

The4thware Industrial Board (ATX)

8th/9th Generation Intel Core, Pentium Series Platform

T4WA-C246-ATX



PRODUCT SPECIFICATION

SYSTEM	
PROCESSOR	Intel® 8th/9th Generation (Coffee Lake-S/Coffee Lake-S Refresh) Core™ i9/ i7/ i5 /i3, Pentium 14nm, Celeron™, Xeon E-2200/2100, LGA 1151 socket Processor, max. TDP 8 Core 95W
CHIPSET	Intel® C246 Express Chipset
MEMORY	DIMM x 4, DDR4 (2666/2400/2133 MHz, max. 128GB) ECC, un-buffered memory Dual channel memory architecture
I/O CHIPSET	NCT6793D + F81216HD
ETHERNET	Intel® PHY i219LM Giga LAN x 1 (supports Intel® AMT 12.0) Intel® i210AT Giga LAN x 1 (BOM option: i210AT x 2) RJ45 x 2 (BOM option: RJ45 x 3)
AUDIO	Realtek® ALC897 6-Channel High Definition Audio CODEC
TPM	Nuvoton NPCT750 TPM2.0 onboard
EXPANSION SLOT	PCIe 3.0[x16] Slot x 1, PCIe 3.0[x4] Slot (open edge) x 2, PCIe 3.0[x1] Slot (open edge) x 2, PCI x 2, M.2 2230 E-key (PCIex1/USB2.0/CNVi) x 1, M.2 2280 M-key (PCIex4/SATA3) x 1
BIOS	256Mbit Flash ROM x 1, AMI BIOS
H/W MONITOR	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on CPU/Chassis
WATCHDOG TIMER	1~255 steps by software program
SMART FAN CONTROL	CPU Fan/ Chassis Fan x 2
WAKE ON LAN/ PXE	Yes (WOL / PXE)
POWER STATE	S3, S4, S5
GRAPHICS	
GRAPHICS CHIPSET	Intel® Graphics Media Accelerator
GRAPHICS MULTI DISPLAY	HDMI+VGA+DP (BOM option: USB 3.2 Gen 2 Gen2-10Gbps Type-C connector (Alternate Mode: USB+DP) x 1)
VGA	Up to 1920 x 1200 @60Hz (via IT6516B)
DVI	—
HDMI	Up to 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz, with Digital Audio
DISPLAYPORT	Up to 4096 x 2160 @ 24 Hz / 3840 x 2160 @ 60 Hz, with Digital Audio

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LVDS	—
EDP	—
BACKLIGHT CONTROL	—
ENVIRONMENTAL & POWER & ME	
BATTERY	Lithium battery
POWER REQUIREMENT	24-pin ATX connector x 1, 8-pin (2x4) ATX 12V Power connector x 1
OPERATING TEMPERATURE	32°F ~140°F (0°C ~ 60°C)
STORAGE TEMPERATURE	-40°F ~185°F (-40°C ~85°C)
OPERATING HUMIDITY	0%~90%RH, non-condensing
CERTIFICATION	CE & FCC Class A
FORM FACTOR	ATX Form Factor, 12"x9.6" (305mm x 244mm)
WEIGHT	1.76 lb (0.8 Kg)
MTBF (HOURS)	281410
REAR PANEL I/O PORTS	
USB	USB 3.2 Gen 2 ports (10 Gbps) x 4, USB 3.2 Gen 1 ports (5 Gbps) x 2, USB 2.0 ports x 4
DISPLAY I/O	HDMI x 1, VGA x 1, DP x 1, USB Type-C x 1 (optional)
AUDIO I/O	Audio Jack x 3: Line-in, Mic-in, Line-out
LAN I/O	LAN (RJ45) ports x 2 (BOM option: RJ45 x 3)
SERIAL PORT	—
PS/2 PORT	—
OTHERS	-
INTERNAL I/O CONNECTORS	
STORAGE	SATA III (6.0Gb/s) ports x 4, support RAID 0/1/5/10 M.2 2280 M-key (PCIex4/SATA3) x 1
USB	USB 2.0 headers x 1 support additional 2 USB ports (2x5PIN, p=2.54mm)
DISPLAY I/O	—
AUDIO I/O	—
SERIAL PORT	5 x RS-232 headers 1 x RS-232/422/485 (COM1, supports 5V/12V/RI optional)
PS/2 PORT	-
PARALLEL PORT	—
DIO	8-bit Digital I/O interface (In/Out programmable) x 1

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FAN	CPU Fan connector(s) (4-pin) x 1 Chassis Fan connector(s) (4-pin) x 2
POWER	—
OTHERS	Chassis Intrusion x 1 AT/ATX mode select jumper x 1 Front panel header x 1 Clear CMOS jumper x 1 3-pin ME lock header x 1 Buzzer on-board x 1
OS	
OS SUPPORT	Windows® 10 64bit, Windows® 11 64bit, Linux Ubuntu 64bit (18.04.1/Kernal4.8.0)