

The4thware Industrial Board (MITX)

12th Generation Intel Core, Pentium, Celeron Series Platform

T4WP-R680E-MITX



PRODUCT SPECIFICATION

Specification	
CPU	LGA1700 for Intel® 12th Gen. Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors Max. 65W TDP
Chipset	Intel® R680E Chipset
Memory	Technology: Up to DDR5 4800 MHz, ECC support Max.: 2 x 32GB (Total 64GB) Socket: 2 x SO-DIMM
Display	Display Port: 3, Supports DP 1.4, up to 4K resolution HDMI: 1 eDP/LVDS: 1 x Header (Support either eDP or LVDS ; switched by BIOS)
Expansion Slot	PCIe: 1 x PCIe 5.0 x16 Slot (Bifurcation Support: 16x to 8x+8x) M.2: 1 x M.2 E key, Type 2230 for WIFI/BT device (PCIe & CNVi) 1 x M.2 M key, Type 2242/2260/2280 (PCIe x4 & SATA mode)
Ethernet	Speed: 10/100/1000/2500 Mbps Controller: 1 x Intel® i210AT (co-lay i211AT), 1 x Intel® I225LM (Intel vPro supported) Teaming: Yes Connector: 2 x RJ-45
Audio	Codec: Realtek ALC897 High Definition Audio Connector: Line-Out, Line-In
Storage	SATA port : 4 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10
Rear I/O	Display Port: 3 HDMI: 1 USB3.2 Gen2: 3 (2*Type A, 1*Type C) USB3.2 Gen1: 1 (Type A) USB2.0: 4 (Type A) Ethernet: 2 x RJ45 Serial Port: 1 (RS-232/422/485) Audio jack: 2 PS/2: 1 x Keyboard, 1x Mouse

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Internal I/O connectors	<p>Serial Port Header: 4 x COM Header (1 x RS-232/422/485, 3 x RS-232)</p> <p>USB3.2 Gen1: -1 x USB3.2 Gen1 Stick Connector -1 x Header Support Additional 2 x USB3.2 Gen1 Ports</p> <p>USB2.0: 1 x Header Support Additional 2 x USB2.0 Ports</p> <p>CPU Fan/ Chassis Fan: 1 x Header (PWM Mode) / 1 x Header (PWM Mode)</p> <p>Disable ME: 1 x Header</p> <p>LVDS/ eDP selection: 1 x Header</p> <p>Panel SW: 1 x Header</p> <p>Front Panel Audio (AAFP): 1 x Header</p> <p>System Panel: 1 x Header (10-1 Pin)</p> <p>SP/DIF: 1 x Header</p> <p>Chassis Intrusion: 1 x Header</p> <p>Speaker: 1 x Header</p> <p>Clear CMOS: 1 x Header</p> <p>COM Debug: 1 x Header</p> <p>GPIO: 1 x Header (8 Bit)</p>
H/W	YES
TPM	1 x SPI TPM header
IAMT/vPRO	Yes
Power Type	ATX 12V DC-IN (supported by additional cable)
Microsoft Windows	Windows® 10 (64bit)
Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
Operating Temperature	0~60° C
Non-Operating Temperature	-40~85° C
Relative Humidity	5%~95%
Form Factor	Mini-IX, 170 x 170 mm
Safety	CE (CLASS B), FCC (CLASS B)