



**Integrated Board**



**Super H12SST-PS**

**Views: [Angled View](#) | [Node View](#) |  
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Note: Image above may show a varied configuration of optional parts. Please refer to parts list for standard parts included.

## Key Features

- Compute Intensive Applications
- HPC, Data Center, Enterprise Server
- Hyperscale / Hyperconverged

Four hot-pluggable systems (nodes) in a 2U form factor. Each node supports the following:

1. Single AMD EPYC™ 7002 Series Processor
2. Up to 2TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 8 DIMM slots
3. 2 PCI-E 4.0 x16 (LP) slots
4. Flexible Networking support via SIOM; Dedicated IPMI 2.0 LAN
  - **Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS management**
5. 3 Hot-swap 3.5" SATA3 drive bays
  - M.2 Interface:** 4 SATA/PCI-E 4.0 x4
  - M.2 Form Factor:** 2280, 22110, 2260, 2242
  - M.2 Key:** M-key
6. 2000W Redundant Power Supplies **Titanium Level (96%)**  
*(Full redundancy based on configuration and application load)*



# Specifications

## Product SKUs

**AS -2014TP-HTR** ■ A+ Server 2014TP-HTR

## Motherboard (per Node)

### Super H12SST-PS

## Processor/Chipset (per Node)

**CPU** ■ Single AMD EPYC™ 7002 Series Processor  
■ Socket SP3  
■ Supports CPU TDP/cTDP up to 225W\*

**Cores** ■ Up to 64 Cores

**Note** \* Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization

## System Memory (per Node)

**Memory Capacity** ■ 8 DIMM slots  
■ Supports up to 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs  
■ 8-channel memory bus

**Memory Type** ■ DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs

**Memory Sizes** ■ 8GB, 16GB, 32GB, 64GB, 128GB, 256GB

**Memory Voltage** ■ 1.2V

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

## On-Board Devices (per Node)

**Chipset** ■ System on Chip

**Storage** ■ SATA3 (6Gbps) via AMD EPYC

**Network Controllers** ■ Barebones and Complete System must have at least one **SIOM** installed per node

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

**Video** ■ ASPEED AST2500 BMC

## Input / Output (per Node)

**LAN** ■ Provided via SIOM (optional)  
■ 1 RJ45 Dedicated IPMI LAN port

**USB** ■ 2 USB 3.0 ports (rear)  
■ 1 USB 2.0 port (Type A)

**Video** ■ 1 VGA port

**DOM** ■ 1 SuperDOM (Disk on Module) port

**Others** ■ 2 COM ports (header)  
■ 1 TPM 2.0 header

## System BIOS (per Node)

**BIOS Type** ■ AMI 128Mb SPI Flash ROM

## Management (per Node)

**Software** ■ **IPMI 2.0**  
■ KVM with dedicated LAN  
■ **SSM, SUM**  
■ **SuperDoctor@ 5**  
■ Watch Dog

**Power Configurations** ■ ACPI / APM Power Management

## Chassis

**Form Factor** ■ 2U Rackmount

**Model** ■ **CSE-827HQ+-R2K04BP2**

## Dimensions and Weight

**Width** ■ 17.25" (438mm)

**Height** ■ 3.47" (88mm)

**Depth** ■ 30.5" (774mm)

**Package** ■ 26.4" (W) x 11.2" (H) x 39.8" (D)

**Weight** ■ Gross Weight: 85 lbs (38.6 kg)  
■ Net Weight: 54.5 lbs (24.7 kg)

**Available Colors** ■ Black

## Front Panel (per Node)

**Buttons** ■ Power On/Off button  
■ UID button

**LEDs** ■ Power status LED  
■ HDD activity LED  
■ Network activity LEDs  
■ Universal Information (UID) LED

## Expansion Slots (per Node)

**PCI-Express** ■ 2 PCI-E 4.0 (x16) Low-profile slots  
■ 1 **SIOM** card support (must be assembled/integrated with SIOM)

**M.2** ■ Interface: 4 SATA/PCI-E 4.0 x4  
■ Form Factor: 2280, 22110, 2260, 2242  
■ Key: M-key

## Drive Bays (per Node)

**Hot-swap** ■ 3 Hot-swap 3.5" SATA3 drive bays

## System Cooling

**Fans** ■ 4 Heavy duty 8cm PWM fans

## Power Supply (76mm Width)

2000W Redundant Power Supplies with PMBus

**Total Output Power** ■ 1000W/1800W/1980W/2000W

**Dimension (W x H x L)** ■ 76 x 40 x 336 mm

**Input** ■ 1000W: 100-127 Vac / 12-9.5 A / 50-60 Hz  
■ 1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz  
■ 1980W: 220-230 Vac / 10-9.8 A / 50-60 Hz  
■ 2000W: 230-240 Vac / 10-9.8 A / 50-60 Hz  
■ 2000W: 200-240 Vac / 11.8-9.8 A / 50-60 Hz (UL/cUL only)

