



## WIO

### 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

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Intel® C621A

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Up to 4TB RDIMM, DDR4-3200MHz; Up to 4TB LRDIMM, DDR4-  
3200MHz  
Up to 4TB Intel® Optane™ Persistent Memory 200 Series, DDR4-  
3200MHz (OC), in 16 DIMM slots

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1 PCI-E 4.0 x16 Left Riser Slot,  
1 PCI-E 4.0 x16 Right Riser Slot,  
2 PCI-E 4.0 x16 Center Right Hand Slot,  
8 PCI-E 4.0 NVMe Internal Port(s)

**M.2 Interface:** 2 PCI-E 2.0 x1

**M.2 Form Factor:** 2260/2280

**M.2 Key:** M-Key

2 PCI-E 4.0 x16, AIOM slots Superset of OCP 3.0 Expansion

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

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1 VGA D-Sub Connector port

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AIOM for LAN

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## Product SKUs

- MBD-X12DDW-A6
- X12DDW-A6

## Physical Stats

- **Form Factor** Proprietary WIO
- **Dimension** 12.288" x 13.404" (31.21cm x 34.05cm)

## 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** 16 DIMM slots
- Up to 4TB Intel® Optane™ Persistent Memory 200 Series, DDR4-3200MHz
- Up to 4TB ECC LRDIMM, DDR4-3200MHz; Up to 4TB ECC RDIMM, DDR4-3200MHz
- **Memory Type** 3200/2933/2666MHz ECC DDR4 LRDIMM, RDIMM
- **DIMM Sizes** 16GB, 32GB, 64GB, 128GB, 256GB
- LRDIMM: 16GB, 32GB, 64GB, 128GB, 256GB
- RDIMM: 16GB, 32GB, 64GB, 128GB, 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 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **IPMI** ASPEED AST2600 BMC
- **Graphics** ASPEED AST2600 BMC
- **Network Controllers** AIOM for LAN

## Input / Output

- **USB** 4 USB 3.1 Gen1 port(s) (2 via header; 2 rear)
- **Video Output** 1 VGA D-Sub Connector port(s)
- **Serial Port** 1 COM Port(s) (1 header)
- **TPM** 1 TPM Header

## Expansion Slots

- **PCI-E** 1 PCI-E 4.0 x16 Left Riser Slot,
- 1 PCI-E 4.0 x16 Right Riser Slot,
- 2 PCI-E 4.0 x16 Center Right Hand Slot
- **M.2** M.2 Interface: 2 PCI-E 3.0 x2
- Form Factor: 2260/2280
- Key: M-Key

## System BIOS

- **BIOS Type** AMI UEFI

## Management

- **Software** SuperDoctor® 5, NMI, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, SSM, IPMI2.0, vPro, Watchdog, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® III
- **System Management Software** IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support
- **Power Configurations** ATX Power connector

## PC Health Monitoring

- **Voltage** PCH temperature, Monitors CPU voltages, CPU temperature, Chassis intrusion header, 6 -fan status, +5V standby, +12V, Memory Voltages, CPU thermal trip support, +1.8V PCH
- **LED** UID/Remote UID
- Power LED
- BMC/IPMI Heartbeat LED
- **Temperature** Monitoring for CPU and chassis environment
- CPU thermal trip support
- **FAN** 6 fans with tachometer status monitoring
- **Other Features** WOL, UID, RoHS, Node Manager Support, Chassis intrusion detection, ATX Power connector, ACPI power management, 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)