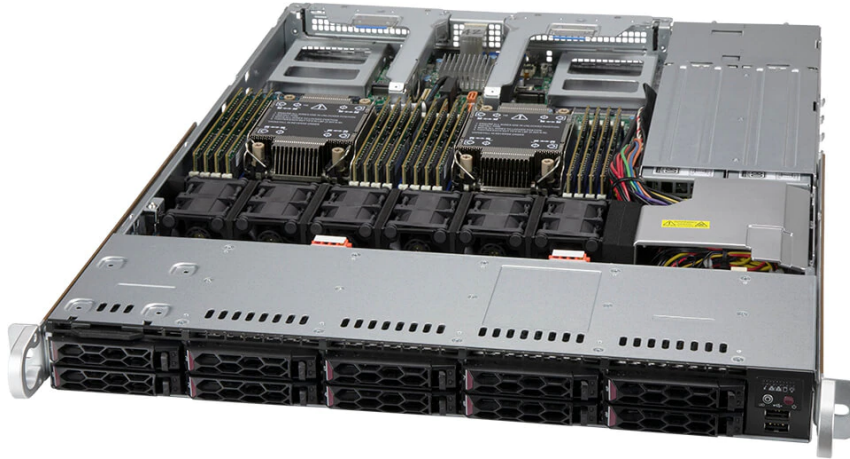


# CloudDC SuperServer SYS-120C-TN10R (Complete System Only )

NEW



## Key Applications

- Web Server, Firewall Application
- Data Center Optimized, Value IaaS
- Cloud Computing, Compact Server
- DNS & Gateway Servers, Firewall Application
- CDN, Edge Nodes



## Key Features

1. Dual sockets P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors
2. Intel® C621A Chipset
3. 16 DIMMs up to 6TB 3DS ECC DDR4-3200: LRDIMM/RDIMM/Intel® DCPMM
4. 2 PCI-E 4.0 x16 FHHL;  
2 PCI-E 4.0 x16 AIOM (OCP 3.0);  
2 PCI-E 3.0 x2 NVMe M.2
5. Dual AIOM with NCSI (OCP 3.0) for networking, 1 dedicated IPMI LAN
6. 10x 2.5" hot-swap hybrid NVMe/SATA/SAS drive bays
7. 6 counter-rotating 4 cm PWM fans with optimal fan speed control, 2 air shrouds
8. 860W redundant Platinum level 100-240Vac and 200-240 Vdc power supplies
9. 1 VGA, 1 COM, 2 USB 3.0 (rear), 2 USB 2.0 (front)

# Specifications

## Product SKUs

<b>SYS-120C-TN10R</b>	<ul style="list-style-type: none"> <li>SuperServer SYS-120C-TN10R (Black)</li> </ul>
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## Motherboard

### Super X12DDW-A6

## Processor

<b>CPU</b>	<ul style="list-style-type: none"> <li>Dual Socket P+ (LGA-4189)</li> <li>3rd Gen Intel® Xeon® Scalable processors</li> <li>Support CPU TDP 270W</li> <li><b>CPUs with TDP higher than 185W may have support conditions due to power and thermal limitations.</b></li> </ul>
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<b>Cores</b>	<ul style="list-style-type: none"> <li>Up to 40C/80T; Up to 60MB Cache</li> </ul>
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## System Memory

<b>Memory</b>	<ul style="list-style-type: none"> <li>Memory Capacity: 16 DIMM slots</li> <li>Up to 4TB: 16x 256 GB DRAM</li> <li>Up to 6TB: 8x 256 GB DRAM and 8x 512 GB PMem</li> <li>Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM;LRDIMM</li> <li>Intel® Optane™ persistent memory 200 series</li> </ul>
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<b>Memory Voltage</b>	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
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<b>Error Detection</b>	<ul style="list-style-type: none"> <li>ECC</li> </ul>
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## On-Board Devices

