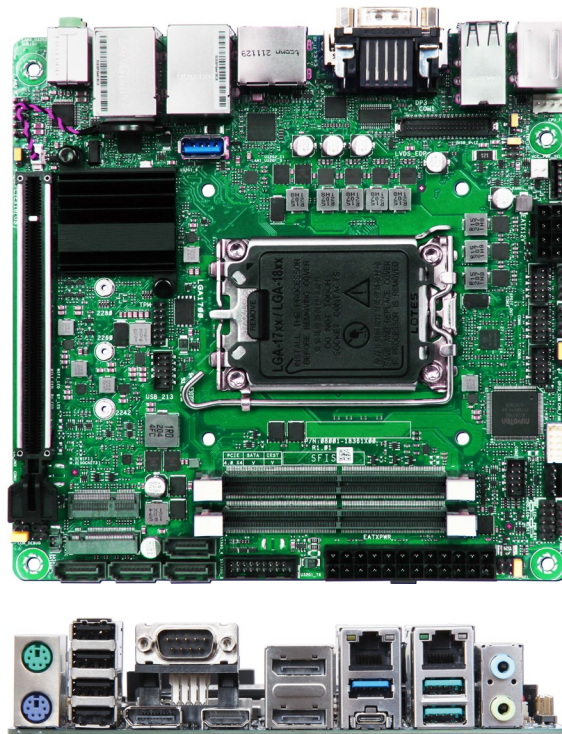


The4thware Industrial Board (MITX)

12th/13th Generation Intel Core Series Platform

T4WP-Q670E-MITX



PRODUCT SPECIFICATION

Specification

Processor	12th Generation Intel® Core™/13th Generation Intel® Core™ processors in LGA1700 package
Chipset	Intel® Q670E
BIOS	AMI uEFI BIOS
Memory	Support up to 64GB DDR5 4800 on two SO-DIMM sockets
Storage Devices	4x SATA III ports 1x M.2 socket (Key M, 2242/2260/2280)
Watchdog Timer	Programmable watchdog timer
Hardware Monitoring	System monitor (Voltage, Fan Speed and Temperature)
Expansion Interface	- 1x PCIe Gen5 x16 - 1x M.2 (Key M, 2242/2260/2280) for SSD - 1x M.2 (Key E, 2230) for Wireless
Audio	Audio jack on rear I/O with Line-out / Line-in with Realtek ALC897 audio controller
Ethernet	- Intel® I210AT (1GbE) and Intel® I225LM (2.5GbE) Ethernet controller - 2x RJ45 connectors on rear I/O
Serial port	- 2x RS232/422/485 ports (one port on rear I/O and one port on board header) - 3x RS232 ports on pin header
USB	- 3x USB 3.2 (Gen2) on rear I/O (2x Type A + 1x Type C) - 1x USB 3.2 (Gen1) on rear I/O - 1x USB 3.2 (Gen1) on board (Vertical Type-A) - 2x USB 3.2 (Gen1) on pin header - 4x USB 2.0 on rear I/O - 2x USB 2.0 on pin header
GPIO	8-bit configurable controlled by embedded controller
Graphic Controller	Intel® UHD Graphics 770 supports DirectX 12, OpenGL 4.6
Display Interface	- DP: Three DP ports on rear I/O, resolution up to 8K - eDP/LVDS: One eDP/LVDS port on board header, switch by BIOS - HDMI: One HDMI connector on rear I/O

PRODUCT SPECIFICATION

Dimension	170 mm (L) x 170 mm (W)
Power Supply	ATX power input
Environment	<ul style="list-style-type: none">- Operation Temperature: 0°C to 60°C- Storage Temperature: -20°C to 80°C- Relative Humidity: 5% to 95%, non-condensing
MTBF	Over 100,000 hours at 40°C