



MicroBlade/SuperBlade®

Highest-Density • High-Performance • High-Efficiency • Cost-Effective
Enterprise, Data Center, Web, HPC and Cloud Computing Solutions

New!



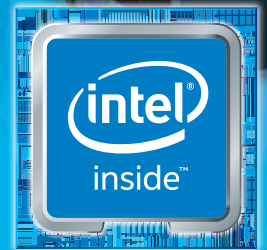
3U MicroBlade

Up to **28 UP/14 DP** Nodes



6U MicroBlade

Up to **112 UP/28 DP** Nodes



TwinBlade®
(Double Density)



GPU/Intel® Xeon Phi™
coprocessor Blade



DataCenter
Blade®



StorageBlade®



4-Socket
Blade



PCI-E Blade

MicroBlade

6U/3U DP/UP Server Systems, support up to:

- 112 nodes - Intel® Atom™ processor (C2750/C2550)
- 56 UP nodes - Intel® Xeon® processor E3-1500 v5 (1585/1578L)
- 56 UP nodes - Intel® Xeon® processor D-1500 (1581/1541)
- 56 UP nodes - Intel® Xeon® processor E3-1200 v5
- 28 DP nodes - Intel® Xeon® processor E5-2600 v4/v3
- High-efficiency Supermicro system design (as low as 10W per node)
- Redundant (N+1 or N+N) Titanium Level (96%+) digital power supplies
- Redundant 10/2.5/1 Gbps SDN switches
- Redundant chassis management modules with unified remote management software
- Front-loading nodes for easy access and servicing

SuperBlade®

7U MP/DP Server Systems, support up to:

- 20 DP nodes - Intel® Xeon® processor E5-2600 v4/v3
- 10 MP nodes - Intel® Xeon® processor E5-4600 v2
- 30 GPU cards + 20 CPU
- 20 GPU/Intel® Xeon Phi™ coprocessor or 40 PCI-E cards or 90 SSD and 20 CPU
- 6 hot-swap SSD/HDD per node (with 3 NVMe support)
- Redundant (N+1 or N+N) Platinum Level (94%+) digital power supplies
- Redundant 10Gbps layer 2/3 switches and FCoE switches
- Redundant FDR / QDR InfiniBand Switches
- Redundant chassis management modules with unified remote management software



MicroBlade

Support up to: 56 Intel® Xeon® processor UP or 28 DP server nodes · M.2 NVMe · SAS3
 · Redundant Titanium Level digital power supplies
 · Redundant 10/2.5/1Gbps SDN switches



3U MicroBlade

6U MicroBlade

MicroBlade Servers

10Gbps

MBI-6128R-T2 MBI-6128R-T2X

Intel® Xeon® Processor E5-2600 v4/v3

New! **HD Graphics** **New!**
NVMe
10Gbps

MBI-6219G-T8HX/T7LX MBI-6119G-T8HX/T7LX

Intel® Xeon® Processor E3-1500 v5 (1585/1578L)

New! **10Gbps** **New!**

MBI-6218G-T81X/T41X MBI-6118G-T81X/T41X

Intel® Xeon® processor D-1500 (1581/1541)

New! **SAS3** **New!** **New!** **New!**

MBI-6119G-C2 MBI-6119G-C4 MBI-6119G-T4 MBI-6219G-T

Intel® Xeon® Processor E3-1200 v5

MBI-6118D-T2/T2H MBI-6118D-T4/T4H

Intel® Xeon® Processor E3-1200 v4/v3

MBI-6418A-T7H MBI-6418A-T5H

Intel® Atom™ Processor (C2750/C2550)

MicroBlade Enclosures

6U/3U Enclosures

- 112 Intel® Atom™ processor (C2750/C2550) nodes
- 56/28/14 Intel® Xeon® processor D-1500 (1581/1541) UP nodes
- 56/28/14 Intel® Xeon® processor E3-1500 v5 (1585/1578L)UP nodes
- 56/28/14 Intel® Xeon® processor E3-1200 v5/v4/v3 UP nodes
- 28/14 Intel® Xeon® processor E5-2600 v4/v3 DP nodes

High-Efficiency Power Supply

- Titanium Level (96%+ efficiency) 2000W digital power supplies with N+N or N+1 redundancy
- Platinum Level (94%+ efficiency) 1600W digital power supplies with N+N or N+1 redundancy
- 2000W DC power supplies with N+N or N+1 redundancy



Model	MBE-314E-420(D)/416/220(D)	MBE-628L-816/416
Blade Server	Up to 14 hot-swappable blade servers	Up to 28 hot-swappable blade servers
Node Support	Intel® based blades	Intel® based blades
LED	Power LED, Fault LED	Power LED, Fault LED
Ethernet Switch	Up to two hot-swappable 10Gbps/1Gbps switches	Up to four hot-swappable 1Gbps switches
Management Module	Up to one hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities	Up to one hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	<ul style="list-style-type: none"> • Up to four hot-swappable 2000W (-420) • Up to four hot-swappable 1600W (-416) • Up to two hot-swappable 2000W (-220) 	<ul style="list-style-type: none"> • Up to eight hot-swappable 1600W (-816) • Up to four hot-swappable 1600W (-416)
Cooling Design	4 cooling fans	8 cooling fans
Rack Unit	3U	6U
Dimensions (H x W x D)	-420(D)/220(D): 5.21" (132.5mm) x 17.67" (449mm) x 36.10" (917mm) -416: 10.43" (265mm) x 17.67" (449mm) x 34.43" (875mm)	10.43" (265mm) x 17.67" (449mm) x 34.43" (875mm)

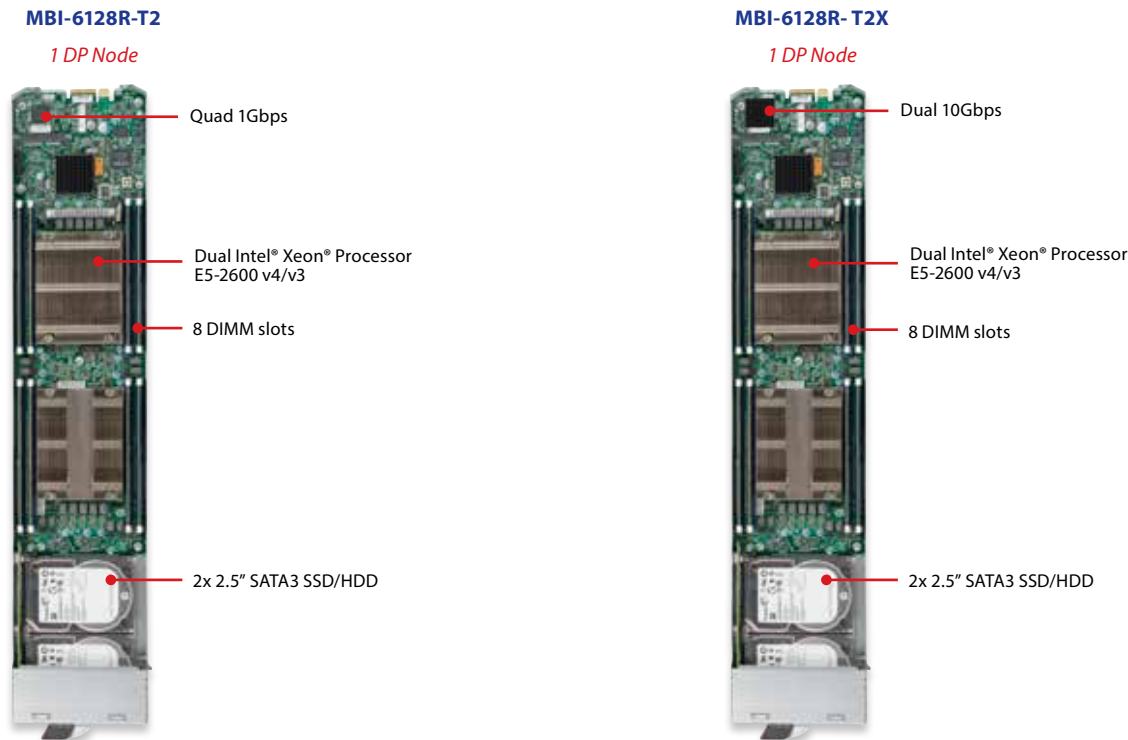


Model	MBE-628E-816/416	MBE-628E-820(D)/420(D)
Blade Server	Up to 28 hot-swappable blade servers	Up to 28 hot-swappable blade servers
Node Support	Intel® based blades	Intel® based blades
LED	Power LED, Fault LED	Power LED, Fault LED
Ethernet Switch	Up to two hot-swappable 10Gbps/1Gbps switches	Up to two hot-swappable 10Gbps/1Gbps switches
Management Module	Up to two hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities	Up to two hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	<ul style="list-style-type: none"> • Up to eight hot-swappable 1600W (-816) • Up to four hot-swappable 1600W (-416) 	<ul style="list-style-type: none"> • Up to eight hot-swappable 2000W (-820) • Up to four hot-swappable 2000W (-420)
Cooling Design	8 cooling fans	8 cooling fans
Rack Unit	6U	6U
Dimensions (H x W x D)	10.43" (265mm) x 17.67" (449mm) x 34.43" (875mm)	10.43" (265mm) x 17.67" (449mm) x 36.10" (875mm)



X10 MicroBlade DP Servers

Dual Intel® Xeon® Processor E5-2600 v4/v3 Supported



Model	MBI-6128R-T2	MBI-6128R-T2X
Server Nodes/42U Rack	196	196
Processor	Dual Intel® Xeon® processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s	Dual Intel® Xeon® processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel® C612	Intel® C612
Memory Support	8x DDR4-2400 ECC VLP RDIMMs	8x DDR4-2400 ECC VLP RDIMMs
Max Memory	Up to 256GB	Up to 256GB
Expansion & Drive Bays	2x 2.5" SATA3 SSD/HDD 1x SuperDOM Port	2x 2.5" SATA3 SSD/HDD 1x SuperDOM Port
Storage RAID	Intel® PCH SATA3 RAID 0,1	Intel® PCH SATA3 RAID 0,1
Ethernet Interface	Quad-port 1Gbps LAN	Dual-port 10Gbps LAN
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
LED Indicators	Power LED UID / KVM LED Network Activity LED Fault LED	Power LED UID / KVM LED Network Activity LED Fault LED
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)
Chassis	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416

