

# Specifications

## Product SKUs

<b>SSG-640SP-E1CR90</b>	▪ SuperServer SSG-640SP-E1CR90 (Black)
-------------------------	--

## Motherboard

**Super X12DSC-6**

## Processor

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

## System Memory

<b>Memory</b>	▪ Memory Capacity: 16 DIMM slots ▪ Up to 4TB: 16x 256 GB DRAM ▪ Memory Type: 3200MHz ECC DDR4 RDIMM;LRDIMM
---------------	--

<b>Memory Voltage</b>	▪ 1.2 V
-----------------------	---------

<b>Error Detection</b>	▪ ECC
------------------------	-------

## On-Board Devices

<b>Chipset</b>	▪ Intel® C621A
----------------	----------------

<b>Network Connectivity</b>	▪ 2x 10GbE BaseT with X550
-----------------------------	----------------------------

<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
-------------	--

## Input / Output

<b>LAN</b>	▪ 1 RJ45 Dedicated IPMI LAN port ▪ 2 RJ-45 10Gbase-T ports
------------	---

<b>USB</b>	▪ 2 USB 3.0 port(s) (2 Rear_USB)
------------	----------------------------------

<b>Video</b>	▪ 1 VGA port(s)
--------------	-----------------

<b>Serial Port</b>	▪ 1 COM Port(s) (1 rear)
--------------------	--------------------------

<b>DOM</b>	▪ 2 SuperDOM (Disk on Module) port
------------	------------------------------------

## System BIOS

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

## Management

## Chassis

<b>Form Factor</b>	▪ 4U Rackmount
--------------------	----------------

<b>Model</b>	▪ <b>CSV-947HTS-R2K63P</b>
--------------	----------------------------

## Dimensions and Weight

<b>Height</b>	▪ 7"
---------------	------

<b>Width</b>	▪ 17.6"
--------------	---------

<b>Depth</b>	▪ 42.1"
--------------	---------

<b>Package</b>	▪ 29.92" (H) x 35.82" (W) x 53.15" (D)
----------------	--

<b>Weight</b>	▪ Net Weight: 150 lbs (68.04 kg) ▪ Gross Weight: 240 lbs (108.86 kg)
---------------	---

<b>Available Color</b>	▪ Black
------------------------	---------

## Expansion Slots

<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
----------------------------	--

## Drive Bays / Storage

<b>Hot-swap</b>	▪ 90x 3.5" hot-swap SATA3/SAS3 drive bays (4x 2.5" NVMe dedicated) ▪ 2x 2.5" 7mm drive bays
-----------------	--

<b>M.2</b>	▪ 2 M.2 NVMe
------------	--------------

## System Cooling

<b>Fans</b>	▪ 6 Heavy Duty 8cm Fan(s)
-------------	---------------------------

## Power Supply

2x 2600W Titanium Redundant Power Supply

<b>Dimension (W x H x L)</b>	▪ 73.5 x 40 x 265 mm
------------------------------	----------------------

<b>AC Input</b>	▪ 2600W: 200-240Vac / 15A Max / 50-60Hz
-----------------	---

<b>DC Input</b>	▪ 2600W: 240-240Vdc For CQC only / 15A Max
-----------------	--

<b>+12V</b>	▪ Max: 216A / Min: 0A (11.4Vdc-12.6Vdc) (12V output)
-------------	--

<b>Output Type</b>	▪ Backplanes (gold finger)
--------------------	----------------------------

<b>Certification</b>	▪  Titanium Level
----------------------	--

[ Test Report ]

## Operating Environment

<b>Software</b>	<ul style="list-style-type: none"> <li>▪ <u>IPMI 2.0</u></li> <li>▪ <u>SUM</u></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	1	Super X12DSC-6 Motherboard
	CSV-947HTS-R2K63P	1	4U Chassis
<b>Backplane</b>	BPN-ADP-30SAS3-1	3	Adapter board between Expander and HDD BPN for CSE-947H,RoHS
<b>Backplane</b>	BPN-ADP-947SB	1	BPN-ADP-947SB,RoHS
<b>Backplane</b>	BPN-SAS3-826TQ-B2B	1	2-port 2U SAS3 12Gbps backplane, support up to 2x 2.5-inch SAS3/SATA3 HDD/SSD
<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	3	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	1	39" 9 PIN COM PORT EXTENSION CABLE
<b>Cable 2</b>	CBL-0082L	1	Y SPLIT SATA POWER ADAPTER, PB FREE
<b>Cable 3</b>	CBL-0212L	1	4-PIN POWER CABLE FOR SC808 S809, ST TO RA, 20CM
<b>Cable 4</b>	CBL-0234L	1	Y CABLE FOR 4-PIN HDD
<b>Cable 5</b>	CBL-0473L	4	21CM 30AWG SATA CBL, S-S
<b>Cable 6</b>	CBL-CDAT-0841	1	8 pin to 8 pin round SGPIO cable, 81cm, 28AWG, pinout 1-1
<b>Cable 7</b>	CBL-OTHR-1062-25	1	CBL,VGA,DP15/F, to 2X7F/P2.0,25CM,RoHS
<b>Cable 8</b>	CBL-OTHR-1100	1	90-single,SlimlineULP x12 to SlimlineLP x8,FFC,100 OHM
<b>Cable 9</b>	CBL-PWCD-0376-IS	2	PWCD,US,IEC60320 C19 TO C20,940mm (3ft),14AWG,15A,250V,Black
<b>Cable 10</b>	CBL-PWEX-1100-25	1	MicroFit 2x2F/PH3.0 to 1x4F/PH5.08,25cm,10A/pin,16AWG,R
<b>Cable 11</b>	CBL-PWEX-1265	2	2x4,PH3.0 to 2x4,PH4.2,20CM,16AWG,9.5A/pin,RoHS
<b>Software</b>	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
<b>Heatsink / Retention</b>	SNK-P0078PR	2	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 12</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 13</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 14</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-1300-100	1	NCSI,2X Slimline x8 (STR) to 2X Slimline x8 STR,14Z14cm (One per Node)
	AOM-SADPT-S	1	Bypass card for 60/90 bay systems
	AOC-S3916L-H16IR	1	AOC with SAS3916 controller (U3) and 240PD RAID Key (U39)
<b>Network Cards</b>	AOC-SGP-I2	-	Standard LP 2-port GbE, Intel 82575
	AOC-S40G-I2Q	-	Standard LP 2-port 40GbE controller, Intel Fortville XL710
	AOC-S25G-M2S	-	Standard LP, 2x 25GbE SFP28, Mellanox ConnectX-4 LX EN
	More	-	AOC Compatibility Matrix (Select Storage & X12)
<b>NVME kit (only 1 is needed)</b>	CBL-SAST-1049	2	[NR] SLIMLINE SAS (LE) to SLIMLINE SAS, INT, 30.2CM,85 OHM,R
	CBL-PWEX-1093-26	1	[NR]MicroFit,2x2, PH3.0,F to MicroFit,2x2,PH3.0,F,26CM,10A/p
	MCP-220-00178-0B	4	2.5 thin profile drive tray, Orange tab (for hotswap NVMe drive), for SC119UH
	BPN-NVMe4-228N-S4	1	2U 4-Slot SFF BPN supports 4x NVMe Storage Devices
<b>SuperCap Kit (Need Both items)</b>	BTR-CVPM05	1	Broadcom 05-50039-00 CacheVault w/ 24" Remote Extender(Optional)
	MCP-240-94711-0N	1	SC947 MB Node Supercap holder module,RoHS (Optional)
<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