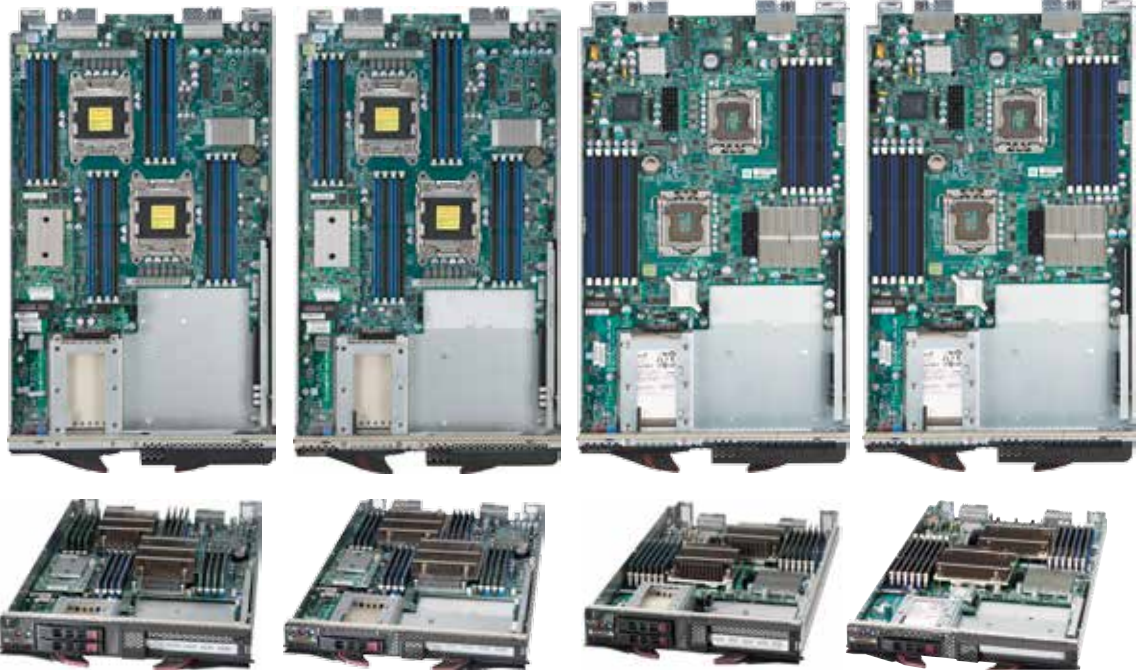
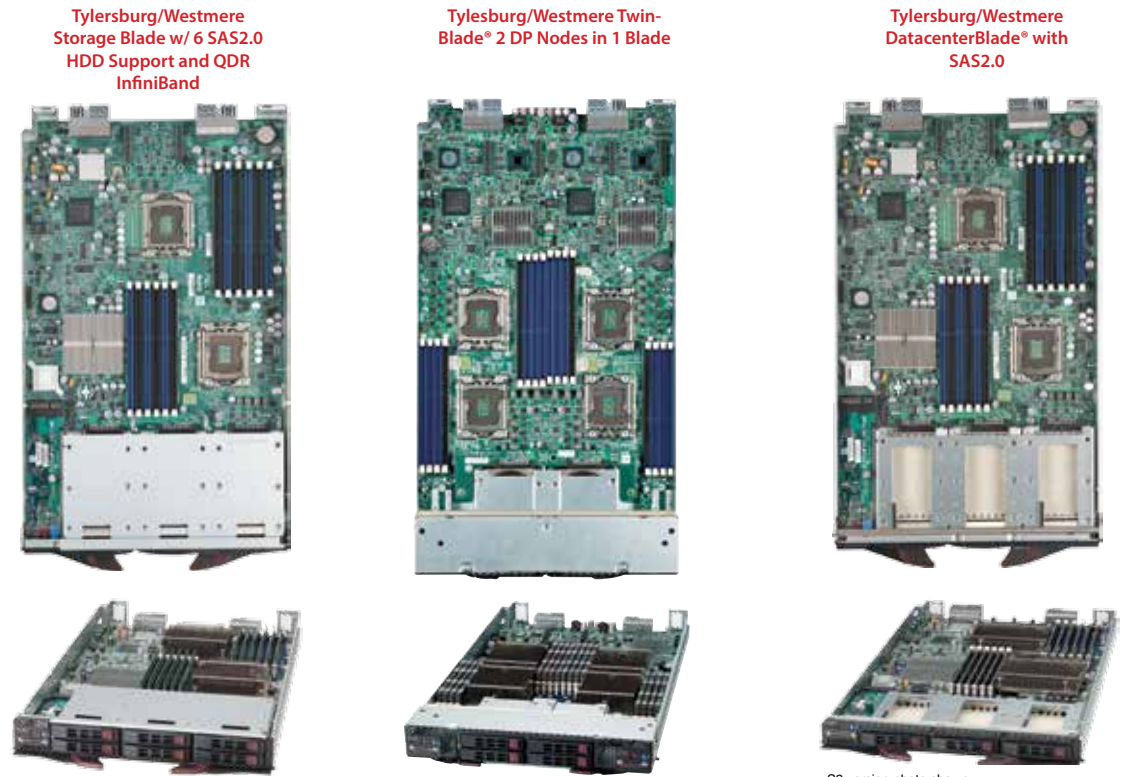**CPU Socket cap MUST always be in position when the CPU is not installed.**

