SUPERMICR •

MicroCloud Solutions 12/8 Modular UP Server Nodes in 3U

New! Intel[®] Xeon[®] E3-1200 V3 Support

12/8 Modular UP Server Nodes in 3U · High-Density · High-Performance · High-Efficiency · Cost-Effective Easy-to-Service · Space Saving · Optimized for Cloud Computing and Web 2.0



ML/MC-H12 Node (2x 3.5" HDDs/Node) ML/MC-H12 Node (4x 2.5" HDDs/Node)



2 Hot-pluggable Nodes in 3U (Front I/O) New! SYS-5038ML-H12TRF SYS-5037MC-H12TRF AS-3012MA-H12TRF



MC-H8 Node

New!

ML-H8 Node

8 Hot-pluggable Nodes in 3U (Rear I/O) New! SYS-5038ML-H8TRF SYS-5037MC-H86RF/H8TRF SYS-5037MR-H8TRF



MR-H8 Node

- High density with 12/8 hot-pluggable UP nodes in 3U
- Excellent expansion capability with 1 PCI-E 3.0 x8 LP slot per node
- Up to 2x 3.5" hot-swap or 4x 2.5" fixed SATA3.0 (6Gbps) HDDs per node
- High efficiency Platinum Level (94%) 1+1 redundant power supplies
- IPMI 2.0 remote management plus KVM with dedicated LAN per node
- Intel[®] Xeon[®] processor E5-2600 , E3-1200v2/1200 v3 families, or AMD Opteron[™] 3000 series
- **130W high-performance CPU support available**









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12-Node, Front I/O MicroCloud Server Solutions



12 Hot-pluggable Nodes in 3U (Front I/O)



2 Hot-pluggable Nodes in 3U (Front I/O) (Rear View)

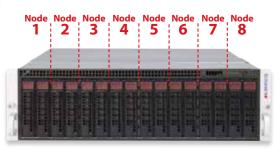
MODEL	New - SYS-5038ML-H12TRF	SYS-5037MC-H12TRF	AS-3012MA-H12TRF
Processor Support	Intel [®] 4th Generation Core [™] i3 series Intel [®] Celeron [®] Intel [®] Pentium [®] v Intel [®] Xeon [®] processor E3-1200 v3 series, up to 80 Watt CPU	Intel [®] Xeon [®] processor E3-1200 v2 series, Intel [®] 2nd Gen. Core i3 & Intel [®] Pentium [®] family processors; socket H2 (LGA 1155), up to 69/(87) Watt CPU	AMD Opteron™ 3000 series 8/4 core processors, up to 65 Watt CPU
Key Applications	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download 	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download 	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download
Outstanding Features	 High-density, Enerprise Performance, Cost-effective Multi-node UP server Up to 12x hot-pluggable node in 3U chassis 13Watt to 80Watt CPU support MicroLP card upgradable 2x 3.5" or 4 x 2.5"SATA3.0 (optional) SATA drive bays per node RAID 0, 1, 10(Optional with 4 x 2.5" drive installed) IPMI2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies 	 High-density, Enerprise Performance, Cost-effective Multi-node UP server Up to 12x hot-pluggable node in 3U chassis 69/(87) Watt CPU support MicroLP card upgradable 2x 3.5" or 4x 2.5" (optional) SATA drive bays per node RAID 0, 1, 10 (Optional with 4 x 2.5" drive installed) IPMI 2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies 	 High-density, Enterprise Performance, Cost-effective Multi-node UP server Up to 12x hot-pluggable node in 3U chassis MicroLP card upgradable 2x 3.5" or 4x 2.5" (optional) SATA drive bays per node RAID 0, 1, 10 (Optional with 4 x 2.5" drive installed) IPMI 2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies
Serverboard	SUPER® X10SLE-F	SUPER® X9SCE-F	A+ H8SME-F
Chipset	Intel [®] C224 PCH chipset	Intel [®] C204 PCH chipset	AMD SR5650 / SP5100
System Memory (Max.)	Twelve set of 4 DIMM sockets (Per Node) Up to 32GB DDR3 EEC VLP-UDIMM 1600/1333	Twelve set of 4 DIMM Sockets (Per Node) Up to 32GB DDR3 ECC VLP-UDIMM 1600/1333/1066	Twelve set of 4 DIMM Sockets (Per Node) Up to 32GB DDR3 ECC VLP-UDIMM 1600/1333/1066
Expansion slot	Twelve MicroLP Slots	Twelve MicroLP slots	Twelve MicroLP slots
Onboard Storage Controller	Twelve Intel [®] C224 controller for 4 SATA3 (6Gbps) ports; RAID 0,1	Twelve Intel C204 for 2 SATA3 (6Gbps); RAID 0, 1	Twelve AMD SP5100 for 4 SATA
Connectivity	Twelve Dual LAN Intel [®] i350 GbE LAN controller (w/ MicroLP card)	Twelve Dual LAN Intel [®] i350 GbE LAN controller (w/ MicroLP card)	Twelve Dual LAN Intel [*] i350 GbE LAN controller (w/ MicroLP card)
VGA/Audio	Twelve Aspeed AST2400 graphic	Twelve Matrox [*] G200eW graphics	Twelve Matrox [*] G200eW graphics
Management	Twelve set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView	Twelve set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView	Twelve set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView
Drive Bays	Twelve set of 2x 3.5" SATA3 or 4x 2.5" (optional) SATA3 drive bays (internal)	Twelve set of 2x 3.5" SATA3 or 4x 2.5" (optional) SATA drive bays (internal)	Twelve set of 2x 3.5" SATA2 or 4x 2.5" (optional) SATA drive bays (internal)
Power Supply	1620W Redundant Platinum Level (94%) high-	1620W Redundant Platinum Level (94%) high-	1620W Redundant Platinum Level (94%) high-
Cooling System	efficiency power supplies 4x 9cm Heavy duty fans with optimal cooling zone	efficiency power supplies 4x 9cm Heavy duty fans with optimal cooling zone	efficiency power supplies 4x 9cm Heavy duty fans with optimal cooling zone
Form Factor	3U Rackmount 444.5 x 132.5 x 749.3mm (17.5" x 5.21" x 29.5")	3U Rackmount 444.5 x 132.5 x 749.3mm (17.5" x 5.21" x 29.5")	3U Rackmount 444.5 x 132.5 x 749.3mm (17.5" x 5.21" x 29.5")

