

# SuperServer 2029U-MTNRV-NEBS (Complete System Only)



**Integrated Board**



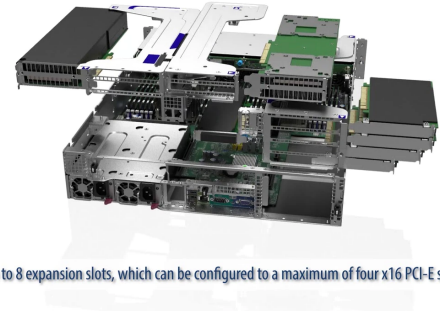
**Super X11DPU-V**

**Views:** | [Angled View 1](#) | [Angled View 2](#) | [Top View](#) | [Front View](#) | [Rear View](#) |

**Complete System Only:** To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 2 CPUs, 4 DIMMs, 1 NIC adapter\*). \*NIC adapter requirement includes 1 Ultra Riser card.

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Manuals](#)

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



Up to 8 expansion slots, which can be configured to a maximum of four x16 PCI-E slots

## Key Applications

- Telecom Central Office and Data Center
- 5G Core and Edge Computing
- AI Inference and Machine Learning
- Network Functions Virtualization
- Cloud Computing



## Key Features

1. NEBS Level 3 Certified
2. Dual Socket P (LGA 3647): Intel® Xeon® Gold 6240R
3. 24 DIMMs; up to 1.5TB 3DS ECC DDR4-2933MHz<sup>†</sup> RDIMM
4. Up to 8 PCI-E Add-on Cards
5. Flexible LAN options
6. 6 Hot-swap 2.5" drive bays  
6 NVMe/SATA ports (NVMe from CPU1) or 6 SATA ports
7. 6 Hot-swap Heavy duty 6cm PWM fans
8. 1600W Redundant Power Supplies  
**Titanium Level (96%)**
9. GPU Support (Optional)

# Specifications

## Product SKUs

<b>SYS-2029U-MTNRV-NEBS</b>	■ SuperServer 2029U-MTNRV-NEBS
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## Motherboard

### Super X11DPU-V

## Processor

<b>CPU</b>	<ul style="list-style-type: none"> <li>■ Dual Socket P (LGA 3647)</li> <li>■ Intel® Xeon® Gold 6240R Processors (2.4GHZ) integrated for Complete System, CPU TDP 165W</li> </ul>
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<b>Cores</b>	■ 24 Cores
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## System Memory

<b>Memory Capacity</b>	<ul style="list-style-type: none"> <li>■ 24 DIMM slots</li> <li>■ Up to 1.5TB 3DS ECC DDR4-2933MHz<sup>†</sup> RDIMM</li> </ul>
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<b>Memory Type</b>	<ul style="list-style-type: none"> <li>■ 2933<sup>†</sup>/2666/2400/2133MHz ECC DDR4 RDIMM</li> <li>■ 2666 ECC DDR4 NVDIMM</li> </ul>
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<b>Note</b>	<sup>†</sup> 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro
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## On-Board Devices

<b>Chipset</b>	■ Intel® C621 chipset
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<b>SATA</b>	■ SATA3 (6Gbps); RAID 0, 1, 5, 10
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<b>Network Connectivity</b>	■ Flexible Networking options
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<b>Graphics</b>	■ ASPEED AST2500 BMC
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## Input / Output

<b>SATA</b>	■ 6 SATA3 (6Gbps) ports
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<b>LAN</b>	■ Flexible LAN options
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<b>USB</b>	■ 2 USB 3.0 ports (rear)
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<b>Video</b>	■ 1 VGA Connector
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<b>Serial Header</b>	■ 1 Serial header
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<b>DOM</b>	■ 2 Super <u>DOM</u> (Disk on Module) ports
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## System BIOS

<b>BIOS Type</b>	■ AMI 32Mb SPI Flash ROM
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## Management

<b>Software</b>	<ul style="list-style-type: none"> <li>■ Intel® Node Manager</li> <li>■ <u>Redfish API</u></li> <li>■ <u>IPMI 2.0</u></li> <li>■ KVM with dedicated LAN</li> <li>■ NMI</li> <li>■ <u>SSM</u>, <u>SPM</u>, <u>SUM</u></li> <li>■ <u>SuperDoctor® 5</u></li> </ul>
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<b>Power Configurations</b>	■ ACPI Power Management
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## Chassis