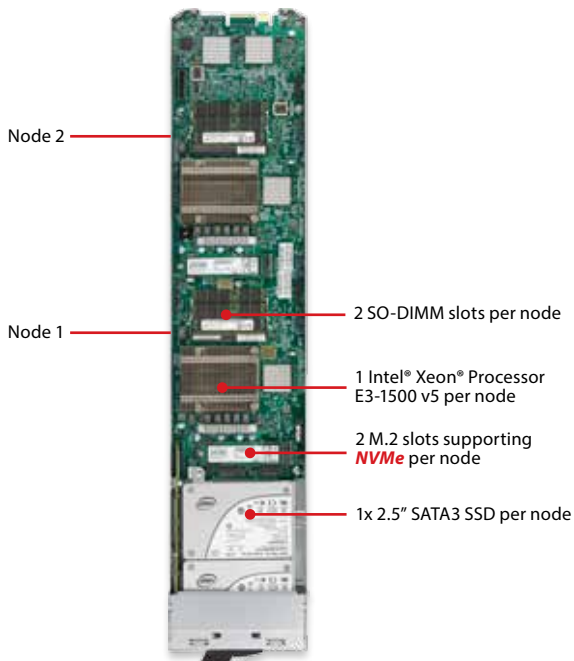


X11 MicroBlade UP Servers

Intel® Xeon® Processor E3-1500 v5 (1585/1578L) Supported

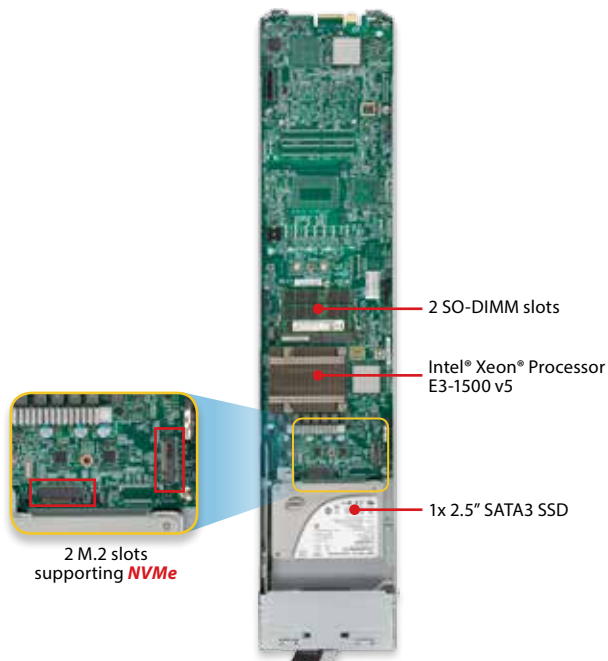
MBI-6219G-T8HX/T7LX

2 Independent UP Nodes



MBI-6119G-T8HX/T7LX

1 UP Node



Model	MBI-6219G-T8HX/T7LX		MBI-6119G-T8HX/T7LX	
Server Nodes/42U Rack	392		196	
Processor	-T8HX: Intel® Xeon® processor E3-1585 v5, 4 core, 65W with Integrated Intel® Iris™ Pro Graphics P580 per node	-T7LX: Intel® Xeon® processor E3-1578L v5, 4 core, 45W with Integrated Intel® Iris™ Pro Graphics P580 per node	-T8HX: Intel® Xeon® processor E3-1585 v5, 4 core, 65W with Integrated Intel® Iris™ Pro Graphics P580	-T7LX: Intel® Xeon® processor E3-1578L v5, 4 core, 45W with Integrated Intel® Iris™ Pro Graphics P580
Chipset	Intel® C236		Intel® C236	
Memory Support	2x DDR4-2400 ECC SO-DIMMs per node		2x DDR4-2400 ECC SO-DIMMs	
Max Memory	Up to 32GB per node		Up to 32GB	
Expansion & Drive Bays	1x 2.5" SATA3 SSD 1x SuperDOM Port 2x M.2 Slots (PCI-E 3.0 x4) supporting NVMe per node		1x 2.5" SATA3 SSD 1x SuperDOM Port 2x M.2 Slots (PCI-E 3.0 x4) supporting NVMe	
Storage RAID	N/A		N/A	
Ethernet Interface	Dual-port 10Gbps LAN per node		Dual-port 10Gbps LAN	
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN		IPMI 2.0, KVM over IP, Virtual Media over LAN	
LED Indicators	Power LED Fault LED Network Activity LED UID / KVM LED		Power LED Fault LED Network Activity LED UID / KVM LED	
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)		1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)	
Chassis	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416		6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416	

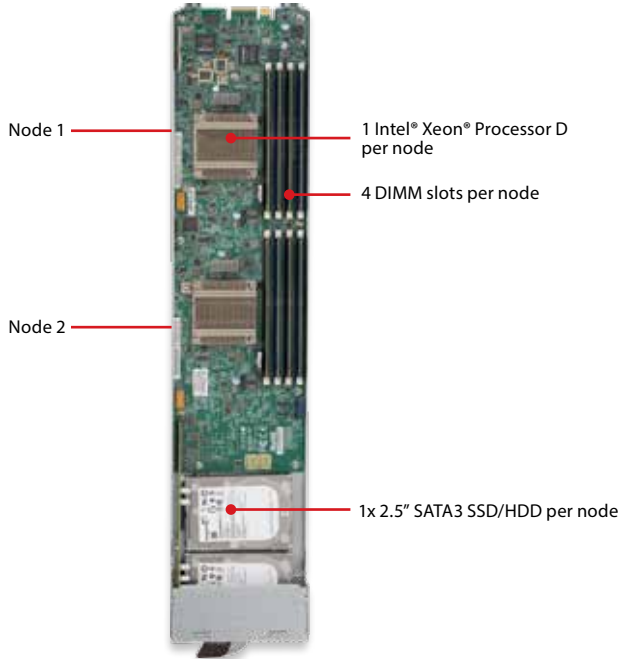


X10 MicroBlade UP Servers

Intel® Xeon® processor D-1500 (1581/1541) Supported

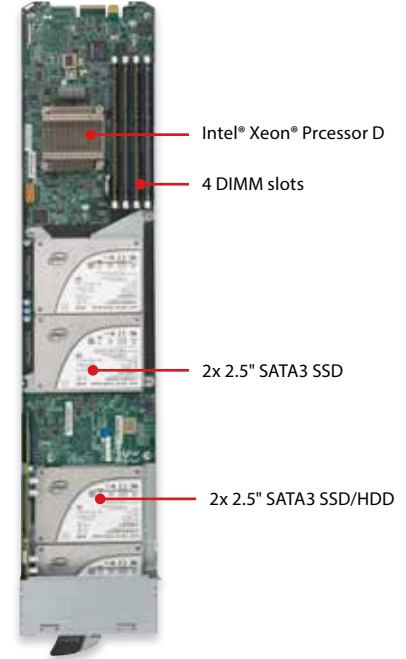
MBI-6218G-T81X/ T41X

2 Independent UP Nodes



MBI-6118G-T81X/ T41X

1 UP Node



Model	MBI-6218G-T81X/ T41X		MBI-6118G-T81X/ T41X	
Server Nodes/42U Rack	392		196	
Processor	-T81X: Intel® Xeon® processor D-1581, 16 cores, 65W	-T41X: Intel® Xeon® processor D-1541, 8 cores, 45W	-T81X: Intel® Xeon® processor D-1581, 16 cores, 65W	-T41X: Intel® Xeon® processor D-1541, 8 cores, 45W
Chipset	System-on-Chip		System-on-Chip	
Memory Support	4x DDR4-2400 ECC VLP RDIMMs per node		4x DDR4-2400 ECC VLP RDIMMs	
Max Memory	Up to 128GB per node		Up to 128GB	
Expansion & Drive Bays	1x 2.5" SATA3 SSD/HDD and 1x SuperDOM Port per node		4x 2.5" SATA3 SSD or 2x SSD/HDD + 2x SSD and 1x SuperDOM Port	
Storage RAID	N/A		RAID 0,1,5,10	
Ethernet Interface	Dual-port 10Gbps LAN per node		Dual-port 10Gbps LAN	
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN		IPMI 2.0, KVM over IP, Virtual Media over LAN	
LED Indicators	Fault LED Network Activity LED Power LED UID / KVM LED		Fault LED Network Activity LED Power LED UID / KVM LED	
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)		1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)	
Chassis	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416		6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416	

