



**WIO**  
**3 AOC in 1U**  
**Dual 10GbE**

## 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

1 PCI-E 4.0 x16 Right Riser Slot,  
1 PCI-E 4.0 x32 Left Riser Slot,  
4 PCI-E 4.0 NVMe x4 Internal Port(s)

**M.2 Interface:** PCI-E 3.0 x4 and SATA

**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

I/O: 1 VGA, 2 COM, TPM header

2 SuperDOM with built-in power

## Product SKUs

- MBD-X12SPW-TF
- X12SPW-TF

## Physical Stats

- **Form Factor** Proprietary WIO
- **Dimension** 8" x 13" (20.32cm x 33.02cm)

## 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** ECC , DDR4 LRDIMM (3DS), RDIMM (3DS)
- **DIMM Sizes** LRDIMM 3DS: 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 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

- **SATA** 10 SATA3 (6Gbps) port(s)
- **LAN** 2 RJ45 10GBase-T 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 port(s)
- **Serial Port** 2 COM Port(s) (1 header; 1 rear)
- **DOM** 2 SATA DOM (Disk on Module) power connector support
- **TPM** 1 TPM Header

## Expansion Slots

- **PCI-E** 1 PCI-E 4.0 x16 Right Riser Slot,
  - 1 PCI-E 4.0 x32 Left Riser Slot
- **M.2** M.2 Interface: PCI-E 3.0 x4; SATA
  - Form Factor: 2280, 22110
  - Key: M-Key

## System BIOS

- **BIOS Type** AMI UEFI
- **BIOS Features** ACPI 6.0
  - RTC (Real Time Clock) Wakeup
  - SMBIOS 3.0 or later

## Management

- **Software** SuperDoctor® 5, NMI, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, IPMI2.0, Watchdog
- **Power Configurations** Power-on mode for AC power recovery, ACPI Power Management

## PC Health Monitoring

- **Voltage** VBAT, Supports system management utility, 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
  - Control of power-on for recovery from AC power loss
  - ACPI power management

## 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** 8% - 90% (non-condensing)
- **Non Operating Relative Humidity Range** 5% - 95% (non-condensing)