X12STW-F

WIO

Key Features

Intel® Xeon® E-2300 Processor, 10th Generation Intel® Pentium® Processor, Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 95W TDP

Intel® C256

Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz

1 PCI-E 4.0 x16 Left Riser Slot
1 PCI-E 3.0 x4 (in x8, Right Riser slot)

M.2 Interface: 1 PCI-E 4.0 x4 and 1 PCI-E 3.0 x4
M.2 Form Factor: 2280/22110
M.2 Key: M-Key Double Height Connector

Dual LAN with Intel® i210 Gigabit Ethernet Controller

Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

1 VGA port

4 USB 3.2 Gen1 ports (2 rear + 2 via headers)
1 USB 3.2 Gen2 port (1 Type A)
6 USB 2.0 ports (2 rear + 4 via headers)

Product SKUs

MBD-X12STW-F	X12STW-F

Physical Stats

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

Processor

CPU	10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 95W TDP
Core	Up to 8 cores, 16 threads

System Memory

Memory Capacity	4 DIMM slots Up to 128GB ECC UDIMM, DDR4-3200MHz
Memory Type	3200/2933/2666MHz SDRAM
DIMM Sizes	4GB, 8GB, 16GB, 32GB
Memory Voltage	1.2V
Error Detection	Corrects single-bit errors

On-Board Devices

Chipset	Intel® C256
SATA	Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
IPMI	ASPEED AST2600 BMC
Graphics	ASPEED AST2600 BMC
Network Controllers	Dual LAN with Intel® Ethernet Controller I210-AT

Input / Output

SATA	8 SATA3 (6Gbps) port(s)
LAN	2 RJ45 Gigabit Ethernet LAN ports
USB	6 USB 2.0 port(s) (4 via header; 2 rear) 4 USB 3.2 Gen1 port(s) (2 via header; 2 rear) 1 USB 3.2 Gen2 port(s) (1 rear 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 Left Riser Slot, 1 PCI-E 3.0 x4 (in x8 slot)
M.2	M.2 Interface: 1 PCI-E 4.0 x4; 1 PCI-E 3.0 x4 Form Factor: 2280/22110 Key: M-Key Double Height Connector

System BIOS

BIOS Type	256MB UEFI
BIOS Features	ACPI 6.0 SMBIOS 3.3 Plug and Play (PnP) RTC (Real Time Clock) Wakeup UEFI 2.7 USB Keyboard support PCI 3.0

Management

Software	SuperDoctor® 5, NMI, SUM, SPM, Intel® Node Manager, SSM, IPMI2.0, Watchdog
System Management Software	IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support
Power Configurations	ACPI Power Management

PC Health Monitoring

Voltage	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages
LED	UID/Remote UID CPU / System Overheat LED
Temperature	Monitoring for CPU and chassis environment CPU thermal trip support Thermal Monitor 2 (TM2) support PECI
FAN	6x 4-pin fan headers (up to 6 fans) Thermal control tachometer fan connectors Fan speed control 6 fans with tachometer status monitoring Overheat LED indication
Other Features	WOL, UID, Node Manager Support, M.2 NGFF connector, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, Chassis intrusion header, Chassis intrusion detection, 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)