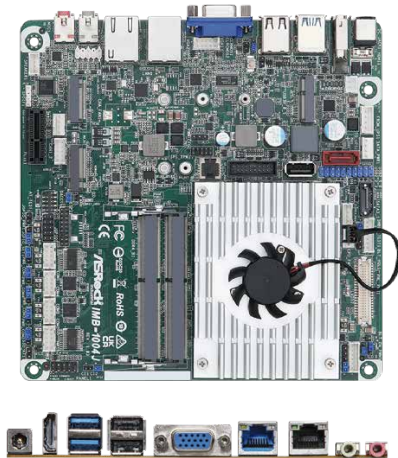


# IMB-1004

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, 4 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
- 12~28V DC-In

## 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 3.8 cm) |
|------------|-----------------------------------------------------------------|

### Processor System

|         |                                                                                                                                                                                                                                                              |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU     | Intel® Elkhart Lake SoC Processors<br>IMB-1004J (J6412, QC, Max Speed Up to 2.6GHz, 10W)<br>IMB-1004D (J6426, QC, Max Speed Up to 3.0GHz, 10W)<br>IMB-1004L (N6210, DC, Max Speed Up to 2.6GHz, 6.5W)<br>IMB-1004N (N6415, QC, Max Speed Up to 3.0GHz, 6.5W) |
| Chipset | SoC                                                                                                                                                                                                                                                          |
| BIOS    | AMI SPI 256 Mbit                                                                                                                                                                                                                                             |

### Memory

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

### Graphics

|              |                                                                           |
|--------------|---------------------------------------------------------------------------|
| Controller   | Intel® Gen 11 Graphics                                                    |
| HDMI         | HDMI 2.0b<br>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<br>(Connector shared with eDP) |
| eDP          | Max resolution up to 1920 x 1080@60Hz<br>(Connector shared with LVDS)     |
| MultiDisplay | Triple display                                                            |

### Expansion Slot

|            |                                                                                                                         |
|------------|-------------------------------------------------------------------------------------------------------------------------|
| PCIe       | 1 x PCIe x1 (Gen3)                                                                                                      |
| M.2        | 1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0<br>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

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Interface | Realtek ALC897 HD , High Definition Audio. Mic-In / Line-Out |
|-----------|--------------------------------------------------------------|

### Ethernet

|                   |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| Controller/ Speed | LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps<br>LAN2: Realtek RTL8111G/RTL8111H-CG 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)                   |
| DC Jack  | 1                                      |

### Internal Connector

|                 |                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------|
| USB             | 2 x USB 3.2 Gen1 (1xUSB3.2 header)<br>5 x USB 2.0 (2x2.54 pitch header, 1 x USB 2.0 Type-A vertical con) |
| COM             | 2 x COM (RS-232)<br>2 x COM (RS-232/422/485)                                                             |
| GPIO            | 4 x GPI, 4 x GPO                                                                                         |
| TPM             | TPM Header                                                                                               |
| LVDS            | 1 (Connector with LVDS/eDP signal, switch by BIOS)                                                       |
| VGA             | 1                                                                                                        |
| SATA PWR Output | 1                                                                                                        |
| Speaker Header  | 1                                                                                                        |
| CAN Bus         | 2 x CAN Bus (1 x 2.00 pitch header)<br>(Supported by IMB-1004D, IMB-1004N)                               |

### 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)                                              |

### 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                                                                        |
| Power On  | AT/ATX Supported<br>- AT : Directly PWR on as power input ready<br>- ATX : Press button to PWR on after power input ready |

### Environment

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

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