<b>Form Factor</b>	■ 2U Short Depth Rackmount
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<b>Model</b>	■ <b>CSE-219ULTS-R1K62P</b>
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## Dimensions and Weight

<b>Width</b>	■ 17.2" (432mm)
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<b>Height</b>	■ 3.5" (89mm)
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<b>Depth</b>	■ 22.6" (574mm)
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<b>Weight</b>	<ul style="list-style-type: none"> <li>■ Net Weight: 35 lbs (16 kg)</li> <li>■ Gross Weight: 56.5 lbs (25.6 kg)</li> </ul>
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<b>Available Colors</b>	■ Silver
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## Front Panel

<b>Front Bezel</b>	<ul style="list-style-type: none"> <li>■ 2U Front Bezel</li> <li>■ Replaceable UL900-2004 certified air filter</li> </ul>
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<b>Buttons</b>	<ul style="list-style-type: none"> <li>■ Power On/Off button</li> <li>■ System Reset button</li> </ul>
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<b>LEDs</b>	<ul style="list-style-type: none"> <li>■ Power status LED</li> <li>■ HDD activity LED</li> <li>■ Network activity LEDs</li> <li>■ System information (overheat/UID) LED</li> </ul>
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## Expansion Slots

<b>PCI-Express</b>	<ul style="list-style-type: none"> <li>■ 2 PCI-E 3.0 x16 (FH, 10.5"L)</li> <li>■ 4 PCI-E 3.0 x8 (FH, 10.5"L)</li> <li>■ 1 PCI-E 3.0 x8 (LP)</li> <li>■ 1 PCI-E 3.0 x8 (int)</li> </ul>
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**(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and [AOC Support](#) for details.)**

## Drive Bays / Storage

<b>Hot-swap</b>	<ul style="list-style-type: none"> <li>■ 6 Hot-swap 2.5" drive bays, 6 NVMe/SATA ports (NVMe from CPU1) or 6 SATA ports; Optional SAS support via SAS storage controller</li> </ul>
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Note: SAS3 or NVMe support requires additional optional parts

<b>M.2</b>	<ul style="list-style-type: none"> <li>■ 1 M.2 PCI-E 3.0 x4 M-Key NVMe (2240/2260/2280/22110) or 1 M.2 M-Key SATA3 (2240/2260/2280/22110) via optional parts</li> <li>■ 2 M.2 PCI-E 3.0 x4 M-Key NVMe (2260/2280/22110) via optional add-on card AOC-SLG3-2M2</li> </ul>
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## System Cooling

<b>Fans</b>	■ 6 Hot-swap Heavy duty fans with optimal fan speed control
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<b>Air Shroud</b>	■ 1 Set of Air Shroud
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## Power Supply

**PC Health Monitoring**

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

**1600W Redundant Power Supplies with PMBus**

<b>Total Output Power</b>	<ul style="list-style-type: none"> <li>1600W/1000W</li> </ul>
<b>Dimension (W x H x L)</b>	<ul style="list-style-type: none"> <li>73.5 x 40 x 203 mm</li> </ul>
<b>Input</b>	<ul style="list-style-type: none"> <li>100-127Vac / 13 - 9A / 50-60Hz</li> <li>200-240Vac / 10 - 8A / 50-60Hz</li> </ul>
<b>+12V</b>	<ul style="list-style-type: none"> <li>Max: 83.3A / Min: 0A (100-127Vac)</li> <li>Max: 133A / Min: 0A (200-240Vac)</li> </ul>
<b>12Vsb</b>	<ul style="list-style-type: none"> <li>Max: 2.1A / Min: 0A</li> </ul>
<b>Output Type</b>	<ul style="list-style-type: none"> <li>25 Pairs Gold Finger Connector</li> </ul>
<b>Certification</b>	  <b>Titanium Level</b> <a href="#">[ Test Report ]</a>

**Operating Environment**

<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: <ul style="list-style-type: none"> <li>Continuous: 5°C ~ 40°C (41°F ~ 104°F)</li> <li>Short term: -5°C ~ 55°C (23°F ~ 131°F)</li> </ul> </li> <li>Non-operating Temperature: <ul style="list-style-type: none"> <li>-40°C to 70°C (-40°F to 158°F)</li> </ul> </li> <li>Operating Relative Humidity: <ul style="list-style-type: none"> <li>5% to 85% with excursion of 5% to 93% (non-condensing)</li> </ul> </li> <li>Non-operating Relative Humidity: <ul style="list-style-type: none"> <li>5% to 95% (non-condensing)</li> </ul> </li> </ul>