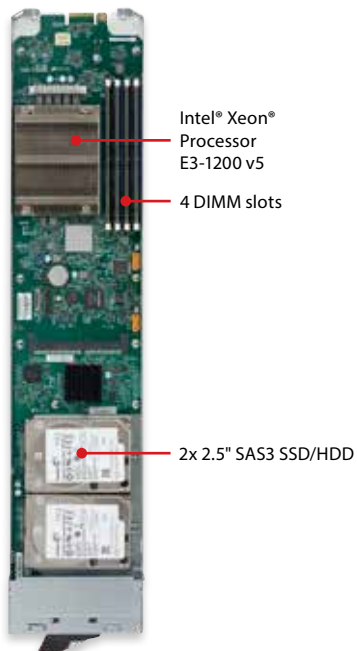


X11 MicroBlade UP Servers

Intel® Xeon® Processor E3-1200 v5 Supported

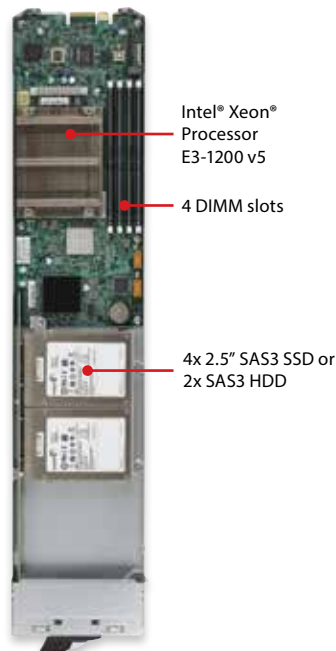
MBI-6119G-C2

1 UP Node



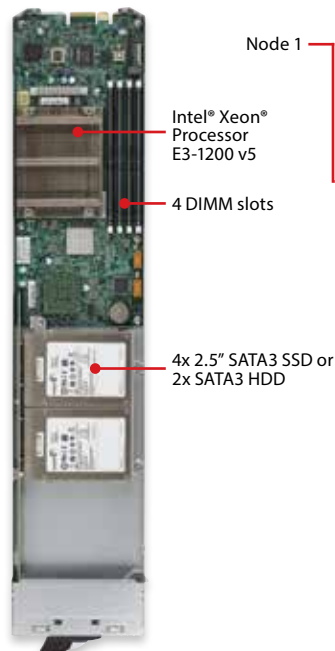
MBI-6119G-C4

1 UP Node



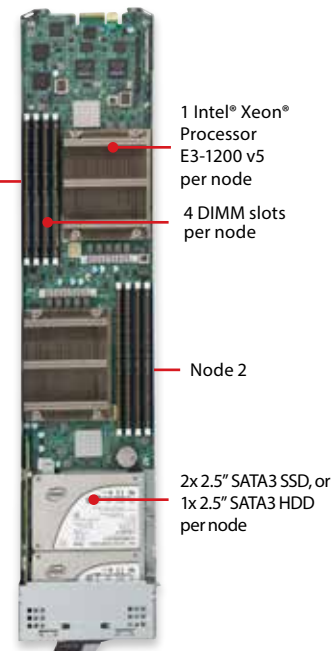
MBI-6119G-T4

1 UP Node



MBI-6219G-T

2 Independent UP Nodes



Model	MBI-6119G-C2/C4		MBI-6119G-T4	MBI-6219G-T
Server Nodes/42U Rack	196		196	392
Processor	Intel® Xeon® processor E3-1200 v5 product family		Intel® Xeon® processor E3-1200 v5 product family	Intel® Xeon® processor E3-1200 v5 product family
Chipset	Intel® C236		Intel® C236	Intel® C236
Memory Support	4x DDR4-2133 ECC VLP UDIMMs		4x DDR4-2133 ECC VLP UDIMMs	4x DDR4-2133 ECC VLP UDIMMs per node
Max Memory	Up to 64GB		Up to 64GB	Up to 64GB per node
Expansion & Drive Bays	-C2: 2x 2.5" SAS3 SSD/HDD and 2x SuperDOM Port	-C4: 2x 2.5" SAS3 HDD or 4x 2.5" SAS3 SSD and 2x SuperDOM Port	2x 2.5" SATA3 HDD or 4x 2.5" SATA3 SSD and 2x SuperDOM Port	1x 2.5" SATA3 HDD or 2x 2.5" SATA3 SSD per node
Storage RAID	Avago 3008 SAS3/SATA3 RAID 0,1,1E,10		Intel® PCH RAID 0,1,5,10	Intel® PCH RAID 0,1
Ethernet Interface	Dual-port 1Gbps LAN		Dual-port 1Gbps LAN	Dual-port 1Gbps LAN per node
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
LED Indicators	Power LED Fault LED Network Activity LED UID / KVM LED		Power LED Fault LED Network Activity LED UID / KVM LED	Power LED Fault LED Network Activity LED UID / KVM LED
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)		1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)
Chassis	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416		6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416

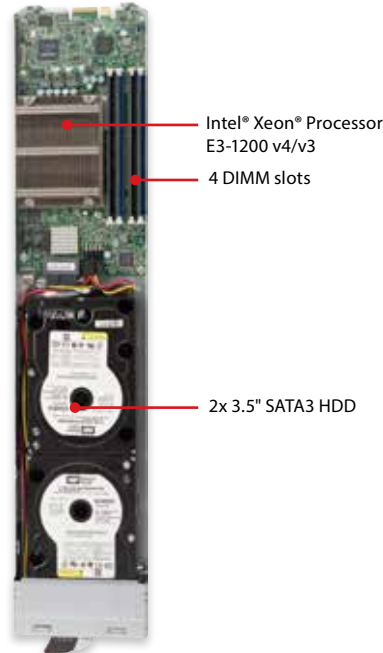


X10 MicroBlade UP Servers

Intel® Xeon® Processor E3-1200 v4/v3 Supported

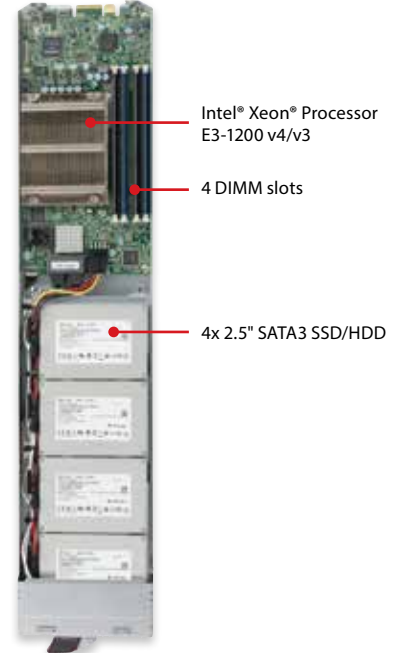
MBI-6118D-T2/T2H

1 UP Node



MBI-6118D-T4/T4H

1 UP Node



Model	MBI-6118D-T2/T2H	MBI-6118D-T4/T4H
Server Nodes/42U Rack	196	196
Processor	Intel® Xeon® processor E3-1200 v4/v3 product families 4 th Generation Intel® Core™ i3 Processor Series	Intel® Xeon® processor E3-1200 v4/v3 product families 4 th Generation Intel® Core™ i3 Processor Series
Chipset	-T2: Intel® C224 -T2H: Intel® C226	-T4: Intel® C224 -T4H: Intel® C226
Memory Support	4x DDR3-1600 ECC VLP UDIMMs	4x DDR3-1600 ECC VLP UDIMMs
Max Memory	Up to 32GB	Up to 32GB
Expansion & Drive Bays	2x 3.5" SATA3 HDD	4x 2.5" SATA3 SSD/HDD
Storage RAID	RAID 0,1	RAID 0,1,5,10
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
LED Indicators	Fault LED Network Activity LED Power LED UID / KVM LED	Fault LED Network Activity LED Power LED UID / KVM LED
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (589.28mm)
Chassis	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416	6U: • MBE-628E-416 • MBE-628E-420 • MBE-628E-816 • MBE-628E-820 3U: • MBE-314E-420(D) • MBE-314E-220(D) • MBE-314E-416

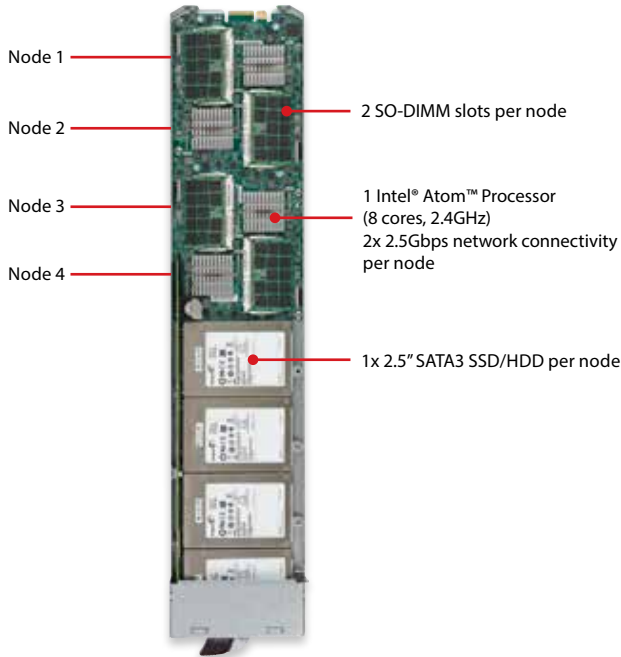


X10 MicroBlade UP Servers

Intel® Atom™ Processor (C2750/C2550) Supported

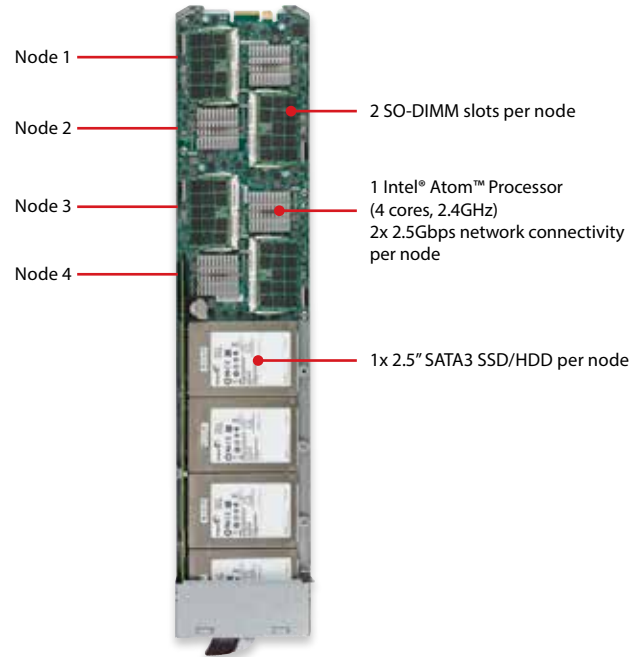
MBI-6418A-T7H

4 Independent UP Nodes



MBI-6418A-T5H

4 Independent UP Nodes



Model	MBI-6418A-T7H	MBI-6418A-T5H
Server Nodes/42U Rack	784	784
Processor	Intel® Atom™ Processor C2750 8 cores, 2.4GHz	Intel® Atom™ Processor C2550 4 cores, 2.4GHz
Chipset	System-on-Chip	System-on-Chip
Memory Support	2x DDR3-1600/1333 ECC SO-DIMMs per node	2x DDR3-1600/1333 ECC SO-DIMMs per node
Max Memory	Up to 32GB per node	Up to 32GB per node
Expansion & Drive Bays	1x 2.5" SATA3 SSD/HDD and 1x SuperDOM Port per node	1x 2.5" SATA3 SSD/HDD and 1x SuperDOM Port per node
Storage RAID	N/A	N/A
Ethernet Interface	Dual-port 2.5Gbps LAN per node	Dual-port 2.5Gbps LAN per node
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
LED Indicators	Power LED UID / KVM LED Network Activity LED Fault LED	Power LED UID / KVM LED Network Activity LED Fault LED
Dimensions (H x W x D)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (489.28mm)	1.2" (30.48mm) x 4.94" (125.48mm) x 23.2" (489.28mm)
Chassis	6U: • MBE-628L-416 • MBE-628L-816	6U: • MBE-628L-416 • MBE-628L-816

MicroBlade Broadcom Based Switches



10Gbps Switch

MBM-XEM-002



2x 40Gbps QSFP+ Uplinks
4x 10Gbps SFP+ Uplinks
Console Port
USB Port

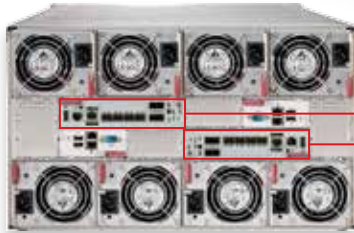


1Gbps Switch

MBM-GEM-004



4x 10Gbps SFP+ Uplinks
8x 1Gbps RJ45 Uplinks
Console Port



MBM-XEM-002
Redundant Switch Modules

MBE-628E-416/420 or MBE-628E-816/820
(6U MicroBlade Rear View)



