MX610HD

12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors,
Thin Mini ITX Motherboard With Intel® H610E Chipset

Features

- 12/13/14th Gen. Intel® Core™ i9/i7/i5/ i3/Pentium/Celeron Processor with Intel® H610E Chipset
- 2 x 262-Pin DDR5 4800 MHz SO-DIMM Socket Supports Up to 64GB (Non-ECC)
- HDMI, LVDS, Optional eDP
- 1 x PCIe x16 (Gen4)
- 1 x Intel® I219V, 1 x Intel® I225LM
- 4 x USB 3.2, 6 x USB 2.0
- 1 x M.2 M-Key 2242/2280, 1 x M.2 E-Key 2230
- 3 x COM
- DC in +12V~24V

HDMI | DP++ | DDR5 SO-DIMM | USB 3.2 | RS232/422/485

Specifications

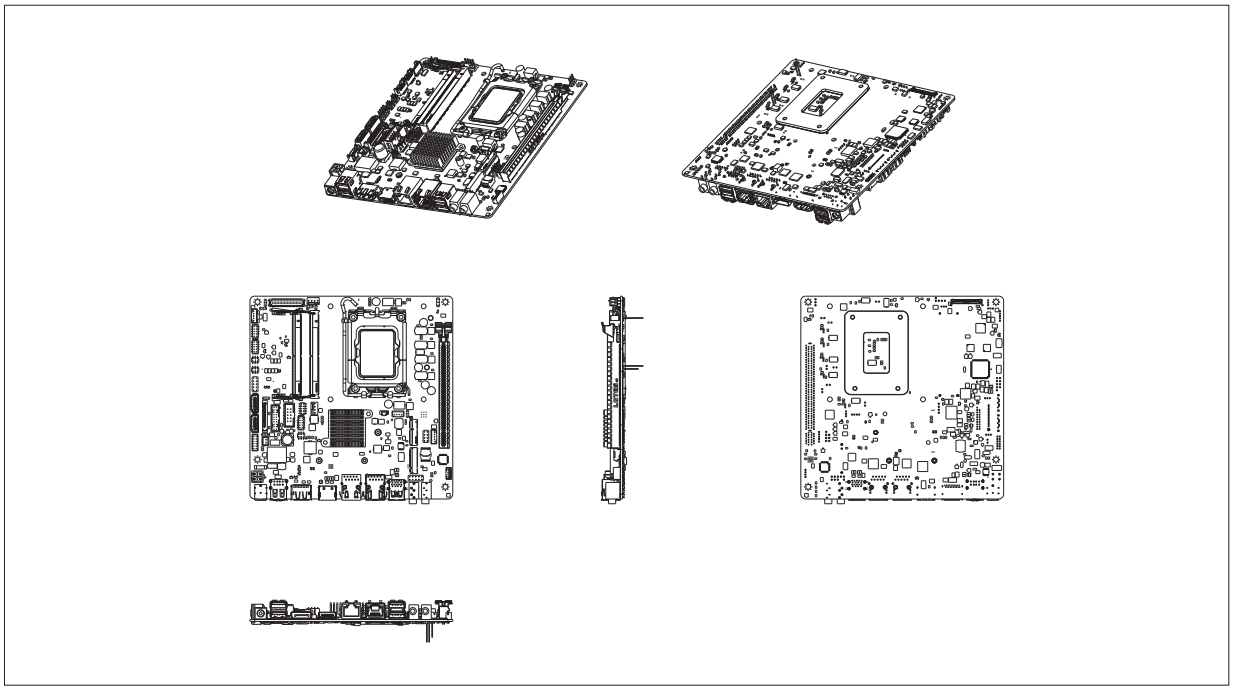
System Information	
Processor	LGA 1700 Socket Supports 12/13/14th Generation Intel® Core™ i9/i7/i5/i3/Pentium/Celeron Processors (Max. TDP at 65W)
Platform Controller Hub	Intel® H610E Chipset
System Memory	2 x 262-Pin DDR5 4800MHz SO-DIMM Socket Supports Up to 64GB (Non-ECC)
I/O Chipset	nuvoton NCT6126D
Watchdog Timer	H/W Reset, 5~255 Seconds/5~255 Minutes
BIOS	AMI uEFI BIOS, 256Mbit SPI Flash ROM
H/W Status Monitor	CPU Temperature Monitoring Voltage Monitoring CPU Fan Speed Control
TPM	Onboard infineon SLB 9670VQ2.0 support TPM2.0
Board	Thin Mini ITX
Expansion	
Expansion	1 x PCIe x16 (Gen4) 1 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III) 1 x M.2 E-Key 2230 CNVi (PCIe x1 + USB 2.0)
Display	
Graphic Chipset	Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
Spec. & Resolution	1 x HDMI 1.4b 4K@30Hz 1 x Dual Mode DisplayPort 1.2a 4K@60Hz 18/24-bits Dual Channel LVDS
Multiple Display	Triple Display
LVDS	Dual Channel 18/24-bits LVDS (Chrontel CH7513A-BF eDP to LVDS) or 1 x eDP 1920 x 1080 @ 60Hz (2 Lanes)
Audio	
Audio Codec	Realtek ALC897 HD Audio Decoding Controller
Audio Interface	Mic-in, Line-out
Audio Amplifier	2 x 6W 8Ω Amplifier

Ethernet	
LAN Chipset	1 x Intel® I219V Gigabit Ethernet 1 x Intel® I225LM 2.5 Gigabit Ethernet
Ethernet Interface	10/100/1000 Base-Tx GbE compatible & 2.5 Gigabit Ethernet
LAN Port	2 x RJ-45
Software Support	
OS	Windows 11, Linux
Certification	
Certification Information	CE, FCC, RoHS Compliant
I/O	
USB	2 x USB 3.2 2 x USB 2.0 2 x USB 3.2 Gen1 by pin header 2 x USB 2.0 by pin header
COM Port	1 x RS-232 2 x RS-232/422/485
SATA	2 x SATA III 2 x SATA power
DIO	1 x 8-bit GPIO
Mechanical & Environmental	
Operating Temp.	0°C to 60°C (32°F ~ 140°F)
Storage Temp.	-20° C ~ 80° C (-4°F ~ 176°F)
Operating Humidity	5% to 90% Non-condensing
Weight	0.88lbs (0.4Kgs)
Power Requirement	DC in +12V~24V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	6.7" x 6.7" (170mm x 170mm)

MX610HD

12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors,
Thin Mini ITX Motherboard With Intel® H610E Chipset

Mechanical Drawing



Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
MX610HD 71852-IA	12th/13th/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors, LGA 1700 Socket, 65W TDP	Intel® H610E	2	8	3	1	ATX Power	0°C ~ 60°C (32~140°F)

