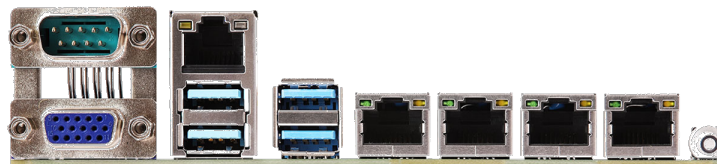
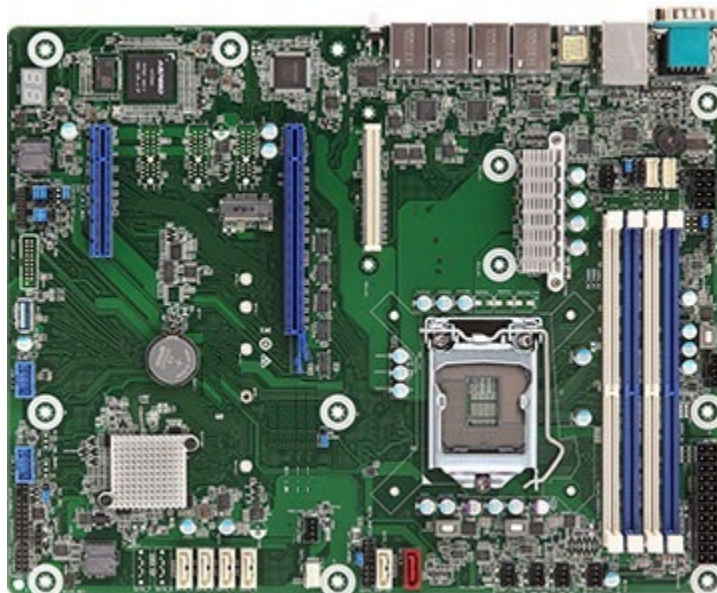


The4thware Industrial Board (ATX)

10th Generation Intel Xeon E Series Platform

T4WARR-C242-ATX



PRODUCT SPECIFICATION

Physical Status	
Form Factor	ATX
Dimensions	12" x 9.6" (304.8 mm x244 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® C242
System Memory	
Supported DIMM Quantity	4 DIMM slots
Supported Type	Dual Channel memory technology DDR4 288-pin ECC/non-ECC UDIMM
Max. Capacity per DIMM	32GB
Max. DIMM Frequency	ECC/Non-ECC UDIMM: 2666/2400/2133 MHz
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	- SLOT6: PCIe3.0 x16, auto switch to x8 when Mezz slot is populated
PCIe x 8	- SLOT2: PCIe x8 (PCIe3.0 x4)
Mezzanine slot	- 1 (shared with SLOT6), supports M350, M540, M599, M710
Other PCIe Expansion Connectors	
M.2 slot	- 1 (2230/2242/2260/2280, Supports PCIE3.0(X2)/SATA3)
SATA/SAS Storage	
PCH Built-in Storage	- C242: 6x SATA3 6Gb/s (SATA0-5, SATA0 support support SATA DOM, and share with M.2(PCIE3.0(X2))/ SATA3 6Gb/s), support RAID 0, 1, 5, 10
Ethernet	
Interface	- 1000 /100 /10 Mbps
Additional GbE Controller	- 3 x RJ45 GLAN by Intel® i210 - 1 x RJ45 GLAN by Intel® i219 - Supports Wake-On-LAN - Supports Energy Efficient Ethernet 802.3az - Supports Dual LAN with Teaming function(TBD) - Supports PXE - LAN2 supports NCSI
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 16MB
Rear I/O	
UID Button/LED	- 1
VGA Port	- 1 x D-Sub
Serial Port	- 1
USB 3.2 Gen1 Port	- 2 Type-A (USB3.2 Gen1)
USB 3.2 Gen2 Port	- 2 Type-A (USB3.2 Gen2)
RJ45	- 4 +1 RJ45 Gigabit Ethernet LAN ports - LAN Ports with LED (ACT/LINK LED and SPEED LED)
Internal Connector/Headers	
Power Connector	- 1x (24-pin) + 1x (8-pin)
Auxiliary Panel Header	- 1 (include chassis intrusion, location button & LED, front LAN LED, event log LED, FSMB)
System Panel	- 1 (RST, PWRBTN, HDDLED, PWRLED)
Speaker Header	- 1(4pin)
Buzzer	- 1
Fan Header	- 6 (1xCPU/4xFront/1xRear)
Thermal Sensor Header	- 1
TPM Header	- 1
SGPIO Header	- 2
SMBus header	- 1
PMBus header	- 1
IPMB Header	- 1
Clear CMOS	- 1 (short pin)
ME/SPS Recovery	- 1
USB 3.2 (Gen1) Header	- 1 (19-pin, 2 USB3.2 Gen1 or 1 USB3.2 Gen1) * when 2 USB3.2 Gen1, 1 Type-A USB2.0 * when 1 USB3.2 Gen1, 1 Type-A USB3.2 Gen1
USB 2.0 Header	- 2 (9-pin, 4 USB2.0)
Type A USB 3.2 (Gen1) Port	- 1 (Type-A, 1 USB3.2 Gen1 or 1 USB2.0) * when 1 Type-A USB2.0, 2 USB3.2 Gen1 * when 1 Type-A USB3.2 Gen1, 1 USB3.2 Gen1
NMI Header	- 1
LED Indicators	
80 Debug Port LED	- 1
Fan Fail LED	- 6 (only Fan Fail LED)

PRODUCT SPECIFICATION

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
Hardware Monitor	
Temperature	- CPU Temperature Sensing - System Temperature Sensing - MB / Card Side Temperature Sensing - TR1 Temperature Sensing
Fan	- 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	- Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore, VCCM, VCCIO, VCCSA, VCCST_SFR, V1.0M, 3VSB, 5VSB, VBAT
Supported OS	
OS	Microsoft® Windows® - Server 2012 R2 (64 bit) - Server 2016 (64 bit) - Server 2019 (64 bit) Linux - RedHat Enterprise Linux Server 6.4 (64 bit) / 6.9 (64 bit) / 7.4 (64 bit) - SUSE Enterprise Linux Server 11 SP4 (64 bit) / 12 SP3 (64 bit) - Ubuntu 16.04 (64 bit) / 18.04 (64 bit) Virtual - VMWare® ESXi 6.5 u1 - 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)