

The4thware Industrial Board (MATX)

9th Generation Intel Xeon E Series Platform

T4WARR-C246-MATX2



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-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 SLOT4 is occupied |
| PCIe x 8 | - SLOT4: PCIe3.0 x8 |
| PCIe x 4 | - SLOT5: PCIe3.0 x4 |
| Other PCIe Expansion Connectors | |
| M.2 slot | - 1 (2230/2242/2260/2280, Supports PCIE3.0(X2)/SATA3) |
| SATA/SAS Storage | |
| PCH Built-in Storage | - Intel® C242: 6x SATA3 6Gb/s (SATA0-5, SATA0 supports SATA DOM, and i/s shared with M.2(PCIE3.0(x2))/ SATA3) |
| Ethernet | |
| Interface | - 1000 /100 /10 Mbps |
| Additional GbE Controller | - 2 x RJ45 GLAN by Intel® i210 - 1 x RJ45 Dedicated IPMI LAN port - Supports Wake-On-LAN - Supports Energy Efficient Ethernet 802.3az - Supports Dual LAN with Teaming function - Supports PXE - LAN1 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 Gen2 Port | - 4 Type-A (USB3.2 Gen2) |
| RJ45 | - 2 x RJ45 Gigabit Ethernet LAN ports - 1 x RJ45 Dedicated IPMI LAN port - 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 (includes chassis intrusion, location button & LED, and front LAN LED) |
| System Panel | - 1 (RST, PWRBTN, HDDLED, PWRLED) |
| Speaker Header | - 1(4pin) |
| Buzzer | - 1 |
| Fan Header | - 6(1CPU/3Front/2Rear) |
| 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) |
| USB 2.0 Header | - 1 (9-pin, 2 USB2.0) |
| NMI Header | - 1 |
| LED Indicators | |
| 80 Debug Port LED | - N/A |
| System BIOS | |
| BIOS Type | - 256 Mb 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/PCH Temperature Sensing - MB/Card Side/TR1 Temperature Sensing |
| Fan | <ul style="list-style-type: none"> - CPU/Rear/Front Fan Tachometer - CPU Quiet Fan (Allow CPU 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, VPPM, 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 6.9 (64 bit) / 7.4 (64 bit) - SUSE Enterprise Linux Server 11 SP4 (64 bit) / 12 SP3 (64 bit) - Ubuntu 15.10 (64 bit) / 16.04 (64 bit) |
| Environment | |
| Temperature | Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C |
| Humidity | - Non operation humidity: 20% ~ 90% (Non condensing) |