Model	SBI-7127R-SH	SBI-7427R-SH/S2L	SBI-7126T-SH	SBI-7426T-SH
Processors	Two Eight/Six/Four-Core Xeon E5-2600 Series	Two Eight/Six/Four-Core Xeon E5-2600 Series	Two Six/Quad/Dual-Core Xeon 5600/5500 Series	Two Six/Quad/Dual-Core Xeon 5600/5500 Series
CPUs per 42U Rack	120	168	120	168
Chipset	Intel C602J	Intel C602J	Intel 5520 with QPI	Intel 5520 with QPI
Memory Support	RDIMM or UDIMM DDR3 1600/1333/1066 in 16 slots	VLP RDIMM or UDIMM DDR3 1600/1333/1066 in 16 slots[+]	RDIMM or UDIMM DDR3 1333/1066/800 in 12 slots	VLP RDIMM or UDIMM DDR3 1333/1066/800 in 12 slots[+]
Max Memory	512GB(RDIMM)/128GB(UDIMM)	256GB(RDIMM)/64GB(UDIMM)	192GB(RDIMM)/48GB(UDIMM)	96GB(RDIMM)[+]
Expansion & Hard Disk Drive	One PCI-E 3.0 x16 (FH/HL) Two hot-plug 2.5" SAS2/SATA3 hard disk drives	One PCI-E 3.0 x16 (FH/HL) *(SH version)* One PCI-E 3.0 x16 (HH/HL) *(S2L version)* One hot-plug 2.5" SAS2/SATA3 hard disk drive *(SH version)* Two hot-plug 2.5" SAS2/SATA3 hard disk drives *(S2L version)*	One PCI-E 2.0 x16 (FH/HL) Two hot-plug 2.5" SAS2/SATA	One PCI-E 2.0 x16 (FH/HL) One hot-plug 2.5" SAS2/SATA
Storage RAID	LSI 2308 controller SW RAID 0,1	LSI 2308 controller	LSI SAS 2008 RAID 0, 1***	N/A
InfiniBand/10GbE Option	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA	4X QDR (40Gb) / DDR (20Gb) InfiniBand or 10GbE mezzanine HCA	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA	4X QDR (40Gb) / DDR (20Gb) InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel i350 dual-port Gigabit Ethernet controller	Intel i350 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	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"x1.67"x18.9"	11.32"x1.19"x18.9"	11.32" x 1.67" x 18.9"	11.32" x 1.19" x 18.9"

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

Cable Reduction

The SuperBlade® 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.

