

# The4thware Industrial Board (MITX)

10<sup>th</sup> Generation Intel Xeon E, Pentium Series Platform

T4WARR-C256-MITX2



## PRODUCT SPECIFICATION

Physical Status	
Form Factor	mini-ITX
Dimensions	6.7" x 6.7" (170.2mm x 170.2mm)
Processor System	
CPU	Supports Intel® Xeon® E-2300 and 10th Gen Intel® Pentium® series processors
Socket	Single Socket H5 (LGA1200)
Chipset	Intel® C256
System Memory	
Supported DIMM Quantity	2 DIMM slots (1DPC)
Supported Type	Supports DDR4 288-pin ECC/non-ECC UDIMM
Max. Capacity per DIMM	ECC/non-ECC UDIMM: up to 32GB
Max. DIMM Frequency	ECC/non-ECC UDIMM: max. 3200*MHz *Up to DDR4 2666MHz when installing 10th Gen Intel® Pentium® Series Processors
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	SLOT7: PCIe4.0* x16 [CPU] *SLOT7 supports PCIe3.0 only when installing 10th Gen Intel® Pentium® Series Processors
Other PCIe Expansion Connectors	
M.2 slot	1 M-key* (PCIe4.0 x4); support 2280 form factor [CPU] *M.2 will not function when installing 10th Gen Intel® Pentium® Series Processors
OCuLink	2 OcuLink (PCIe3.0 x4 or 4 SATA 6Gb/s) [PCH]
SATA/SAS Storage	
PCH Built-in Storage	Intel® C256 (8 SATA 6Gb/s; RAID 0/1/5/10): 2 OcuLink
Ethernet	
Additional GbE Controller	Intel® i210: 2 RJ45 (1GbE)
Server Management	
BMC Controller	ASPEED AST2500
IPMI Dedicated GLAN	1 x Realtek RTL8211E for dedicated management GLAN
Graphics	
Controller	ASPEED AST2500
VRAM	DDR4 256MB

## PRODUCT SPECIFICATION

Rear I/O	
UID Button/LED	1 button w/ LED
VGA Port	1 DB15
USB 3.2 Gen1 Port	2 Type-A (USB3.2 Gen1)
USB 3.2 Gen2 Port	2 Type-A (USB3.2 Gen2)
RJ45	2 RJ45 (1GbE)
Internal Connector/Headers	
Power Connector	1 (4-pin, ATX PSU signal) w/ ATX 24-pin adapter cable, 1 (8-pin, ATX 12V) support 12V DC-in
Other Power Connectors	1 ATX (4-pin) for HDD power when using 12V DC-in power source
Auxiliary Panel Header	1 (9-pin): chassis intrusion, system fault LED, LAN activity LED
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
VGA header	1
Fan Header	3 (4-pin)
Thermal Sensor Header	1
TPM Header	1 (13-pin, SPI)
SGPIO Header	1
SMBus header	1
PMBus header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
LED Indicators	
Standby PWR LED 5vsb	1
Fan Fail LED	3
BMC heartbeat LED	1
System BIOS	
BIOS Type	AMI UEFI BIOS; 256 Mb (32MB) SPI Flash ROM
BIOS Features	Plug and Play, ACPI 6.2 compliance wake up events, SMBIOS 3.3, ASRock Rack instant flash

## PRODUCT SPECIFICATION

Hardware Monitor	
Temperature	CPU, MB, Card side, TR1
Fan	Fan Tachomete, CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature), Multi-Speed Control
Voltage	+12V, +5V, +3.3V, CPU Vcore, DRAM,V1.05M,+BAT, 3VSB, 5VSB
Supported OS	
OS	<p>Microsoft® Windows® :</p> <p>Server 2019 (64 bit) Server 2022 (64 bit)</p> <p>Linux :</p> <p>RedHat Enterprise Linux Server 8.6 (64 bit) / 8.3 (64 bit) CentOS 8.5 (64 bit) / 8.3 (64 bit) SUSE Enterprise Linux Server 15 SP2 (64 bit) Ubuntu Ubuntu 21.04 (64 bit) / Ubuntu 20.10 (64 bit)</p> <p>Hypervisor :</p> <p>VMWare® ESXi 7.0U3d / vSphere 7.0U3d</p> <p>* Supports UEFI BOOT only</p>
Environment	
Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	Non operation humidity: 20% ~ 90% ( Non condensing)