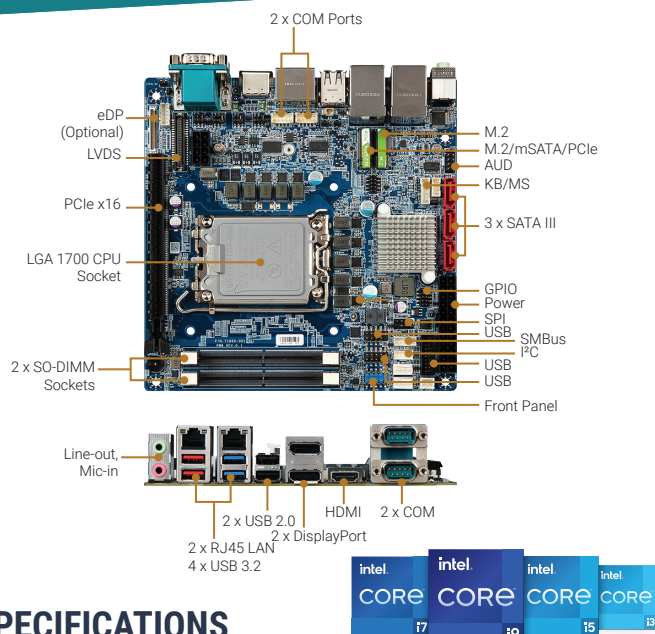


MX610H

Intel® H610E based Mini-ITX Motherboard supports
 12th/13th/14th Gen Intel® Core™ i 9/7/5/3 Processor,
 ATX Power



Features

- LGA 1700 socket supports 12th/13th/14th Gen Intel® Core™ i 9/7/5/3 Processor, codenamed Alder Lake/Raptor Lake/Raptor Lake Refresh
- Supports Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
- Intel® H610E PCH, x4 Gen4 DMI
- 2 x SO-DIMM sockets support Dual Channel DDR5 memory speed up to 5600MHz (CPU dependent), up to 64GB
- Gen 4 PCIe x16, M.2 NVMe and CNVi
- TPM 2.0
- Intel® Ethernet Controller I225-V (2.5GbE)
- Intel® Ethernet Controller I219-LM (1GbE)
- HDMI 1.4b 4k, 2 x DP++ 1.4a 4k, LVDS/eDP
- Supports 3 Independent Displays
- 6 x USB 3.2 Gen 1x1, 6 x USB 2.0
- 4 x COM, 3 x SATA III, I²C, SMBus, SPI, PS/2
- ATX Power



SPECIFICATIONS

System	
Processor	LGA 1700 socket supports 12th Gen Alder Lake/ 13th Gen Raptor Lake/ 14th Gen Raptor Lake Refresh Intel® Core™ i 9/7/5/3, Pentium, Celeron Processors up to 16 Cores 24 Threads Hybrid
Chipset	Intel® H610E PCH
DMI	x4 Gen4 DMI
Memory	2 x SO-DIMM sockets support Dual Channel DDR5 memory speed up to 5600MHz, up to 64GB 12th Gen Intel Core: up to DDR5 4800 MT/s (CPU dependent) 13th Gen Intel Core: up to DDR5 5600 MT/s (CPU dependent) 14th Gen Intel Core: up to DDR5 5600 MT/s (CPU dependent)
BIOS	AMI uEFI BIOS, 256Mb SPI Flash ROM
Super I/O	Fintek F81966AB-I
Audio	Realtek HD Audio support 7.1 channel sound playback
Ethernet	LAN 1: Intel® Ethernet Controller I219-LM LAN 2: Intel® Ethernet Controller I225-V (2.5GbE)
Expansion	1 x Gen 4 PCIe x16 1 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III) 1 x M.2 E-Key 2230 with CNVi Support (PCIe x1 + USB 2.0)
TPM	TPM 2.0
Watchdog Timer	1 Sec ~ 255 Sec Timer
Supported OS	Win 10, Win 11, Linux
Graphics	
Chipset	Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
Resolution	HDMI 1.4b 4K@60Hz Dual Mode DisplayPort (DP++) 1.4a 4K@60Hz 18/24-bits Dual Channel LVDS, optional eDP
Multi-Display	Supports 3 Independent Displays
External I/O Ports	
Display	1 x HDMI 2 x DP++
USB	4 x USB 3.2 Gen 1x1 Ports 2 x USB 2.0 Type A

External I/O Ports Cont.

LAN	2 x RJ45
COM Port	2 x RS-232/422/485
Audio	Line-out, Mic-in

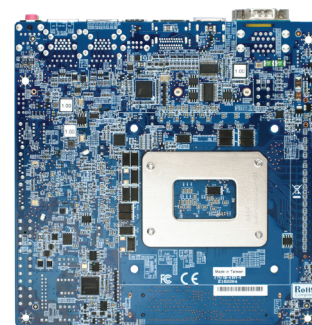
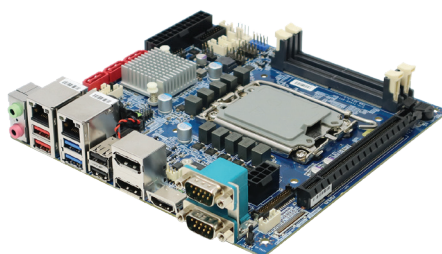
Internal I/O Connectors

