

IMB-1003

Mini-ITX Motherboard



KEY FEATURES

- Intel® Elkhart Lake SoC Processors
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 1 x PCIe x1 Gen3, 4 x USB 3.2 Gen1, 7 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 2 x SATA3
- 1 x Realtek 2.5 Gigabit LAN, 1 x Realtek 1 Gigabit LAN
- Support Triple display, 1 x LVDS or eDP, 1 x HDMI2.0b, 1 x VGA
- TPM Header
- ATX-PWR (24+4-pin) and 12~28V DC-In co-design

SPECIFICATIONS

Form Factor

| | |
|------------|---|
| Dimensions | Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.1 cm) |
|------------|---|

Processor System

| | |
|---------|--|
| CPU | Intel® Elkhart Lake SoC Processors IMB-1003J (J6412, QC, Max Speed Up to 2.6GHz, 10W) IMB-1003D (J6426, QC, Max Speed Up to 3.0GHz, 10W) IMB-1003L (N6210, DC, Max Speed Up to 2.6GHz, 6.5W) IMB-1003N (N6415, QC, Max Speed Up to 3.0GHz, 6.5W) |
| Chipset | SoC |
| BIOS | AMI SPI 256 Mbit |

Memory

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|------------|----------------------------|
| Technology | Dual Channel DDR4 3200 MHz |
| Capacity | 32GB (16 GB per DIMM) |
| Socket | 2 x 260-pin SO-DIMM |

Graphics

| | |
|--------------|---|
| Controller | Intel® Gen 11 Graphics |
| HDMI | HDMI 2.0b Max resolution up to 4096 x 2160@60Hz |
| VGA | Max resolution up to 1920 x 1200@60Hz |
| LVDS | Dual channel 24 bit up to 1920 x 1080@60Hz (Connector shared with eDP) |
| eDP | Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS) |
| MultiDisplay | Triple display |

Expansion Slot

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|------------|---|
| PCIe | 1 x PCIe x1 (Gen3) |
| M.2 | 1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2, USB2.0 and SIM for 4G/5G |
| SIM Socket | 1x SIM socket connected to M.2 key B |

Audio

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

Ethernet

| | |
|-------------------|--|
| Controller/ Speed | LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps |
| Connector | 2 x RJ-45 |

Rear I/O

| | |
|----------|--|
| HDMI | 1 x HDMI2.0b |
| VGA | 1 |
| Ethernet | 1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN |
| USB | 2 x USB 3.2 (Gen1), 2 x USB2.0 |
| Audio | 2 (Mic-In, Line-Out) |
| COM | COM1, COM3, COM4 (RS-232/422/485) |
| PS2 | 1 x PS/2 combo |

Internal Connector

| | |
|-----------------|--|
| USB | 2 x USB 3.2 Gen1 (1xUSB3.2 header) 5 x USB 2.0 (2x2.54 pitch header, 1 x USB 2.0 Type-A vertical con) |
| COM | COM2, COM5, COM6 (RS-232) |
| GPIO | 4 x GPI, 4 x GPO |
| TPM | TPM Header |
| LVDS | 1 (Connector with LVDS/eDP signal, switch by BIOS) |
| SATA PWR Output | 1 |
| Speaker Header | 1 |
| CAN Bus | 2 x CAN Bus (1 x 2.00 pitch header) (Supported by IMB-1003D, IMB-1003N) |

Storage

| | |
|------|--|
| M.2 | 1 x M.2 (Key M, 2242/2260/2280) with SATA3 and PCIe x1 for SSD |
| SATA | 2 x SATA3 (6Gb/s), SATA3_2 shared with M.2 Key M |

Watchdog Timer

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

Power Requirements

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|-----------|---|
| Input PWR | ATX PWR (24+4-pin) and 12V~28V 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

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|--------------------|----------------|
| Operating Temp | 0°C ~ 60°C |
| Storage Temp | -40° C ~ 85° C |
| Operating Humidity | 5% ~ 90% |
| Storage Humidity | 5% ~ 90% |

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