



Key Features



3rd Gen Intel® Xeon® Scalable processors
Dual Socket LGA-4189 (Socket P+) supported, CPU TDP supports
Up to 270W TDP, 3 UPI up to 11.2 GT/s

Intel® C621A

Up to 4TB 3DS ECC RDIMM, DDR4-3200MHz; Up to 4TB 3DS
ECC LRDIMM, DDR4-3200MHz
Up to 4TB Intel® Optane™ Persistent Memory 200 Series, DDR4-
3200MHz, in 18 DIMM slots P1-DIMMB2 and P2-DIMMB2 are
reserved for Intel Optane Persistent Memory 200 Series only.

2 PCI-E 4.0 x8,
4 PCI-E 4.0 x16,
2 PCI-E 4.0 NVMe x8 Internal Port(s)

M.2 Interface: 1 PCI-E 4.0 x4
M.2 Form Factor: 2280/22110
M.2 Key: M-Key

Intel® C621A controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10

Dual LAN with Intel® i350 Gigabit Ethernet Controller

2 VGA (1 rear bezel, 1 front panel) ports

Product SKUs

- MBD-X12DPi-N6
- X12DPi-N6

Physical Stats

- **Form Factor** E-ATX
- **Dimension** 12" x 13" (30.48cm x 33.02cm)

Processor

- **CPU**
 - 3rd Gen Intel® Xeon® Scalable processors
 - Dual Socket LGA-4189 (Socket P+) supported, CPU TDP supports Up to 270W TDP, 3 UPI up to 11.2 GT/s
- **Core** Up to 40 cores

System Memory

- **Memory Capacity**
 - 18 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
 - P1-DIMMB2 and P2-DIMMB2 are reserved for Intel Optane Persistent Memory 200 Series only.
- **Memory Type** 3200/2933/2666MHz ECC DDR4 LRDIMM (3DS), RDIMM (3DS)
- **DIMM Sizes**
 - LRDIMM: 256GB
 - RDIMM: 256GB
- **Memory Voltage** 1.2V
- **Error Detection**
 - Corrects single-bit errors
 - Detects double-bit errors (using ECC memory)

On-Board Devices

- **Chipset** Intel® C621A
- **SATA** Intel® C621A controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **IPMI** ASPEED AST2600 BMC
- **Network Controllers** Dual LAN with Intel® i350 Gigabit Ethernet Controller

Input / Output

- **SATA** 14 SATA3 (6Gbps) port(s)
- **LAN** 2 RJ45 Gigabit Ethernet LAN ports
- **USB**
 - 7 USB 3.2 Gen1 port(s) (2 via header; 4 rear; 1 type A)
 - 2 USB 2.0 port(s) (2 via header)
- **Video Output** 2 VGA (1 rear bezel, 1 front panel) port(s)
- **Serial Port** 2 COM Port(s) (1 header; 1 rear)
- **TPM** 1 TPM Header

Expansion Slots

- **PCI-E**
 - 4 PCI-E 4.0 x16,
 - 2 PCI-E 4.0 x8
- **M.2**
 - M.2 Interface: 1 PCI-E 4.0 x4
 - Form Factor: 2280/22110
 - Key: M-Key

System BIOS

- **BIOS Type** AMI UEFI

Management

- **Software** SuperDoctor® 5, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, SSM, IPMI2.0, Watchdog
- **System Management Software** SuperDoctor 5, IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, SSM, SUM, SPM

PC Health Monitoring

- **Voltage** VBAT, System temperature, PCH temperature, Monitors CPU voltages, Memory temperature, CPU temperature, Chassis intrusion header, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, Memory Voltages, LAN temperature, 8 -fan status
- **LED**
 - UID/Remote UID
 - Power LED
 - BMC/IPMI Heartbeat LED
- **Temperature**
 - Monitoring for CPU and chassis environment
 - CPU thermal trip support
 - PECI
- **FAN**
 - 8x4-pin fan headers (up to 8 fans)
 - PWM fan speed control
- **Other Features** WOL, UID, RoHS, Node Manager Support, Dual Cooling Zones, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, Chassis intrusion header, ATX Power connector, ACPI power management, SDDC, RoT, NCSI header

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)