



MicroBlade/SuperBlade®

Highest-Density Blade Systems for Enterprise, Data Center, HPC and Cloud Computing

Up to 36 Cores per Node and 160W TDP Dual Intel® Xeon® Processor E5-2600 v3 Product Family



Industry's Densest Xeon® DP and UP Servers



MicroBlade

Up to 28 Xeon® DP or UP or 112 Atom™ Nodes in 6U



TwinBlade® (Double Density)

Up to 20 Xeon® DP Nodes in 7U



Xeon® DP/UP MicroBlade



Atom MicroBlade



GPU/Xeon Phi™ Blade



DataCenter Blade®



4-Socket Blade



Storage Blade



PCI-E Blade

MicroBlade

- 28 Xeon® E5-2600 v3 DP Nodes in 6U
- 28 Xeon® E3-1200 v3 UP Nodes in 6U
- 112 Atom™ C2000 Nodes in 6U
- High-Efficiency Supermicro System Design (as low as 10W per Node)
- Up to 99% cable reduction compared to 1U servers
- Redundant GbE SDN Switches with 40G/10G Uplinks, and more...
- 96% High-Efficiency Titanium Level, N+1 or N+N Redundant, Digital Power Supplies
- Front-Loading Nodes for Easy Access and Servicing

SuperBlade®

- 20 DP/10 MP Nodes per 7U
- 4320 Xeon® Cores per 42U Standard Rack
- Up to 6 HDDs/SSDs per Node (with NVMe support)
- 30 GPU Cards + 20 CPUs per 7U
- 20 PCI-E Cards + 20 CPUs per 7U
- High Efficiency Platinum Level Redundant Power Supplies
- Redundant Chassis Management Modules
- 10GbE Layer 2/3 and FCoE Switch Modules
- FDR / QDR InfiniBand Switch Modules

November 2014

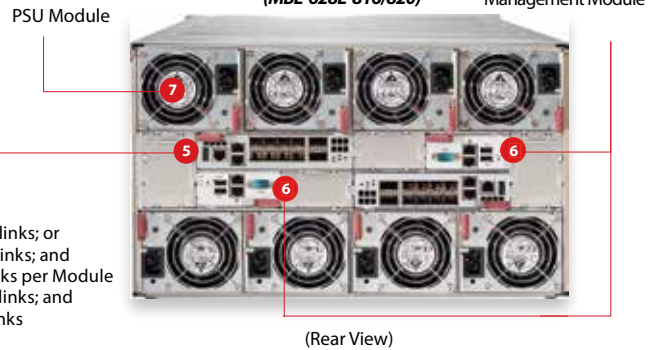
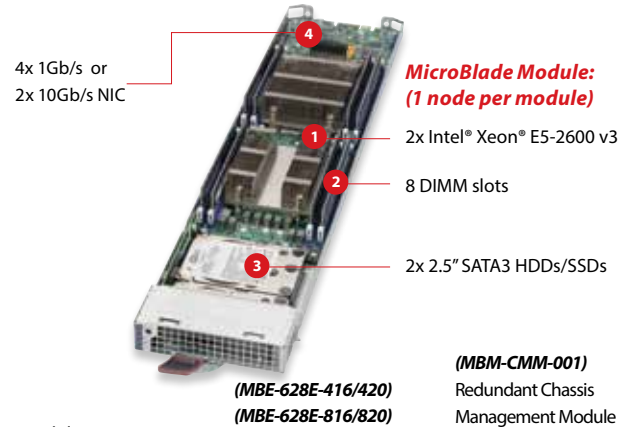