MBM-GEM-004
Redundant Switch Modules

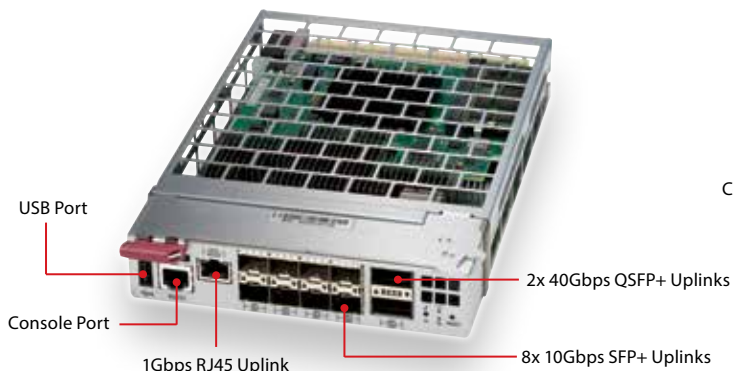
MBE-314E-416/420 or MBE-314E-816/820
(3U MicroBlade Rear View)

Model	MicroBlade Switch	
	MBM-XEM-002	MBM-GEM-004
General Specifications	<ul style="list-style-type: none"> Broadcom 10Gbps Ethernet Low Latency Switch 2x 40Gbps Ethernet QSFP+ or 4x 10Gbps Ethernet SFP+ Uplinks 56x 10/2.5/1Gbps Ethernet Downlinks 1 Console port 1 USB port 	<ul style="list-style-type: none"> Broadcom 1Gbps Ethernet Low Latency Switch 4x 10Gbps Ethernet SFP+ and 8x 1Gbps Ethernet RJ45 Uplinks 28x 1Gbps Ethernet Downlinks 1 Console port
Switching Capacity	1280Gbps	152Gbps
Physical Layer Features	<ul style="list-style-type: none"> Jumbo frames up to 9KB 40Gbps optical/copper Optional 10Gbps Ethernet optical/copper 	<ul style="list-style-type: none"> Jumbo frames up to 9KB Optional 10Gbps Ethernet optical/copper 1Gbps Ethernet copper
Layer 2 Features	<ul style="list-style-type: none"> 4K VLANs Spanning Tree Protocol (802.1D) Rapid Spanning Tree Protocol (802.1w) Multiple Spanning Tree Protocol (802.1s) MAC Address: -XEM-002: 128K -GEM-004: 64K 	<ul style="list-style-type: none"> IEEE 802.1Q VLANs/ port-based VLANs IEEE 802.3ad with LACP IEEE 802.1AB Link Layer Discovery Protocol (LLDP) Multi-Chassis Link Aggregation (M-LAG)
Advanced Layer 2 Features	<ul style="list-style-type: none"> Storm control Flow control Port mirroring Uplink Failure Detection 	
Layer 3 Features	<ul style="list-style-type: none"> OSPF BGP DHCP Server 	
Security Features	<ul style="list-style-type: none"> Switch access password protection RADIUS and TACACS+ Authentication Access Control Lists (ACLs) SSH, SSL Encryption 	
System Management	<ul style="list-style-type: none"> Industry Standard CLI SNMP v1/v2/v3 SSH Syslog DHCP (Client) 	<ul style="list-style-type: none"> Web-based management interface NTP RMON Zero Touch Provisioning
Multicast	IGMP Snooping	
Weight	3.2lbs/1.5kg	3.1lbs/1.4kg
Dimensions (H x W x D)	1.4" (36mm) x 10.5" (267mm) x 6.25" (159mm)	

MicroBlade Intel® Based Switches

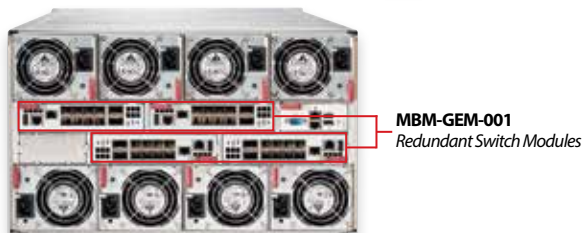
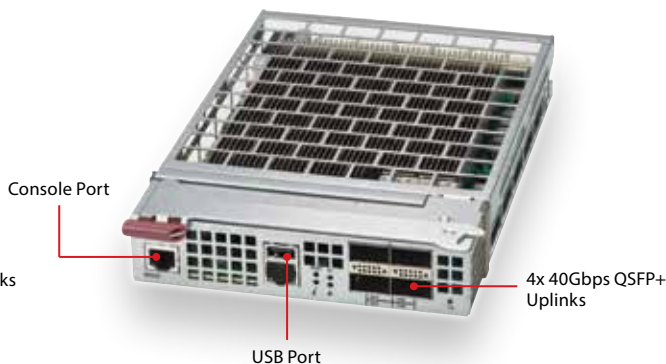
2.5/1Gbps Switch

MBM-GEM-001

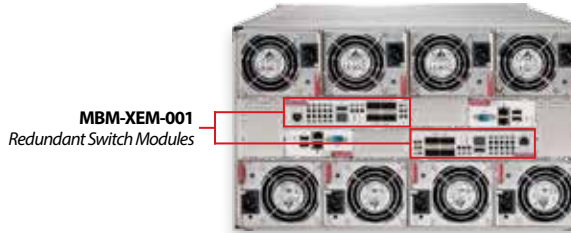


10/2.5/1Gbps Switch

MBM-XEM-001



MBE-628L-416 or MBE-628L-816
(6U MicroBlade Rear View)



MBE-628E-416/420 or MBE-628E-816/820
(3U MicroBlade Rear View)

Model	MicroBlade Switch	
	MBM-GEM-001	MBM-XEM-001
General Specifications	<ul style="list-style-type: none"> Intel® 1Gbps Ethernet Low Latency Switch 1Gbps Ethernet RJ45, 2x 40Gbps Ethernet QSFP+ or 8x 10Gbps Ethernet SFP+ Uplinks 56x 2.5/1Gbps Ethernet Downlinks 1 Console port 1 USB port 	<ul style="list-style-type: none"> Intel® 10Gbps Ethernet Low Latency Switch 4x 40Gbps Ethernet QSFP+ Uplinks 56x 10/2.5/1Gbps Ethernet Downlinks 1 Console port 1 USB port
Switching Capacity	442Gbps	880Gbps
Physical Layer Features	<ul style="list-style-type: none"> 40Gbps optical/copper 10Gbps optical/copper 1Gbps copper Jumbo frames up to 9KB 	<ul style="list-style-type: none"> 40Gbps optical/copper Jumbo frames up to 9KB 1Gbps copper
Layer 2 Features	<ul style="list-style-type: none"> 4K VLANs Spanning Tree Protocol (802.1D) Rapid Spanning Tree Protocol (802.1w) Multiple Spanning Tree Protocol (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 Unidirectional Link Detection (UDLD) Uplink Failure Detection (UFD)
Data Center Features	<ul style="list-style-type: none"> L2 Data Center Bridging CEE v1.01 DCB for PFC/ETS 	
SDN	Open Flow	
Security Features	<ul style="list-style-type: none"> Switch access password protection RADIUS and TACACS+ Authentication 	<ul style="list-style-type: none"> SSH, SSL Encryption Access Control Lists (to 4K) SSH, SSL Encryption SSH, SSL Encryption
System Management	<ul style="list-style-type: none"> XML-RPC Industry Standard CLI Auto 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 – HTTP/HTTPS NTP
Multicast	IGMP Snooping	
Weight	3.2 lbs/1.5kg	3.1 lbs/1.4kg
Dimensions (H x W x D)	1.4" (36mm) x 10.5" (267mm) x 6.25" (159mm)	

MicroBlade Power Supply and Power Cable Guide



Key Advantages of Supermicro High-Efficiency MicroBlade Power Supplies

Availability – Non-stop power with N+1 or N+N up to 8 redundant power supply modules

Cost Saving – With 96%+ efficiency (Titanium Level) power supplies, 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

Model	PWS-2K01A-BR	PWS-1K67P-1R	PWS-2K02D-BR
Output	2000W/1980W/1800W/1000W	1600W/1400W/1200W	2000W
Type	Redundant Module (N+1 or N+N)	Redundant Module (N+1 or N+N)	Redundant Module (N+1 or N+N)
+12V	<ul style="list-style-type: none"> • 166.7A (2000W) • 165A (1980W) • 150A (1800W) • 83.3A (1000W) 	<ul style="list-style-type: none"> • 133A (1600W) • 116.7A (1400W) • 100A (1200W) 	<ul style="list-style-type: none"> • 166.7A (2000W) • 133.3A (1600W)
5VSB	4.2A	4.2A	4.2A
PFC	Yes	Yes	No
Peak Efficiency	96%+ efficiency (Titanium Level)	95%+ efficiency (Platinum Level)	92%+ efficiency
Input Range	<ul style="list-style-type: none"> • 100-127V (1000W) • 200-220V (1800W) • 220-230V (1980W) • 230-240V (2000W) • 200-240V (2000W for UL & cUL) 	<ul style="list-style-type: none"> • 100-120V (1200W) • 120-140V (1400W) • 200-240V (1600W) 	<ul style="list-style-type: none"> • -40-44Vdc (1600W) • -44-66Vdc (2000W)
Operating Conditions	Temp: 0 to 50°C Humidity: 5 to 95% RH	Temp: 0 to 50°C Humidity: 5 to 95% RH	Temp: 0~50°C
Fan Type	80x80mm counter rotating fan	80x38mm fan	80x80mm counter rotating fan

At the current time, the Supermicro® MicroBlade is shipping with power supplies of 2000W, and 1600W. Table 1 below illustrates the various Power Supplies offered by Supermicro. This table shows the maximum power requirement of each model.

