

UP Workstation SYS-540A-TR



Key Applications

- Deep Learning/AI/Machine Learning Development

Key Features

1. Supports 3rd Gen Intel® Xeon® Scalable or Xeon® W-3300 Processors with TDP up to 270W
 2. 7 PCI-E 4.0 Slots
 3. 1x 10GBase-T, 1x 1GbE, and dedicated IPMI LAN ports
 4. 4x 92mm hot-swap fan(s) 2x 80mm rear hot-swap exhaust PWM fan(s)
 5. 2200W Redundant (1+1) Power Supplies Titanium Level Certified
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Specifications

Product SKUs

- SYS-540A-TR** ■ SuperServer SYS-540A-TR (black)

Motherboard

Super X12SPA-TF

Processor

- CPU**
- Single Socket P+ (LGA-4189)
 - 3rd Gen Intel® Xeon® Scalable processors, Intel® Xeon® W-3300 processors
 - Support CPU TDP 270W

- Cores**
- Up to 38C/76T, 40C/80T; Up to 57,60MB Cache

System Memory

- Memory**
- Memory Capacity: 16 DIMM slots
 - Up to 4TB: 16x 256 GB DRAM
 - Memory Type: 3200MHz ECC DDR4 RDIMM / LRDIMM

- Memory Voltage**
- 1.2 V

- Error Detection**
- ECC

On-Board Devices

- Chipset**
- Intel® C621A

- Network Connectivity**
- 1x 1GbE BaseT with Intel® I210-AT
 - 1x 1GbE BaseT with Realtek RTL8211F PHY (dedicated IPMI)
 - 1x 10GbE BaseT with Marvell AQC113

- IPMI**
- Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output

- SATA**
- 8 SATA (6Gbps) port(s)

- USB**
- 4 USB 2.0 port(s) (2 header; 2 rear)
 - 6 USB 3.2 Gen 1 port(s) (2 header; 4 rear)
 - 2 USB 3.2 Gen 2 port(s) (1 rear Type A; 1 rear Type C)
 - 1 USB 3.2 Gen 2x2 port(s) (1 rear)

- Video**
- 1 VGA port(s)

System BIOS

- BIOS Type**
- AMI 256MB SPI Flash

Chassis

- Form Factor**
- Full-Tower

- Model**
- CSE-747BTS-R2K20BP

Dimensions and Weight

- Height**
- 18.1" (460mm)

- Width**
- 7" (178mm)

- Depth**
- 26.5" (673mm)

- Package**
- 12.7" (H) x 27" (W) x 37.5" (D)

- Weight**
- Net Weight: 52.9 lbs (24 kg)
 - Gross Weight: 57 lbs (25.85 kg)

- Available Color**
- black

Front Panel

- Buttons**
- Power On/Off
 - System Reset

- LEDs**
- HDD activity
 - Network activity
 - Power On
 - System Overheat / Fan Fail LED

Expansion Slots

- PCI-Express (PCI-E)**
- Slot 1: PCI-E 4.0 x16
 - Slot 2: PCI-E 4.0 x8 (in x16)
 - Slot 3: PCI-E 4.0 x16
 - Slot 4: PCI-E 4.0 x8 (in x16)
 - Slot 5: PCI-E 4.0 x16
 - Slot 6: PCI-E 4.0 x8 (in x16)
 - Slot 7: PCI-E 4.0 x16

Drive Bays / Storage

- Hot-swap**
- 8x 3.5" hot-swap SATA drive bays

- M.2**
- 4x PCI-E 4.0 x4

- Peripheral Bays**
- 3x 5.25" drive bays

System Cooling

- Fans**
- 2x 80mm Fan(s)
 - 4x 92mm Fan(s)

Power Supply

2200W Redundant Power Supplies with PMBus

- Dimension (W x H x L)**
- 76 x 40 x 336 mm

- AC Input**
- 1200W: 100-127Vac / 50-60Hz
 - 1800W: 200-220Vac / 50-60Hz
 - 1980W: 220-230Vac / 50-60Hz
 - 2090W: 230-240Vac / 50-60Hz
 - 2200W: 230-240Vac / 50-60Hz

Management

Software

- [SPM](#)
- KVM with dedicated LAN
- [IPMI 2.0](#)
- SuperDoctor 5
- [SUM](#)
- Watch Dog

Power Configurations

- ACPI 6.0

PC Health Monitoring

Voltage

- +1.8V, +12V, +3.3V, +5V, +5V standby, 10 -fan status, 3.3V standby, HT, Memory, VBAT