28 Xeon® DP Nodes in 6U

Intel® Xeon® Processor E5-2600 v3 Product Family Supported



Industry's Densest DP Server



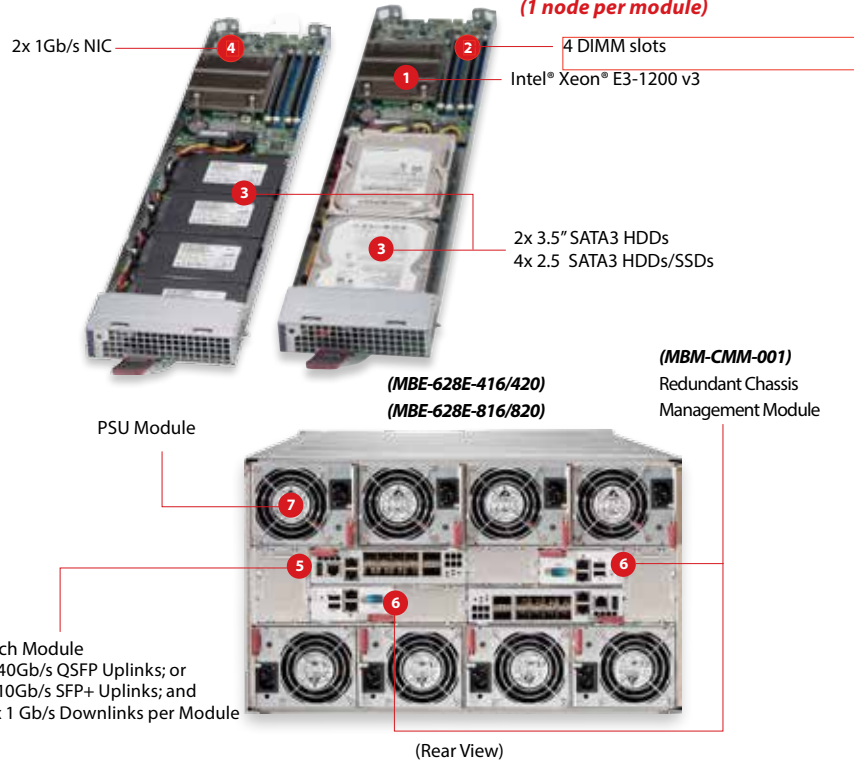
MODEL	MicroBlade (MBI-6128R-T2/T2X)
MicroBlade Module	<ul style="list-style-type: none"> 1 2 Intel® Xeon® processor E5-2600 v3 product family per module 2 Up to 256GB ECC DDR4 2133MHz VLP RDIMM in 8 DIMM sockets per module 3 2x 2.5" SATA3 HDDs/SSDs and 1x SATA-DOM 4 4x 1Gb/s or 2x 10Gb/s NIC
Outstanding Features	<ul style="list-style-type: none"> • 28 hot swap Microblade modules per 6U chassis • 1 Xeon® node per blade, 28 Xeon® nodes per enclosure, 196 Xeon® nodes per 42U rack • 2x 2.5" SATA3 HDDs/SSDs and 1x SATA-DOM • 2x 40G/8x 10G combo ports Intel® switch, Cisco compatible • Up to 8 (N+1 or N+N redundant) 2000W Titanium Level (96%) Digital High-Efficiency power supplies
5 Switch Module	<ul style="list-style-type: none"> • Up to 2 switch modules with 2x 40Gb/s QSFP Uplinks; or 8x10Gb/s SFP+ Uplinks; and 56x 1Gb/s Downlinks per module (MBM-GEM-001) • Up to 2 switch modules with 4x40Gb/s QSFP Uplinks and 28x 10Gb/s Downlinks per module (MBM-XEM-001) - L2+ Switching - 64K MAC Table - 4K VLANs - Port Mirroring - Spanning Tree (RSTB/MSTP) - Access Control List (ACL) - Link Aggregation - Storm Controllers - IGMP Snooping - OpenFlow/SDN capable - CLI / SNMP/ XMLRPC - Intel® Open Networking Software (ONS) - Out of Band Management port - RS232 Console - Cisco compatible - LLDP Data Center Bridging
6 Chassis Management Module	<ul style="list-style-type: none"> • Up to 2 CMMs remotely manage and monitor server blades, power supplies, cooling fans, and networking switches • The 2nd CMM is for redundancy and failover support - 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 Direction) - LAN Alert-SNMP Trap - Event Log - Hardware Health Monitor - Remote Power Control - Management Tools - IPMIView, CLI (Command Line Interface) - Supports RMCP & RMCP+ Protocols
7 PSU Module	<ul style="list-style-type: none"> • Up to 8 (N+1 or N+N redundant) 2000W (200-240VAC) Titanium Level (96%); 1600W (200-240VAC)/1400W (120-140VAC)/1200W (100-120VAC) Platinum Level (95%) Digital high-efficiency power supplies with cooling fans • Peak efficiency 96% at 50% loading • Supports remote monitoring through I²C and SMBus
Dimensions	<p>6U Rackmount</p> <ul style="list-style-type: none"> • 449 x 265 x 875mm (17.67"W x 10.43"H x 34.43"D)



28 Xeon® UP Nodes in 6U

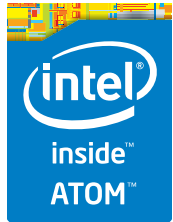
Intel® Xeon® Processor E3-1200 v3 Product Family Supported

MicroBlade Module:
(1 node per module)



- Switch Module
- 2x 40Gb/s QSFP Uplinks; or 8x 10Gb/s SFP+ Uplinks; and
 - 56x 1 Gb/s Downlinks per Module