<b>NVMe</b>	<ul style="list-style-type: none"> <li>NVMe; RAID 0/1/5/10 support</li> <li>U.2</li> </ul>
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<b>SATA</b>	<ul style="list-style-type: none"> <li>SATA3 (6Gbps); RAID 0/1/5/10 support</li> </ul>
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<b>Chipset</b>	<ul style="list-style-type: none"> <li>Intel® C621A</li> </ul>
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<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>Via Slim-AIOM</li> </ul>
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<b>IPMI</b>	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> </ul>
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## Input / Output

<b>LAN</b>	<ul style="list-style-type: none"> <li>1 Dedicated IPMI LAN port</li> </ul>
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<b>USB</b>	<ul style="list-style-type: none"> <li>2 USB 2.0 port(s) (2 front)</li> <li>2 USB 3.0 port(s) (2 rear)</li> </ul>
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<b>Video</b>	<ul style="list-style-type: none"> <li>1 VGA port(s)</li> </ul>
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<b>Serial Port</b>	<ul style="list-style-type: none"> <li>1 COM Port(s) (1 rear)</li> </ul>
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## Chassis

<b>Form Factor</b>	<ul style="list-style-type: none"> <li>1U</li> </ul>
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<b>Model</b>	<ul style="list-style-type: none"> <li><b>CSE-LB16AC10-R860AW</b></li> </ul>
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## Dimensions and Weight

<b>Height</b>	<ul style="list-style-type: none"> <li>1.7" (43mm)</li> </ul>
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<b>Width</b>	<ul style="list-style-type: none"> <li>17.2" (437mm)</li> </ul>
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<b>Depth</b>	<ul style="list-style-type: none"> <li>23.5" (597mm)</li> </ul>
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<b>Package</b>	<ul style="list-style-type: none"> <li>7.7" (H) x 23.7" (W) x 31.8" (D)</li> </ul>
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<b>Weight</b>	<ul style="list-style-type: none"> <li>Gross Weight: 40 lbs (18.14 kg)</li> </ul>
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<b>Available Color</b>	<ul style="list-style-type: none"> <li>Black</li> </ul>
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## Front Panel

<b>Buttons</b>	<ul style="list-style-type: none"> <li>Power On/Off</li> <li>Universal Information (UID)</li> </ul>
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<b>LEDs</b>	<ul style="list-style-type: none"> <li>Drive activity</li> <li>Network activity</li> <li>Power status</li> <li>Universal Information (UID)</li> </ul>
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## Expansion Slots

<b>PCI-Express (PCI-E)</b>	<ul style="list-style-type: none"> <li>Slot 1: PCI-E 4.0 x16 FHHL</li> <li>Slot 2: PCI-E 4.0 x16 FHHL</li> </ul>
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## Drive Bays / Storage

<b>Hot-swap</b>	<ul style="list-style-type: none"> <li>10x 2.5" hot-swap NVMe/SATA/SAS drive bays (10x 2.5" NVMe hybrid) (NVMe drives require additional cables from the optional parts list.)</li> <li>U.2 drive support</li> </ul>
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<b>M.2</b>	<ul style="list-style-type: none"> <li>2 M.2 NVMe</li> <li>M-Key, 2280</li> </ul>
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## System Cooling

<b>Fans</b>	<ul style="list-style-type: none"> <li>6x 4cm heavy duty fans with optimal fan speed control</li> </ul>
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<b>Air Shroud</b>	<ul style="list-style-type: none"> <li>2 Air Shroud(s)</li> </ul>
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## Power Supply

AC 860W, Platinum Level, Redundant Power Supply, 54.5mm width

<b>Dimension (W x H x L)</b>	<ul style="list-style-type: none"> <li>54.5 x 40.25 x 320 mm</li> </ul>
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<b>Output Type</b>	<ul style="list-style-type: none"> <li>Gold Finger</li> </ul>
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<b>Certification</b>	 <b>Platinum Level</b>
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[ [Test Report](#) ]

## Operating Environment

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<b>DOM</b>	<ul style="list-style-type: none"> <li>▪ 1 Super<u>DOM</u> (Disk on Module) port</li> </ul>
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**System BIOS**

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>▪ AMI 32MB SPI FLASH ROM</li> </ul>
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**Management**

