



High Performance

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 RDIMM, DDR4-3200MHz; Up to 2TB LRDIMM, DDR4-3200MHz
Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots

2 PCI-E 4.0 x16,
2 PCI-E 4.0 x8,
1 PCI-E 4.0 x8 (in x16 slot),
1 PCI-E 4.0 NVMe x8 Internal Port(s)

M.2 Interface: 1 SATA/PCI-E 3.0 x4
M.2 Form Factor: 2280/22110
M.2 Key: M-Key

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

Dual LAN with 10GBase-T with Intel® X550



Product SKUs	
MBD-X12SPI-TF	■ X12SPI-TF
Physical Stats	
Form Factor	■ ATX
Dimension	■ 12.1" x 10" (30.73cm x 25.4cm)
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 ECC LRDIMM, DDR4-3200MHz; Up to 2TB ECC RDIMM, DDR4-3200MHz
Memory Type	■ ECC , DDR4 LRDIMM, RDIMM
DIMM Sizes	■ 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
IPMI	■ ASPEED AST2600 BMC
Graphics	■ ASPEED AST2600 BMC
Network Controllers	■ Dual LAN with 10GBase-T with Intel® X550
Input / Output	
LAN	■ 2 RJ45 10 Gigabit Ethernet LAN ports
USB	■ 4 USB 2.0 port(s) (2 rear; 2 via header) ■ 5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)
Video Output	■ 1 VGA D-Sub Connector port(s)
Serial Port	■ 1 COM Port(s) (1 header)
DOM	■ 2 SATA <u>DOM</u> (Disk on Module) power connector support
TPM	■ 1 TPM Header

Expansion Slots	
PCI-E	■ 2 PCI-E 4.0 x16, ■ 1 PCI-E 4.0 x8 (in x16 slot), ■ 2 PCI-E 4.0 x8
M.2	■ M.2 Interface: 1 SATA/PCI-E 3.0 x4 ■ 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	■ SuperDoctor® 5, <u>SUM</u> , KVM with dedicated LAN, <u>SPM</u> , Intel® Node Manager, <u>SSM</u> , <u>IPMI2.0</u> , Watchdog
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
PC Health Monitoring	
Voltage	■ VBAT, System temperature, Monitors CPU voltages, HT, Chassis intrusion header, 3.3V standby, +5V standby, +5V, +3.3V, +12V, +1.8V, 7-fan status
LED	■ UID/Remote UID ■ BMC/IPMI Heartbeat LED ■ Suspend static indicator LED ■ CPU / System Overheat LED
Temperature	■ CPU thermal trip support ■ PECI
FAN	■ 7x4-pin fan headers (up to 7 fans) ■ System level control ■ PWM fan speed control ■ Fan speed control ■ Overheat LED indication
Other Features	■ UID, RoHS, Dual Cooling Zones, Chassis intrusion detection, ATX Power connector, ACPI power management, RoT, NCSI header
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)