

## SuperServer 6029BT-DNC0R (Complete System Only)



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



### Key Applications

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

### Key Features

- Two hot-pluggable systems (nodes) in a 2U form factor. Each node supports the following:
- Dual Socket P (LGA 3647) support 2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)<sup>†</sup>
  - 24 DIMMs: up to 6TB 3DS ECC DDR4-2933MHz<sup>‡</sup> RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM<sup>††</sup>
  - 2 PCI-E 3.0 x8 slot, 1 PCI-E 3.0 x16, 1 [S10M](#) card support (flexible networking) Note: must bundle with Network card
  - 6 SAS3 or 3 NVMe + 3 SAS3 Hot-swap 3.5" drive bays, 2 internal M.2 NVMe/SATA slots
  - SAS3 support via Broadcom 3008; IT mode
  - IPMI 2.0 + KVM with dedicated LAN
  - Video via Aspeed AST2500 BMC
  - 4 Heavy duty 8cm PWM fans with air shroud
  - 2200W Redundant Power Supplies **Titanium Level (96%)**

**Complete System Only:** To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 2 CPUs, 2 DIMMs, 1 HDD/NVMe and 1 S10M card per node).

[Drivers & Utilities](#) [BIOS](#) [IPMI](#) [Tested Memory](#) [Tested M.2 List](#) [NVMe Options](#) [Manuals](#) [OS Certification Matrix](#) [Quick-References Guide](#)  
[Drive Options](#) [Tested S10M](#) [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	
<b>SYS-6029BT-DNC0R</b>	SuperServer 6029BT-DNC0R (Black)
Motherboard	
<b>Super X11DPT-B</b>	
Processor	
<b>CPU</b>	Dual Socket P (LGA 3647) 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors <sup>†</sup> , Dual UPI up to 10.4GT/s Support CPU TDP 70-205W*
<b>Cores</b>	Up to 28 Cores
<b>Note</b>	* Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization.
<b>Note</b>	† BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)
System Memory	
<b>Memory Capacity</b>	24 DIMM slots Up to 6TB 3DS ECC DDR4-2933MHz <sup>‡</sup> RDIMM/LRDIMM Supports Intel® Optane™ DCPMM <sup>††</sup>
<b>Memory Type</b>	2933 <sup>‡</sup> /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
<b>Note</b>	<sup>‡</sup> 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro <sup>††</sup> Cascade Lake only. Contact your Supermicro sales rep for more info.
On-Board Devices	
<b>Chipset</b>	Intel® C621 chipset
<b>SAS</b>	SAS3 (12Gbps) via Broadcom 3008; IT mode
<b>Network</b>	Must bundle with at least one <a href="#">S10M</a> network card
<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
<b>Video</b>	ASPEED AST2500 BMC
Input / Output (per Node)	
<b>LAN</b>	1 RJ45 Dedicated IPMI LAN port
<b>USB</b>	2 USB 3.0 ports (rear)
<b>Video</b>	1 VGA port
<b>DOM</b>	1 SuperDOM (Disk on Module) port
<b>Others</b>	M.2 and SATA DOM for boot drive only
System BIOS	
<b>BIOS Type</b>	AMI 32Mb SPI Flash ROM
Management	
<b>Software</b>	Intel® Node Manager <a href="#">IPMI 2.0</a> KVM with dedicated LAN <a href="#">SSM</a> , <a href="#">SPM</a> , <a href="#">SUM</a> <a href="#">SuperDoctor® 5</a> Watch Dog
<b>Power Configurations</b>	ACPI / APM Power Management
PC Health Monitoring	
<b>CPU</b>	Monitors for CPU Cores, Chipset Voltages, Memory, 4+1 Phase-switching voltage regulator
<b>FAN</b>	Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
<b>Temperature</b>	Monitoring for CPU and chassis environment Thermal Control for fan connectors