Display	1 x LVDS Header 1 x eDP Header (Optional)
USB	1 x USB 3.2 Gen 1x1 Header (2 Ports) 2 x USB 2.0 Headers (4 Ports)
COM Port	2 x RS-232 Headers with Voltage Selection
SATA	3 x SATA III Connectors
GPIO	1 x 8-bits GPIO Header
Additional I/O	1 x SPI Header, 1 x I ² C Header, 1 x SMBus Header, 1 x Front Audio Header, 3W Per Channel Amplifier, 1 x Front Panel Header, 1 x PS/2 Header

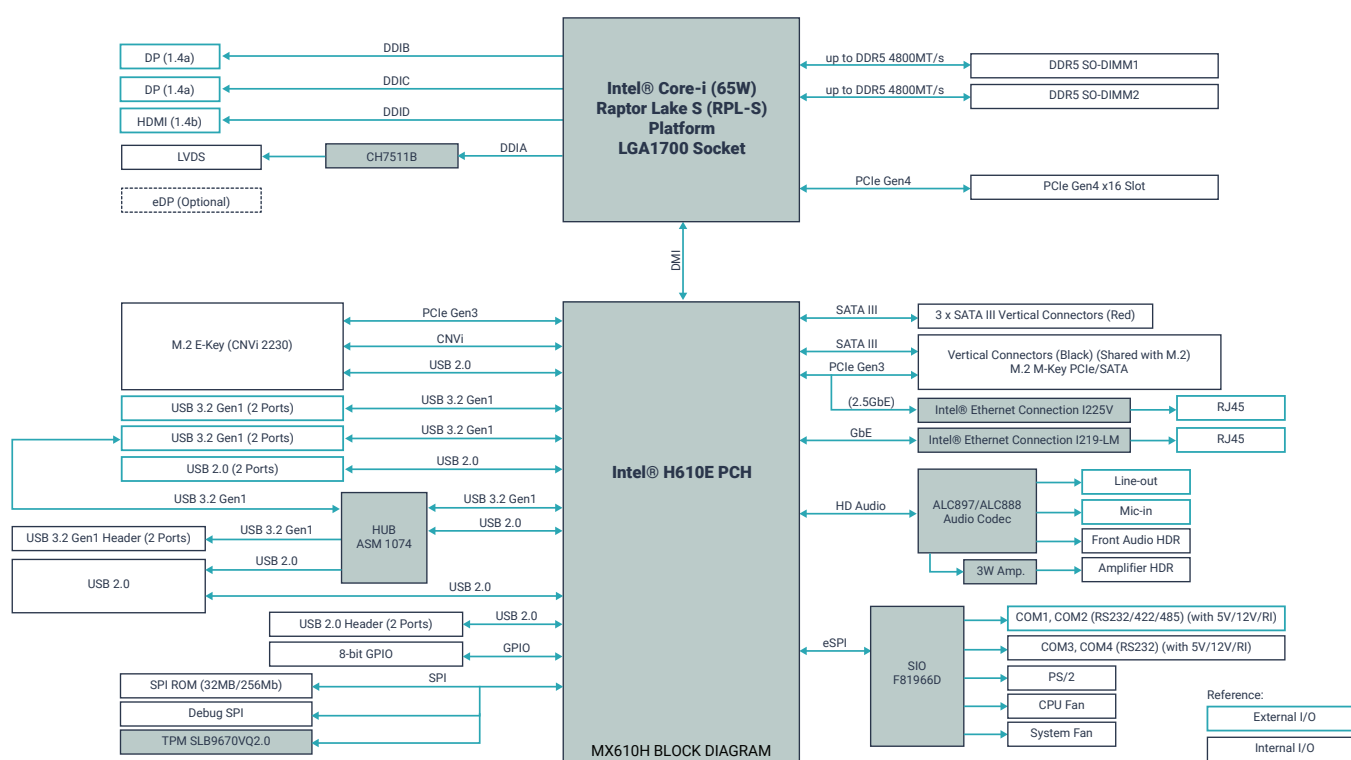
Mechanical, Power, and Environment

Power	1 x 24-pin ATX Connector 1 x 8-pin ATX 12 Connector
Power Type	AT / ATX mode Switchable Through Jumper
Operating Temp	0°C to 60°C (32°F ~ 140°F)
Storage Temp	-20° C ~ 80° C (-4°F ~ 176°F)
OP Humidity	5% to 90% Non-condensing
Form Factor	Mini ITX
Dimensions	6.7" x 6.7" (170mm x 170mm)
Certification / Compliance	FCC Class B/CE RoHS Compliant
Weight	0.88 lbs (0.4 KG)

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



BLOCK DIAGRAM



ORDERING INFORMATION

Model Name	CPU/CPU Socket	Memory / Storage	LAN	Low Profile I/O	Power Input
MX610H	LGA 1700	2 x SO-DIMM sockets	1x 2.5GbE, 1x GbE	No	ATX
Model Name	Description				
183000000006	2.00mm pitch 12" length serial cable				
182437200040	2.54mm pitch 14" length dual port USB 2.0 cable w/ full height bracket				
182000000073	2.00mm pitch 19.7" length dual port serial cable w/ full height bracket				

PACKING LIST

- ✓ 1 x MX610H Motherboard
- ✓ 1 x I/O Shield



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