## Parts List

### NEBS Tested Parts List

	Part Number	Qty	Description
<b>CPU</b>	P4X-CLX6240R-SRGZ8	2	CLX 6240R 2P 24C/48T 2.4G 35.75M 10.4GT 165W 3647 B1
<b>Memory</b>	MEM-DR464L-CL01-ER29	2	Micron 64GB DDR4-2933 2RX4 (16Gb) LP ECC RDIMM
	MEM-DR464L-HL02-ER29	2	Hynix 64GB DDR4-2933 2Rx4 (16Gb) ECC RDIMM
	MEM-DR432L-HL01-ER29	2	Hynix DDR4 1.2V 2933 ECC REG, 32GB DIMM
	MEM-DR432L-HL01-ER29	4	Samsung DDR4 1.2V 2933 ECC REG, 32GB DIMM
	MEM-DR432L-SL01-ER29	2	Micron DDR4 1.2V 2933 ECC REG, 32GB DIMM
	MEM-DR432L-CL01-ER29	6	16GB DDR4-2933 2RX8 LP ECC RDIMM
	MEM-DR432L-CL01-ER29	6	16GB DDR4-2933 2Rx8 ECC REG DIMM
	MEM-DR416L-CL01-ER29		
	MEM-DR416L-HL04-ER29		
<b>Hard Drives</b>	HDS-SUN1-MZQLB7T6HMLA07	1	Samsung PM983 7.68TB NVMePCIe3x4 V4TLC 2.5"7mm(1.3 DWPD)
	HDS-IUN0-SSDPE2KE076T8		Intel DC P4610 7.6TB NVMe PCIe3.1 3D TLC 2.5" 3DWPD Rev.1
	HDS-MUN-MTFDHAL7T6TDP1AT		Micron 9300 PRO 7.6TB NVMe PCIe 3.0 3D TLC U.2 15mm
	HDS-I2T0-SSDSC2KG076T8		Intel D3-S4610 7.68TB SATA6Gb/s3DTLC 2.5"7mm 3DWPD Rev.2
	HDS-S2T1-MZ7LH3T8HMLT05		Samsung PM883 3.84TB SATA 6Gb/s V4 TLC 2.5" 7mm (1.3 DWPD)
	HDS-M2T-MTFDDAK7T6TDS1AW		Micron 5300 PRO 7.68TB,SATA,2.5",3D TLC,0.6DWPD
<b>GPUs</b>	GPU-NVTT4	1	NVIDIA Tesla T4 16GB GDDR6 PCIe 3.0 – Passive Cooling 70
	GPU-NVTV100S-32		Tesla V100S 32
	GPU-FPGA-INNVVN3000-3		Intel N3000-N FPGA
<b>Add on Cards</b>	AOC-S3108L-H8iR-16DD	1	Boardcom 3108L SAS controller
	AOC-STG-I2T		Intel® X540 2-port RJ45 10GbE Gen3 x8 Standard Low profile
	AOC-2UR68-m2TS-P		2U Ultra 2-port 25G SFP28, 1x PCI-E 3.0 x8 (internal)
	AOC-SLG3-2E4R		LP, PCIe3 x8, 2 internal Mini-SAS HD port redriver NVMe card
	AOM-TPM-9670H-S		TCG 2.0 compliant trusted platform module (TPM), Horizontal FF
	AOC-2UR66-I4G		2U Ultra Riser with 4 GbE ports and 2 PCI-E x16 3.0, Intel i350
	AOC-2UR66-I4XTF		2U Ultra Riser 4-port 10GBase-T, Intel XL710-BM1 and X557-AT4
	AOC-S100G-M2C-O		Standard low-profile adapter card based on Mellanox ConnectX-4 chipset; two QSFP28 100Gpbs Ethernet ports, PCI-E 3.0 x16 host interface,RoHS
<b>HDS</b>	HDS-IMT0-SSDSCKB240G8	1	Intel D3 S4510 240GB M.2 SATA 6Gb/s 3D TLC 22x80mm 1DWPD
<b>Fan</b>	FAN-0214L4	6	60x60x56 mm, Counter-rotating Cooling Fan for 2U Ultra Short Depth Series Servers
<b>Power Supplies</b>	PWS-1K62A-1R	2	1600W AC power supply