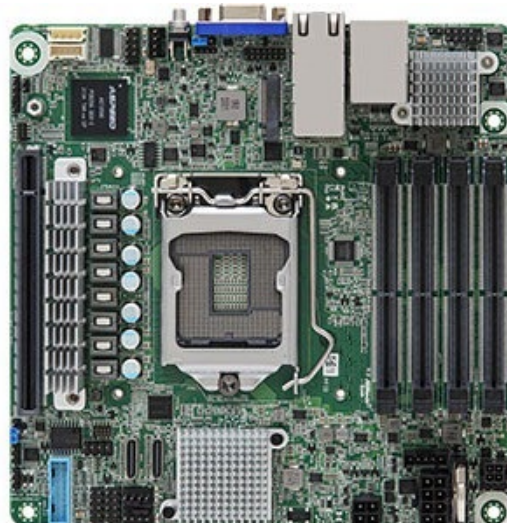


The4thware Industrial Board (MITX)

10th Generation Intel Xeon E, Pentium Series Platform

T4WARR-C256-MITX1



PRODUCT SPECIFICATION

Physical Status	
Form Factor	mini-ITX
Dimensions	6.7" x 6.7" (170mm x 170mm)
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	4 DIMM slots (2DPC)
Supported Type	Supports DDR4 260-pin ECC/non-ECC SODIMM
Max. Capacity per DIMM	ECC/non-ECC SODIMM: up to 32GB
Max. DIMM Frequency	ECC/non-ECC SODIMM: max. 2933MHz (1DPC) / max. 2133MHz (2DPC) [TBD]
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* (PCIe4.0x4); 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® X550: 2 RJ45 (10GbE)
Server Management	
BMC Controller	ASPEED AST2500
IPMI Dedicated GLAN	1 x Realtek RTL8211E for dedicated management GLAN

PRODUCT SPECIFICATION

Graphics	
Controller	ASPEED AST2500
VRAM	DDR4 256MB
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)
RJ45	2 RJ45 (10GbE)
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 (4-pin) for HDD power when using 12V DC-in power source
Auxiliary Panel Header	1 (9-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate
System Panel COM Header	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
Fan Header	3 (4-pin)
Thermal Sensor Header	1
TPM Header	1 (13-pin, SPI)
SGPIO Header	2
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)
NC-SI	1 (9-pin)
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,TR1 sensing
Fan	Fan Tachomete, CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature), Multi-Speed Control
Voltage	VCORE,VCCSA,VCCM,VCCST_SFR, 3.3V, 5V, 12V, +1.05V_PCH_AUX,+BAT, 3VSB, 5VSB,VCCIO,+2.5V_VPP
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 8.4 (64 bit) / Server 8.2 (64 bit) CentOS 8.5 (64 bit) / 8.2 (64 bit) Ubuntu 20.10 (64 bit) / Ubuntu 21.04 (64 bit)</p> <p>Hypervisor :</p> <p>VMWare® ESXi 7.0U2a/ vSphere 7.0U2b VMWare® ESXi 7.0U3/ vSphere 7.0U3</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)