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8 Hot-pluggable Nodes in 3U (Rear I/O)

8 Hot-pluggable Nodes in 3U (Rear I/O)



(Front View) 16x 3.5" hot-swap SATA3 drive bays 2 HDDs per node

MODEL	SYS-5038ML-H8TRF	SYS-5037MC-H8TRF SYS-5037MC-H86RF	SYS-5037MR-H8TRF
Processor Support	Intel [®] 4th Generation Core [™] i3 series Intel [®] Celeron [®] Intel [®] Pentium [®] v Intel [®] Xeon [®] processor E3-1200 v3 series, up to 84 Watt CPU	Intel [®] Xeon [®] processor E3-1200 v2 series, Intel [®] 2nd Gen. Core i3 & Intel [®] Pentium [®] family processors; socket H2 (LGA 1155), up to 95 Watt CPU	Intel [®] Xeon [®] processor E5-2600 series, socket R (LGA 2011), up to 130 Watt CPU
Key Applications	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download 	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download 	 Cloud Computing Web Cache, CDN, Video Streaming Web/Collocating Service Social networking/download
Outstanding Features	 High-density, Enterprise Performance, Cost-effective Multi-node UP server Up to 8x hot-pluggable node in 3U chassis 13 Watt to 84 Watt CPU support Hot Swappable SAS/SATA HDD Expansivon Slot support Cable-less design MicroLP card upgradable IPMI2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies 	 High-density, Enterprise Performance, Cost-effective Multi-node UP server Up to 8x hot-pluggable node in 3U chassis 95 Watt CPU support Hot swappable SAS/SATA HDDs Expansion slot support Cable-less design IPMI 2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies 	 High-density, High-performance, Cost-effective Multi-node UP server Up to 8x hot-pluggable node in 3U chassis 130 Watt CPU support Hot swappable SATA HDDs Expansion slot support Cable-less design MicroLP card upgradable IPMI 2.0 with KVM over Dedicated LAN for each node 1620W Redundant Platinum Level Power Supplies
Serverboard	SUPER [®] X10SLD-F	-H8TRF: SUPER●* X9SCD-F -H86RF: SUPER●* X9SCD+-HF	SUPER [®] X9SRD-F
Chipset	Intel [®] C224 chipset	Intel [®] C204 PCH chipset	Intel [®] C602J chipset
System Memory (Max.)	Eight set of 4 DIMM Sockets (Per Node) Up to 32GB* DDR3 ECC 1600/1333MHz UDIMMs	Eight set of 4 DIMM Sockets (Per Node) Up to 32GB* DDR3 ECC 1600/1333MHz UDIMMs	Eight set of 4 DIMM Sockets (Per Node) Up to 128GB* ECC DDR3 1600 MHz SDRAM
Expansion slot	Eight PCI-E 3.0 x 8 (low profile) slots	Eight PCI-E 3.0 x8 (low profile) slots	Eight PCI-E 3.0 x8 (low profile) slots
Onboard Storage Controller	Eight Intel [®] C224 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1; Select low profile AOC SAS card to support SAS drive HW RAID 0,1	-H8TRF: Eight Intel [®] C204 for 2 SATA3 (6Gbps); RAID 0,1 -H86RF: Select low profile AOC SAS card to support SAS drive HW RAID 0,1	Eight Intel [®] C602J for 2 SATA3 (6Gbps); RAID 0, 1
Connectivity	Eight Dual LAN Intel [*] i350 GbE LAN controller	Eight Dual LAN Intel [®] 82580DB GbE LAN controller	Eight Dual LAN Intel [*] i350 GbE LAN controller
