

SuperServer 5019P-WTR



Integrated Board



Super X11SPW-TF

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



Key Applications

- DB Processing & Storage
- Data Center Applications
- Firewall Applications

Key Features

1. Single Socket P (LGA 3647) supports 2nd Gen Intel® Xeon® Scalable processor (Cascade Lake/Skylake)[‡]
2. 6 DIMMs; up to 1.5TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM
3. 2 PCI-E 3.0 x16 (FHFL) slots, 1 PCI-E 3.0 x8 (LP) slot
4. 4 Hot-swap 3.5" SATA3 drive bays
5. 2x 10GBase-T ports with Intel X722 + X557
6. 1 VGA, 2 COM, 2 USB 3.0, 2 USB 2.0
7. 2 SuperDOM (Disk on Module) ports
8. 500W Redundant power supplies **Platinum Level Certified**

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Tested M.2 List](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#) ▶ [Quick-References Guide](#) ▶ [Compatible GPU List](#) ▶ [Drive Options](#) ▶ [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-5019P-WTR ■ SuperServer 5019P-WTR (Black)

Motherboard

Super X11SPW-TF

Processor

CPU ■ Single Socket P (LGA 3647)
 ■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡]
 ■ Support CPU TDP 70-205W*

Cores ■ Up to 28 Cores

Note * Certain high frequency optimized CPU are not supported, such as Intel Gold 6250 and 6256. Please contact Supermicro Technical Support for additional information.

Note ‡ BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)

System Memory

Memory Capacity ■ 6 DIMM slots
 ■ Up to 1.5TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM

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

Chipset ■ Intel® C622 chipset

SATA ■ SATA3 (6Gbps); RAID 0, 1, 5, 10

Network Controllers ■ Dual 10GBase-T LAN with Intel® X722 + X557

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

SATA ■ 10 SATA3 (6Gbps) ports

LAN ■ 2 RJ45 10GBase-T LAN ports
 ■ 1 RJ45 dedicated IPMI LAN port

USB ■ 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
 ■ 7 USB 2.0 ports (2 rear + 5 headers)

Video ■ 1 VGA port

Serial Port / Header ■ 2 COM ports (1 rear, 1 header)

Chassis

Form Factor ■ 1U Rackmount

Model ■ **CSE-815TQC-R504WB2**

Dimensions and Weight

Height ■ 1.7" (43mm)

Width ■ 17.2" (437mm)

Depth ■ 25.6" (650mm)

Package ■ 23.5" (W) x 8.5" (H) x 33.7" (L)

Weight ■ Gross Weight: 48 lbs (21.77 kg)
 ■ Net Weight: 24 lbs (10.89 kg)

Available Colors ■ Black

Front Panel

Buttons ■ Power On/Off button
 ■ System Reset button

LEDs ■ Power LED
 ■ Hard drive activity LED
 ■ Network activity LEDs
 ■ System Information LED
 ■ Information LED (temp., status)

Expansion Slots

PCI-Express ■ 2 PCI-E 3.0 x16 (FHFL) slots
 ■ 1 PCI-E 3.0 x8 (LP) slot

M.2 ■ 1x M.2 Interface: PCI-E 3.0 x4 and SATA
 ■ Form Factor: 2280, 22110
 ■ Key: M-Key
 ■ Double Height Connector

Drive Bays

Hot-swap ■ 4 Hot-swap 3.5" SATA3 drive bays

System Cooling

Fans ■ 5 Counter-rotation 40x56mm PWM fans
 ■ 1 fan for AOC cooling (option)

Power Supply

500W Redundant Power Supplies with PMBus

Total Output Power ■ 500W: 100 – 240Vac

Dimension (W x H x L) ■ 54.5 x 40.25 x 320 mm

Input ■ 100-240Vac, 50-60Hz, 6.1-2.6A

+12V ■ Max: 42A / Min: 0.5A

+5Vsb ■ Max: 4A / Min: 0A

Output Type ■ Gold Finger Connector Mating with Molex 45984-4343

With Power Distributor ■ +5V: 25A
 ■ +3.3V: 12A
 ■ -12V: 0.6A

SuperDOM	<ul style="list-style-type: none"> 2 <u>SuperDOM</u> (Disk on Module) ports with built-in power
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System BIOS

BIOS Type	<ul style="list-style-type: none"> AMI 32Mb SPI Flash ROM
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Management

Software	<ul style="list-style-type: none"> Intel® Node Manager <u>IPMI 2.0</u> KVM with dedicated LAN NMI <u>SPM, SUM</u> <u>SuperDoctor® 5</u> Watch Dog
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Power Configurations	<ul style="list-style-type: none"> ACPI / APM Power Management
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PC Health Monitoring