+12V

- Max: 100A / Min: 0A
- Max: 150A / Min: 0A
- Max: 165A / Min: 0A
- Max: 174A / Min: 0A
- Max: 183.3A / Min: 0A

Output Type

- Backplanes (gold finger)

Certification



Titanium Level

[[Test Report](#)]

Operating Environment

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-X12SPA-TF	1	Super X12SPA-TF Motherboard
	CSE-747BTS-R2K20BP	1	Full-Tower Chassis
Backplane	BPN-SAS3-747TQ-N4	1	8-port 4U/Tower SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3 HDD/SSD and 4x NVMe/SAS3/SATA3 storage devices
Cable 1	CBL-0484L	8	55CM 30AWG SATA S-S CBL
Cable 2	CBL-CDAT-0661	2	8 Pin to 8 Pin Round SGPIO Cable, 40cm, 28AWG, Pinout 1-1
Cable 3	CBL-PWEX-1040	4	PWYCB,GPU,2x4M/CPU to two (2x3F+2x1F)/PCIe,P4.2, 5CM,16/20AW
Parts	MCP-260-00148-0N	1	STD I/O Shield for X12SPA-TF with EMI Gasket
Manual	MNL-2328-QRG	1	540A-TR Quick Reference Guide
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-C0121L-1	4	22W x 129.65L x 4.35H mm, Al., Screws, Pad, Anodized, X11SPA M.2 HS with single package
Heatsink / Retention	SNK-P0081AP4	1	4U Active CPU Heat Sink for X12 Generation UP Gaming and Workstations
*Power Supply	PWS-2K20A-1R	2	1U 2200W Redundant, Titanium, 76(W) X 40(H) X 336(L) mm
*Power Distributor	PDB-PT747-6824	1	Power Distributor Board is for 4U GPU solution using regular
*Cable 4	CBL-0071L	1	ROUND 16 TO 16 PIN RIBBON FP CABLE 30"L, LF
*Cable 5	CBL-0160L	2	US POWER CORD 16AWG, PB FREE
*Cable 6	CBL-0216L	4	4 TO 4 PIN FAN POWER CABLE, 210MM
*Cable 7	CBL-0286L	2	4 TO 4 PIN REAR FAN PWR EXT W/ SQUARE HEADER, 30CM (PWM)
*FAN 1	FAN-0082L4	2	80x80x38 mm 4-pin PWM Fan Assembly for SC743, SC745
*FAN 2	Fan-0114L4	2	92x38mm 4-PIN PWM FAN W/ HUS for SC747
*FAN 3	FAN-0138L4	2	92x92x38 mm, 7.5K RPM, SC747 Middle Fan for Passive Cooling GPU
*Front Bezel	MCP-210-74701-0B	1	SC747 plastic front bezel
*Drive Tray(s)	MCP-220-00073-0B	3	Black 5.25 drive tray w/o rail (SC747)
*Front Panel	MCP-280-74702-0N	1	SC747BTQ-R2K04B Front Control Panel PCB (2x USB3.0, Audio)
*Parts	MCP-290-74701-0B	1	Black plastic top cover for SC747
*Parts	MCP-290-74702-0N	1	GPU Card Holder (11 slots) for SC747TQ, SC842
*Parts	MCP-290-74703-0B	1	fixed 3.5" dummy cover for SC747
*Parts	MCP-290-74709-0B	1	Plastic feet (2 pcs/set) for 4U tower chassis, black color

Notes:

- Parts with * are inside the chassis
- 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
DVD Kit	CBL-0082L • eStore	1	Y SPLIT SATA POWER ADAPTER
	CBL-SAST-0624 • eStore	1	70cm SATA Cable S-S 30AWG

	DVM-LITE-DVDRW24-HBT1	1	BLACK LITE-ON 5.25" HH 24X DVD-RW SATA DRIVE
Fan Kits for Various GPU Population	MCP-320-74703-0N-KIT	1	Fully-populated with Full-height Double-width Passive GPU cards
	MCP-310-74706-0B	1	Fully-populated with Full-height Double-width Active GPU cards (30°C operating temp.)
	MCP-320-74704-0N-KIT	1	Fully-populated with Low-profile Single-width Passive GPU cards
Front Bezel	MCP-210-74703-0B	1	Front bezel cover (for 5.25" bay) for rackmount
HDD Converter	MCP-220-93801-0B • <i>eStore</i>	1	Black Hotswap Gen 6 3.5 to 2.5 HDD Tray
Mobile Rack	CSE-M14TQC	1	SAS3/SATA mobile rack for 4x 2.5" drives
Mounting Rails	MCP-290-00059-0B • <i>eStore</i>	1	Chassis Mounting Rails for Rackmount