



**Embedded  
High Performance  
Supports up to 10 cores**

## Key Features

10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3 Processor, Intel® Xeon® W-1200 Processors  
Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 65W TDP

---

Intel® W480E

---

Single LAN with Intel® Ethernet i225LM  
Single LAN with Intel® Ethernet i225V

---

Up to 64GB DDR4 ECC/non-ECC SO-DIMM, DDR4-2933MHz, in 2 DIMM slots

---

1 PCI-E 3.0 x16 slots (16/NA or 8/8)  
1 M.2 M-Key PCI-E 3.0 x4, 2280

---

Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10

---

1 HDMI port, 1 DP (DisplayPort) port

---

## Product SKUs

- **MBD-X12SCV-W** ■ X12SCV-W

## Physical Stats

- **Form Factor** ■ Mini-ITX
- **Dimension** ■ 6.7" x 6.7" (17.02cm x 17.02cm)

## Processor

- **CPU** ■ Intel® Xeon® W-1200 Processors, 10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3 Processor ■ Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 65W TDP
- **Core** ■ Up to 10 cores
- **Note** ■ \*\* Motherboard supports this maximum TDP. Please verify your system can thermally support. ■ \*\*The X12SCV-W does not support the Intel 10th/11th generation processor 2M cache SKUs. These processors will not boot with the latest BIOS version.

## System Memory

- **Memory Capacity** ■ 2 DIMM slots ■ Up to 64GB ECC/non-ECC SODIMM, DDR4-2933MHz
- **Memory Type** ■ 2933/2666/2400/2133MHz ECC/non-ECC DDR4 SODIMM
- **DIMM Sizes** ■ 4GB, 8GB, 16GB, 32GB
- **Memory Voltage** ■ 1.2V
- **Error Detection** ■ Corrects single-bit errors ■ Detects double-bit errors (using ECC memory)

## On-Board Devices

- **Chipset** ■ Intel® W480E
- **SATA** ■ Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **Audio** ■ ALC 888S HD Audio
- **Graphics** ■ Intel® HD Graphics
- **Network Controllers** ■ Single LAN with Intel® Ethernet i225V ■ Single LAN with Intel® Ethernet i225LM

## Input / Output

- **SATA** ■ 4 SATA3 (6Gbps) port(s)
- **LAN** ■ 2 RJ45 2.5 Gigabit Ethernet LAN port
- **USB** ■ 4 USB 2.0 port(s) (4 via header) ■ 4 USB 3.2 Gen2 port(s) (4 rear type A)
- **Video Output** ■ 1 DP (DisplayPort) port(s), 1 HDMI port(s)
- **Serial Port** ■ 1 COM Port(s) (1 header)
- **DOM** ■ 1 SuperDOM (Disk on Module) ports
- **TPM** ■ 1 TPM Header & Chip both

## Expansion Slots

- **PCI-E** ■ 1 PCI-E 3.0 x16 slots (16/NA or 8/8)
- **M.2** ■ M.2 Interface: 1 PCI-E 3.0 x4 ■ Form Factor: 2280 ■ Key: M-Key

## System BIOS

- **BIOS Type** ■ AMI UEFI
- **BIOS Features** ■ ACPI 6.1 ■ SMBIOS 3.1 ■ PCI FW 3.0 ■ UEFI 2.7 ■ RTC (Real Time Clock) Wakeup

## Management

- **Software** ■ SuperDoctor® 5, NMI, Watchdog
- **System Management Software** ■ SuperDoctor 5
- **Power Configurations** ■ ATX Power connector, ACPI / ACPM Power Management, +12V DC Power Input

## PC Health Monitoring

- **Voltage** ■ VBAT, System temperature, System level control, PCH temperature, Monitors CPU voltages, HT, CPU temperature, Chipset Voltage, 3 -fan status, +3.3V, +1.8V
- **LED** ■ Power LED
- **Temperature** ■ Thermal Control for 3 Fan Connectors
- **FAN** ■ 3x 4-pin fan headers (up to 3 fans) ■ System level control ■ PWM fan speed control ■ Fan speed control ■ 3 fans with tachometer monitoring
- **Other Features** ■ WOL, System level control, RoHS, M.2 NGFF connector, Chassis intrusion header, ATX Power connector, ACPI power management, 8-pin 12v DC power connector, 12V DC or ATX Power Source

## Operating Environment

- **Operating Temperature Range** ■ 0°C - 60°C (32°F - 140°F)
- **Non-Operating Temperature Range** ■ -40°C - 85°C (-40°F - 185°F)
- **Operating Relative Humidity Range** ■ 10% - 85% (non-condensing)
- **Non Operating Relative Humidity Range** ■ 10% - 95% (non-condensing)