

SuperServer 6029TP-HC0R



Views: | [Angled View](#) | [Node View](#) | [Front View](#) | [Rear View](#) |



Key Applications / Features

- Compute Intensive Application
- HPC, Data Center
- Enterprise Server
- Financial Analysis
- Mission-critical applications

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

1. Dual Socket P (LGA 3647) support 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake/Skylake)[‡]
2. 16 DIMMs; up to 4TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM^{††}
3. 2 PCI-E 3.0 x16 (LP) slots
4. Flexible Networking support via SIOM; Dedicated IPMI 2.0 LAN
5. 3 Hot-swap 3.5" SAS/SATA drive bays
6. Broadcom 3008 SAS3 controller; RAID 0, 1, 1E
7. Mini-mSATA (half size) support
8. Up to 2200W Redundant Power Supplies Titanium Level (96%)

Barebone or Complete System requires SIOM or network card installed per node.

[Drivers & Utilities](#) [BIOS](#) [IPMI](#) [Tested Memory](#) [Tested M.2 List](#) [Manuals](#) [OS Certification Matrix](#) [Quick-References Guide](#) [Drive Options](#)

[Tested SIOM](#) [Network Card \(AOC\) Matrix](#)

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

Specifications ^

Product SKUs

SYS-6029TP-HC0R SuperServer 6029TP-HC0R (Black)

Motherboard (Four per System)

Super X11DPT-PS

Processor (per Node)

CPU	Dual Socket P (LGA 3647) 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors [‡] , Dual UPI up to 10.4GT/s Support CPU TDP 70-165W*
Cores	Up to 28 Cores
Note	* Please contact Supermicro Technical Support for supporting conditions of high power (TDP 150W and above) or high base frequency (3.0 GHz and above) processors.
Note	* Processors ending N or S are optimized for networking and storage applications. Customer need POC their application and observe any thermal throttling before large deployment.
Note	[‡] BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)

System Memory (per Node)

Memory Capacity	16 DIMM slots Up to 4TB 3DS ECC DDR4-2933MHz [†] RDIMM/LRDIMM Supports Intel® Optane™ DCPMM ^{††}
Memory Type	2933 [†] /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
Note	[†] 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro ^{††} Cascade Lake only. Contact your Supermicro sales rep for more info.

On-Board Devices (per Node)

Chipset	Intel® C621 chipset
SAS	Broadcom 3008 SAS3 (12Gbps) controller; RAID 0, 1, 1E support
Network Controllers	Barebones and Complete System must have at least one SIOM or network card 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
Graphics	ASPEED AST2500 BMC

Input / Output (per Node)

SAS	3 SAS3 (12Gbps) ports
LAN	1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports total (rear)
VGA	1 VGA port
Serial Port / Header	1 Fast UART 16550 port / 1 Header (internal)
Others	2 SuperDOM support on the motherboard 1 NVMe or 2 SATA M.2 (22x80/60/42 mm) support with option part: AOC-SMG3-2H8M2 M.2 and SuperDOM are for OS boot and they cannot coexist

System BIOS

BIOS Type AMI 32MB SPI Flash ROM

Management

Software	Intel® Node Manager IPMI 2.0 KVM with dedicated LAN NMI SSM , SPM , SUM SuperDoctor® 5 Watchdog
Power Configurations	ACPI Power Management

PC Health Monitoring

CPU	Monitors for CPU Cores, Chipset Voltages, Memory. 5+1 Phase-switching voltage regulator
FAN	Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors
Omni-Path Fabric CPUs	Do not support

Chassis

Form Factor 2U Rackmount
Model CSE-827HQ+-R2K20BP2

Dimensions and Weight

Width	17.25" (438mm)
Height	3.47" (88mm)
Depth	30.5" (774mm)
Weight	Gross Weight: 90 lbs (40.9kg) Net Weight: 72 lbs (32.7 kg)

Available Colors Black

Front Panel

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 3.0 x16 Low-profile slots 1 SIOM card support Note: Barebones and Complete System must bundle with Network Card (With only one CPU installed, SXB2 M.2 and SXB4 riser card slots not function)
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Drive Bays (per Node)

Hot-swap 3 Hot-swap 3.5" SAS/SATA HDD trays

System Cooling

Fans 4 Heavy duty 8cm PWM fans with optimal fan speed control

Power Supply

2200W Redundant Power Supplies with PMBus

Total Output Power and Input	1200W with Input 100-127Vac 1800W with Input 200-220Vac 1980W with Input 220-230Vac 2090W with Input 230-240Vac 2200W with Input 220-240Vac (for UL/cUL use only) 2090W with Input 230-240Vdc (for CCC only)
AC Input Frequency	50-60Hz
Dimension (W x H x L)	76 x 40 x 336 mm
+12V	Max: 100A / Min: 0A (100-127Vac) Max: 150A / Min: 0A (200-220Vac) Max: 165A / Min: 0A (220-230Vac) Max: 174.17A / Min: 0A (230-240Vac) Max: 183.3A / Min: 0A (220-240Vac)
5VSB	Max: 1A / Min: 0A
Output Type	Backplanes (gold finger)
Certification	[Test Report]

Operating Environment

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F) 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
Motherboard / Chassis	MBD-X11DPT-PS	4	Super X11DPT-PS Motherboard
	CSE-827HQ+-R2K20BP2	1	2U Chassis
Backplane	BPN-ADP-S3008L-L6IP	4	LSI 3008, SAS 12Gbs (X6 port inside)
Backplane	BPN-SAS3-827HQ2	1	2U 12-Port 4-Node Backplane Supports 3x3.5
Cable 1	CBL-PWCD-0578	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG
Parts	MCP-240-82715-0N	1	TwinPro SC827HQ+ BPN retention bracket assembly
Air Shroud	MCP-310-21716-0B	4	Twinpro X11 air shroud
Riser Card	RSC-P-6	4	RSC-P-6 (1U LHS TwinPro RSC with 1 PCI-Ex16),RoHS
Riser Card	RSC-R1UTP-E16R	4	1U RHS TwinPro Riser card with one PCI-E x16 slot
Heatsink / Retention	SNK-P0067PS	4	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Heatsink / Retention	SNK-P0067PSM	4	1U Passive CPU Heat Sink with a 26-mm Wide Middle Air Channel for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Power Supply	PWS-2K20A-1R	2	1U 2200W Redundant, Titanium, 76(W) X 40(H) X 336(L) mm
FAN 1	FAN-0162L4	4	80x80x38 mm, 13.5K RPM, HCP, LMV, and LPC Cooling Fan,RoHS/REACH

Optional Parts List

	Part Number	Qty	Description
TPM security module (optional, not included)	AOM-TPM-9670V	1	SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor
TPM security module (optional, not included)	AOM-TPM-9671V	1	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor
Add-on-Card	AOC-SMG3-2H8M2	-	AOC supports 2280 M.2 form factor SSD (1 NVMe or 2 SATA), FST-SCRW-0121L is included in AOC-SMG3-2H8M2
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00043-0N	-	Black Hot-swap gen 4 3.5" to 2.5" HDD tray
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)

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