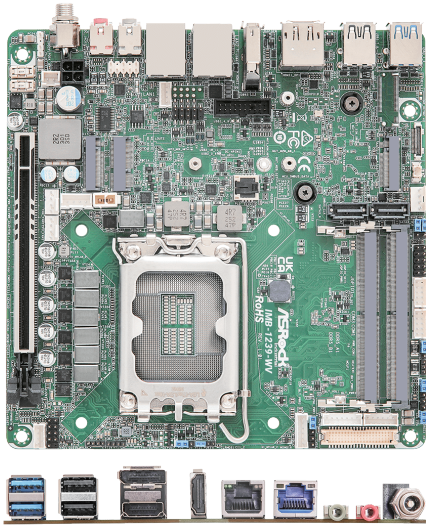


IMB-1239-WV

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, 2 x COM, 2 x SATA3
- 1 x Intel 2.5 Gigabit LAN, 1 x Intel 1 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 1 x DP 1.4a, 1 x LVDS, 1 x eDP 1.4b
- TPM 2.0 onboard IC
- 12~28V DC-In (Lockable DC Jack)

SPECIFICATIONS

Form Factor

| | |
|------------|---|
| Dimensions | Mini-ITX (6.7-in x 6.7-in x 1.5-in, 17.0 cm x 17.0 cm x 2.5 cm) |
|------------|---|

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 |
| DisplayPort | DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz |
| LVDS | Dual channel 24 bit up to 1920x1200@60Hz |
| eDP | eDP 1.4b Max resolution up to 4096x2160@60Hz |
| 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, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G |
| SIM Socket | 1 x Socket connected to M.2 Key B |

Audio

| | |
|-----------|---|
| Interface | Realtek ALC897, High Definition Audio. Line-out, Mic-in |
|-----------|---|

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 | 2 x HDMI 2.0b |
| 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 2 x USB 2.0 |
| Audio | 2 (Mic-in, Line-out) |

Internal Connector

| | |
|-----------------|--|
| USB | 1 x USB 3.2 Gen1 (1 x USB 3.2 header) 3 x USB 2.0 (1 x 2.54 pitch header) |
| COM | COM1, COM3 (RS-232/422/485) |
| GPIO | 4 x GPI, 4 x GPO |
| LVDS | 1 |
| eDP | 1 |
| SATA PWR Output | 1 |
| Speaker Header | 1 |

Storage

| | |
|------|--|
| M.2 | 1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x4 for SSD |
| SATA | 2 x SATA3 (6Gb/s) |

Security

| | |
|-----|--------------------|
| TPM | TPM 2.0 onboard IC |
|-----|--------------------|

Watchdog Timer

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

Power Requirements

| | |
|-----------|---|
| Input PWR | 12~28V DC-In with 4-pin wafer PWR cable or DC Jack (Screw type) |
| Power On | AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready |

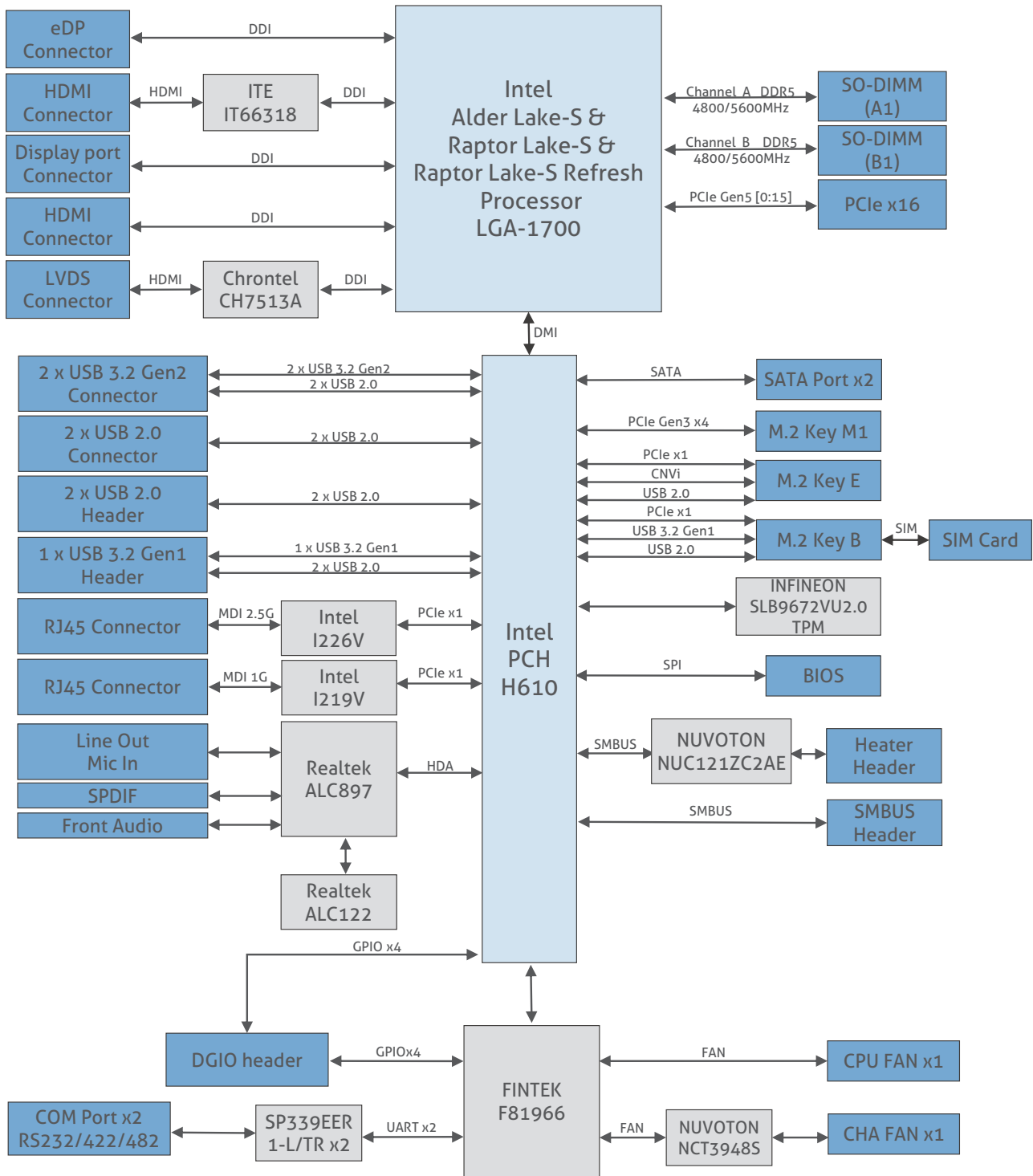
Environment

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

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BLOCK DIAGRAM



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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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