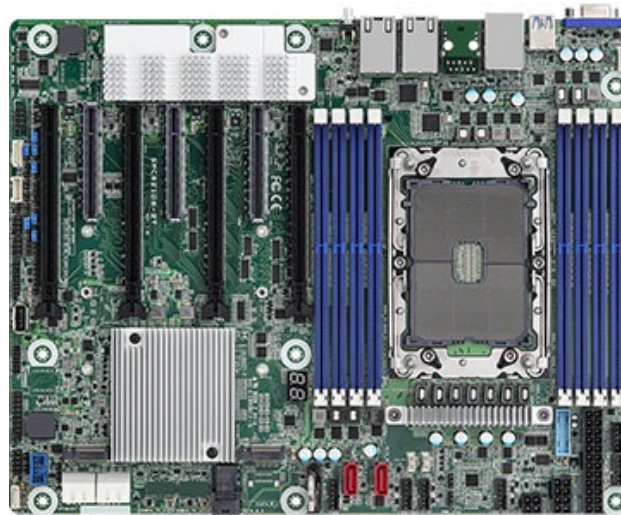


# The4thware Industrial Board (ATX)

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

T4WARR-C621A-ATX2



## PRODUCT SPECIFICATION

Physical Status	
Form Factor	ATX
Dimensions	12" x 9.6"
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	max. 3200MHz
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	SLOT7: PCIe4.0 x16* SLOT5: PCIe4.0 x16* SLOT3: PCIe4.0 x16* SLOT1: PCIe4.0 x16  * SLOT7/5/3 auto-switch to PCIe4.0 x8 when SLOT6/4/2 occupied
PCIe x 8	SLOT6: PCIe4.0 x8 SLOT4: PCIe4.0 x8 SLOT2: PCIe4.0 x8
Other PCIe Expansion Connectors	
M.2 slot	1 M-key (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280/2242 form factor 1 M-key (PCIe3.0 x1 or SATA 6Gb/s), supports 22110/2280/2242 form factor
SATA/SAS Storage	
PCH Built-in Storage	Intel® C621A (12 SATA 6Gb/s; RAID 0/1/5/10): 1 Mini-SAS HD, 4 SATA 7-pin, 2 SATA DOM, 2 M.2
Ethernet	
Additional GbE Controller	Intel® X710-AT2: 2 RJ45 (10 GbE)
Server Management	
BMC Controller	ASPEED AST2500
IPMI Dedicated GLAN	1 x Realtek RTL8211E for dedicated management GLAN
Graphics	
Controller	ASPEED AST2500
VRAM	DDR4 16MB

## PRODUCT SPECIFICATION

Rear I/O	
UID Button/LED	1
VGA Port	1 DB15
USB 3.2 Gen1 Port	4 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (10GbE)
Dedicate LAN	1 dedicated IPMI
Internal Connector/Headers	
Power Connector	1 (24-pin, ATX main power), 1 (8-pin, ATX 12V), 1 (4-pin, ATX 12V), 1 (3-pin, SATA power)
Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
COM Header	1
VGA header	1
Speaker Header	1
Buzzer	1
Fan Header	5 (6-pin)
Thermal Sensor Header	1
TPM Header	1 (17-pin, LPC), 1 (13-pin, SPI)
VROC header	1
SGPIO Header	1
SMBus header	1
PMBus header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
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)
Type A USB 2.0 Port	1 (Type-A, 1 USB2.0)
NMI Header	1
NC-SI	1
LED Indicators	
Standby PWR LED 5vsb	1
80 Debug Port LED	1
Fan Fail LED	5

## PRODUCT SPECIFICATION

System BIOS	
BIOS Type	256Mb SPI Flash ROM
BIOS Features	AMI UEFI BIOS
Hardware Monitor	
Temperature	CPU, PCH, MB, Card side 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	+12V, +5V, +3.3V, CPU Vcore, DRAM, 1.05V_PCH, +BAT, 3.3VSB, 5VSB
Supported OS	
OS	<p>Microsoft® Windows® :</p> <p>Server 2016 (64 bit) Server 2019 (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 12 SP5 (64 bit) / 15 SP2 (64 bit) Ubuntu 20.04.1 (64 bit) / 20.10 (64 bit)</p> <p>Hypervisor :</p> <p>VMWare® ESXi 6.7 U3 / vSphere 6.7 U3 VMWare® ESXi 7.0.U1c / vSphere 7.0.U1c 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)