

# SuperServer 5038ML-H12TRF



## Key Features (per node)

1. Single socket H3 (LGA 1150) supports Intel® Xeon® E3-1200 v3/v4, 4th/5th gen. Core™ i3, Pentium, Celeron processors; Socket H3 (LGA 1150)
2. 2x 3.5 or 4x 2.5" SATA3 HDDs with Optional kit
3. Up to 32GB DDR3 VLP ECC UDIMM 1600/1333MHz support in 4 sockets
4. 2x GbE LAN (Intel i350), 1x Dedicated LAN for IPMI Remote Management
5. 1x VGA, 1x COM ports, 2x USB 2.0 (with KVM dongle)
6. 4x 9cm Heavy duty fans with optimal cooling zone
7. 1620W Redundant Platinum Level power supplies

Note: Image above may show a varied configuration or optional parts. Please refer to parts list for standard parts included.

## Specifications

### Product SKUs

SuperServer ■ SYS-5038ML-H12TRF (Black)

### Motherboard

Motherboard ■ MBD-X10SLE-F

### Processor/Cache

#### CPU

- Intel® Xeon® processor E3-1200 v3/v4 family, Intel® 4th/5th Gen Core™ i3, Pentium, Celeron processors
- Up to 80W
- Socket H3 (LGA 1150)

### System Memory (per node)

Memory Capacity ■ 4x 240-pin DDR3 DIMM slots  
 ■ Supports up to 32 GB DDR3 VLP ECC Un-Buffered memory (UDIMM)

Memory Type ■ 1333/1600MHz\*\*\* ECC DDR3 (VLP) SDRAM 72-bit, 240-pin gold-plated UDIMMs

DIMM Sizes ■ 8GB, 4GB, 2GB, 1GB

Memory Voltage ■ 1.5 V, 1.35 V

Error Detection ■ Corrects single-bit errors  
 ■ Detects double-bit errors (using ECC memory)

### Chassis

Form Factor ■ 3U

Model ■ CSE-939H-R1K63B

### Dimensions and Weight

Height ■ 5.21" (132.5 mm)

Width ■ 17.5" (444.5 mm)

Depth ■ 29.5" (749.3 mm)

Package ■ 16.1" (H) x 28.35" (W) x 42.36" (D)

Weight ■ Net Weight: 95.0 lbs (43.09 kg)  
 ■ Net Weight w/ 2.5" HDDs: 115 lbs (52.16 kg)  
 ■ Net Weight w/ 3.5" HDDs: 132 lbs (59.87 kg)  
 ■ Gross Weight: 125 lbs (56.70 kg)

Color ■ Black



### Drive Bays (per node)

Internal ■ 2x 3.5" SATA3 HDDs per node; up to 24x 3.5" HDDs total OR 4x 2.5" SATA3 HDDs per node; up to 48x 2.5" HDDs total  
 ■ Enterprise SATA HDD only recommended

### System Cooling

Fans ■ 4x 9cm Heavy duty fans with optimal cooling zone

On-Board Devices (per node)	
Chipset	<ul style="list-style-type: none"> <li>Intel® C224 PCH chipset</li> </ul>
SATA	<ul style="list-style-type: none"> <li>1x SATA DOM</li> <li>4x SATA3 (6Gbps) w/ RAID 0, 1, 10</li> </ul>
IPMI	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM over LAN support</li> <li>ASPEED AST2400 BMC</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2400 Graphics (BMC with Graphic controller)</li> </ul>
Network Devices (per node)	
Micro-LP NIC	<ul style="list-style-type: none"> <li>Intel® i350 GbE controller</li> <li>Dual RJ-45 connectors</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> <li>Intel® I/O Acceleration Technology (I/O AT)</li> <li><a href="#">MicroLP Adapter Matrix</a> (Networking options)</li> </ul>
Input / Output (per node)	
Serial ATA	<ul style="list-style-type: none"> <li>4x SATA3 (6Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2x RJ45 Gigabit Ethernet LAN ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>2x USB 2.0 ports and 1x USB 3.0 Type A port</li> </ul>
DOM	<ul style="list-style-type: none"> <li>SATA DOM (Disk on Module) power connector support</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1x VGA port</li> </ul>
System BIOS	
BIOS Type	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI BIOS</li> </ul>
BIOS Features	<ul style="list-style-type: none"> <li>DMI 2.3</li> <li>ACPI 1.0 / 2.0</li> <li>USB Keyboard support</li> <li>SMBIOS 2.3</li> </ul>
Front Window (each node)	
Switch	<ul style="list-style-type: none"> <li>Power / UID</li> </ul>