<b>Software</b>	<ul style="list-style-type: none"> <li>▪ SCC</li> <li>▪ Redfish API</li> <li>▪ <u>IPMI 2.0</u></li> <li>▪ <u>SSM</u></li> <li>▪ Intel® Node Manager</li> <li>▪ <u>SPM</u></li> <li>▪ KVM with dedicated LAN</li> <li>▪ <u>SUM</u></li> <li>▪ NMI</li> <li>▪ Watch Dog</li> <li>▪ SuperDoctor® 5</li> </ul>
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<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>▪ ACPI/APM Power Management</li> </ul>
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**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>
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<b>FAN</b>	<ul style="list-style-type: none"> <li>▪ Fans with tachometer monitorin</li> <li>▪ Pulse Width Modulated (PWM) fan connectors</li> <li>▪ Status monitor for speed control</li> </ul>
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<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>
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<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>
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## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X12DDW-A6	1	Super X12DDW-A6 Motherboard
	CSE-LB16AC10-R860AW	1	1U Chassis
<b>Backplane</b>	BPN-SAS3-LB16A-N10	1	1U 10-Slot SFF Hybrid Backplane Supports 10xSAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 2x(1x4) + 1x(2x2) Power Connectors
<b>Cable 1</b>	CBL-SAST-1274LP-100	1	SlimlineLP x8 (LE) to 2x Slimline x4 (STR),68/76CM,100 O
<b>Cable 2</b>	CBL-SAST-1285LP-100	1	SlimlineLP x4 (STR) to Slimline x4 (STR),57CM,100 OHM,Ro
<b>FAN 1</b>	FAN-0101L4	2	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
<b>Parts</b>	MCP-150-00015-0B	6	Rubber pad, 3.0mm H, 10x10mm
<b>Air Shroud</b>	MCP-310-00105-0B	2	Mylar Air Shroud for LA15-AW,LB13-AW,LB16-AW + X12DDW
<b>Manual</b>	MNL-2332-QRG	1	120C-TN10R Quick Reference Guide
<b>Riser Card</b>	RSC-D-6G4	1	1U LHS DCO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
<b>Riser Card</b>	RSC-DR-6G4	1	1U RHS DCO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
<b>Software</b>	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
<b>Heatsink / Retention</b>	SNK-P0077P	2	1U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
<b>*Power Supply</b>	PWS-860P-1R2	2	1U 860W, Redundant power supply, 54.5mm width, Platinum with
<b>*Power Distributor</b>	PDB-PT116-SL8824	1	Based on PDB-PT116-L8824 to optimize 24Pin etc cable lengths
<b>*Cable 3</b>	CBL-CDAT-0680-55	1	NCSI,2x10F to 2x10F,IDC,PH2.54,55cm,shield,28AWG,RoHS
<b>*Cable 4</b>	CBL-CUSB-1001-57	1	[NR] USB2.0,2x5,PH2.54 to 2x5,PH2.54,57CM,28AWG
<b>*Cable 5</b>	CBL-PWCD-0160-IS	2	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,RoHS/REACH
<b>*FAN 2</b>	FAN-0101L4	4	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
<b>*Front Panel</b>	FPB-FP116	1	Front control board for SC116 (USB 2.0 x 2)
<b>*Parts</b>	MCP-160-00028-0B	1	Mylar Cable Channel for Cloud-DC, X12 DDW
<b>*Drive Tray(s)</b>	MCP-220-00188-0B	10	Black gen-5.5 tool-less cost-effective 2.5" HDD tray (no dummy)
<b>*Rear Window</b>	MCP-240-00173-0N	1	1U X12 AWIO Rear window for LA15,LB16,LB13 Redundant PWS
<b>*Power Supply</b>	MCP-250-00009-0N	1	SC113 Redundant Power Distributor Cover
<b>*Rail Set</b>	MCP-290-00063-0N	1set	Rail set, quick/quick, default for 1U 17.2"W for SC113/SC116,RoHS/REACH
<b>*Fan Holder</b>	MCP-320-00056-0B	24	40X56 rubber fan pin for SC819U, SC119U,RoHS/REACH
<b>*Fan Holder</b>	MCP-320-00066-0B	1	Fan holder with cable channel, 40X56mm fan, for LA15,LB16,LB13
<b>*Parts</b>	MCP-320-00067-0B	1	Chassis base Air Foam block set (L+R) for Cloud-DC
<b>*Fan Holder</b>	MCP-340-00035-0B	2	Dummy fan 40x56mm for 40x56 counter-rotating fan (cost-effective)

