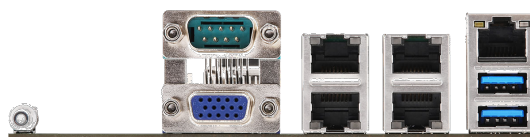


# The4thware Industrial Board (MITX)

3<sup>th</sup> Generation Intel Atom C3000 Series Platform

## T4WARR-C3558-MITX



## PRODUCT SPECIFICATION

Physical Status	
Form Factor	Mini ITX
Dimensions	6.7" x 6.7" (170.2 mm x170.2 mm)
Processor System	
CPU	Intel® Atom C3558 Series Processor: 4core, 16W
Socket	SOC
System Memory	
Supported DIMM Quantity	4 DIMM slots 288-pin DDR4 Support up to 128GB DDR4 RDIMM (32 GB w/8Gb DRAM) Support up to 64GB DDR4 UDIMM (16 GB w/8Gb DRAM)
Supported Type	Dual Channel DDR4 memory technology Non-ECC, ECC UDIMM: 4GB, 8GB, 16GB RDIMM: 4GB, 8GB, 16GB, 32GB
Max. Capacity per DIMM	Dual Channel DDR4 memory technology Non-ECC, ECC UDIMM: 4GB, 8GB, 16GB RDIMM: 4GB, 8GB, 16GB, 32GB
Max. DIMM Frequency	Non-ECC UDIMM: 1600/1866/2133MHz ECC UDIMM: 1600/1866/2133MHz RDIMM: 1600/1866/2133MHz
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 8	SLOT7: PCIe3.0 x8 (MAX x8 by BIOS setup)
SATA/SAS Storage	
PCH Built-in Storage	5 SATA3 6.0 Gb/s: 3 SATA3 ports, 2 SATA DOM (SATA_0, SATA_1, SATA_2, SATA_3 and SATA_12) Supports up to 8 SATA ports from 2 mini SAS HD connectors (SATA_4_7 and SATA_8_11) by BIOS setting (4 x SATA ports from each mini SAS HD connector)
Ethernet	
Interface	Gigabit LAN 10/100/1000 Mb/s
Additional GbE Controller	Marvell 88E1543(4L) - 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 2.0 with Ikmv and vMedia support
IPMI Dedicated GLAN	1 Realtek RTL8211E for dedicated management LAN
Features	Watch Dog NMI

## PRODUCT SPECIFICATION

Graphics	
Controller	ASPEED AST2500
VRAM	DDR4 64MB
Output	Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz
Rear I/O	
UID Button/LED	1
VGA Port	1 D-sub
Serial Port	1 (COM)
USB 3.2 Gen1 Port	2 Type-A (USB3.2 Gen1)
RJ45	4 RJ45 Gigabit Ethernet LAN ports 1 RJ45 Dedicated IPMI LAN port - LAN Ports with LED (ACT/LINK LED and SPEED LED)
Internal Connector/Headers	
Power Connector	1 (24-pin, ATX main power), 1 (8-pin, ATX 12V) support 12V DC-in
Other Power Connectors	1 (4-pin, HDD Power)
Auxiliary Panel Header	1 (includes chassis intrusion, location button & LED, front LAN LED, and event log LED)
System Panel	1
Fan Header	4 (4-pin)
TPM Header	1
IPMB Header	1
USB 2.0 Header	1 (support 1 USB port or 2 USB ports on header. The port number controlled by USB_SEL1 and USB_SEL2 jumper)
System BIOS	
BIOS Type	128Mb AMI UEFI Legal BIOS
BIOS Features	Plug and Play (PnP), ACPI 1.1 Compliance Wake Up Events, SMBIOS 2.3.1 Support, DRAM Voltage Multi-adjustment, ASRock Instant Flash
Hardware Monitor	
Temperature	CPU/PCH/DDR/LAN/Storage Temperature Sensing MB/Card side/TR1 Temperature Sensing
Fan	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	Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore, DRAM, +BAT, 3VSB, 5VSB

## PRODUCT SPECIFICATION

Supported OS	
OS	<p>Microsoft® Windows®</p> <ul style="list-style-type: none"> <li>- Server 2016 (64 bit)</li> <li>- Server 2012 (64 bit)</li> <li>- Server 2012 R2 (64 bit)</li> </ul> <p>Linux</p> <ul style="list-style-type: none"> <li>- RedHat Enterprise Linux Server 6.8 (32 / 64 bit) / 7.2 (64 bit)</li> <li>- CentOS 6.8 (32 / 64 bit) / 7.2 (64 bit)</li> <li>- SUSE Enterprise Linux Server 11 SP4 (32 / 64 bit) / 12 SP1 (64 bit)</li> <li>- Fedora core 24 (64 bit)</li> <li>- Ubuntu 16.04 (64 bit) / 15.10 (64 bit) (AHCI mode)</li> </ul> <p>Virtual</p> <ul style="list-style-type: none"> <li>- VMWare® ESXi 6.0</li> </ul> <p>* Please refer to our website for the latest OS support list.</p>
Environment	
Temperature	<p>Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C</p> <p>* Install a CPU Fan when the airflow through the heatsink is below 2CFM.</p>
Humidity	<p>Non operation humidity: 20% ~ 90% ( Non condensing)</p>