Tylersburg/Westmere Storage Blade w/ 6 SAS2.0 HDD Support and QDR InfiniBand

Tylesburg/Westmere Twin-Blade® 2 DP Nodes in 1 Blade

Tylersburg/Westmere DatacenterBlade® with SAS2.0

S3 version photo shown

Model	SBI-7126T-S6	SBI-7226T-T2 (two nodes)	SBI-7426T-S3/T3
Processors	Two Six/Quad/Dual-Core Xeon 5600/5500 Series	Two Six/Quad/Dual-Core Xeon 5600/5500 Series per node	Two Six/Quad/Dual-Core Xeon 5600/5500 Series
CPUs per 42U Rack	120	240	168
Chipset	Intel 5500 with QPI	Intel 5500 with QPI	Intel 5500 with QPI
Memory Support	RDIMM or UDIMM DDR3 1333/1066/800 in 12 slots	RDIMM or UDIMM DDR3 1333/1066/800 in 8 slots /node	VLP RDIMM DDR3 1333/1066/800 in 12 slots[+]
Max Memory	192GB(RDIMM)/48GB(UDIMM)	128GB(RDIMM)/32GB(UDIMM) /node	96GB (RDIMM)[+]
Expansion & Hard Disk Drive	Six hot-plug 2.5" SAS2/SATA3 hard disk drives	Two hot-plug 2.5" SATA3 hard disk drives per node	Three hot-plug 2.5" SAS2/SATA3** hard disk drives
Storage RAID	LSI SAS 2008 RAID 0, 1, 10 Optional RAID 5	Intel ICH10R SATA RAID 0, 1	LSI SAS 2008* RAID 0, 1 Optional RAID 5*
InfiniBand/10GbE Option	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA	4X FDR/QDR (40Gb) InfiniBand or 10GbE mezzanine HCA /node	4X QDR (40Gb) / DDR (20Gb) InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel 82576 dual-port Gigabit Ethernet controller	Intel 82576 dual-port Gigabit Ethernet controller /node	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
Graphics	Matrox G200eW	Matrox G200eW	Matrox G200eW
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED /node	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
Dimensions	11.32" x 1.67" x 18.9"	11.32" x 1.67" x 20.5"	11.32" x 1.19" x 18.9"

SuperBlade® Networking

1Gb Ethernet Switch Solutions

NEW!

Model	SBM-GEM-001/ SBM-GEM-005	SBM-GEM-X2C+	SBM-GEM-X3S+
Type	Layer-2 Ethernet switch	Layer-2/3 Ethernet switch	Layer-2/3 Ethernet switch
Internal Ports	Fourteen 1-Gbps downlink ports for LAN interfaces of the server blades	Fourteen/Twenty 1-Gbps downlink ports for LAN interfaces of server blades	Fourteen/Twenty 1-Gbps downlink ports for LAN interfaces of server blades
External Ports	Ten 1-Gbps uplink RJ-45 ports	Three 10-Gbps (Two CX4 & One SFP+) and two 1-Gbps RJ-45 uplink ports, stackable	Three 10-Gbps SFP+ and four 1-Gbps RJ-45 uplink ports
Trunking	Link aggregation support - static (802.3ad)	Link aggregation support - full (802.3ad)	Link aggregation support - full (802.3ad)
Jumbo Frame	Up to 9k bytes	Up to 16k bytes (10G) or 9K bytes (1G)	Up to 16k bytes (10G) or 9K bytes (1G)
Remote Management	Browser-based management	Browser-based management / CLI	Browser-based management/CLI
Layer 2 Capabilities	VLANs, STP, RSTP, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x
Layer 3 Capabilities		BGP, DVMRP, IGMP, IPv6, OSPF, PIM, RIP, QoS	BGP, DVMRP, IGMP, IPv6, OSPF, PIM, RIP, QoS
OS	Software upgradeable	Software upgradeable	Software upgradeable

10Gb Ethernet and Converged Network Solutions

NEW!