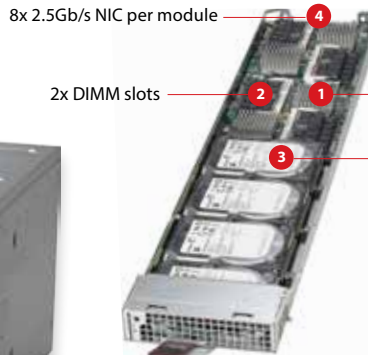
MODEL	MicroBlade (MBI-6118D-T2/T4)
MicroBlade Module	<ul style="list-style-type: none"> 1 Intel® Xeon® E3-1200 v3 product family per module 2 Up to 32GB ECC DDR3 1600/1333MHz VLP UDIMM in 4 DIMM sockets per module 3 2x 3.5" SATA3 HDDs/SSDs or 4x 2.5" SATA3 HDDs/SSDs 4 2x 1Gb/s NIC
Outstanding Features	<ul style="list-style-type: none"> • 28 hot swap Microblade modules per 6U chassis • 1 Xeon® node per blade, 28 Xeon® nodes per enclosure, 196 Xeon® nodes per 42U rack • 2x 3.5" SATA3 HDDs/SSDs or 4x 2.5" SATA3 HDDs/SSDs • 2x 40G/8x 10G combo ports Intel® switch, Cisco compatible • Up to 8 (N+1 or N+N redundant) 2000W Titanium Level (96%) Digital High-Efficiency power supplies
5 Switch Module	<ul style="list-style-type: none"> • Up to 2 switch modules with 2x 40Gb/s QSFP Uplinks; or 8x10Gb/s SFP+ Uplinks; and 56x 1Gb/s Downlinks per Module - L2+ Switching - 64K MAC Table - 4K VLANs - Port Mirroring - Spanning Tree (RSTB/MSTP) - Access Control List (ACL) - Link Aggregation - Storm Controllers - IGMP Snooping - OpenFlow/SDN capable - CLI / SNMP / XMLRPC - Intel® Open Networking Software (ONS) - Out of Band Management port - RS232 Console - Cisco compatible - LLDP Data Center Bridging
6 Chassis Management Module	<ul style="list-style-type: none"> • Up to 2 CMMs 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 Direction) - LAN Alert-SNMP Trap - Event Log - Hardware Health Monitor - Remote Power Control - Management Tools - IPMIView, CLI (Command Line Interface) - Supports RMCP & RMCP+ Protocols
7 PSU Module	<ul style="list-style-type: none"> • Up to 8 (N+1 or N+N redundant) 2000W (200-240VAC) Titanium Level (96%); 1600W (200-240VAC)/1400W (120-140VAC)/1200W (100-120VAC) Platinum Level (95%) Digital high-efficiency power supplies with cooling fans • Peak efficiency 96% at 50% loading • Supports remote monitoring through I²C and SMBus
Dimensions	<ul style="list-style-type: none"> 6U Rackmount • 449 x 265 x 875mm (17.67"W x 10.43"H x 34.43"D)



112 UP Nodes in 6U

New! Intel® Atom™ Processor C2000 Series Supported

Industry's Densest UP Server



MicroBlade Module :
(4 independent nodes per module)
Each node supports:

- 1x Intel® Atom™ C2750/C2550 (8 cores, 2.4GHz / 4 cores, 2.4GHz)
- 2x 2.5Gb/s network connectivity

8x 2.5Gb/s NIC per module

2x DIMM slots

1x 2.5" SATA3 HDD/SSD
1x SATA-DOM

- Switch Module
- 2x 40Gb/s QSFP Uplinks; or 8x 10Gb/s SFP+ Uplinks; and
 - 56x 2.5 Gb/s Downlinks per Module

(MBM-CMM-001)
Redundant Chassis Management Module

(MBE-628L-416)
(MBE-628L-816)

PSU Module



(Rear View)

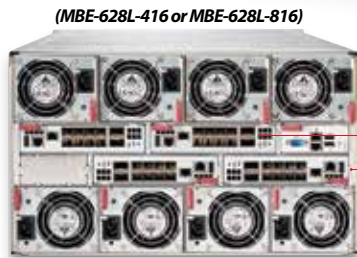
MODEL	MicroBlade (MBI-6418A-T7H/T5H)		
MicroBlade Module	<ul style="list-style-type: none"> 1 4 Intel® Atom™ processor C2750 (8-Core) for up to 6272 cores per 42U rack 2 Up to 128GB ECC DDR3 1600/1333MHz SO-DIMM in 8 DIMM sockets per module (32GB per Node) 3 4x 2.5" SATA3 HDDs/SSDs and 4 SATA-DOM per module (1x 2.5" SATA3 HDDs and 1 SATA-DOM per Node) 4 8x 2.5Gb/s network connectivity per module (2x 2.5Gb/s network connectivity per Node) 		
Outstanding Features	<ul style="list-style-type: none"> • 28 hot swap Microblade modules per 6U chassis • 4 Avoton nodes per blade, 112 Avoton nodes per enclosure, 784 Avoton nodes per 42U rack • 4x 2.5" SATA3 HDDs/SSDs bays and 4 SATA-DOM per blade • Up to 2x 40G/8x 10G combo ports Intel® switch, Cisco compatible • Up to 8 (N+1 or N+N redundant) 1600W Platinum Level (95%) Digital High-Efficiency power supplies 		
5 Switch Module	<ul style="list-style-type: none"> • Up to 4 switch modules with 2x 40Gb/s QSFP Uplinks; or 8x 10Gb/s SFP+ Uplinks; and 56x 2.5Gb/s Downlink per Module 		
	<ul style="list-style-type: none"> - L2+ Switching - 64K MAC Table - 4K VLANs - Port Mirroring - Spanning Tree (RSTB/MSTP) 	<ul style="list-style-type: none"> - Access Control List (ACL) - Link Aggregation - Storm Controllers - IGMP Snooping - OpenFlow/SDN capable - CLI / SNMP/ XMLRPC 	<ul style="list-style-type: none"> - Intel® Open Networking Software (ONS) - Out of Band Management port - RS232 Console - Cisco compatible - LLDP Data Center Bridging
6 Chassis Management Module	<ul style="list-style-type: none"> • 1 CMM remotely manages and monitors server blades, power supplies, cooling fans, and networking switches 		
	<ul style="list-style-type: none"> - 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 Direction) - LAN Alert-SNMP Trap - Event Log 		<ul style="list-style-type: none"> - Hardware Health Monitor - Remote Power Control - Management Tools - IPMIView, CLI (Command Line Interface) - Supports RMCP & RMCP+ Protocols
7 PSU Module	<ul style="list-style-type: none"> • Up to 8 (N+1 or N+N redundant) 1600W (200-240VAC) (Optional 1400W (120-140VAC)/1200W (100-120VAC) Platinum Level (95%) Digital High-Efficiency power supplies with cooling fans • Peak efficiency 95% at 50% loading • Supports remote monitoring through I²C and SMBus 		
Dimensions	<ul style="list-style-type: none"> 6U Rackmount 449 x 265 x 875mm (17.67"W x 10.43"H x 34.43"D) 		

MicroBlade Software Defined Switch Module

2.5/1GbE Switch (MBM-GEM-001/003i/003S)



10GbE Switch (MBM-XEM-001)



(MicroBlade Rear View)

MBM-GEM-001/003i/003S Switch:

- 2x 40Gbps QSFP uplinks; or 8x 10Gbps SFP+ uplinks; and
- 56x 2.5 Gb/s downlinks per Module

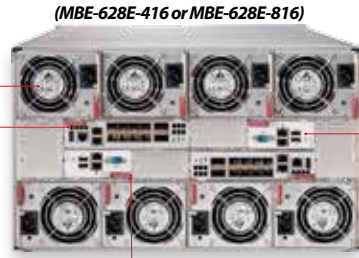
MBM-GEM-001/003i/003S Switch:

- 2x 40Gb/s QSFP Uplinks; or 8x 10Gb/s SFP+ Uplinks; and
- 56x 1 Gb/s Downlinks per Module

MBM-XEM-001 Switch:

- 4x 40Gb/s QSFP Uplinks; and 28x 10Gb/s Downlinks per Module

PSU Module



(MicroBlade Rear View)