**+12V** ■ Max: 83.3A / Min: 0A (100-127 Vac)  
■ Max: 150A / Min: 0A (200-220 Vac)  
■ Max: 165A / Min: 0A (220-230 Vac)  
■ Max: 166.7A / Min: 0A (230-240 Vac)  
■ Max: 166.7A / Min: 0A (200-240 Vac) (UL/cUL only)

**+5Vsb** ■ Max: 1A / Min: 0A

**Output Type** ■ 27 Pairs Gold Finger Connector

**Certification**



**Titanium Level**  
[ Test Report ]

## Operating Environment

**RoHS** ■ RoHS Compliant

**Environmental Spec.** ■ Operating Temperature: 10°C ~ 30°C (50°F ~ 85°F)  
All CPU SKUs supported  
10°C ~ 35°C (50°F ~ 95°F)  
See Note \*  
■ Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)  
■ Operating Relative Humidity: 8% to 90% (non-condensing)  
■ Non-operating Relative Humidity: 5% to 95% (non-condensing)

# Parts List

## Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-H12SST-PS	4	Super H12SST-PS Motherboard
	CSE-827HQ+-R2K04BP2	1	2U Chassis
<b>Backplane</b>	BPN-ADP-6SATA3P	4	Backplane adapter card; 6SATA ports,RoHS/REACH,PBF
<b>Backplane</b>	BPN-SAS3-827HQ2	1	2U 12-Port 4-Node Backplane Supports 3x3.5" SAS3/SATA3 HDD per Node
<b>Drive Tray(s)</b>	MCP-220-00075-0B	12	Black gen 5.5 hot-sw ap 3.5" HDD tray
<b>Parts</b>	MCP-240-82715-0N	1	Tw inPro SC827HQ+ BPN retention bracket assembly
<b>Riser Card</b>	RSC-P-6-X2	4	1U LHS Tw inPro riser card with one PCI-E 4.0 x16 slot,HF,RoH
<b>Riser Card</b>	RSC-PR-6-X2	4	1U RHS Tw inPro Riser card with one PCI-E 4.0 x16 slot,HF,RoH
<b>Software</b>	SFT-OOB-LIC	4	License key for enabling OOB BIOS management
<b>Heatsink / Retention</b>	SNK-P0062P	4	1U Passive CPU Heat Sink for AMD Socket SP3 Processors
<b>Air Shroud</b>	MCP-310-82723-0B	4	SC827HQ+ mylar air shroud for MBD-H12SST-PS-P
<b>Power Supply</b>	PWS-2K04A-1R	2	AC-DC 2000W, Titanium Level, Redundancy, 1U, PMBus 1.2, +12V/+5Vsb, 360x76x40mm,HF,RoHS/REACH
<b>FAN</b>	FAN-0162L4	4	80x80x38 mm, 13.5K RPM, HCP, LMV, and LPC Cooling Fan,RoHS/REACH
<b>Cable</b>	CBL-PWCD-0578-1	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG,RoHS
<b>Software</b>	SFT-OOB-LIC	1	License key for enabling OOB BIOS management

## Optional Parts List

	Part Number	Qty	Description
<b>Hot-swap 3.5" to 2.5" Hard Disk Drive Tray</b>	MCP-220-00043-0N	-	Black Hot-sw ap gen 4 3.5" to 2.5" HDD tray
<b>Global Services &amp; Support</b>	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
<b>Software</b>	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
<b>TPM security module</b>	<u>AOM-TPM-9655V</u>	-	TPM 1.2 module with Infineon 9655, RoHS/REACH,PBF;
	<u>AOM-TPM-9655V-S</u>	-	TPM 1.2 module with Infineon 9655, RoHS/REACH,PBF; Provisioned for TXT
	<u>AOM-TPM-9665V</u>	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF;
	<u>AOM-TPM-9665V-S</u>	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF; Provisioned for TXT
<b>SIOM</b>	-	-	Supermicro SIOM solutions <a href="#">[Details]</a>