Model	SBM-XEM-X10SM	SBM-XEM-F8X4SM*
Type	Layer 2/3 10Gb Ethernet Switch	Data Center Converged Switch with FCoE
Internal Ports	10/20x internal 10Gb links to ports on mezzanine cards	10/20x internal 10Gb links to ports on mezzanine cards, support DCB, FCoE
External Ports	10/4x 10Gb Ethernet ports with SFP+ connectors	Ethernet: 4x 10Gb Ethernet ports with SFP+ connectors** Fibre Channel: 8/6x Fibre Channel ports: N ports, support 2, 4, 8Gbps
Jumbo Frame	Up to 16K bytes (10G) or 9K bytes (1G)	Up to 12K bytes (10 GbE) or 2112 bytes (FC)
Remote Management	Browser-based management/CLI	Browser-based management/CLI
Layer 2 Capabilities	4K VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x, 802.3ad (Full Link aggregation)	4K VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x, 802.3ad (Full Link aggregation)
Layer 3 Capabilities	ACL, DHCP, VRRP, RIP, OSPF, BGP, IPv6, RIPng, OSPFv3, IGMP, PIM, DVMRP, QoS	ACL, DHCP, VRRP, RIP, OSPF, BGP, IPv6, RIPng, OSPFv3, IGMP, PIM, DVMRP, QoS
FC Classes	N/A	2, 3
OS	Software upgradeable	Software upgradeable

* Supports optional Mini-CMM (BMB-CMM-002)

** SBE-710 series enclosure only

> ### Key Advantages of Supermicro SuperBlade® Networking Solutions
>
> **Highly Integrated-** Connection to SuperBlade® backplane optimizes networking flexibility
>
> **Easy-to-Manage-** Unified and cost-effective solution for both LAN and SAN networking
>
> **Power and Space Saving-** Compact designs for maximum efficiency
>
> **Easy to Install and Service-** Quick snap-in/out installation from chassis rear
>
> **Reliability-** Shared and redundant power supplies and cooling
>
> **Cutting-Edge Technology-** Including 10GbE, Fiber Channel and FDR InfiniBand

Ethernet Pass-Through Solutions

Model	SBM-GEP-T20	SBM-GEM-002	SBM-XEM-002M***
Internal Ports	Twenty 1-Gbps downlink ports for LAN interfaces of TwinBlade server blades	Fourteen 1-Gbps downlink ports for LAN interfaces of Server blades	Fourteen 10-Gbps downlink XAUI ports
External Uplink Ports	Twenty 1-Gbps uplink RJ45 ports	Fourteen 1-Gbps uplink RJ-45 ports (Speed fixed at 1-Gbps - no auto negotiation)	Fourteen 10-Gbps uplink SFP+ ports (Speed fixed at 10-Gbps - no auto negotiation)
Type	Ethernet pass-through module for TwinBlade SBE-720D and SBE-720E enclosure	Ethernet pass-through module for 10-Blade and 14-Blade enclosure	10G Ethernet pass-through module for 10-Blade (SBE-710E) and 14-Blade (SBE-714E) enclosure

*** Supports optional Mini-CMM (BMB-CMM-002)

InfiniBand Switch Solutions

NEW!

Model	SBM-IBS-F3616(M)+	SBM-IBS-Q3618/Q3616(M)+	SBM-IBS-001
Internal Ports	20 4x FDR downlink ports	18/20 4x QDR downlink ports	14 internal 4x DDR
External Uplinks	16 4x FDR QSFP uplink ports	18/16 4x QDR QSFP uplink ports	10 external ports : 4x DDR-copper
Type	4x FDR InfiniBand Switch	4x QDR InfiniBand switch	4x DDR InfiniBand switch
Bandwidth	4x FDR non-blocking architecture with 20x FDR 40Gbps downlinks and 16x FDR 56Gbps uplinks.	4X QDR (40Gbps) non-blocking architecture	4x DDR (20Gbps) non-blocking architecture

+ "M" version supports Mini-CMM (BMB-CMM-002)

InfiniBand/10GbE Mezzanine HCA

NEW! NEW! NEW!

