

# The4thware Industrial Board (MATX)

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

T4WARR-C252-MATX1



## PRODUCT SPECIFICATION

Physical Status	
Form Factor	Micro-ATX
Dimensions	9.6" x 9.6" (244 mm x244 mm)
Processor System	
CPU	Supports Intel® Xeon® E-2300 and 10th Gen Intel® Pentium® series processors
Socket	Single Socket H5 (LGA1200)
Chipset	Intel® C252
System Memory	
Supported DIMM Quantity	4 DIMM slots (2DPC)
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	SLOT6: PCIe4.0* x16 [CPU] *When installing 10th Gen Intel® Pentium® Series Processors, SLOT6 supports PCIe3.0 only and SLOT4 will not function
PCIe x 4	SLOT4: PCIe4.0* x4 [CPU]
PCIe x 1	SLOT7: PCIe3.0 x1 [PCH]
Other PCIe Expansion Connectors	
M.2 slot	1 M-key* (PCIe3.0 x2 or SATA 6Gb/s); support 22110/2280/2260 form factor [PCH] *SATA0 will be disabled when M2_1 populated with SATA device
SATA/SAS Storage	
PCH Built-in Storage	Intel® C252 (6 SATA 6Gb/s; RAID 0/1/5/10): 5 SATA 7-pin, 1 SATA DOM or 1 M.2
Ethernet	
Additional GbE Controller	Intel® X710-AT2: 2 RJ45 (10GbE)
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
Serial Port	1 DB9
USB 3.2 Gen1 Port	4 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (10GbE)
Internal Connector/Headers	
Power Connector	1 (24-pin, ATX main power), 1 (8-pin, ATX 12V)
Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
VGA header	1
Speaker Header	1
Buzzer	1
Fan Header	7 (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)
ME/SPS Recovery	1
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
USB 2.0 Header	1 (9-pin, 2 USB2.0)
NMI Header	1
LED Indicators	
Standby PWR LED 5vsb	1
80 Debug Port LED	1
Fan Fail LED	7
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,V1.0M,+BAT, 3VSB, 5VSB
Supported OS	
OS	<p>Microsoft® Windows® :</p> <p>Server 2019 (64 bit)</p> <p>Server 2022 (64 bit)</p> <p>Linux :</p> <p>SUSE Enterprise Linux Server 15 SP2 (64 bit)</p> <p>Ubuntu 21.04 (64 bit)</p> <p>Hypervisor :</p> <p>VMWare® ESXi 7.0U2a / vSphere 7.0U2b</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)