(MBM-CMM-001) Redundant Chassis Management Module

MODEL	MicroBlade SDN Switch Module	
	MBM-GEM-001/003i/003S	MBM-XEM-001
General Specifications	<ul style="list-style-type: none"> • Intel® FM5224 GbE Low Latency Switch • 1Gbps RJ45, 2x 40Gbps QSFP; or 8x 10Gbps SFP+ Uplinks • 56x 2.5G/s or 1G/s Downlinks • 1 Console port • 1 USB port 	<ul style="list-style-type: none"> • Intel® FM6348 10GbE Low Latency Switch • 4x 40Gbps QSFP Uplinks • 28x 10Gbps Downlinks • 1 Console port • 1 USB port
Switching Capacity	<ul style="list-style-type: none"> • 442Gbps 	<ul style="list-style-type: none"> • 880Gbps
Physical Layer Features	<ul style="list-style-type: none"> • Jumbo frames up to 9KB • 40 Gigabit optical/copper • 10 Gigabit optical Ethernet SFP+/copper • 1 Gigabit RJ45 Ethernet 	<ul style="list-style-type: none"> • Jumbo frames up to 9KB • 40 Gigabit optical/copper
Layer 2 Features	<ul style="list-style-type: none"> • 4K VLANs • Spanning Tree (802.1D) • Rapid Spanning Tree (802.1w) • Multiple Spanning Trees (802.1s) 	<ul style="list-style-type: none"> • IEEE 802.1Q VLANs/ port-based VLANs • IEEE 802.3ac VLAN tagging • IEEE 802.1AX LAG • IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
Advanced Layer 2 Features	<ul style="list-style-type: none"> • Storm control • Flow control • Port mirroring 	<ul style="list-style-type: none"> • Static MAC filtering • UDLD • Uplink Failure Detection (UFD)
Data Center Features	<ul style="list-style-type: none"> • L2 Data Center Bridging 	<ul style="list-style-type: none"> • CEE v1.01 DCB for PFV/ETS
SDN	<ul style="list-style-type: none"> • Open Flow 1.X 	
Security Features	<ul style="list-style-type: none"> • Switch access password protection • RADIUS and TACACS+ Authentication 	<ul style="list-style-type: none"> • Access Control Lists (to 4K) • SSH, SSL Encryption
System Management	<ul style="list-style-type: none"> • XML-RPC • Industry Standard CLI • Command completion • Content-sensitive "Help" • SNMP v1/v2/v3 • SSH 	<ul style="list-style-type: none"> • TFTP Client • Syslog • DHCP (Client) • Web-based management interface – (future) <ul style="list-style-type: none"> – HTTP/HTTPS • NTP
Multicast	<ul style="list-style-type: none"> • IGMP Snooping 	
Weight	<ul style="list-style-type: none"> • 3.2lbs/1.5kg 	
Dimensions (WxDxH)	<ul style="list-style-type: none"> • 267 x 159 x 36mm (10.5"x6.25"x1.4") 	
Value Added Feature	<ul style="list-style-type: none"> • Layer 2 function (MBM-GEM-001) • Layer 3 function (MBM-GEM-003I) • Advanced Feature (MBM-GEM-003S)* 	<ul style="list-style-type: none"> • Layer 2 function (MBM-XEM-001)

* Contact your Supermicro sales representative for more information, or visit our website www.supermicro.com

SuperBlade® Server Solutions

Best Density

- Up to 20 DP (Intel® Xeon® Processor E5-2600 v3 product family) Nodes
- Up to 10 MP (Intel® Xeon® Processor E5-4600 and E5-4600 v2 product families) Nodes

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

Outstanding Storage Flexibility

- Up to six 2.5" hot-plug SAS2/SATA3 hard drives or SSDs per blade server
- HW RAID with BBU option

Highest GPU/Xeon Phi™ Expansion in the Industry

- Up to 30 NVIDIA® Kepler or 20 Intel® Xeon Phi™ per 7U enclosure

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

Ease of Deployment

- Quick implementation of optimized Blade System of High Performance
- Computing with the benefit of easy operation & maintenance

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



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 FDR/QDR IB switches (710Q)	• One hot-plug 4x DDR IB switch (714E only) or up to two hot-plug 4x FDR/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	• 12.2"H x 17.6"W x 29"D	• 12.2"H x 17.6"W x 29"D



Model	SBE-720D/E/F 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 2 hot-plug FDR 56G IB switches (720F); FDR-10/QDR (720E)
Gigabit Ethernet Switch	• Up to 2 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	12.2"H x 17.6"W x 29"D

Personal Supercomputing Mini-Rack Cabinet



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

CSE-RACK14U

*Not recommended for SBI-7227R-T2, SBI-7127RG/RG-E, and 7228R-T2F/T2X

New Generation X10 SuperBlade® Solutions

Intel® Xeon® Processor E5-2600 v3 Product Family Supported



CPU Socket cap MUST always be in position when the CPU is not installed.