#### 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>3108 CacheVault</b>	BTR-TFM8G-LSICVM02	1	CacheVault for Broadcom 3108 (requires a SuperCap mount)
	BTR-CV3108-1U1	1	CacheVault for Broadcom 3108 with SuperCap mounting in 1U 40x56 fan tray. Recommended to add only if all PCI-E, drive and AIOM locations are occupied. It will replace one fan in the system.
<b>3108 RAID Card</b>	CBL-SAST-1260-100	1	MiniSAS HD x8 (LE) to 2x Slimline x4 (STR),60CM
	AOC-S3108L-H8IR-16DD	1	Standard LP, 8 internal ports (12Gb/s) Gen-3, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60;
<b>3108/3908/3916 SuperCap Mount</b>	MCP-240-21747-0N	1	SuperCap mounting card for AIOM location
	MCP-240-00127-0N	1	SuperCap mounting tray for 2.5" drive location
	BKT-BBU-BRACKET-05	1	SuperCap mounting bracket for PCI-E location
<b>3808 HBA Card</b>	<u>AOC-S3808L-L8IT</u>	1	Standard LP, 8 internal ports (12Gb/s) Gen-4, 16HDD; HBA;
	CBL-SAST-1276F-100	1	Slimline x8 (LE) to 2x Slimline x4 (STR),76/76CM Alternative: CBL-SAST-1264F-100 (64 CM)
<b>3816 HBA Card</b>	AOC-S3816L-L16IT	1	Standard LP, 16 internal ports (12Gb/s) Gen-4, 122HDD; HBA;
	CBL-SAST-1276F-100	1	Slimline x8 (LE) to 2x Slimline x4 (STR),76/76CM Alternative: CBL-SAST-1264F-100 (64 CM)
	CBL-SAST-1265F-100	1	Slimline x8 (STR) to Slimline x4 (STR),64CM
<b>3908 RAID Card</b>	<u>AOC-S3908L-H8IR-16DD</u>	1	Standard LP, 8 internal ports (12Gb/s) Gen-4, 122HDD; RAID 0, 1, 5, 6, 10, 50, 60;
	CBL-SAST-1276F-100	1	Slimline x8 (LE) to 2x Slimline x4 (STR),76/76CM Alternative: CBL-SAST-1264F-100 (64 CM)
<b>3908/3916 CacheVault</b>	BTR-CV3916-1U1	1	CacheVault for Broadcom 3908/3916 with a SuperCap mount in 1U 40x56 fan tray. Recommended to add only if all PCI-E, drive and AIOM locations are occupied. It will replace one fan in the system.
	BTR-CVPM05	1	CacheVault for Broadcom 3908/3916 (requires a SuperCap mount)
<b>3916 RAID Card</b>	CBL-SAST-1276F-100	1	Slimline x8 (LE) to 2x Slimline x4 (STR),76/76CM Alternative: CBL-SAST-1264F-100 (64 CM)
	CBL-SAST-1265F-100	1	Slimline x8 (STR) to Slimline x4 (STR),64CM
	<u>AOC-S3916L-H16IR-32DD</u>	1	Standard LP, 16 internal ports (12Gb/s) Gen-4, 32HDD; RAID 0, 1, 5, 6, 10, 50, 60;
<b>Add-on card for additional M.2</b>	<u>AOC-SLG3-2M2</u>	-	Low Profile PCI-E x8 add-on card supports 2 PCI-E 3.0 x4 M-Key M.2 NVMe Modules
	<u>AOC-SLG3-2H8M2</u>	-	Low Profile PCI-E x8 add-on card supports 2 PCI-E 3.0 x4 M-Key M.2 NVMe/SATA Modules; RAID 0,1
<b>AIOM Network Card(s)</b>	<u>AOC-AG-i4SM</u>	-	OCP 3.0 AIOM NIC, 4x 1GbE SFP, PCI-E 2.1 x4, Intel® i350-AM4
	<u>AOC-AG-i4M</u>	-	OCP 3.0 AIOM NIC, 4x 1GbE RJ45, PCI-E 2.1 x4, Intel® i350-AM4
	AOC-ATG-i4SM	-	OCP 3.0 AIOM NIC, 4x 10GbE SFP+, PCI-E 3.0 x8, Intel® XL710-BM1
	<u>AOC-AG-i2M</u>	-	OCP 3.0 AIOM NIC, 2x 1GbE RJ45, PCI-E 2.1 x4, Intel® i350-AM2
	<u>AOC-ATG-i2TM</u>	-	OCP 3.0 AIOM NIC, 2x 10GbE RJ45, PCI-E 3.0 x4, Intel® X550-AT2
	AOC-A25G-m2SM	-	OCP 3.0 AIOM NIC, 2x 25GbE SFP28, PCI-E x8, Mellanox® CX-6 LX