Model	AOC-XEH-iN2	AOC-GEH-iP2	AOC-IBH-X3QD	AOC-IBH-X3QS	AOC-IBH-XQD	AOC-IBH-XQS	AOC-IBH-XDD/XDS
Chipset	Intel® 82599 (Niantic)	Intel® i350-AM2 chip	Mellanox ConnectX3 IB FDR	Mellanox ConnectX3 IB FDR	Mellanox ConnectX2 IB QDR	Mellanox ConnectX IB QDR	Mellanox ConnectX IB DDR
Ports	Dual port 10Gbps Ethernet	Dual port 1Gbps Ethernet	Dual port 4x FDR/QDR IB or 10GbE	Single port 4x FDR/QDR IB or 10GbE	Dual port 4x QDR/DDR IB or 10GbE	Single port 4x QDR/DDR IB or 10GbE	Dual/Single port 4x DDR IB or 10GbE

Key Advantages of Supermicro High-efficiency SuperBlade® Power Supplies

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

Cost Saving - With 94%+ Platinum Level efficiency, power consumption is significantly reduced, providing a 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.

Model	PWS-3K01-BR	PWS-2K53-BR	PWS-1K62-BR
Output	3000W	2500W	1620W
Type	Redundant Module (N+1)	Redundant Module (N+1)	Redundant Module (N+1)
+12V	250A	208A	132A (200~240VAC input) 100A (100-140 VAC input)
5VSB	16A	16A	16A
PFC	Yes	Yes	Yes
Peak Efficiency	94%+ (Platinum)	94%+ (Platinum)	93%+
Input AC Range	200~240VAC	200~240VAC	100~240VAC
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	4x 90mm fans	4x 90mm fans	2x 90mm fans

At the current time, the Supermicro® SuperBlade® is shipping with power supplies of 1620W, 2500W and 3000W. 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.

Model	Watts	Low Volts	High Volts	Low Amps	10% Reserve	High Amps	10% Reserve	Max Amps
PWS-3K01-BR	3000	200	240	15	1.5	17.5	1.8	19.3
PWS-2K53-BR	2500	200	240	12.9	1.3	15.4	1.5	17
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 2500W/3000W Extension Cord

Figure 2 - CBL-0248L 1620W Extension Cord

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

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 2500W/3000W (Figure 1) or CBL-0248L for 1620W (Figure 2) power supplies. The power cord 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/S. America	Euro	UK	US	US
Model	CBL-0238L (2500W/3000W)	CBL-0239L (2500W/3000W)	CBL-0243L (2500W/3000W)	CBL-0245L (2500W/3000W)	CBL-0244L (2500W/3000W)	CBL-0240L (2500W/3000W)	CBL-0241L (2500W)	CBL-0247L (2500W/3000W)	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 6-20P or equivalent	NEMA 5-20P
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									

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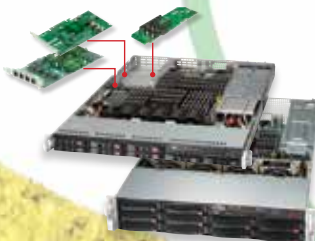Multi TeraFLOPS Servers/Workstations/Blades

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	EN61000-3-2 - Harmonics
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	CE- EMC Directive 89/336/EEC
	VCCI (SBI-7126TG only)
	AS/NZS CISPR22:2006 (SBI-7126TG only)

Safety Compliance

United States / Canada	UL60950-1 - CSA/CUL 60950-1
Europe	CE LVD 2006/95/EC
	IEC/EN-60950-1

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MKT-0004-06-2013-1.0