Power Supply Amperage Draw

Model	Watts	Low Volts	High Volts	Low Amps	10% Reserve	High Amps	10% Reserve	Max Amps
PWS-2K01A-BR	2000W (UL/cUL only)	200	240	9.8	1.0	11.5	1.2	11.5
PWS-2K01A-BR	2000W	230	240	9.8	1.0	10	1.0	10
PWS-2K01A-BR	1980	220	230	9.8	1.0	10	1.0	10
PWS-2K01A-BR	1800	200	220	9.5	1.0	10	1.0	10
PWS-2K01A-BR	1000	100	127	9.5	1.0	12	1.2	12
PWS-1K67P-1R	1600	100	120	12	1.2	14.2	1.4	14.2
PWS-1K67P-1R	1400	120	140	11.7	1.2	13.7	1.4	13.7
PWS-1K67P-1R	1200	200	240	7	0.7	9.4	0.9	9.4

The Supermicro MicroBlade product includes a power extension cord CBL-PWCD-0579 for 2000W /1600W power supply. The power cord connects the power supply to a wall AC outlet or Power Distribution Unit (optional) in an IT room. The AC outlet and PDU should supply input voltage ranging from 200V to 240V AC.

Before beginning receptacle installation, consider the following:

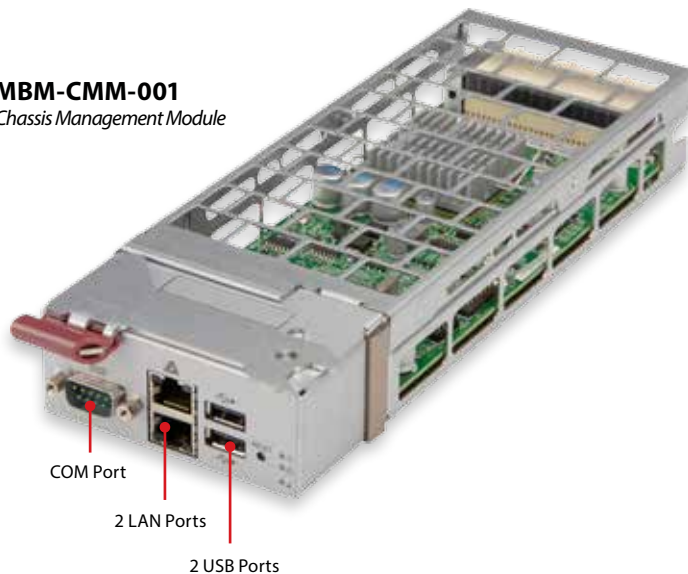
- Observe all local electrical codes and practices.
- Ensure that the AC power receptacle is wired to the site AC power via conductors through flexible meta conduit or via approved AC power cable before installation.
- Ensure that AC power cord is properly sized service rated, temperature rated, and 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 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.

Chassis Management Module

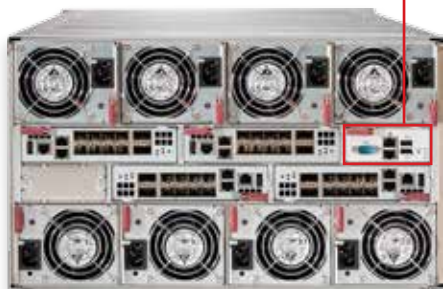
The MicroBlade Chassis Management Module (CMM) provides remote access control capability to the enclosure and components such as individual server blade, power supply, and switch. User enjoys the centralized remote management to monitor and control over the CMM hierarchy at all 3 levels SSM, CMM and IPMI.

Remote access is enabled via IP address to capture server blade status and the next layer of system information at BMC via table summary, which includes: FW rev, FW Build Time, BIOS version, BIOS Build Time, IP Address, BMC MAC Address, System LAN1 MAC Address, System LAN2 MAC Address, Software Module, Management IP and lastly to the whole system's details such as Core, Environment, WebUI, layer 1/2, Platform Advanced Features, Internal Mapping Names, Admin Mode and Operation Mode Status.

MBM-CMM-001
Chassis Management Module

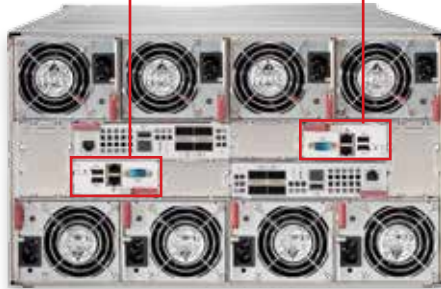


MBM-CMM-001
Chassis Management Module



MBE-628L
6U MicroBlade Enclosure Rear View

MBM-CMM-001
Redundant Chassis Management Modules



MBE-628E
6U MicroBlade Enclosure Rear View

MBM-CMM-001
Chassis Management Module



MBE-314E
3U MicroBlade Enclosure Rear View

Key Features

- Centralized remote management
 - Server Blades
 - Power Supplies
 - Cooling Fans
 - Switches
- Easy Setup.
- Easy Manage.
- Management Tools:
 - IPMIView - CLI, Web-based GUI
 - CMM – Enclosure Monitoring.
 - SSM – Blade Enclosure and Rack.
 - Utilities: SMCIPMITOOL for CMM and IPMICFG for IPMI.
 - OS Support.
- Redundancy and Fail-over
- 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
- Supports RMCP & RMCP+ Protocols
- Remote Access.
- Remote Power Control
- Remote KVM through Network
- Remote Management Processor and sub-system

Specifications

- 2x USB Ports
- Remote Management Processor and sub-system
- 2x LAN ports
- Video ADC, Video Compress FPGA
- I²C, IPMI Management
- 12V Hot-swap Controller
- GBX Backplane Connector



SuperBlade®

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

Dual Intel® Xeon® Processor E5-2600 v4/v3 Product Families (up to 22 cores, 160W per CPU)

Industry's Most Versatile Blade Solutions

GPU/Intel® Xeon Phi™ coprocessor Blade

Up to 20 GPU/Intel® Xeon Phi™ coprocessor or 40 PCI-E Cards, or 90 SSD



SuperBlade Servers



3-GPU Blade



TwinBlade® (Double Density)



DataCenter Blade®



StorageBlade®



4-Socket Blade



PCI-E Blade



SBI-7128RG-X/F/F2



SBI-7228R-T2F/T2F2/T2X



SBI-7128R-C6(N)



SBI-7428R-T3/C3(N)

X10 SuperBlade® DP Servers



SBI-7147R-S4X/S4F



SBI-7227R-T2

X9 SuperBlade® MP/DP Servers



SBI-7127R-S6



SBI-7127RG3



SBI-7127RG-E



SBI-7427R-S3/T3



SBI-7427R-SH/S2L



SBI-7127RG



SBI-7127R-SH

X9 SuperBlade® DP Servers

SuperBlade® Enclosures and Cabinet

Best Density

- Up to 20 DP Nodes (Intel® Xeon® Processor E5-2600 v4/v3 product families)
- Up to 10 MP Nodes (Intel® Xeon® Processor E5-4600 or Intel® Xeon® Processor E5-4600 v2 product families)

High Efficiency Power for Earth-Friendly Operations

- Platinum Level (94%+) 3000W and 2500W power supplies with N+N or N+1 redundancy
- Multiple Choices - 1620W, 2500W, or 3000W



Model	SBE-710E/Q Series	SBE-714D/E/Q Series
Blade Server	Up to 10 hot-swappable blade servers	Up to 14 hot-swappable blade servers
Node Support	Intel® based blades	Intel® based blades
LED	Power LED, Fault LED	Power LED, Fault LED
InfiniBand Switch	Up to two hot-swappable 4x FDR/QDR IB switches (-710Q)	Up to two hot-swappable 4x FDR/QDR IB switches (-714Q)
Ethernet Switch	<ul style="list-style-type: none"> • Up to two hot-swappable 1Gbps Ethernet switches or pass-through modules • Up to two hot-swappable 10Gbps pass-through modules (-710E) • Up to two hot-swappable 10Gbps Ethernet switches (-710Q) 	<ul style="list-style-type: none"> • One (-714D) or up to two (-714E/Q) hot-swappable 1Gbps Ethernet switches • Up to two 10Gbps pass-through modules (-714E) • Up to two hot-swappable 10Gbps Ethernet switches (-714Q)
Management Module	<ul style="list-style-type: none"> • Up to two hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities 	One (-714D) or up to two (-714E/Q) hot-swappable management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swappable 1620W/2500W (-710E) or 1620W/2500W/3000W (-710Q) power supplies, N+1 redundancy	Hot-swappable 1620W (-714D/E) or 1620W/2500W (-714Q) power supplies, N+1 redundancy
Cooling Design	Front to back	Front to back
Rack Unit	7U	7U
Dimensions (H x W x D)	12.2" (309.88mm) x 17.6" (447.04mm) x 29" (736.6mm)	12.2" (309.88mm) x 17.6" (447.04mm) x 29" (736.6mm)



Model	SBE-720D/E/F Series
Blade Server	Up to 10 hot-swappable server blades and TwinBlades
Node Support	Intel® based blades
LED	Power LED, Fault LED
InfiniBand Switch	Up to 2 hot-swappable FDR 56Gbps InfiniBand switches (720F); FDR-10/QDR (720E)
Ethernet Switch	Up to 2 hot-swappable 1Gbps Ethernet switches or pass-through module
Management Module	One hot-swappable management module providing remote KVM and IPMI 2.0 functionalities
Power Supply	Hot-swappable 2500W/3000W Platinum Level (94%) power supplies, N+1 redundancy
Cooling Design	Front to back
Rack Unit	7U
Dimensions (H x W x D)	12.2" (309.88mm) x 17.6" (447.04mm) x 29" (736.6mm)

Personal Supercomputing Mini-Rack Cabinet



CSE-RACK14U

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

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

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;
- Dimensions (W x D x H): 21.65" (549.91mm) x 34.65" (880.11mm) x 30.64" (778.256mm)
- Supports standard 19" rackmount servers with standard mounting holes
- Front door lock, casters with brakes
- Stability support
- Optional air filter