VGA/Audio	Eight Aspeed AST2400 graphic	Eight Matrox [*] G200eW graphics	Eight Matrox [*] G200eW graphics
Management	Eight set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView	Eight set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView	Eight set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor [*] III, Watch Dog, NMView
Drive Bays	<mark>Eight se</mark> t of 2x 3.5" hot-swap SAS/SATA3 (6Gbps) HDDs	-H8TRF: Eight set of 2x 3.5" Hot swap SATA 3(6Gbps) HDDs -H86RF: Eight set of 2x 3.5" Hot swap SAS/SATA HDDs	Eight 2x 3.5 hot-swap SATA3 (6Gbps) drive bays
Power Supply	1620W Redundant Platinum Level (94%)high- efficiency power supplies	1620W Redundant Platinum Level (94%)high- efficiency power supplies	1620W Redundant Platinum Level (94%) high- efficiency power supplies
Cooling System	4x 8cm Heavy duty fans with optimal cooling zone	4x 8cm Heavy duty fans with optimal cooling zone	4x 8cm Heavy duty fans with optimal cooling zone
Form Factor	3U Rackmount 438.4 x 132.5 x 589mm (17.26" x 5.21" x 23.2")	3U Rackmount 438.4 x 132.5 x 589mm (17.26" x 5.21" x 23.2")	3U Rackmount 438.4 x 132.5 x 589mm (17.26" x 5.21" x 23.2")

SUPERMICR MicroCloud Server Solutions

he Supermicro MicroCloud modular server system provides the high density, performance, efficiency and cost savings required for today's demanding server deployments. The 12/8 modular server nodes are conveniently integrated into a compact 3U chassis that is only 29.5/23.2 inches deep, saving over 72% of rack space when compared to traditional 1U servers optimized for the best performance per rack. The cable-less, hot-pluggable server nodes operate independently. Each node provides up to 128GB of DDR3-1600/1333MHz of ECC LR/RDIMM memory, one PCI-E 3.0 x8 expansion slot for low-profile add-on card, and two 3.5" or four 2.5" SATA 3.0 (6Gbps) hard disk drives. The MicroCloud system utilizes redundant Platinum Level (94%) high-efficiency power supplies and sophisticated cooling zone controls for a Green energy profile. Each node is powered by processors from either the newest Intel Xeon E3-1200v2 & E3-1200 v3 families (5037MC and 5038ML models) or E5-2600 family up to 130W TDP; or the 8/4-Core AMD Opteron[™] 3000 series.

Supermicro MicroCloud Applications:

- Web Servers, Collocation Services
- CDN, Video Streaming, and Downloads
- Enterprise/Corporate Server (WINS, DNS, Print, LDAP, AD, ...)
- Web 2.0 Applications such as Social Media Marketing, Ecommerce, Customer Support
- Ideal for Scale-out Applications with Virtualization
- Server Farms with Single Tenancy
 Server Requirements



- ✓ High Density, Enterprise Performance, Cost-Effective
- ✓ High Efficiency, Easy-to-Service, Space Saving
- Optimized for Cloud Computing and Web 2.0



Cloud Computing



Enterprise IT



Search Engine



File System



Web Servers



Video Streaming

10005-6/2013 Rev. 4



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