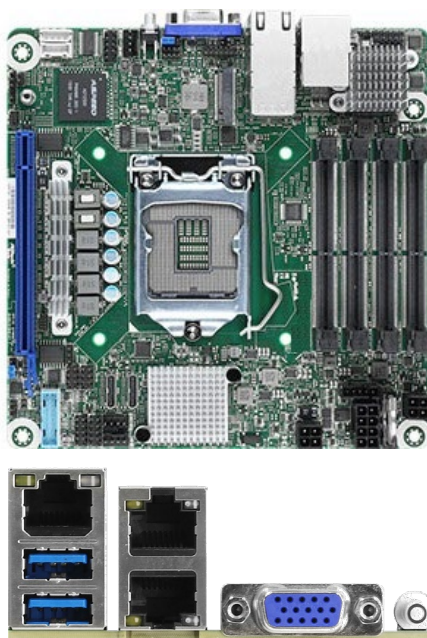


The4thware Industrial Board (MITX)

10th Generation Intel Xeon E Series Platform

T4WARR-C246-MITX3



PRODUCT SPECIFICATION

Physical Status	
Form Factor	mini-ITX
Dimensions	6.7" x 6.7" (170.2 mm x170.2 mm)
Processor System	
CPU	Supports Intel® Xeon® E-2100/E-2200 Series Processors
Socket	Single Socket LGA 1151
Thermal Design Power	Max. 95W
Chipset	Intel® C246
System Memory	
Supported DIMM Quantity	4 DIMM slots
Supported Type	Dual Channel DDR4 memory technology DDR4 260-pin ECC/non-ECC SO-DIMM
Max. Capacity per DIMM	32GB
Max. DIMM Frequency	2666/2400/2133 Mhz
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	- SLOT7: PCIe3.0 x16
Other PCIe Expansion Connectors	
M.2 slot	- 1 x M.2 (NGFF 2280, PCI-E Gen3 x4 link or SATA signal)
OCuLink	- SATA 0-3 by OCulink1, SATA 4-7 by Oculink2
SATA/SAS Storage	
PCH Built-in Storage	- C246: 8x SATA3 6Gb/s (SATA 0-3 by OCulink1, SATA 4-7 by Oculink2) + 1 x M.2 (NGFF 2280, PCI-E Gen3 x4 link or SATA signal)
Ethernet	
Interface	- 10000/1000 /100 /10 Mbps
Additional GbE Controller	- 2 x RJ45 10GLAN by IntelX550 - Supports Wake-On-LAN - Supports Energy Efficient Ethernet 802.3az - Supports Dual LAN with Teaming function(TBD) - Supports PXE
Server Management	
BMC Controller	- ASPEED AST2500
IPMI Dedicated GLAN	- 1 x Realtek RTL8211E for dedicated management GLAN
Features	- Watch Dog - NMI

PRODUCT SPECIFICATION

Graphics	
Controller	- ASPEED AST2500
VRAM	- DDR4 512Mb
Rear I/O	
UID Button/LED	- 1
VGA Port	- 1 DB15 (VGA)
USB 3.2 Gen1 Port	- 2 Type-A (USB3.2 Gen1)
RJ45	- RJ45:2 10GLAN+1(IPMI) LAN port - LAN Ports with LED (ACT/LINK LED and SPEED LED)
Internal Connector/Headers	
Power Connector	- 1x (4-pin) + 1x (8-pin) support 12V DC-IN (DC-IN mode power budget is up to 432W)
Other Power Connectors	- 1 (4-pin, SATA power)
Auxiliary Panel Header	- 1 (include chassis intrusion, location button & LED, front LAN LED, event log LED)
System Panel	- 1 (RST, HDLED, PLED, PERBTN)
COM Header	- 1
Fan Header	- 3 (1CPU/1Front/1Rear)
Thermal Sensor Header	- 1
TPM Header	- 1
SGPIO Header	- 2
SMBus header	- 1
PMBus header	- 1
IPMB Header	- 1
Clear CMOS	- 1
USB 3.2 (Gen1) Header	- 1 (19-pin, 2 USB3.2 Gen1)
NC-SI	- 1
LED Indicators	
Fan Fail LED	- 3
System BIOS	
BIOS Type	- 256Mb AMI UEFI Legal BIOS
BIOS Features	- Plug and Play (PnP) - ACPI 2.0 Compliance Wake Up Events - SMBIOS 2.8.0 Support - ASRock Rack Instant Flash

PRODUCT SPECIFICATION

Hardware Monitor	
Temperature	<ul style="list-style-type: none"> - CPU Temperature Sensing - System Temperature Sensing - System Inlet Temperature Sensing
Fan	<ul style="list-style-type: none"> - CPU/Rear/Front Fan Tachometer - CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) - CPU/Rear/Front Fan Multi-Speed Control
Voltage	<ul style="list-style-type: none"> - Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore, VCCM, VCCIO, VCCSA, VCCST_SFR, V1.0M, 3VSB, 5VSB, VBAT
Supported OS	
OS	<p>Microsoft® Windows®</p> <ul style="list-style-type: none"> - Server 2016 (64 bit) - Server 2019 (64 bit) <p>Linux</p> <ul style="list-style-type: none"> - RedHat Enterprise Linux Server 6.10 (64 bit) / 7.7 (64 bit) - SUSE Enterprise Linux Server 12 SP4 (64 bit) / 15 SP1 (64 bit) - Ubuntu 18.04.4 (64 bit) <p>Virtual</p> <ul style="list-style-type: none"> - VMWare® ESXi 6.5 u3 - Win hyper-V Server 2016
Environment	
Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	- Non operation humidity: 20% ~ 90% (Non condensing)