TwinBlade®
Haswell-EP, 10GbE or FDR IB
2 DP Nodes in 1 Blade



StorageBlade
Haswell-EP
SAS 3.0 12Gbps, NVMe



DatacenterBlade®
Haswell-EP
SAS 3.0 12Gbps, NVMe



Model	SBI-7228R-T2F/T2F2/T2X (two nodes)	SBI-7128R-C6	SBI-7428R-T3/C3
Server Nodes/42U Rack	120	60	84
Processors	Intel® Xeon® processor E5-2600 v3 (Haswell) product family with QPI up to 9.6 GT/s	Intel® Xeon® processor E5-2600 v3 (Haswell) product family with QPI up to 9.6 GT/s	Intel® Xeon® processor E5-2600 v3 (Haswell) product family with QPI up to 9.6 GT/s
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory Support	LRDIMM DDR4-2133MHz in 8 slots/node	LRDIMM DDR4-2133MHz in 16 slots	VLP RDIMM DDR4-2133MHz in 16 slots*
Max Memory	Up to 512GB LRDIMM, 256 ECC RDIMM	Up to 1TB ECC LRDIMM, 512GB ECC RDIMM	Up to 256GB ECC VLP RDIMM
Expansion & Hard Disk Drive	Two Hot-Plug 2.5" SATA3 HDDs/SSDs per node	Six Hot-Plug 2.5" SAS3 HDDs/SSDs, or Three Hot-Plug 2.5" SAS3 HDDs/SSDs + Three Hot-Plug 2.5" NVMe Support	Three Hot-Plug 2.5" SAS3 (-C3) / SATA3 (-T3) HDDs/SSDs, or Three Hot-Plug 2.5" NVMe Support
Storage RAID	Intel® C612; RAID 0,1	LSI® 3108 with 2G Cache HW RAID 0,1,5,6,10,50 w/optional SuperCap	Intel PCH SATA3 RAID 0,1,5(T3) LSI® 3108 with 2G Cache HW RAID 0,1,5
InfiniBand/10GbE Option	Onboard 10 GbE (-T2X) Onboard FDR InfiniBand (-T2F/T2F2)*	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA
Ethernet Interface	Intel® i350 dual-port Gigabit Ethernet Controller	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
Graphics	Aspeed AST 2400 VGA	Aspeed AST 2400 VGA	Aspeed AST 2400 VGA
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
Dimensions	11.32" x 1.67" x 20.5"	11.32" x 1.67" x 18.9"	11.32" x 1.19" x 18.9"

* T2X: Dual 10 GbE ports onboard
T2F: For InfiniBand port onboard
T2F2: Dual InfiniBand port onboard
† VLP (very low-profile) memory modules

X9 SuperBlade® Solutions

Intel® Xeon® Processor E5-4600, E5-4600 v2, E5-2600 and E5-2600 v2 Product Families Supported

4-Socket Blade
Ivy Bridge
10GbE or FDR IB

TwinBlade®
Ivy Bridge
2 DP Nodes in 1 Blade

StorageBlade
Ivy Bridge
6x 2.5" HDDs/SSDs

3-GPU Blade
Ivy Bridge
(2 CPUs + 3 GPU cards per node)



CPU Socket cap MUST always be in position when the CPU is not installed.



Model	SBI-7147R-S4X/S4F	SBI-7227R-T2 (two nodes)	SBI-7127R-S6	SBI-7127RG3
Server Nodes/42U Rack	60	120	60	60 (+180 GPU cards)
Processors	Intel® Xeon® processor E5-4600 and E5-4600 v2 product families, (Quad Socket R_LGA2011) with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s, per node	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s
Chipset	Intel® C602J	Intel® C602J	Intel® C602J	Intel® C602J
Memory Support	LRDIMM DDR3 1866/1600/1333/1066 in 16 slots	LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 8 slots / node	LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 16 slots	LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 8 slots
Max Memory	1TB (LRDIMM)/512GB(RDIMM)	512GB(LRDIMM)/256GB(RDIMM)	1TB (LRDIMM)/512GB (RDIMM)	512GB(LRDIMM)/256GB(RDIMM)
Expansion & Hard Disk Drive	Four Hot-Plug 2.5" SAS2 HDDs/SSDs per node	Two hot-plug 2.5" SATA3 HDDs/SSDs per node	Six hot-plug 2.5" SAS2 HDDs/SSDs	Three Tesla Kepler K20X-SXM/ K40 SXM, 1x internal SATA-DOM
Storage RAID	LSI® 2308 RAID 0,1,10	Intel® PCH SATA; RAID 0,1	LSI 2208 controller HW: RAID 0, 1, 5, 6, 10, 50 Battery Backup Option	N/A
InfiniBand/10GbE Option	Onboard 10GbE (-S4X) Onboard FDR 56G IB (-S4F)	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA /node	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR 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, Networking LED, Fault LED /node	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED
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 1.67" x 20.5"

X9 SuperBlade® Solutions

Intel® Xeon® Processor E5-2600 and E5-2600 v2 Product Families Supported

2-GPU Blade

Ivy Bridge, (2 CPUs + 2 GPU/
Xeon Phi™ cards per node)



