

# Specifications

## Product SKUs

<b>SSG-640SP-DE1CR90</b>	▪ SuperServer SSG-640SP-DE1CR90 ( <b>Black</b> )
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## Motherboard

**Super X12DSC-6**

## Processor (per Node)

<b>CPU</b>	▪ Dual Socket P+ (LG-4189) ▪ 3rd Gen Intel® Xeon® Scalable processors ▪ Support CPU TDP 120-205W
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## System Memory (per Node)

<b>Memory</b>	▪ Memory Capacity: 16 DIMM slots ▪ Up to 4TB: 16x 256 GB DRAM ▪ Memory Type: 3200MHz ECC DDR4 RDIMM;LRDIMM
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<b>Memory Voltage</b>	▪ 1.2 V
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<b>Error Detection</b>	▪ ECC
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## On-Board Devices (per Node)

<b>Chipset</b>	▪ Intel® C621A
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<b>Network Connectivity</b>	▪ 2x 10GbE BaseT with X550
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<b>IPMI</b>	▪ Support for Intelligent Platform Management Interface v.2.0 ▪ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
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## Input / Output (per Node)

<b>LAN</b>	▪ 1 RJ45 Dedicated IPMI LAN port ▪ 2 RJ-45 10Gbase-T ports
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<b>USB</b>	▪ 2 USB 3.0 port(s) (2 Rear_USB)
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<b>Video</b>	▪ 1 VGA port(s)
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<b>Serial Port</b>	▪ 1 COM Port(s) (1 rear)
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<b>DOM</b>	▪ 2 SuperDOM (Disk on Module) port
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## System BIOS

<b>BIOS Type</b>	▪ AMI 128MB SPI Flash EEPROM
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## Management

## Chassis

<b>Form Factor</b>	▪ 4U Rackmount
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<b>Model</b>	▪ <b>CSV-947HTS-R2K63P</b>
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## Dimensions and Weight

<b>Height</b>	▪ 7"
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<b>Width</b>	▪ 17.6"
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<b>Depth</b>	▪ 42.1"
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<b>Package</b>	▪ 29.92" (H) x 35.82" (W) x 53.15" (D)
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<b>Weight</b>	▪ Net Weight: 150 lbs (68.04 kg) ▪ Gross Weight: 240 lbs (108.86 kg)
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<b>Available Color</b>	▪ Black
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## Expansion Slots (per Node)

<b>PCI-Express (PCI-E)</b>	▪ Slot 1: PCI-E 4.0 x16 LP ▪ Slot 2: PCI-E 4.0 x16 LP ▪ Slot 3: PCI-E 4.0 x16 LP
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## Drive Bays / Storage (per Node)

<b>Hot-swap</b>	▪ 90x 3.5" hot-swap SATA3/SAS3 drive bays ▪ 4x 2.5" 7mm drive bays
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<b>M.2</b>	▪ 2 M.2 NVMe
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## System Cooling

<b>Fans</b>	▪ 6 Heavy Duty 8cm Fan(s)
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## Power Supply

2x 2600W Titanium Redundant Power Supply

<b>Dimension (W x H x L)</b>	▪ 73.5 x 40 x 265 mm
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<b>AC Input</b>	▪ 2600W: 200-240Vac / 15A Max / 50-60Hz
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<b>DC Input</b>	▪ 2600W: 240-240Vdc For CQC only / 15A Max
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<b>+12V</b>	▪ Max: 216A / Min: 0A (11.4Vdc-12.6Vdc) (12V output)
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<b>Output Type</b>	▪ Backplanes (gold finger)
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<b>Certification</b>	▪   Titanium Level
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[ Test Report ]

## Operating Environment

<b>Software</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">IPMI 2.0</a></li> <li>▪ <a href="#">SUM</a></li> <li>▪ NMI</li> <li>▪ Watch Dog</li> <li>▪ SuperDoctor® 5</li> </ul>
<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>▪ ACPI Power Management</li> <li>▪ Power-on mode for AC power recovery</li> </ul>

### PC Health Monitoring

<b>CPU</b>	<ul style="list-style-type: none"> <li>▪ 4+1 Phase-switching voltage regulator</li> <li>▪ Monitors for CPU Cores, Chipset Voltages, Memory</li> </ul>
<b>FAN</b>	<ul style="list-style-type: none"> <li>▪ Fans with tachometer monitoring</li> <li>▪ Pulse Width Modulated (PWM) fan connectors</li> <li>▪ Status monitor for speed control</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>▪ Monitoring for CPU and chassis environment</li> <li>▪ Thermal Control for fan connectors</li> </ul>