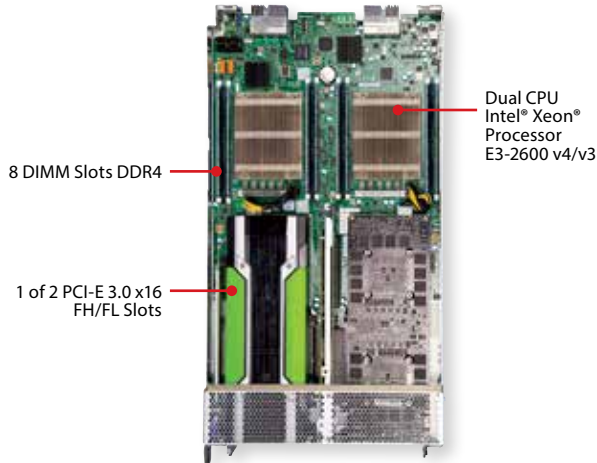


X10 SuperBlade® DP Servers

Dual Intel® Xeon® Processor E5-2600 v4/v3 Supported

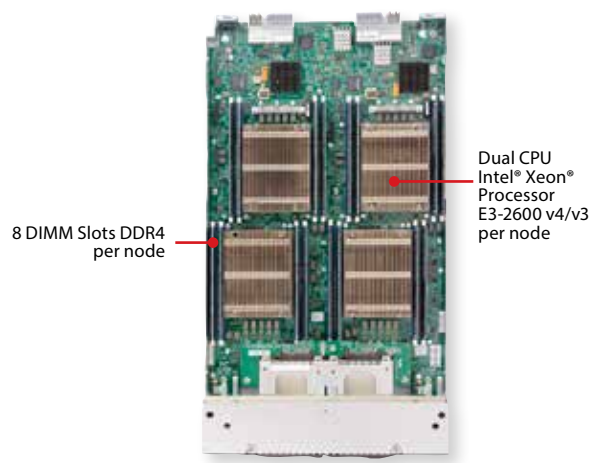
2 GPU/Intel® Xeon Phi™ coprocessors Blade

10Gbps or FDR IB
2 GPUs/Intel® Xeon Phi™ coprocessors or
4 PCI-E 3.0 x8 Cards



TwinBlade®

10Gbps or FDR IB
2 Independent DP Nodes per Blade Server



Model	SBI-7128RG-X/F/F2	SBI-7228R-T2F/T2F2/T2X (two nodes)
Server Nodes/42U Rack	60 (+120 GPU/Intel® Xeon Phi™ coprocessor cards)	120
Processor	Dual Intel® Xeon® processor E5-2600 v4 product family with QPI up to 9.6 GT/s	Dual Intel® Xeon® processor E5-2600 v4 product family with QPI up to 9.6 GT/s per node
Chipset	Intel® C612	Intel® C612
Memory Support	LRDIMM / RDIMM DDR4-2400 in 8 DIMM slots	LRDIMM / RDIMM DDR4-2400 in 8 DIMM slots per node
Max Memory	Up to 1TB ECC 3DS LRDIMM	Up to 1TB ECC 3DS LRDIMM per node
Expansion & Drive Bays	2x Intel® Xeon Phi™ coprocessors or NVIDIA Tesla K80, M40/M60 (2x PCI-E 3.0 x16 FHFL cards) or 4x PCI-E 3.0 x8 cards, 2x SuperDOM Ports or 1x SSD; or, up to 8x 2.5 SATA3 SSD/HDD + 1x 2.5" SSD**	2x hot-swappable 2.5" SATA3 SSD/HDD per node 1x SuperDOM Port per node
Storage RAID	Intel PCH SATA3; RAID 0,1	Intel PCH SATA3; RAID 0,1
InfiniBand/10Gbps Option	-X: Onboard 2-port 10 Gbps -F: Onboard 1-port FDR InfiniBand* -F2: Onboard 2-port FDR InfiniBand*	-T2X: Onboard 2-port 10 Gbps per node -T2F: Onboard 1-port FDR InfiniBand* per node -T2F2: Onboard 2-port FDR InfiniBand* per node
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN per node
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED per node
Dimensions (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)
Chassis	7U: • SBE-720F • SBE-710Q • SBE-720E	7U: • SBE-720F • SBE-720E

* -X/T2X : Dual 10 Gbps ports onboard
-F/T2F : Single InfiniBand port onboard
-F2/T2F2: Dual InfiniBand port onboard

** If no GPU/ Intel® Xeon Phi™ installed



X10 SuperBlade® DP Servers

Dual Intel® Xeon® Processor E5-2600 v4/v3 Supported

nvm
EXPRESS
StorageBlade®
SAS 3.0 12Gbps, NVMe

nvm
EXPRESS
DatacenterBlade®
SAS 3.0 12Gbps, NVMe

Dual CPU Intel® Xeon® Processor E3-2600 v4/v3

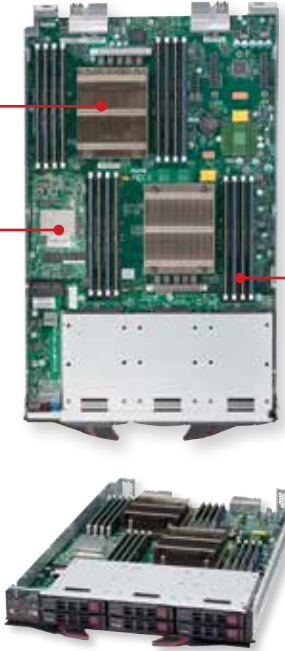
LSI® 3108 Mezzanine Card

16 DIMM Slots DDR4

Dual CPU Intel® Xeon® Processor E3-2600 v4/v3

LSI® 3108 Mezzanine Card

16 DIMM Slots DDR4



Model	SBI-7128R-C6(N)	SBI-7428R-T3(N)/C3(N)
Server Nodes/42U Rack	60	84
Processor	Dual Intel® Xeon® processor E5-2600 v4 product family with QPI up to 9.6 GT/s	Dual Intel® Xeon® processor E5-2600 v4 product family with QPI up to 9.6 GT/s
Chipset	Intel® C612	Intel® C612
Memory Support	LRDIMM / RDIMM DDR4-2400 in 16 DIMM slots	LRDIMM / RDIMM DDR4-2400 in 16 DIMM slots
Max Memory	Up to 2TB ECC 3DS LRDIMM/RDIMM	Up to 512GB ECC VLP LRDIMM/RDIMM
Expansion & Drive Bays	6x hot-swappable 2.5" SAS3 SSD/HDD, or 3x hot-swappable 2.5" SAS3 SSD/HDD + 3x hot-swappable 2.5" NVMe Support (-C6N), 2x SuperDOM Ports	3x hot-swappable 2.5" SAS3 (-C3) / SATA3 (-T3) SSD/HDD, or 3x hot-swappable 2.5" NVMe Support (-T3N/C3N), 2x SuperDOM Ports
Storage RAID	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/10Gbps Option	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN
Management	IPMI 2.0, KVM-over-IP, Virtual Media over LAN	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED
Dimensions (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 18.9" (480.06 mm)	11.32" (287.52mm) x 1.19" (30.23mm) x 18.9" (480.06mm)
Chassis	7U: • SBE-720F • SBE-720E • SBE-720D • SBE-710E • SBE-710Q	7U: • SBE-714Q • SBE-714E



X9 SuperBlade® MP/DP Servers

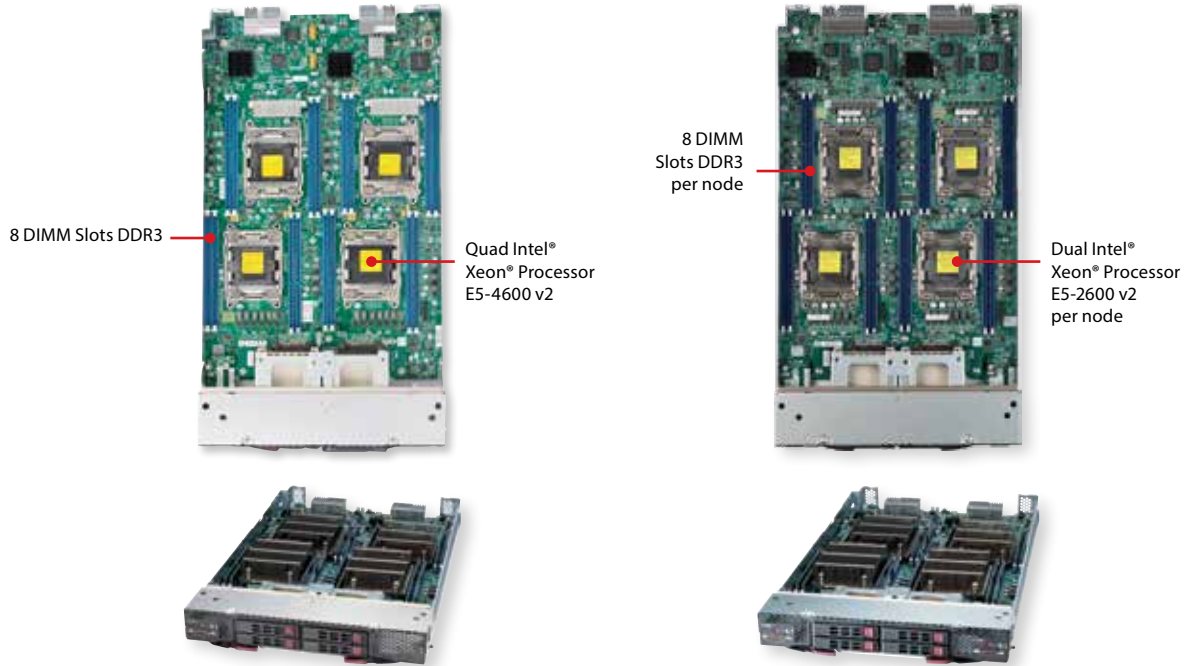
Quad and Dual Intel® Xeon® Processor E5 Supported

4-Socket Blade

10Gbps or FDR IB

TwinBlade®

2 Independent DP Nodes per Blade Server



Model	SBI-7147R-S4X/S4F	SBI-7227R-T2 (2 Independent Nodes per Blade Server)
Server Nodes/42U Rack	60	120
Processor	Quad Intel® Xeon® processor E5-4600 or Quad Intel® Xeon® processor E5-4600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s, per node
Chipset	Intel® C602J	Intel® C602J
Memory Support	LRDIMM / RDIMM DDR3-1866 in 16 DIMM slots	LRDIMM / RDIMM / UDIMM DDR3-1866 in 8 DIMM slots per node
Max Memory	Up to 1TB LRDIMM / 512GB RDIMM	Up to 512GB LRDIMM / 256GB RDIMM per node
Expansion & Drive Bays	4x hot-swappable 2.5" SAS2 SSD/HDD per node, 2x SuperDOM Ports	2x hot-swappable 2.5" SATA3 SSD/HDD per node, 2x SuperDOM Ports
Storage RAID	RAID 0,1,1E,10	Intel® PCH SATA; RAID 0,1
InfiniBand/10Gbps Option	-S4X: Onboard 2-port 10Gbps -S4F: Onboard 1-port FDR 56G IB	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA per node
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN per node
Management	IPMI 2.0, KVM-over-IP, Virtual Media over LAN	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED per node
Dimensions (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)
Chassis	7U: • SBE-720F • SBE-710Q • SBE-720E	7U: • SBE-720F • SBE-720D • SBE-720E