DatacenterBlade®

Ivy Bridge
SAS 2.0



PCI-E Blade

PCI-E 3.0 x16
Expansion Slot



Dual PCI-E Blade

PCI-E 2.0 x16
Expansion Slot



PCI-E Blade

PCI-E 3.0 x16
Expansion Slot



SBI-7127RG-E	SBI-7427R-S3/T3	SBI-7427R-SH/S2L	SBI-7127RG	SBI-7127R-SH
60 (+120 GPU/Xeon Phi™ cards)	84	84	60 (+120 PCI-E cards)	60
Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 and E5-2600 v2 product families, with QPI up to 8.0GT/s
Intel® C602	Intel® C602J	Intel® C602J	Intel® C602	Intel® C602J
LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 8 slots	VLP RDIMM or UDIMM DDR3 1866/1600/1333/1066 in 16 slots+	VLP RDIMM or UDIMM DDR3 1866/1600/1333/1066 in 16 slots+	LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 8 slots	LRDIMM or UDIMM DDR3 1866/1600/1333/1066 in 16 slots
512GB(LRDIMM)/256GB(RDIMM)	256GB(RDIMM)/64GB(UDIMM)	256GB(RDIMM)/64GB(UDIMM)	512GB(LRDIMM)/256GB(RDIMM)	512GB(RDIMM)/128GB(UDIMM)
Two Tesla Kepler K10/K20M/ K40M/K20X, GRID K1/K2, or Xeon Phi™, One SSD or One SATA-DOM	Three hot-plug 2.5" SAS2* HDDs/ SSDs	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 hard disk drive (SH version) Two hot-plug 2.5" SAS2 HDDs/ SSDs (S2L version)	Two PCI-E Card (FH/FL) One SATA-DOM	One PCI-E 3.0 x16 (FH/HL) Two hot-plug 2.5" SAS2 HDDs/ SSDs
N/A	LSI 2208 controller HW RAID 0,1,5 (S3 version only) Intel® PCH SATA RAID 0,1,5 (T3 version)	LSI 2308 controller	N/A	LSI 2308 controller SW RAID 0,1
FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA	FDR-10/QDR InfiniBand or 10GbE mezzanine HCA
Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 dual-port Gigabit Ethernet controller	Intel® i350 dual-port Gigabit Ethernet controller
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	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
Matrox G200eW	Matrox G200eW	Matrox G200eW	Matrox G200eW	Matrox G200eW
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	Power LED, UID/KVM LED, Networking LED, Fault LED
11.32" x 1.67" x 20.5"	11.32" x 1.19" x 18.9"	11.32" x 1.19" x 18.9"	11.32" x 1.67" x 20.5"	11.32" x 1.67" x 18.9"

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
- Batch patching and BIOS/IPMI update

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



SBM-CMM-003
TwinBlade® CMM Module



BMB-CMM-002
Mini CMM Installs in SBM-XEM-002M, SBM-IBS-Q3616M, SBM-IBS-Q3618M, SBM-XEM-X105M, SBM-IBS-F3616M and SBM-XEM-F8X45M CMM (Chassis Management Module)

1Gb Ethernet Switch Solutions



Model	SBM-GEM-001	SBM-GEM-X2C+	SBM-GEM-X3S+	SBM-XEM-X105M*	SBM-XEM-F8X45M*
Type	Layer-2 Ethernet switch	Layer-2/3 Ethernet switch	Layer-2/3 Ethernet switch	Layer 2/3 10Gb Ethernet Switch	Data Center Converged Switch with FCoE
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	10/20x internal 10Gb links to ports	10/20x internal 10Gb links to ports on mezzanine cards, support DCB, FCoE
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	10/4x 10Gb Ethernet ports with SFP+ connectors	Ethernet: 4x 10Gb Ethernet ports with SFP+ connectors** Fibre Channel: 6x Fibre Channel ports: N ports, support 2, 4, 8Gbps
Trunking	Link aggregation support - static (802.3ad)	Link aggregation support - full (802.3ad)	Link aggregation support - full (802.3ad)	Up to 16K bytes (10G) or 9K bytes (1G)	Up to 12K bytes (10 GbE) or 2112 bytes (FC)
Jumbo Frame	Up to 9k bytes	Up to 16k bytes (10G) or 9K bytes (1G)	Up to 16k bytes (10G) or 9K bytes (1G)	Browser-based management/CLI	Browser-based management/CLI
Remote Management	Browser-based management	Browser-based management / CLI	Browser-based management/CLI	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 2 Capabilities	VLANs, STP, RSTP, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	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
Layer 3 Capabilities	N/A	BGP, DVMRP, IGMP, IPv6, OSPF, PIM, RIP, QoS	BGP, DVMRP, IGMP, IPv6, OSPF, PIM, RIP, QoS	N/A	2, 3
OS	Software upgradeable	Software upgradeable	Software upgradeable	Software upgradeable	Software upgradeable

** SBE-710 series enclosure only

10Gb Ethernet and Converged Network

NEW!

Ethernet Pass-Through Solutions



Model	SBM-GEP-T20	SBM-GEM-002	SBM-XEM-002M*	SBM-IBS-F3616(M)*	SBM-IBS-Q3618/Q3616(M)*	SBM-IBS-001
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 XAU1 ports	20 4x FDR downlink ports	18/20 4x QDR downlink ports	14 internal 4x DDR
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)	16 4x FDR QSFP uplink ports	18/16 4x QDR QSFP uplink ports	10 external ports : 4x DDR-copper
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	4x FDR InfiniBand Switch	4x QDR InfiniBand switch	4x DDR InfiniBand switch

NEW!

InfiniBand/10GbE Mezzanine HCA

NEW!

NEW!



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

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

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

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.



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

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	Israel	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, CEBC, 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									

We Keep IT Green

NVMe • SAS 3.0 • PCI-E SSD



New! MicroBlade™
128 Avoton or 28 DP Nodes
in 6U



SuperBlade® Family



New! TwinPro™
New Generation Twin System
4 DP Nodes in 2U



FatTwin™
8/4 Nodes in 4U
Front or Rear I/O

New! NVMe



Datacenter Optimized
Datacenter PUE < 1.1
47°C Ambient Server Solutions

New! Ultra
Enterprise Class Computing



Double-Sided Storage®
Highest Capacity up to 72x 3.5"
Hot-swap HDDs in 4U



New! 90X Drives
in 4U

GPU/Xeon Phi™ Supercomputing
Multi TeraFLOPS Servers/Workstations/Blades



Comprehensive Server, Storage and Networking Product Lines
Optimized for IT, Datacenter, Embedded, HPC and Cloud Computing



Electromagnetic Compatibility (EMC)

United States / Canada
Europe

FCC - Emissions (US) Verification
EN55022 - Emissions
EN55024 - Immunity
EN61000-3-2 - Harmonics
EN61000-3-3 - Voltage Flicker
CE - EMC Directive 89/336/EEC
VCCI (SBI-7126TG only)
AS/NZS CISPR22:2006 (SBI-7126TG only)

Safety Compliance

United States / Canada
Europe

UL60950-1 - CSA/CUL 60950-1
CE LVD 2006/95/EC
IEC/EN-60950-1

SUPERMICRO®

Headquarters:

Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131, USA
Tel: +1-408-503-8000
Fax: +1-408-503-8008
E-mail: Marketing@Supermicro.com

European Subsidiary:

Super Micro Computer, B.V.
Het Sterrenbeeld 28, 5215 ML,
's-Hertogenbosch, The Netherlands
Tel: +31-73-640-0390
Fax: +31-73-641-6525
E-mail: Marketing@Supermicro.nl

Asian Subsidiary:

Super Micro Computer, Inc. (Taiwan Office)
3F., No.150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 23511, Taiwan (R.O.C.)
Tel: +886-2-8226-3990
Fax: +886-2-8226-3991
E-mail: Marketing@Supermicro.com.tw

China Subsidiary:

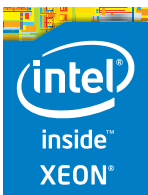
Super Micro Computer, Inc. (Beijing Office)
Suite 1208 JiaHua Building D
Shangdi Haidian District, Beijing
China 100085
Tel: +86-10-62969165
E-mail: Marketing@Supermicro.com

Supermicro Japan

S-7F N.E.S Bldg., 22-14, Sakuragaoka-cho,
Shibuya-Ku, Tokyo, 150-0031 Japan
Tel: +81-3-5728-5196
FAX: +81-3-5728-5197
Tech Support: japanservice@supermicro.com
E-mail: Marketing@Supermicro.com

Super Micro Computer, Inc.

(Supermicro® Science & Technology Park)
No.1899, Xingfeng Rd., Bade City,
Taoyuan County 334, Taiwan (R.O.C.)
Tel: +886-2-8226-3990
Fax: +886-2-8226-3991
E-mail: Marketing@Supermicro.com.tw



www.supermicro.com

©2011 Super Micro Computer, Inc. Specifications subject to change without notice. All other brands and names are the property of their respective owners.