Power Supply	
1620W high-efficiency redundant power supply w/ PMBus	
AC Input	<ul style="list-style-type: none"> <li>1000W Output @ 100-120V, 12-10A, 50-60Hz</li> <li>1200W Output @ 120-140V, 12-10A, 50-60Hz</li> <li>1620W Output @ 180-240V, 10.5-8A, 50-60Hz</li> </ul>
DC Output	<ul style="list-style-type: none"> <li>1000W: +12V/84A; +5Vsb/4A</li> <li>1200W: +12V/100A; +5Vsb/4A</li> <li>1620W: +12V/135A; +5Vsb/4A</li> </ul>
Certification	  Platinum Level <a href="#">[ Test Report ]</a>

PC Health Monitoring	
CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages.</li> <li>3-Phase-switching voltage regulator with auto-sense from 0.5V-2.3V</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Cooling zone</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> </ul>

Operating Environment / Compliance	
RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10SLE-F	12	Super X10SLE-F Motherboard
	CSE-939H-R1K63B	1	3U Chassis
Add-on Card / Module	AOM-CGP-I2M-P	12	AOM-CGP-I2M-O-P
Add-on Card / Module	AOM-PDB-MC12-P	12	939 MicroCloud 12 nodes power board between MB and backplane
Backplane	BPN-SAS-939H	1	CSE939 MicroCloud (12 node) hotswap backplane
Cable 1	CBL-0489L	12	70cm SATA cable S-RA 30AWG
Cable 2	CBL-0488L	12	55cm SATA cable S-RA 30AWG
Cable 3	CBL-0487L-01	12	8Pin to 2SATA Power cable 12cm and 58cm. 18AWG
Cable 4	CBL-0493L	12	46cm 12 pin to 12 pin control cable for MicroCloud 28AWG
Cable 5	CBL-0218L	1	11.5CM KVM/SUVI 36 PIN TO 9 PIN/15 PIN 2USB, 30/28AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1526-QRG	1	5038ML-H12TRF Quick Reference Guide,PBF
Heatsink / Retention	SNK-P0047PSR	12	LP CPU Heat Sink for 12-node Micro Cloud Series Servers

Power Supply	PWS-1K63S-1R	2	1600W redundant platinum power supply
Mounting Rail	MCP-290-41803-0N	1	Fat twin F418 / F424 Rail set support 28-33.5 inch depth rail,RoHS/REACH,PBF

#### Optional Parts List

	Part Number	Qty	Description
HDD Kit 1 (4x 2.5" HDD)	MCP-220-93903-0N	-	SC939 2.5" HDD mounting kit (drive plate, mylar, screws)
HDD Kit 2 (1x 3.5" + 2x 2.5" HDD)	MCP-120-93903-0N	-	SC939 2.5" HDD adapter plate (2x HDD)
	CBL-PWEX-0627	-	4.2mm pitch 2x4p 8pin hsg to 3 SATA power 15p female, 18AWG
	CBL-0489L	-	70cm SATA cable S-RA 30AWG
MicroLP Card	AOM-CIBF-M1M	-	InfiniBand FDR Adapter
	AOM-CTG-i1SM	-	10GbE SFP+ Adapter
Onsite Service Program	<a href="#">QS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
Onsite Service Program	<a href="#">QSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)