X9 SuperBlade® DP Servers

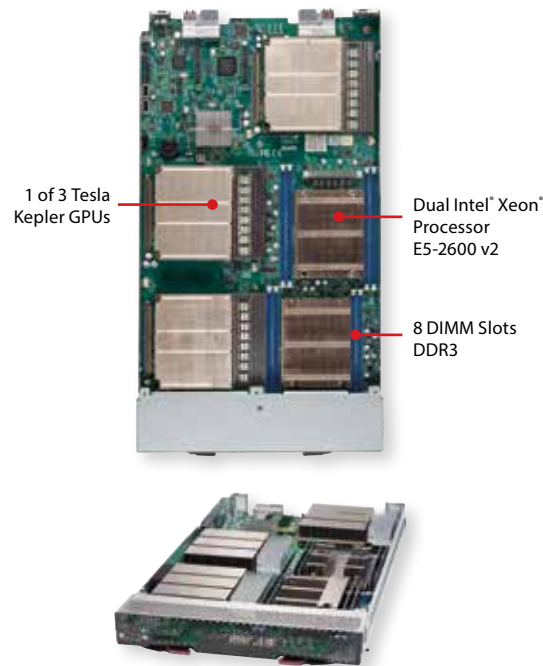
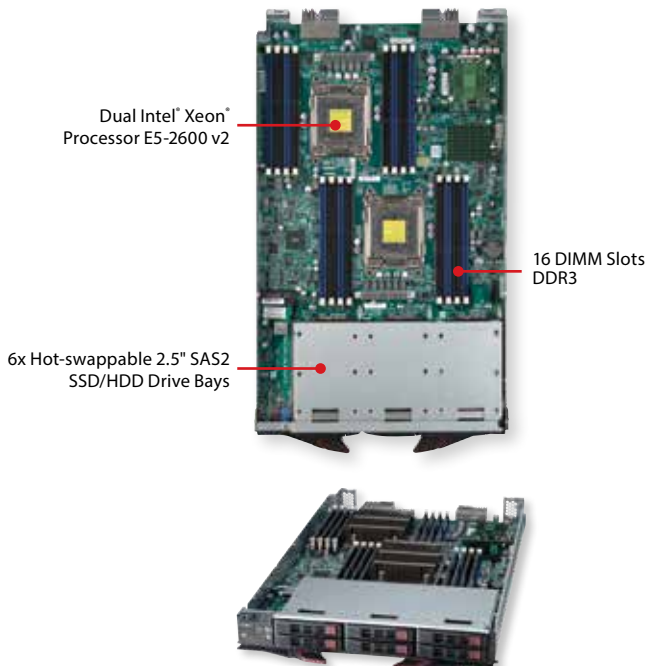
Dual Intel® Xeon® Processor E5 Supported

StorageBlade

6x 2.5" SSD/HDD

3-GPU Blade

Dual CPU with 3 Embedded GPU



Model	SBI-7127R-S6	SBI-7127RG3
Server Nodes/42U Rack	60	60 (+180 GPU cards)
Processor	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s
Chipset	Intel® C602J	Intel® C602J
Memory Support	LRDIMM / RDIMM / UDIMM DDR3-1866 in 16 DIMM slots	LRDIMM / RDIMM / UDIMM DDR3-1866 in 8 DIMM slots
Max Memory	Up to 1TB LRDIMM / 512GB RDIMM	Up to 512GB LRDIMM / 256GB RDIMM
Expansion & Drive Bays	6x hot-swappable 2.5" SAS2 SSD/HDD	3x Tesla Kepler K20X-SXM/K40 SXM, 1x SuperDOM Port
Storage RAID	LSI® 2208 controller HW: RAID 0, 1, 5, 6, 10, 50 Battery Backup Option	N/A
InfiniBand/10Gbps Option	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN
Management	IPMI 2.0, KVM-over-IP, Virtual Media over LAN	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Network ing LED, Fault LED per node
Dimensions (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 18.9" (480.06mm)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)
Chassis	7U: <ul style="list-style-type: none"> • SBE-720F • SBE-720D • SBE-710Q <ul style="list-style-type: none"> • SBE-720E • SBE-710E 	7U: <ul style="list-style-type: none"> • SBE-720F • SBE-720D • SBE-710Q <ul style="list-style-type: none"> • SBE-720E • SBE-710E

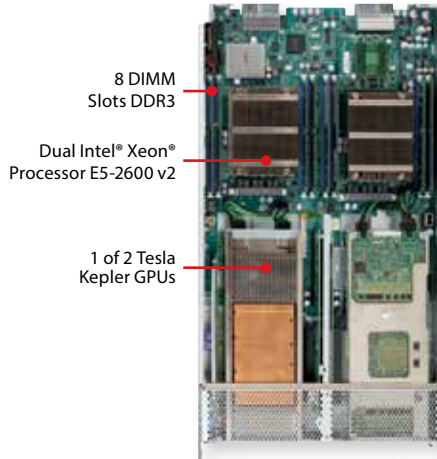


X9 SuperBlade® DP Servers

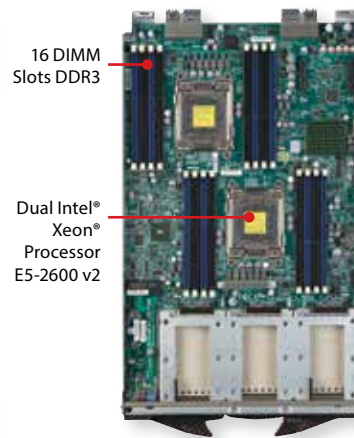
Dual Intel® Xeon® Processor E5 Supported

2-GPU/Intel® Xeon Phi™ Coprocessor Blade

(2 CPUs + 2 GPU/Intel® Xeon Phi™ cards per node)

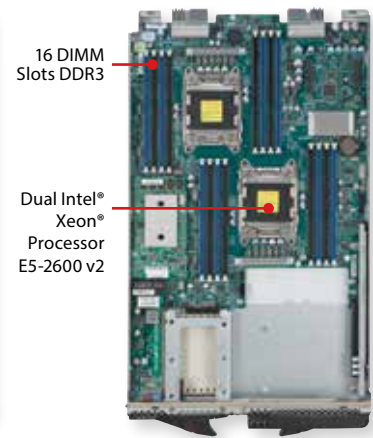


DatacenterBlade® SAS 2.0



PCI-E Blade

PCI-E 3.0 x16 Expansion Slot



Model	SBI-7127RG-E	SBI-7427R-S3/T3	SBI-7427R-SH/S2L
Server Nodes/42U Rack	60 (+120 GPU/Intel® Xeon Phi™ coprocessors)	84	84
Processor	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s
Chipset	Intel® C602	Intel® C602J	Intel® C602J
Memory Support	LRDIMM / RDIMM / UDIMM DDR3-1866 in 8 DIMM slots	LRDIMM / RDIMM / UDIMM DDR3-1866 in 16 DIMM slots	LRDIMM / RDIMM / UDIMM DDR3-1866 in 16 DIMM slots
Max Memory	Up to 512GB LRDIMM / 256GB RDIMM	Up to 256GB LRDIMM / 64GB RDIMM	Up to 256GB LRDIMM / 64GB RDIMM
Expansion & Drive Bays	2x Tesla Kepler K10/K20M/K40M/K20X, GRID K1/K2, or Intel® Xeon Phi™ coprocessor, 1x SSD or 1x SuperDOM Port	3x hot-swappable 2.5" SAS2* SSD/HDD	1x PCI-E 3.0 x16 (FH/HL) (-SH) 1x PCI-E 3.0 x16 (HH/HL) (-S2L) 1x hot-swappable 2.5" SAS2 hard disk drive (-SH) 2x hot-swappable 2.5" SAS2 SSD/HDD (-S2L)
Storage RAID	N/A	LSI 2208 controller HW RAID 0,1,5 (S3 version only) Intel® PCH SATA RAID 0,1,5 (T3 version)	RAID 0,1
InfiniBand/10Gbps Option	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN
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
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 (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)	11.32" (287.52mm) x 1.19" (30.23mm) x 18.9" (480.06mm)	11.32" (287.52mm) x 1.19" (30.23mm) x 18.9" (480.06mm)
Chassis	7U: • SBE-710E • SBE-720E	7U: • SBE-714Q • SBE-714D • SBE-714E	7U: • SBE-714Q • SBE-714D • SBE-714E

