



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, in 8 DIMM slots

2 PCI-E 4.0 x8,
1 PCI-E 4.0 x16,
1 PCI-E 4.0 x8 (in x16 slot)
3 PCI-E 3.0 x8

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 Intel® i210 Gigabit Ethernet Controller

Product SKUs

- MBD-X12SPL-F
- X12SPL-F

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 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
- **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 Intel® i210 Gigabit Ethernet Controller

Input / Output

- **SATA** 10 SATA3 (6Gbps) port(s)
- **LAN** 2 RJ45 Gigabit Ethernet LAN ports
- **USB**
 - 6 USB 2.0 port(s) (4 via header; 2 rear)
 - 5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)
- **Video Output** 1 VGA port(s)
- **Serial Port** 1 COM Port(s) (1 header)
- **DOM** 2 SATA DOM (Disk on Module) power connector support
- **TPM** 1 TPM Header

Expansion Slots

- **PCI-E**
 - 1 PCI-E 4.0 x16,
 - 1 PCI-E 4.0 x8 (in x16 slot),
 - 2 PCI-E 4.0 x8,
 - 3 PCI-E 3.0 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, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, SSM, IPMI2.0, Watchdog
- **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
 - Suspend static indicator LED
 - CPU / System Overheat LED
- **Temperature**
 - CPU thermal trip support
 - PECI
- **FAN**
 - 7x 4-pin fan headers (up to 7 fans)
 - System level control
 - PWM fan speed control
 - Fan speed control
 - Overheat LED indication
- **Other Features**
 - WOL, UID, RoHS, Chassis intrusion header, Chassis intrusion detection, ATX Power connector, ACPI power management, RoT

Operating Environment

- **Operating Temperature Range** 0°C - 50°C (32°F - 122°F)
- **Non-Operating Temperature Range** -40°C - 70°C (-40°F - 158°F)
- **Operating Relative Humidity Range** 10% - 85% (non-condensing)
- **Non Operating Relative Humidity Range** 10% - 95% (non-condensing)