

X12SPG-NF



GPU Serverboard

Key Features

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

Intel® C621A

Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz

Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots

3 PCIe 4.0 x16 Proprietary Slots

2 PCIe 4.0 NVMe x4

M.2 Interface: 2 SATA/PCIe 3.0 x4

M.2 Form Factor: 2280/22110

M.2 Key: M-Key

1 PCIe 4.0 x8 AIOM

Single LAN with Realtek RTL8211F PHY
(dedicated IPMI)

Intel® C621A controller for 2 SATA3 (6

Gbps) ports; RAID 0,1

Optimized Servers

[SYS-210GP-DNR](#)

Specifications

Product SKUs**MBD-X12SPG-NF****Physical Stats****Form Factor**

Proprietary

Dimension

9.6" x 14.5" (24.38cm x 36.83cm)

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**

8 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

3200/2933/2666 MT/s ECC , DDR4 LRDIMM (3DS), RDIMM (3DS)

DIMM Sizes

8GB, 16GB, 32GB, 64GB, 128GB, 256GB

LRDIMM: 64GB, 128GB

RDIMM: 8GB, 16GB, 32GB, 64GB

Memory Voltage

1.2V

Error Detection

Corrects single-bit errors

On-Board Devices**Chipset**

Intel® C621A

SATA

Intel® C621A controller for 2 SATA3 (6 Gbps) ports; RAID 0,1

IPMI

ASPEED AST2500 BMC

Graphics

1 ASPEED AST2500 BMC port(s)

Network Controllers

Single LAN with Realtek RTL8211F PHY (dedicated IPMI)

Input / Output**LAN**

1 RJ45 Dedicated IPMI LAN port

USB

2 USB 3.2 Gen1 port(s) (2 rear)

Video Output

1 VGA D-Sub Connector port(s)

Serial Port

1 COM Port(s) (1 rear)

DOM2 SATA DOM (Disk on Module) power connector support**TPM**

1 TPM Header

Expansion Slots**PCIe**

1 PCIe 4.0 x8 AIOM,

3 PCIe 4.0 x16 Proprietary Slot

M.2

M.2 Interface: 2 SATA/PCIe 3.0 x4, RAID 0 & 1

Form Factor: 2280/22110

Key: M-Key

System BIOS**BIOS Type**

AMI UEFI

BIOS Features

ACPI 6.2

SMBIOS 3.0 or later

UEFI 2.7

Management**Software**

[Redfish API](#), [Supermicro Server Manager \(SSM\)](#),
[Supermicro Power Manager \(SPM\)](#), [Supermicro Update Manager \(SUM\)](#), [SuperDoctor® 5](#), [Super Diagnostics Offline](#)
[, KVM with dedicated LAN](#), [IPMI 2.0](#)

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, CPU thermal trip support for processor protection

Security**Hardware**

Trusted Platform Module (TPM) 2.0

PC Health Monitoring**Voltage**

VBAT, System temperature, Monitors CPU voltages, HT, 3.3V standby, +5V standby, +5V, +3.3V, +12V, +1.8V

LED

UID/Remote UID

BMC/IPMI Heartbeat LED

Suspend static indicator LED

CPU / System Overheat LED

Temperature

CPU thermal trip support

PECI

FAN

System level control

PWM fan speed control

Fan speed control

Overheat LED indication

Other Features

UID

RoHS

ACPI power management

RoT

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)

Operating Relative Humidity Range

10% - 85% (non-condensing)

Non Operating Relative Humidity Range

10% - 95% (non-condensing)

Parts List

Optional Parts

TPM security module

Part Number	AOM-TPM-9671V	AOM-TPM-9670V
Qty	1	1
Description	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor	SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor