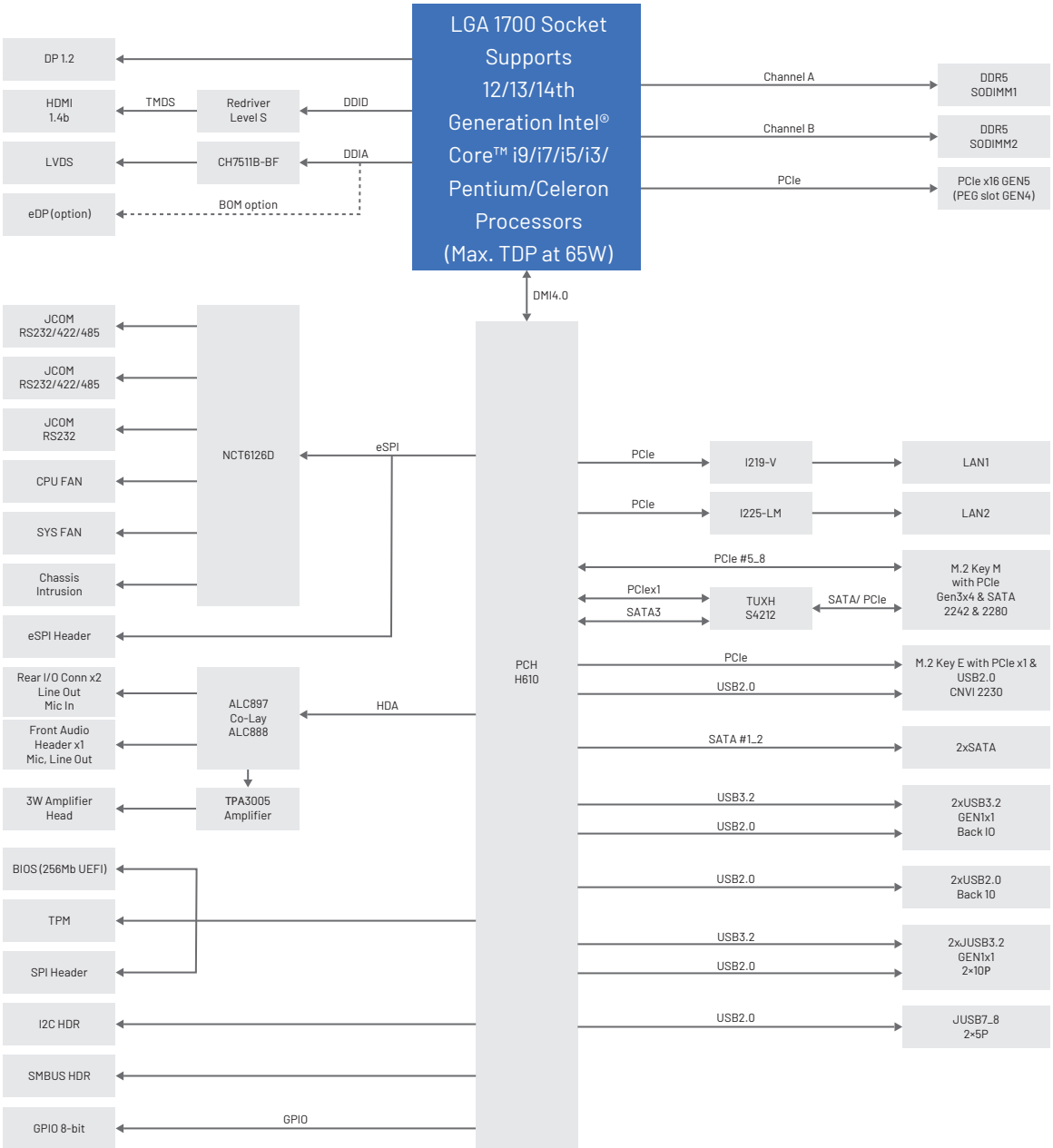
Packing List

Item	P/N	Quantity
SATA Power Cable	-	1
Full Size IO Shield	-	1
Half Size IO Shield	-	1

MX610HD

12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors,
Thin Mini ITX Motherboard With Intel® H610E Chipset

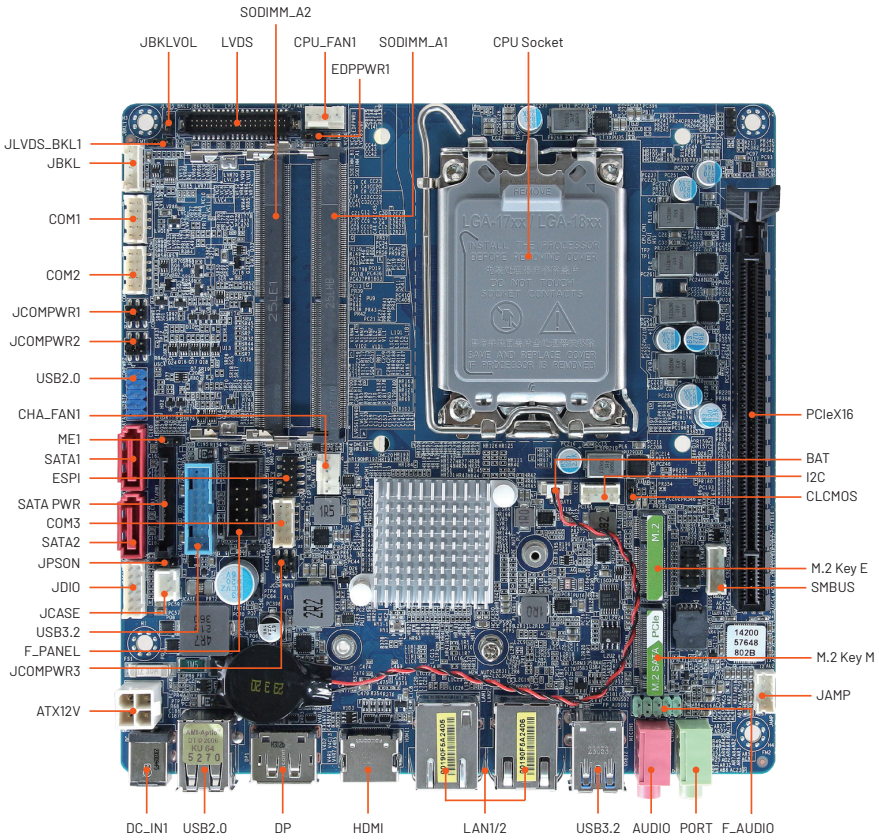
Block Diagram



MX610HD

12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors,
Thin Mini ITX Motherboard With Intel® H610E Chipset

I/O Overview



Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660