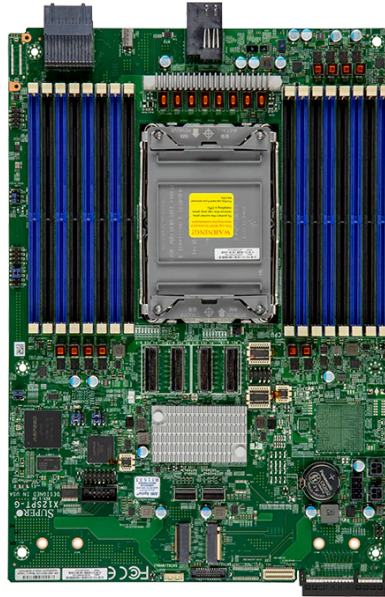


## X12SPT-G (For SuperServer Only)

---



### GrandTwin UP Serverboard

#### Key Features

1. 3rd Gen Intel® Xeon® Scalable processors  
Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports Up to 270W TDP
2. Intel® C621A
3. Up to 4TB 3DS ECC RDIMM, DDR4-3200MHz; Up to 4TB 3DS ECC LRDIMM, DDR4-3200MHz  
Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 16 DIMM slots
4. 1x PCI-E 4.0 x8 4C connector (for front I/O module), 4x PCI-E 4.0 x8 MCIO connectors
5. Intel® C621A controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
6. **M.2 Interface:** 2 PCI-E 4.0 x4, **M.2 Form Factor:** 2280

# Specifications

## Product SKUs

**MBD-X12SPT-G** ■ X12SPT-G

## Physical Stats

**Form Factor** ■ Proprietary

**Dimension** ■ 8.53" x 12.42" (21.67cm x 31.55cm)

## Processor

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

**Core** ■ Up to 40 cores

## System Memory

**Memory Capacity** ■ 16 DIMM slots  
■ Up to 2TB Intel® Optane™ Persistent Memory 200 Series  
■ Up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz; Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz

**Memory Type** ■ 3200/2933/2666MHz ECC , DDR4 LRDIMM (3DS), RDIMM (3DS)

**DIMM Sizes** ■ 8GB, 16GB, 32GB, 64GB, 128GB, 256GB  
■ DCPMM: 64GB, 128GB, 256GB  
■ LRDIMM: 64GB, 128GB, 256GB  
■ RDIMM: 8GB, 16GB, 32GB, 64GB, 128GB, 256GB

**Memory Voltage** ■ 1.2V

**Error Detection** ■ Corrects single-bit errors

## On-Board Devices

**Chipset** ■ Intel® C621A

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

**Graphics** ■ ASPEED AST2600 BMC

**Network Controllers** ■ N/A

## Input / Output

**SATA** ■ 6 SATA3 (6Gbps) port(s)

**Serial Port** ■ 1 COM Port(s) (1 header)

**TPM** ■ 1 TPM Header

## Expansion Slots

**PCI-E** ■ N/A

**M.2** ■ M.2 Interface: 2 SATA/PCI-E 3.0 x4, RAID 0 & 1  
■ Form Factor: 2280  
■ Key: M-Key

## System BIOS

**BIOS Type** ■ AMI UEFI

## Management

**Software** ■ SuperDoctor® 5, NMI, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, SSM, Watchdog, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support

**System Management Software** ■ IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support

**Power Configurations** ■ Power-on mode for AC power recovery, ACPI Power Management

## PC Health Monitoring

**Voltage** ■ VBAT, PCH temperature, Memory temperature, CPU temperature, +5V standby, +5V, +3.3V, +12V, +1.8V, VRM temperature, Memory Voltages, CPU thermal trip support

**LED** ■ UID/Remote UID  
■ BMC/IPMI Heartbeat LED

**Other Features** ■ WOL, UID, RoHS, Node Manager Support, RoT, NCSI header

**FAN** ■ 1x 4-pin fan header (up to 1 fan)

## Operating Environment

**Operating Temperature Range** ■ 10°C - 35°C (50°F - 95°F)

**Non-Operating Temperature Range** ■ -40°C - 70°C (-40°F - 158°F)

**Operating Relative Humidity Range** ■ 8% - 90% (non-condensing)

**Non Operating Relative Humidity Range** ■ 5% - 95% (non-condensing)

## Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X12SPT-G	1	X12SPT-G Motherboard

Optional Parts List			
Name	Part Number	Qty	Description
TPM security module (optional, not included)	<a href="#">AOM-TPM-9671H</a>	1	SPI Capable Horizontal TPM 1.2 Module SPI capable TPM 2.0 with Infineon 9670 controller with horizontal form factor
	<a href="#">AOM-TPM-9670H</a>	1	

### Server (Optimized for X12SPT-G)

Server Name
<a href="#">SYS-210GT-HNTE</a>