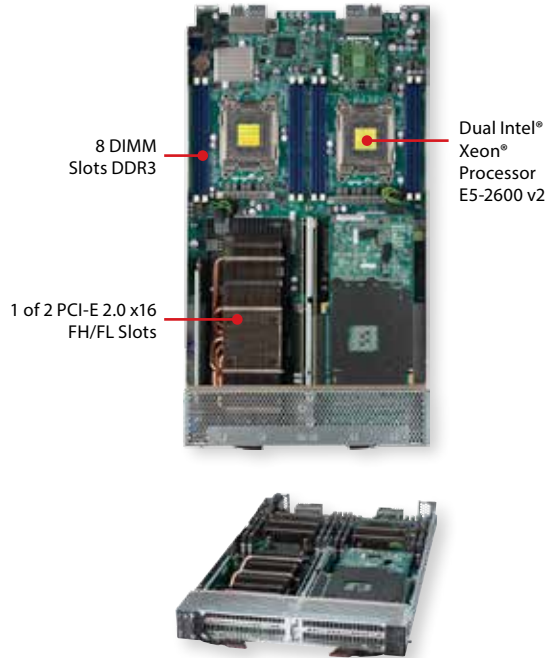


X9 SuperBlade® DP Servers

Dual Intel® Xeon® Processor E5 Supported

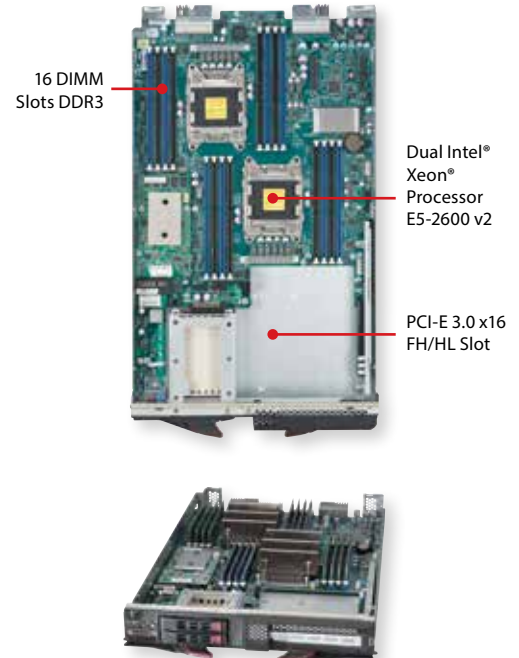
Dual PCI-E Blade

2 PCI-E 2.0 x16
Expansion Slots



PCI-E Blade

PCI-E 3.0 x16
Expansion Slot



Model	SBI-7127RG	SBI-7127R-SH
Server Nodes/42U Rack	60 (+120 PCI-E cards)	60
Processor	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s	Dual Intel® Xeon® processor E5-2600 or Dual Intel® Xeon® processor E5-2600 v2 product families, with QPI up to 8.0GT/s
Chipset	Intel® C602	Intel® C602J
Memory Support	LRDIMM / RDIMM or UDIMM DDR3 1866/1600/1333/1066 in 8 slots	LRDIMM / RDIMM or UDIMM DDR3 1866/1600/1333/1066 in 16 slots
Max Memory	Up to 512GB LRDIMM / 256GB RDIMM	Up to 512GB RDIMM / 128GB UDIMM
Expansion & Drive Bays	2x PCI-E cards (FH/FL) 1x SuperDOM Port	1x PCI-E 3.0 x16 (FH/HL) 2x hot-swappable 2.5" SAS2 SSD/HDD
Storage RAID	N/A	LSI 2308 controller SW RAID 0,1
InfiniBand/10Gbps Option	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA	FDR-10/QDR InfiniBand or 10Gbps/FCoE mezzanine HCA
Ethernet Interface	Dual-port 1Gbps LAN	Dual-port 1Gbps LAN
Management	IPMI 2.0, KVM-over-IP, Virtual Media over LAN	IPMI 2.0, KVM-over-IP, Virtual Media over LAN
LED Indicators	Power LED, UID/KVM LED, Networking LED, Fault LED	Power LED, UID/KVM LED, Networking LED, Fault LED per node
Dimensions (H x W x D)	11.32" (287.53mm) x 1.67" (42.42mm) x 20.5" (520.7mm)	11.32" (287.53mm) x 1.67" (42.42mm) x 18.9" (480.06mm)
Chassis	7U: <ul style="list-style-type: none"> • SBE-720F • SBE-710E • SBE-720E • SBE-710Q 	7U: <ul style="list-style-type: none"> • SBE-720F • SBE-720D • SBE-710Q • SBE-720E • SBE-710E

SuperBlade Networking Solutions

	1Gbps Ethernet			10Gbps Ethernet and Converged Network	
Model	SBM-GEM-001	SBM-GEM-X2C+	SBM-GEM-X3S+	SBM-XEM-X10SM*	SBM-XEM-F8X4SM*
Type	Layer 2 1Gbps Ethernet Switch	Layer 2/3 1Gbps Ethernet Switch	Layer 2/3 1Gbps Ethernet Switch	Layer 2/3 10Gbps Ethernet Switch	Data Center Converged Switch with FCoE
Downlinks	14x 1Gbps Ethernet Downlinks	14/20x 1Gbps Ethernet Downlinks	14/20x 1Gbps Ethernet Downlinks	10/20x 10Gbps Ethernet Downlinks	10/20x 10Gbps Downlinks to ports on mezzanine cards, support DCB, FCoE
Uplinks	10x 1Gbps Ethernet RJ45 Uplinks	3x 10Gbps Ethernet (Two CX4 & One SFP+) and 2x 1Gbps Ethernet RJ45 Uplinks, stackable	3x 10Gbps Ethernet SFP+ and 4x 1Gbps Ethernet RJ45 Uplinks	4 (TwinBlade Servers)/10x (10-Blade Servers) 10Gbps Ethernet SFP+ Uplinks	Ethernet: 4x 10Gbps Ethernet SFP+ Uplinks** Fibre Channel: 6x Fibre Channel N_Port Uplinks, support 2, 4, 8Gbps
Stacking	N/A	Up to 8 switches	Up to 8 switches	N/A	N/A
Trunking	Static Link aggregation support (802.3ad)	Full Link aggregation support (802.3ad)	Full Link aggregation support (802.3ad) MLAG	Full Link aggregation support (802.3ad) MLAG	Full Link aggregation support (802.3ad) MLAG
Jumbo Frame	Up to 9k bytes	Up to 16k bytes (10Gbps) or 9K bytes (1Gbps)	Up to 16k bytes (10Gbps) or 9K bytes (1Gbps)	Up to 16K bytes (10Gbps) or 9K bytes (1Gbps)	Up to 12K bytes (10Gbps) or 2112 bytes (FC)
Remote Management	Browser-based management	Browser-based management / CLI	Browser-based management/CLI	Browser-based management/CLI	Browser-based management/CLI
Layer 2 Features	VLANs, STP, RSTP, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	4K VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x	4K VLANs, STP, RSTP, MSTP, IGMP snooping, 802.1x
Layer 3 Features	N/A	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	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
OS	Software upgradeable	Software upgradeable	Software upgradeable	Software upgradeable	Software upgradeable

* "M" version supports Mini-CMM (BMB-CMM-002)
** SBE-710 series enclosure only

	Ethernet Pass-Through			InfiniBand	
Model	SBM-GEP-T20	SBM-GEM-002	SBM-XEM-002M*	SBM-IBS-Q3618/ Q3616(M)*	SBM-IBS-F3616(M)*
Type	Ethernet pass-through module for TwinBlade SBE-720D and SBE-720E enclosures	Ethernet pass-through module for 10-Blade and 14-Blade enclosures	10Gbps Ethernet pass-through module for 10-Blade (SBE-710E) and 14-Blade (SBE-714E) enclosures	4x QDR InfiniBand Switch	4x FDR InfiniBand Switch
Downlinks	20x 1Gbps Ethernet Downlinks	14x 1Gbps Ethernet Downlinks	14x 10Gbps Ethernet Downlinks	18/20 4x QDR Downlinks	20 4x FDR Downlinks
Uplinks	20x 1Gbps Ethernet RJ45 Uplinks	14x 1Gbps Ethernet RJ45 Uplinks (Speed fixed at 1Gbps - no auto negotiation)	14x 10Gbps Ethernet SFP+ Uplinks (Speed fixed at 10Gbps - no auto negotiation)	18/16 4x QDR QSFP+ Uplinks	16 4x FDR QSFP+ Uplinks

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

	InfiniBand/10Gbps/FCoE Mezzanine HCA					
Model	AOC-XEH-IN2	AOC-XEH-B2S	AOC-IBH-XQD	AOC-IBH-XQS	AOC-IBH-X3QD	AOC-IBH-X3QS
Chipset	Intel® 82599 (Niantic)	Broadcom 57402 (Cumulus)	Mellanox ConnectX2	Mellanox ConnectX2	Mellanox ConnectX3	Mellanox ConnectX3
Ports	Dual-port 10Gbps Ethernet (FCoE support)	Dual-port 10Gbps Ethernet (NPAR support)	Dual-port 4x QDR InfiniBand or 10Gbps Ethernet	Single-port 4x QDR InfiniBand or 10Gbps Ethernet	Dual-port 4x FDR InfiniBand or 10Gbps Ethernet	Single-port 4x FDR InfiniBand or 10Gbps Ethernet

Optional Parts List

	Part Number	Description
SFP+ Cable	CBL-0347L	39.37" (100cm) 10GbE SFP+ TO SFP+, Twinax copper cable
SFP+ Cable	CBL-0456L	78.74" (200cm) 10GbE SFP+ TO SFP+, Twinax copper cable
SFP+ Cable	CBL-0348L	118.11" (300cm) 10GbE SFP+ TO SFP+, Twinax copper cable
SFP+ Cable	CBL-0349L	196.85" (500cm) 10GbE SFP+ TO SFP+, Twinax copper cable
QSFP Cable	CBL-NTWK-0417-01	1M INFINIBAND QSFP TO QSFP QDR with EEPROM. 30AWG
QSFP Cable	CBL-NTWK-0325-02	2M INFINIBAND QSFP TO QSFP QDR with EEPROM. 26AWG
QSFP Cable	CBL-NTWK-0446-01	3M INFINIBAND QSFP TO QSFP QDR with EEPROM. 28AWG
QSFP Cable	CBL-NTWK-0422-01	5M INFINIBAND QSFP TO QSFP QDR with EEPROM. 26AWG
SFP Transceiver	AOC-TFC8-FS	8G FC SFP Transceiver for Fiber Channel
SFP+ Transceiver	AOC-E10GSFPSR	10Gb SFP+ Transceiver for Ethernet

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-swappable Capable
- GBX Backplane Connector



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)

SuperBlade Power Supply and Power Cable Guide

SuperBlade Power Supply Options

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 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.

Power Supply Amperage Draw

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

Power Supply Cable Options

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, 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

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2U Simply Double
All Flash NVMe or SAS3
2.5" or 3.5" drive bays

SAS 3.0 • NVMe • 100G/50G/40G/25GbE



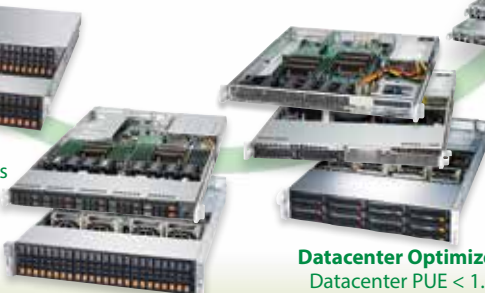
GPU/Intel® Xeon Phi™ Coprocessor Supercomputing
Multi TeraFLOPS Servers/Workstations/Blades



New! 60/90x 3.5"
Top-Loading Drives in 4U



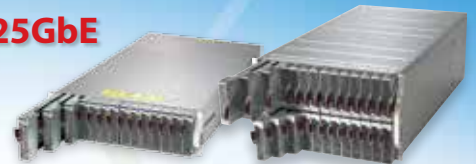
All Flash Solutions
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Optimized for IT, Datacenter, Embedded, HPC and Cloud Computing



3U/6U MicroBlade
0.05/0.1/0.2U MicroBlade Servers in 3U/6U



New!
8-Way



TwinPro™
New Generation Twin System
4 DP Nodes in 2U,
2 DP Nodes in 1U



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

We Power the Cloud



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