

Specifications

Product SKUs

- SSG-540P-E1CTR45L** ■ SuperServer SSG-540P-E1CTR45L (**Black**)

Motherboard

- Super X12SPI-TF**

Processor

- CPU**
 - Single Socket P+ (LGA-4189)
 - 3rd Gen Intel® Xeon® Scalable processors
 - Support CPU TDP 270W

System Memory

- Memory**
 - Memory Capacity: 8 DIMM slots
 - Up to 2TB: 8x 256 GB DRAM
 - Up to 3TB: 4x 256 GB DRAM and 4x 512 GB PMem
 - Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM;LRDIMM
 - Intel® Optane™ persistent memory 200 series

- Memory Voltage** ■ 1.25 V

- Error Detection** ■ Yes

On-Board Devices

- SATA** ■ SATA3 (6Gbps) via C621A Chipset; RAID 0, 1, 5, 10 support

- SAS** ■ SAS3 (12Gbps) via Broadcom 3808 (IT mode)

- Chipset** ■ Intel® C621A

- Network Connectivity** ■ 2x 10GbE BaseT with Intel® X550

- IPMI**
 - Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output

- LAN**
 - 1 RJ45 Dedicated IPMI LAN port
 - 2 RJ45 10GBase-T LAN ports

- USB**
 - 4 USB 2.0 port(s) (2 headers; 2 rear)
 - 5 USB 3.2 Gen 1 port(s) (2 headers; 2 rear; 1 Type A)

- Video** ■ 1 VGA port(s)

- Serial Port** ■ 1 COM Port(s) (1 header)

Chassis

- Form Factor** ■ 4U Rackmount

- Model** ■ **CSE-946LTS-R1K66P1**

Dimensions and Weight

- Height** ■ 7" (178mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 26" (660mm)

- Package** ■ 22" (H) x 28" (W) x 42" (D)

- Weight**
 - Net Weight: 85 lbs (38.56 kg)
 - Gross Weight: 120 lbs (54.43 kg)

- Available Color** ■ Black

Front Panel

- Buttons**
 - Power On/Off
 - System Reset

- LEDs**
 - Device Activity
 - LAN 1 Activity
 - LAN 2 Activity
 - Power Failure LED
 - Power status
 - System information

Expansion Slots

- PCI-Express (PCI-E)**
 - Slot 2: PCI-E 4.0 x8 LP
 - Slot 4: PCI-E 4.0 x16 LP
 - Slot 6: PCI-E 4.0 x16 LP
 - Slot 7: PCI-E 4.0 x8 LP

Drive Bays / Storage

- Hot-swap** ■ 45x 3.5" hot-swap SATA/SAS drive bays

- M.2**
 - 1x PCI-E 3.0 x4 and SATA
 - Form Factor: 2280, 22110
 - Key: M-key

- Peripheral Bays** ■ 2x 2.5" SATA drive bays

System Cooling

- Fans** ■ 5x (8cm x8cm x3.8cm) heavy duty fans with optimal fan speed control

- Air Shroud** ■ 1 Air Shroud(s)

Power Supply

- AC 1600W, Platinum Level, Redundant Power Supply 73.5mm width,RoHS/REACH,PBF

DOM	<ul style="list-style-type: none"> 2 SuperDOM (Disk on Module) port with built-in power
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System BIOS

BIOS Type	<ul style="list-style-type: none"> AMI 32MB SPI Flash EEPROM
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Management

Software	<ul style="list-style-type: none"> IPMI2.0 Redfish API SSM Intel® Node Manager SPM KVM with dedicated LAN SUM NMI
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Power Configurations	<ul style="list-style-type: none"> ACPI/APM Power Management
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PC Health Monitoring

CPU	<ul style="list-style-type: none"> 7+1 Phase-switching voltage regulator module (VRM) Monitors for CPU Cores, Chipset Voltages, Memory
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FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
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Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors
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Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 265 mm
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Output Type	<ul style="list-style-type: none"> Gold Finger
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Certification	
	Platinum Level [Test Report]

Operating Environment

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

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12SPI-TF	1	Super X12SPI-TF Motherboard
	CSE-946LTS-R1K66P1	1	4U Chassis
Add-on Card / Module	AOC-S3808L-L8IT-P	1	8 int 12Gb/s SAS3 ports, x8 Gen4, HBA - LP, 122 HDD w/ exp,RoHS
Backplane	BPN-SAS3-826TQ-B2B	1	2-port 2U SAS3 12Gbps backplane, support up to 2x 2.5-inch SAS3/SATA3 HDD/SSD
Backplane	BPN-SAS3-946LEL1	1	45-port 4U SC946L Top-load SAS3 12Gbps expander backplane, support up to 45x 3.5-inch SAS3/SATA3 HDD/SSD
Cable 1	CBL-CDAT-0674	1	4 Pin to 4 Pin I2C Cable, 30cm, 26AWG, 4 Wires, Pinout 1-1
Cable 2	CBL-PWCD-0578-1	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG,RoHS
Cable 3	CBL-PWEX-0863	1	Powerlug to 5.7 Radsok, yel 12AWG, 32cm for SC946S
Cable 4	CBL-PWEX-1024	1	Powerlug to 5.7 Radsok, black 12AWG, 45cm,RoHS
Cable 5	CBL-SAST-1261-100	1	Slimline x8 (STR) to 2x Slimline x4 (STR),60/60CM,100 O
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0078P	1	2U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
*Power Supply	PWS-1K66P-1R	2	1U 1600W Redundant Platinum Power Supply 73.5mm width,RoHS/REACH,PBF
*Power Distributor	PDB-PT946S-L824	1	4U PDB support over 2KW for SC946S and 45bay system.,RoHS

Notes:

1. Parts with * are inside the chassis
2. Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List			
	Part Number	Qty	Description
2x 2.5" NVMe Cage (Rear)	MCP-220-82619-0N + 1x CBL-SAST-1264-85 + 1x CBL-0234L • eStore	1	Rear hot-swap 2x 2.5" NVMe drive kit
2x 2.5" SATA/SAS Cage (Rear)	MCP-220-82616-0N • eStore + 1x CBL-SAST-0699 • eStore + 1x CBL-0234L • eStore	1	Rear hot-swap 2x 2.5" SATA/SAS drive kit
Intel VROC RAID Key for NVMe	AOC-VROCSTNMOD	1	Standard Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10
	AOC-VROCINTMOD	1	Intel SSD Only Upgrade module; RAID 0/1/10/5
	AOC-VROCPREMOD	1	Premium Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10/5
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
TPM	AOM-TPM-9671V-O	1	TPM 1.2, vertical form factor, provisioned for server
	AOM-TPM-9670V-O	1	TPM 2.0, vertical form factor, provisioned for server