Chassis	
<b>Form Factor</b>	2U Rackmount
<b>Model</b>	<b>CSE-827BHD+-R2K22BP</b>
Dimensions and Weight	
<b>Width</b>	17.6" (447mm)
<b>Height</b>	3.47" (88mm)
<b>Depth</b>	30.11" (765mm)
<b>Package</b>	9.76" (H) x 24.65" (W) x 45.28" (D)
<b>Weight</b>	Gross Weight: 114.66 lbs (52.01 kg) Net Weight: 87.13 lbs (39.52 kg)
<b>Available Colors</b>	Black
Front Panel	
<b>Buttons</b>	Power On/Off button UID button
<b>LEDs</b>	Power status LED HDD activity LED Network activity LEDs Universal Information (UID) LED
Expansion Slots (per Node)	
<b>PCI-Express</b>	2 PCI-E 3.0 x8 slots 1 PCI-E 3.0 x16 slot 1 <a href="#">S10M</a> card support (must bundle with network card)
Drive Bays / Storage (per Node)	
<b>Hot-swap</b>	6 SAS3 or 3 NVMe + 3 SAS3 Hot-swap 3.5" drive bays <b>Please contact Supermicro Technical Support for additional information about HDD and SSD if mixed. Some restrictions and configuration rules that apply to SSD are different from HDD.</b>
<b>M.2</b>	2 Internal M.2 NVMe/SATA slots
System Cooling	
<b>Fans</b>	4 Heavy duty 8cm PWM fans with air shroud
Power Supply	
2200W Redundant Power Supplies with PMBus	
<b>Total Output Power</b>	1200W/1800W/1980W/2090/2200W
<b>Dimension (W x H x L)</b>	45 x 40 x 480 mm
<b>Input</b>	1200W: 100-127Vac / 50-60Hz 1800W: 200-220Vac / 50-60Hz 1980W: 220-230Vac / 50-60Hz 2090W: 230-240Vac / 50-60Hz 2090W: 180-220Vac (for UL/cUL only) 2200W: 220-240Vac (for UL/cUL only) 2090W: 230-240Vdc (for CCC only)
<b>+12V</b>	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: 174.17A / Min: 0A (180-220Vac, UL/cUL only) Max: 183.33A / Min: 0A (220-240Vac, UL/cUL only) Max: 174.17A / Min: 0A (230-240Vdc, CCC only)
<b>12Vsb</b>	Max: 2.1A / Min: 0A
<b>Output Type</b>	Gold Finger
<b>Certification</b>	
Operating Environment	
<b>RoHS</b>	RoHS Compliant
<b>Environmental Spec.</b>	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
<b>Motherboard / Chassis</b>	MBD-X11DPT-B	2	Super X11DPT-B Motherboard
	CSE-827BHD+-R2K22BP	1	2U Chassis
<b>Backplane</b>	BPN-ADP-6S3008N3-2UB	2	Big Twin 2U Hybrid ADPHDD: 2x SAS3 port + 3 NVMe or SAS3 ports (SAS3008 controller)M.2: 2x SATA or PCIe M.2 ports,HF,RoHS
<b>Backplane</b>	BPN-SAS3-827BHQ-N3	1	2U 12-Port 4-Node Hybrid Backplane Supports 3x3.5
<b>Cable 1</b>	CBL-PWCD-0578	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG
<b>Drive Tray(s)</b>	MCP-220-00133-0B-BULK	12	Black gen 8 hot-swap 3.5
<b>Parts</b>	MCP-240-82718-0N	1	SC827B BigTwin type I (Impact) BPN retention bkt assy
<b>Air Shroud</b>	MCP-310-21725-0B	2	Bigtwin 2U2N plastic air shroud for Cascade lake MB
<b>Manual</b>	MNL-2091-QRG	1	6029BT-DNC0R Quick Reference Guide
<b>Riser Card</b>	RSC-P2-88	2	2U LHS TwinPro Riser card with two standard PCI-E x8 slots,H
<b>Heatsink / Retention</b>	SNK-P0068PS	2	2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
<b>Heatsink / Retention</b>	SNK-P0069PS	2	1.5U Proprietary 50-mm Tall Front Passive CPU Heat Sink for X11 Purley Platform 2U Node Twin Series Servers
<b>Fan</b>	FAN-0162L4	4	80x80x38 mm, 13.5K RPM, HCP, LMV, and LPC Cooling Fan
<b>Power Supply</b>	PWS-2K22A-1R	2	1U 2200W Redundant Power Supply Titanium, 45(W) X 40(H) X 48

Optional Parts List			
	Part Number	Qty	Description
<b>Fan</b>	FAN-0191L4	-	80x80x38 mm, 14.9K RPM, Non-hot-swappable Middle Cooling Fan (Optimal for computational performance)
<b>3.5" to 2.5" Converter Tray</b>	MCP-220-00140-0B	-	Black gen 8 hot-swap 3.5-to-2.5 Tool-less HDD tray, orange tab
<b>TPM security module</b>	<a href="#">AOM-TPM-9670H-S</a>	1	SPI Capable TPM 2.0 Provisioned for Server, Horizontal Form Factor
<b>TPM security module</b>	<a href="#">AOM-TPM-9671H-S</a>	1	SPI Capable TPM 1.2 Provisioned for Server, Horizontal Form Factor
<b>Intel VROC RAID Key</b>	<a href="#">AOC-VROCINTMOD</a>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
	<a href="#">AOC-VROCSTNMOD</a>	1	Intel VROC Standard, RAID 0, 1, 10
	<a href="#">AOC-VROCPREMOD</a>	1	Intel VROC Premium, RAID 0, 1, 5, 10
<b>Global Services &amp; Support</b>	<a href="#">QS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	<a href="#">SFT-QOB-LIC</a> • eStore	1	OOB Management Package (per node license)
<b>Software</b>	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)
<b>SuperDOM</b>	-	-	Supermicro SATA DOM Solutions <a href="#">[Details]</a>
<b>Network Card(s)</b>	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel i350AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel 82599ES
	AOC-STGN-i1S	-	Standard LP, 1x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB	

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