<b>RoHS</b>	<ul style="list-style-type: none"> <li>▪ RoHS Compliant</li> </ul>
<b>Environmental Spec.</b>	<ul style="list-style-type: none"> <li>▪ Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)</li> <li>▪ Non-operating Temperature: -40°C to 60°C (-40°F to 140°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
<b>Motherboard / Chassis</b>	MBD-X12DSC-6	2	Super X12DSC-6 Motherboard
	CSV-947HTS-R2K63P	1	4U Chassis
<b>Backplane</b>	BPN-ADP-30SAS3-1	2	Adapter board between Expander and HDD BPN for CSE-947H,RoHS
<b>Backplane</b>	BPN-ADP-30SAS3-2	1	Adapter board between Expander and BPN for 947H 90bay Twin,RoHS
<b>Backplane</b>	BPN-SAS3-947EB	6	HDD Backplane (15-slot) for CSE-947H 60/90-bay top load chassis/server.,RoHS
<b>Backplane</b>	BPN-SAS3-947EL	4	SAS3 expander module for top-load 60/90-bay single/twin/SBB CSE-947 project,RoHS
<b>Backplane</b>	BPN-SAS3-947SB	1	Midplane for topload CSE-947 60/90-bay SBB/Twin/single-node system,RoHS
<b>Cable 1</b>	CBL-0066	2	39" 9 PIN COM PORT EXTENSION CABLE
<b>Cable 2</b>	CBL-0082L	2	Y SPLIT SATA POWER ADAPTER, PB FREE
<b>Cable 3</b>	CBL-0473L	4	21CM 30AWG SATA CBL, S-S
<b>Cable 4</b>	CBL-OTHR-1062-25	2	CBL,VGA,DP15/F, to 2X7F/P2.0,25CM,RoHS
<b>Cable 5</b>	CBL-OTHR-1101	1	90-twin,SlimlineULP x12 to SlimlineLP x8,FFC,100 OHM to
<b>Cable 6</b>	CBL-PWCD-0376-IS	2	PWCD,US,IEC60320 C19 TO C20,940mm (3ft),14AWG,15A,250V,Black
<b>Cable 7</b>	CBL-PWEX-1100-25	2	MicroFit 2x2F/PH3.0 to 1x4F/PH5.08,25cm,10A/pin,16AWG,R
<b>Cable 8</b>	CBL-PWEX-1265	2	2x4,PH3.0 to 2x4,PH4.2,20CM,16AWG,9.5A/pin,RoHS
<b>Software</b>	SFT-OOB-LIC	2	License key for enabling OOB BIOS management
<b>Heatsink / Retention</b>	SNK-P0078PR	4	2U Proprietary Passive CPU Heat Sink for X12 Generation Hype-E Series Servers
<b>*Power Supply</b>	PWS-2K63A-1R	2	1U 2600Wredundant single outpupowersupply with wide range in
<b>*Cable 9</b>	CBL-PWEX-1101	1	[NR]PH3.0,F to PH3.0,M,2x4P TO PH3.0,M,2x8P,6A/p,30.6/43.6CM,18AWG
<b>*Cable 10</b>	CBL-PWEX-1102	1	[NR]PH3.0,F toPH3.0,M,2x4P TO PH3.0,M,2x8P,6A/p,35.3/48.5CM,18AWG
<b>*Cable 11</b>	CBL-PWEX-1103	1	[NR]PH3.0,F to PH3.0,M,2x4P TO PH3.0,M,2x8P,6A/pin,18AWG,72.4/85.5CM
<b>*Front Panel</b>	FPB-FP827BR	1	2U BigTwin front control board - right side
<b>*Drive Tray(s)</b>	MCP-220-94601-0N	90	SC946ED 3.5" / 2.5" tool-less HDD tray

### 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
<b>HBA option</b>	AOM-S3616-S-O	1	Storage 3616 controller for serviceable 60/90 bay systems. This has two 3616 controller chips, PCI switch, 2x NVMe M.2 (Form factors: 2280 and 22110), RoHS (One per Node)

<b>HW RAID option</b>	CBL-SAST-1213-100	4	Slimline x8 (STR) to Slimline x8 (STR),14CM,100 OHM,RoHS (One per Node)
	AOM-SADPT-S	2	Bypass card for 60/90 bay systems (One per Node)
	AOC-S3916L-H16IR	2	AOC with SAS3916 controller (U3) and 240PD RAID Key (U39) (One per Node)
<b>Network Cards</b>	AOC-S25G-M2S	-	Standard LP, 2x 25GbE SFP28, Mellanox ConnectX-4 LX EN
	More	-	AOC Compatibility Matrix (Select Storage & X12)
	AOC-SGP-I2	-	Standard LP 2-port GbE, Intel 82575
	AOC-S40G-I2Q	-	Standard LP 2-port 40GbE controller, Intel Fortville XL710
<b>SuperCap Kit (Need Both items)</b>	BTR-CVPM05	2	Broadcom 05-50039-00 CacheVault w/ 24" Remote Extender(Optional)(One per Node)
	MCP-240-94711-0N	2	SC947 MB Node Supercap holder module,RoHS (Optional) (One per Node)
<b>TPM Module</b>	<u>AOM-TPM-9671V-S</u>	-	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor
	<u>AOM-TPM-9670V-S</u>	-	SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor