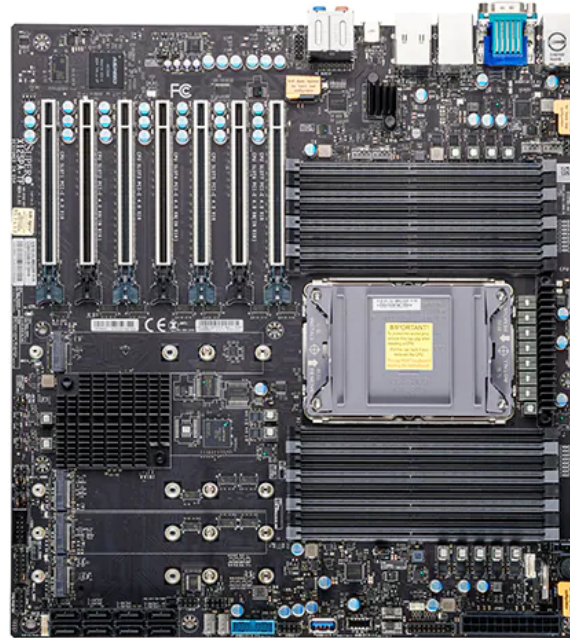


# X12SPA-TF

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**Workstation**

## Key Features

3rd Gen Intel® Xeon® Scalable processors, Intel® Xeon® W-3300 Processor

Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports Up to 270W TDP

Intel® C621A

Single LAN with Intel® Ethernet Controller I210-AT

Single LAN with Marvell AQC113

Single LAN with Realtek RTL8211F PHY (dedicated IPMI)

Up to 4TB 3DS ECC RDIMM, DDR4-3200MHz; Up to 4TB 3DS ECC LRDIMM, DDR4-3200MHz

Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz, in 16 DIMM slots

4 PCIe 4.0 x16,

3 PCIe 4.0 x8 (in x16 slot)

**M.2 Interface:** 4 PCIe 4.0 x4

**M.2 Form Factor:** 2260/2280/22110

**M.2 Key:** M-Key

M.2 support to RAID 0,1, 5, 10, VROC key is required for RAID.

Intel® C621A controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

1 VGA port,

VGA connector is dedicated for IPMI.

## Specifications

## Product SKUs

**MBD-X12SPA-TF**

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## Physical Stats

### Form Factor

E-ATX

### Dimension

13" x 12" (33.02cm x 30.48cm)

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## Processor

### CPU

3rd Gen Intel® Xeon® Scalable processors, Intel® Xeon® W-3300 Processor Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports Up to 270W TDP

### Core

Up to 40 cores

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## System Memory

### Memory Capacity

16 DIMM slots

Up to 4TB Intel® Optane™ Persistent Memory 200 Series, DDR4-3200MHz Up to 4TB 3DS ECC LRDIMM, DDR4-3200MHz; Up to 4TB 3DS ECC RDIMM, DDR4-3200MHz

### Memory Type

ECC DDR4 LRDIMM (3DS), RDIMM (3DS)

### DIMM Sizes

4GB, 8GB, 16GB, 32GB, 64GB, 128GB

### Memory Voltage

1.2V

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## On-Board Devices

### Chipset

Intel® C621A

### SATA

Intel® C621A controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

### IPMI

ASPEED AST2500

### Audio

1x ALC 888S HD Audio port(s) ALC 888S HD Audio

### Graphics

1 ASPEED AST2500 BMC port(s)  
VGA connector is dedicated for IPMI.

## Expansion Slots

### PCIe

4 PCIe 4.0 x16,  
3 PCIe 4.0 x8 (in x16 slot)  
PClex16 Slot#1 shares with M.2, Slot#2 shares with Slot#3(NA/16,8/8), Slot#4 shares with Slot#5(NA/16,8/8), Slot#6 shares with Slot#7(NA/16,8/8)

### M.2

M.2 Interface: 4 PCIe 4.0 x4  
Form Factor: 2260/2280/22110  
Key: M-Key  
M.2 support to RAID 0,1, 5, 10, VROC key is required for RAID.

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## System BIOS

### BIOS Type

256MB SPI Flash with AMI BIOS

### BIOS Features

ACPI 3.0 / 4.0  
SMBIOS 2.7  
PCI FW 3.0  
RTC (Real Time Clock) Wakeup

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## Management

### Software

SuperDoctor® 5, SUM, SPM, Watchdog, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support

### System Management

#### Software

SuperDoctor 5, IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support

### Power Configurations

Power-on mode for AC power recovery, ACPI Power Management, CPU thermal trip support for processor protection, Main Switch Override Mechanism

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## PC Health Monitoring

### Voltage

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

### LED

Suspend static indicator LED  
CPU / System Overheat LED

### Network Controllers

Single LAN with Intel® Ethernet Controller I210-AT  
Single LAN with Realtek RTL8211F PHY (dedicated IPMI)  
Single LAN with Marvell AQC113

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### Input / Output

#### LAN

1 RJ45 Dedicated IPMI LAN port  
1 RJ45 Gigabit Ethernet LAN ports  
1 RJ45 10GBase-T ports

#### USB

4 USB 2.0 port(s) (2 rear; 2 via header)  
6 USB 3.2 Gen1 port(s) (2 via header; 4 rear)  
1 USB 3.2 Gen2x2 port(s) (1 rear type C)  
2 USB 3.2 Gen2 port(s) (1 type A; 1 type C)

#### Video Output

1 VGA port(s)

#### Serial Port

2 COM Port(s) (1 header; 1 rear)

#### DOM

1 SATA DOM power connector (Disk on Module) port

#### TPM

1 TPM Header

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### Temperature

Monitoring for CPU and chassis environment  
CPU thermal trip support  
PECI

#### FAN

10x 4-pin fan headers (up to 10 fans)  
PWM fan speed control  
Fan speed control  
Dual Cooling Zone  
Status monitoring for speed control  
Overheat LED indication

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### Operating Environment

#### Operating Temperature Range

0°C - 50°C (32°F - 122°F)

#### Non-Operating

#### Temperature Range

-20°C - 60°C (-4°F - 140°F)

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## Parts List

### Standard Parts (Bulk Package)

CPU carrier

Part Number	SKT-1205L-P4IC-FXC
Qty	1
Description	-

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CPU-GPU power connector adapter

Part Number	CBL-PWEX-0663 • <a href="#">eStore</a>
Qty	1
Description	-

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IO shield

Part Number	MCP-260-00148-0N
Qty	1

Description -

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SATA Cable(IO Cable)

Part Number CBL-0044L • [eStore](#)

Qty 2

Description -

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Standard Parts (Retail Package)

CPU carrier

Part Number SKT-1205L-P4IC-FXC

Qty 1

Description -

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CPU-GPU power connector adapter

Part Number CBL-PWEX-0663 • [eStore](#)

Qty 1

Description -

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IO shield

Part Number MCP-260-00148-0N

Qty 1

Description -

---

SATA Cable(IO Cable)

Part Number CBL-0044L • [eStore](#)

Qty 6

Description -

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X12SPA-TF QRG

Part Number MNL-2273-QRG

Qty 1

Description -

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Optional Parts

TPM security module (optional, not included)

Part Number	AOM-TPM-9670V	AOM-TPM-9671V
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Qty	1	1
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Description	-	-
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