	<a href="#">AOC-ATG-i2T2SM</a>	-	OCP 3.0 AIOM NIC, 4x 10GbE RJ45 & SFP+, PCI-E x8, Intel® X710-TM4
	<a href="#">AOC-A25G-b2SM</a>	-	OCP 3.0 AIOM NIC, 2x 25GbE SFP28, PCI-E x8, Broadcom® BCM57414
	AOC-ATG-i2SM	-	OCP 3.0 AIOM NIC, 2x 10GbE SFP+, PCI-E 3.0 x8, Intel® X710-BM2
	AOC-A100G-m2CM	-	OCP 3.0 AIOM NIC, 2x 100GbE QSFP28, PCI-E 4.0 x16, Mellanox® CX-6 DX
	AOC-ATGC-i2TM	-	OCP 3.0 AIOM NIC, 2x 10GbE RJ45, PCI-E 3.0 x4, Intel X710-AT2
	<a href="#">AOC-A100G-b2CM</a>	-	OCP 3.0 AIOM NIC, 2x 100GbE QSFP28, PCI-E 4.0 x16, Broadcom® BCM57508
	<a href="#">AOC-AH25G-m2S2TM</a>	-	OCP 3.0 AIOM NIC, 2x 25GbE SFP28 & 2x 10GbE RJ45, PCI-E x8/x4, Mellanox® CX4 Lx EN & Intel® X550-AT2 (Add 1x MCP-310-00107-0B per card to support this NIC)
<b>Cable Management Arm</b>	MCP-290-00152-0N • <a href="#">eStore</a>	1	1U Supermicro Cable Management Arm 2nd Gen
<b>Fan Upgrade</b>	FAN-0163L4 • <a href="#">eStore</a>	6	40x40x56 mm, 23.3K-20.3K RPM, Counter-rotating Fan
<b>Inlet Temp Sensor</b>	MCP-280-00033-0N	1	Universal Thermal sensor kit with 80cm I2C cable
<b>Intel VROC Key</b>	<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
	<a href="#">AOC-VROCINTMOD</a>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
<b>NVMe Cables Kit</b>	CBL-KIT-120C-TN10R-10	1	Supports 10 NVMe drives. Kit includes: 4x CBL-SAST-1219LP-85 (NVMe drive slots # 0-3, 6-9) 1x CBL-SAST-1234FLP-85 (NVMe drive slots # 4-5)
<b>Power Supply Upgrade</b>	PWS-1K27A-1R	2	1000W/1200W 1U 54.5Wx322Lx40H mm redundant Titanium
<b>Software</b>	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)
<b>TPM security module</b>	<a href="#">AOM-TPM-9671V</a>	1	SPI capable TPM 1.2 with Infineon 9670 controller; vertical form factor
	AOM-TPM-9670V-S-FIPS	1	SPI capable TPM 2.0 with Infineon 9670 controller w/ FIPS; vertical form factor
	<a href="#">AOM-TPM-9670V</a>	1	SPI capable TPM 2.0 with Infineon 9670 controller; vertical form factor