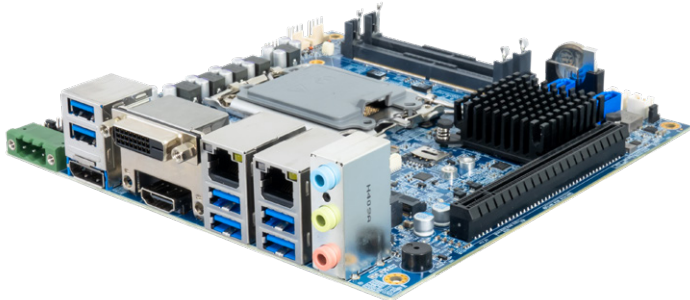




13th / 12th Gen. Intel® Core™ Processors Mini-ITX Motherboard



Specifications

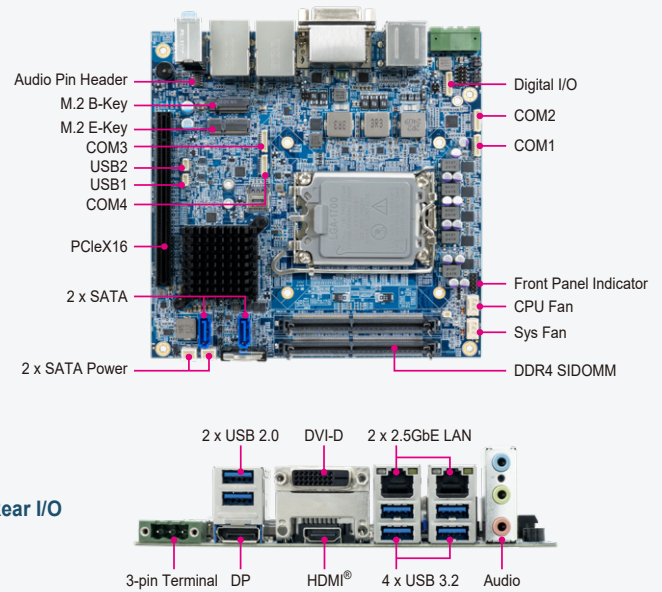
System	
CPU Support	LGA1700 for Intel® 13th & 12th Gen. Core™ i9 / i7 / i5 / i3 / Pentium® / Celeron® CPU
CPU List	Target TDP 65W i9-13900TE/E, i9-12900TE/E i7-13700TE/E, i7-12700TE/E i5-13500TE, i5-13400E, i5-12500TE/E i3-13100TE/E, i3-12100TE/E Pentium: G7400TE/E Celeron: G6900TE/E
Chipset	Intel® H610E/Q670E
Memory Support	2 x DDR4 SO-DIMM, 3200MT/s up to 64GB (non-ECC)
BIOS	AMI UEFI BIOS
Watchdog	1~255 seconds watchdog timer selectable
Power Supply	Support DC12/24V input with 3-pin terminal block
TPM	1 x SPI TPM version: 2.0
Dimensions	170 x 170 mm (6.69" x 6.69")
Certifications	CE / FCC
O.S. Support	Windows 11 LTSC, Window 10 IoT 2021 LTSC Linux Ubuntu 20.04
I/O Ports	
SATA Interface	2 x SATAIII with SATA power connector 2-pin
Expansion Bus	1 x PCIe (x16) 1 x SIM slot for M.2 B-Key (Top side)
M.2 Slot	1 x PCIe M.2 M-Key PCIeX4 (Gen.4) (2280 only) (NVME) (Q670E only) (bottom side) 1 x PCIe M.2 B-Key PCIe (x1) / SATA (2242/3042/3052) / USB 2.0 1 x PCIe M.2 E-Key PCIe (x1) / USB (2230)
LPC	1 x LPC (2x5 pin header), for debug only
Serial Ports	4 x COM ports COM 1&2: RS232 / 422 / 485, support +5V/+12V jumper selectable (wafer) COM 3&4: RS232 / 422 / 485 (wafer)
FAN	1 x System Fan (4 pin wafer, with smart fan function) 1 x CPU Fan (4 pin wafer, with smart fan function)
LAN	Dual LAN (2 x RJ45 on the edge) Intel® LAN I226 (2.5 GbE), supports Wake-On-LAN & PXE
Audio	1 x MIC-in, 1 x Line-in, 1x Line-out (on the edge) 1 x MIC-in, 1 x Line-in, 1x Line-out (pin header, on the main-board)
Digital I/O	4 in / 4 out (wafer)
USB	8 ports 4 x external USB 3.2 Gen.1 (on the edge) 2 x external USB 2.0 (on the edge) 2 x internal USB 2.0 (wafer)
Graphics	
Flexible Display	1 x DP, 1 x HDMI®, 1 x DVI-D, support triple independent display
DisplayPort	1 x DP (on the edge) up to 4096 x 2304 @60Hz (default)
HDMI®	1 x HDMI® (on the edge) up to 4096 x 2160 @60Hz (default)
DVI-D	1 x DVI-D (on the edge) up to 1920 x 1200 @60Hz
Environment	
Operating Temp.	0°C~60°C (32°F~140°F) @humidity 20%~90%
Storage Temp.	-40°C~85°C (-40°F~185°F) @humidity 20%~95%



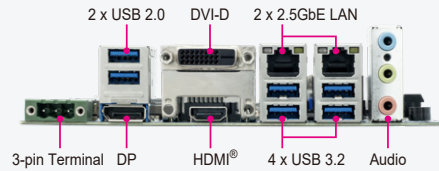
Features

- Intel® 13th & 12th Gen. Core™ i9 / i7 / i5 / i3 / Pentium® / Celeron® CPU
- 4 x COM, 2 x LAN, 8 x USB
- 1 x HDMI®, 1 x DP, 1 x DVI-D
- 1 x M.2 B-Key
- 1 x M.2 E-Key
- 1 x SIM slot for M.2 B-Key

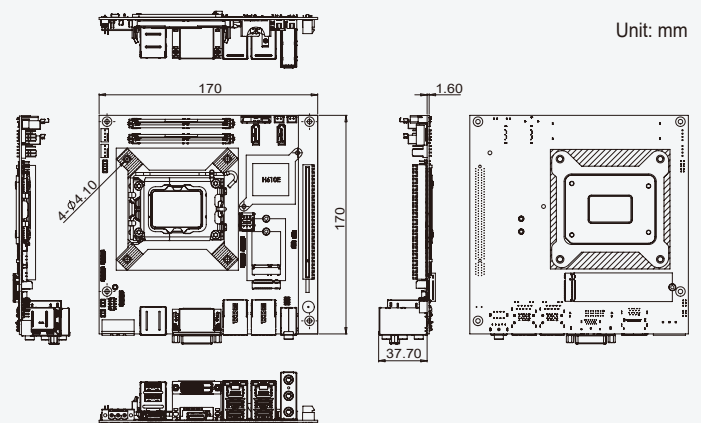
I/O Connector



Rear I/O

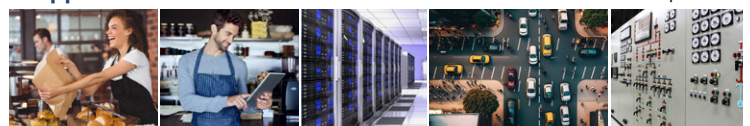


Dimensions



Application

- Automation
- Retail
- Information
- Transportation



* All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information. For detail mechanics drawing, please contact our sales.