

# The4thware Industrial Board (MATX)

3<sup>th</sup> Generation Intel Xeon Scalable Series Platform

T4WARR-C621A-MATX1



## PRODUCT SPECIFICATION

Physical Status	
Form Factor	Micro-ATX
Dimensions	9.6" x 9.6" (243.84 x 243.84 mm)
Processor System	
CPU	Supports 3 <sup>rd</sup> Gen Intel® Xeon® Scalable processors
Socket	Single Socket P+ (LGA 4189)
Chipset	Intel® C621A
System Memory	
Supported DIMM Quantity	8 DIMM slots (1DPC)
Supported Type	Supports DDR4 288-pin RDIMM, LRDIMM, RDIMM/LRDIMM-3DS, Intel® Optane™ Persistent Memory 200 series
Max. Capacity per DIMM	RDIMM: up to 64GB RDIMM-3DS: up to 256GB LRDIMM: up to 128GB LRDIMM-3DS: up to 256GB
Max. DIMM Frequency	3200 MT/s
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	SLOT7: PCIe4.0 x16 [CPU] SLOT6: PCIe4.0 x16 [CPU] SLOT5: PCIe4.0 x16 [CPU] SLOT4: PCIe4.0 x16 [CPU]
Other PCIe Expansion Connectors	
M.2 slot	1 M-key (PCIe3.0 x4 or SATA 6Gb/s); supports 2280 form factor [PCH]
SATA/SAS Storage	
PCH Built-in Storage	Intel® C621A (Up to 11 SATA 6Gb/s; RAID 0/1/5/10): 2 Mini-SAS HD, 2 SATA 7-pin, 1 M.2
Ethernet	
Additional GbE Controller	2 RJ45 (10 GbE) by Intel® X710-AT2
Server Management	
BMC Controller	ASPEED AST2500: IPMI2.0 with iKVM and vMedia support
IPMI Dedicated GLAN	1 RJ45 Dedicated IPMI LAN port by Realtek RTL8211E
Graphics	
Controller	ASPEED AST2500: 1 DB15 (VGA)
Rear I/O	
UID Button/LED	1 UID button w/ LED
VGA Port	1 DB15 (VGA)
USB 3.2 Gen1 Port	2 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (10GbE), 1 dedicated IPMI

## PRODUCT SPECIFICATION

Internal Connector/Headers	
Power Connector	1 Mirco-Fit (4-pin, ATX PSU signal) w/ ATX 24-pin adapter cable, 2 (8-pin, ATX 12V) support 12V DC-in
Other Power Connectors	1 Mirco-Fit (6-pin) for HDD power when using 12V DC-in power source
Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel COM Header	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
Fan Header	4 (4-pin)
TPM Header	1 (17-pin, LPC), 1 (13-pin, SPI)
VROC header	1
HSBP	1
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)
NMI Header	1
LED Indicators	
Standby PWR LED 5vsb	1
Fan Fail LED	4
BMC heartbeat LED	1
System BIOS	
BIOS Type	AMI UEFI BIOS; 256Mb SPI Flash ROM
BIOS Features	Plug and Play (PnP), ACPI 4.0 and above compliance wake up events, SMBIOS 3.3 and above, ASRock Rack Instant Flash
Hardware Monitor	
Temperature	CPU, PCH, MB, Card side Temperature Sensing
Fan	Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control
Voltage	CPU1_PVCCIN, PVDDQ_ABCD, PVDDQ_EFGH, 1.05V_PCH, 1.8V_PCH, +BAT, PVNN_PCH 3.3V, 5V, 12V, 3.3VSB, 5VSB

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Supported OS	
OS	<p>Microsoft® Windows® :</p> <p>Server 2016 (64 bit) Server 2019 (64 bit) Server 2022 (64 bit)</p> <p>Linux :</p> <p>Red Hat Enterprise Linux Server 7.9 (64 bit) / 8.3 (64 bit) CentOs 7.9 (64 bit) / 8.3 (64 bit) SUSE Enterprise Linux Server 15 SP2 (64 bit) / 15 SP3 (64 bit) Ubuntu 20.04.3 (64 bit) / 21.04 (64 bit)</p> <p>Hypervisor :</p> <p>VMWare® ESXi 6.7.0 U3 / vSphere 6.7.0 U3 VMWare® ESXi 7.0U3 / vSphere 7.0U3 Hyper-V Windows® Server 2016 Hyper-V Windows® Server 2019</p>
Environment	
Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	Non operation humidity: 20% ~ 90% ( Non condensing)