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
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FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
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Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors
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Certification	 Platinum Certified [Test Report]
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Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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Environmental Spec.	<ul style="list-style-type: none"> Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)
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Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X11SPW-TF	1	Super X11SPW-TF Motherboard
	CSE-815TQC-R504WB2	1	1U Chassis
Backplane	BPN-SAS3-815TQ	1	1U 4-Port 12Gbps Backplane Support 4x3.5
Cable 1	CBL-0180L-01	1	SATA,INT,ROUND,SET OF 4,ST-RA 70/59/48/38CM,26AWG
Cable 2	CBL-0296L	1	4 pin to 4 pin fan extension cord, for PWM fan. 23cm. 24AWG
Cable 3	CBL-CDAT-0660	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,ROUND CABLE,27CM,28AWG
FAN 1	FAN-0156L4	2	40x40x56 mm 13K-11K RPM Counter-rotating Fan,RoHS/REACH
Manual	MNL-1921-QRG	1	5019P-WT/WTR, QRG,HF,RoHS/REACH
Riser Card	RSC-R1UW-2E16	1	1U LHS WIO Riser card with two PCI-E x16 slots
Riser Card	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
Heatsink / Retention	SNK-P0067PS	1	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
* Power Supply	PWS-504P-1R	2	500W 1U Redundant PWS W/ 54.5MM Wide
* Power Distributor	PDB-PT112-S2424	1	WIO X11 Support,PDB-PT112-S2424 is based on PDB-PT112-2424
* Cable 4	CBL-0335L	1	CBL,FRONT CNTL,20 TO 20 PIN,RA,RND TUBE,73CM,28AWG
* Cable 5	CBL-PWCD-0160-IS	2	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,13A,125V,RoHS/REACH
* Fan Holder	CSE-PT0135	1	FAN HOLDER FOR SIX 40X56MM COUNTER ROTATING FANS
* Peripheral Drive 1	CSE-PT93L-B	1	Black DVD dummy cover for SC813, 813M, 815, PBF-RoHS
* FAN 2	FAN-0156L4	3	40x40x56 mm 13K-11K RPM Counter-rotating Fan,RoHS/REACH
* Front Panel	FPB-FP815U	1	815 UIO front control board (U)
* Parts	MCP-120-00030-0N	1	Blank LP L-bracket (1 raw of capsule hole)
* Parts	MCP-120-00053-0N	2	Blank FH L bracket w/o SCSI cutout for SC825,836,846,743
* Drive Tray(s)	MCP-220-00075-0B	4	Black gen 5.5 hot-swap 3.5"; HDD tray
* Rear Window	MCP-240-00098-0N	1	WIO rear window for SC113,SC116, SC815 Redundant PWS
* Power Supply	MCP-250-81502-0N	1	SC815 Redundant Power Distributor Cover
* Rail Set	MCP-290-00054-0N	1set	Rail set, quick/quick, optional for 1U 17.2
* Fan Holder	MCP-340-00035-0B	3	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
GPU Optional Parts	FAN-0141L4	2	40x40x56mm 20.5K RPM, Counter-rotation fan
	MCP-310-81504-0B	1	Air shroud for Tesla T4 GPU
3.5" to 2.5" Converter Tray	MCP-220-00043-0N	-	Black Hot-swap Gen-4 2.5" to 3.5" HDD tray
DVD-ROM / DVD-RW	DVM-TEAC-DVD-SBT5	1	TEAC slim DVD-ROM SATA drive
	DVM-PLDS-DVDRW-SBT5	1	PHILIPS slim DVD-RW SATA drive
DVD-ROM Accessory	MCP-220-81502-0N	1	Slim SATA DVD mounting kit
Internal 2.5" HDD Tray (FDD slot)	MCP-220-83601-0B	1	Black FDD dummy tray support 1x 2.5" slim HDD
Internal 2.5" HDD Tray (DVD slot)	MCP-290-00036-0B	1	Black DVD dummy tray support 1x 2.5" slim HDD
Cable for internal HDD	CBL-0484L	2	55cm 30AWG SATA straight to straight cable
	CBI-0289L	1	Y split, big 4 pin to two RA SATA power extension 30cm
Hot-swap 2.5" kit (FDD slot)	MCP-220-81504-0N	1	Single slim 2.5" SAS3 (12Gb/s) hot swap in slim FDD form factor

Hot-swap 2.5" kit (DVD slot)	MCP-220-81506-0N	1	Single slim 2.5" SAS3 (12Gb/s) hot swap in slim DVD form factor
USB/COM port tray (FDD slot)	MCP-220-00129-0B	1	Black 2x USB3.0/COM port tray in slim FDD form factor
Cooling Fan	FAN-0156L4	-	40x40x56mm 13K-11K RPM Counter-rotating Fan
Storage Controller card & cable	AOC-S3108L-H8iR & 1x CBL-SAST-0699	-	Standard LP, 8 Internal ports (12Gb/s) PCI-E 3.0 x8, RAID controller, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3108L-H8iR-16DD & 1x CBL-SAST-0699	-	Standard LP, 8 Internal ports (12Gb/s) PCI-E 3.0 x8, 16HDD RAID controller, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8i & 1x CBL-SAST-0699	-	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 63HDD, RAID 0, 1, 10
	AOC-S3008L-L8e & 1x CBL-SAST-0699	-	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 122HDD HBA
CacheVault	BTR-CV3108-1U1	-	CacheVault for Broadcom 3108 with SuperCap mounting in 1Y 40x56 fan tray
	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3108 with SuperCap mounting bracket for PCI-E location
Network Card(s)	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel i350-AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STGN-i2S	-	Standard Lp, 2x 10GbE SFP+, PCI-E x8, Intel 82599ES
	AOC-STGF-i2S	-	Standard Lp, 2x 10GbE SFP+, PCI-E x8, Intel X710-BM2
	AOC-STG-B4S	-	Standard Lp, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGS-i2T	-	Standard Lp, 2x 10GbE RJ45, PCI-E x8, Intel X550-AT2
	AOC-S25G-b2S	-	Standard LP, 2x 25GbE SFP28, PCI-E x8, Broadcom BCM57414
	AOC-S25G-m2S	-	Standard LP, 2x 25GbE SFP28, PCI-E x8, Mellanox CX-4 LX
Front Bezels	CSE-PTFB-813LB	-	Black front bezels
	CSE-PTFB-813-02B	-	Black Front Bezel w/ Round Venting Holes
TPM security module	AOM-TPM-9670V	1	TPM 2.0, vertical form factor
	AOM-TPM-9671V	1	TPM 1.2, vertical form factor
Global Services & Support	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
Software	<u>SFT-OOB-LIC</u> • <i>eStore</i>	1	OOB Management Package (per node license)
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)