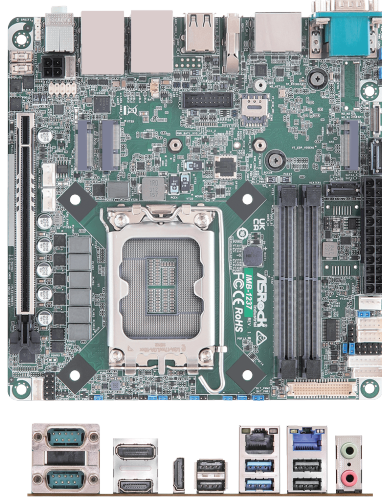


IMB-1237

Mini-ITX Motherboard



KEY FEATURES

- Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with H610 chipset
- 2 x 262-pin SO-DIMM DDR5 4800/5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x16 (Gen5), 2 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 5 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 2 x SATA3
- 1 x Intel 2.5 Gigabit LAN, 1 x Intel 1 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x HDMI 1.4b, 1 x DP 1.4a, 1 x LVDS or eDP
- TPM 2.0 onboard IC
- ATX-PWR (24+4-pin) and +12V DC-In co-design

SPECIFICATIONS

Form Factor

Dimensions (LxWxH)	Mini-ITX (6.7-in x 6.7-in x 1.5-in, 17.0 cm x 17.0 cm x 3.8 cm)
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Processor System

CPU	Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 65W
Chipset	Intel® H610
Socket	LGA1700
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 4800/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *If motherboard ambient temp. is over 55°C, the memory thermal solution should be added to avoid thermal issue
Capacity	96 GB (48 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz HDMI 1.4b Max resolution up to 4096x2160@30Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1200@60Hz (Connector shared with LVDS)
MultiDisplay	Triple Display

Expansion Slot

PCIe	1 x PCIe x16 (Gen5)
M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe x1, USB3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x Socket connected to M.2 Key B

Audio

Interface	Realtek ALC662, High Definition Audio. Line-out, Mic-in
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Ethernet

Controller/ Speed	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.0b 1 x HDMI 1.4b
DisplayPort	1 x DP 1.4a++
Ethernet	1 x 2.5 Gigabit LAN 1 x 1 Gigabit LAN
USB	2 x USB 3.2 Gen2 4 x USB 2.0
Audio	2 (Mic-in, Line-out)
COM	COM1, COM2 (RS-232/422/485)

Internal Connector

USB	1 x USB 3.2 Gen1 (1 x USB 3.2 header) 1 x USB 2.0 (From USB 3.2 header)
COM	COM3, COM4 (RS-232)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	2 x SATA3 (6Gb/s)

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output Interval	From Super I/O to drag RESETCON# 256 Segments, 0, 1, 2, ..., 255sec
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Power Requirements

Input PWR	ATX PWR (24+4-pin) and +12V DC-In co-design
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

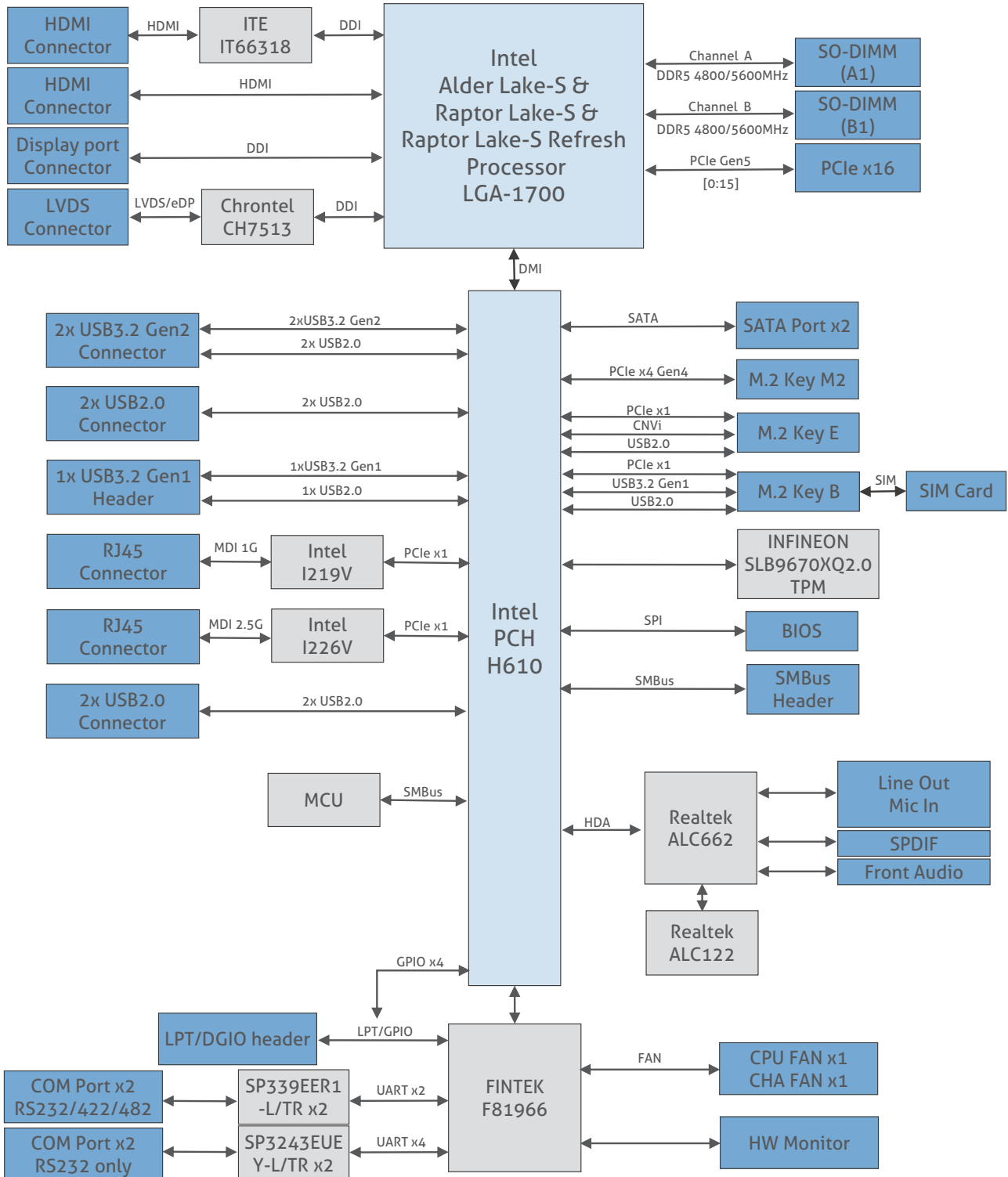
Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

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Mini-ITX Motherboard

BLOCK DIAGRAM



The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

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.

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