

# IMB-1005

Mini-ITX Motherboard



## KEY FEATURES

- Intel® Alder Lake-N SoC Processors
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 1 x PCIe x1 (Gen3), 4 x USB 3.2 Gen1, 5 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key B, 1 x M.2 Key M, 6 x COM, 1 x SATA3
- 2 x Realtek 2.5 Gigabit LAN
- Support Triple display, 2 x HDMI2.0b, 1 x VGA, 1 x LVDS or eDP
- 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® Alder Lake-N SoC Processors<br>IMB-1005J (N97, QC, Max Speed Up to 3.6GHz, 12W)<br>*For other CPU SKUs request, please contact regional Sales for availability |
| Chipset | SoC                                                                                                                                                                   |
| BIOS    | AMI SPI 256 Mbit                                                                                                                                                      |

### Memory

|            |                              |
|------------|------------------------------|
| Technology | Single Channel DDR4 3200 MHz |
| Capacity   | 32GB                         |
| Socket     | 1 x 260-pin SO-DIMM          |

### Graphics

|              |                                                                           |
|--------------|---------------------------------------------------------------------------|
| Controller   | Intel® UHD 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 1200@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 and CNVi for Wireless<br>1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2 Gen1, USB2.0 and SIM for 4G/5G |
| SIM Socket | 1 x 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 RTL8125BG with 10/100/1000/2500 Mbps |
| Connector         | 2 x RJ-45                                                                                                |

### Rear I/O

|          |                                   |
|----------|-----------------------------------|
| HDMI     | 2 x HDMI2.0b                      |
| VGA      | 1                                 |
| Ethernet | 2 x 2.5 Gigabit LAN               |
| USB      | 2 x USB 3.2 Gen1<br>2 x USB 2.0   |
| Audio    | 2 (Mic-In, Line-Out)              |
| COM      | COM1, COM2, COM3 (RS-232/422/485) |

### Internal Connector

|                    |                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------|
| USB                | 2 x USB 3.2 Gen1 (1 x USB3.2 header)<br>3 x USB 2.0 (1 x 2.54 pitch header, 1 x USB 2.0 Type-A vertical con) |
| COM                | COM4 (RS-232)<br>COM5 (RS-232 or TTL (optional))<br>COM6 (RS-232 or ccTalk (optional))                       |
| GPIO               | 4 x GPI, 4 x GPO                                                                                             |
| LVDS               | 1 (Connector with LVDS/eDP signal, switch by BIOS)                                                           |
| SATA PWR Output    | 1                                                                                                            |
| Speaker Header     | 1                                                                                                            |
| MIPI Camera Header | 1 (optional)                                                                                                 |

### Storage

|      |                                                                    |
|------|--------------------------------------------------------------------|
| M.2  | 1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 or SATA3 for SSD |
| SATA | 1 x SATA3 (6Gb/s)                                                  |

### Security

|     |            |
|-----|------------|
| TPM | TPM Header |
|-----|------------|

### Watchdog Timer

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

### Power Requirements

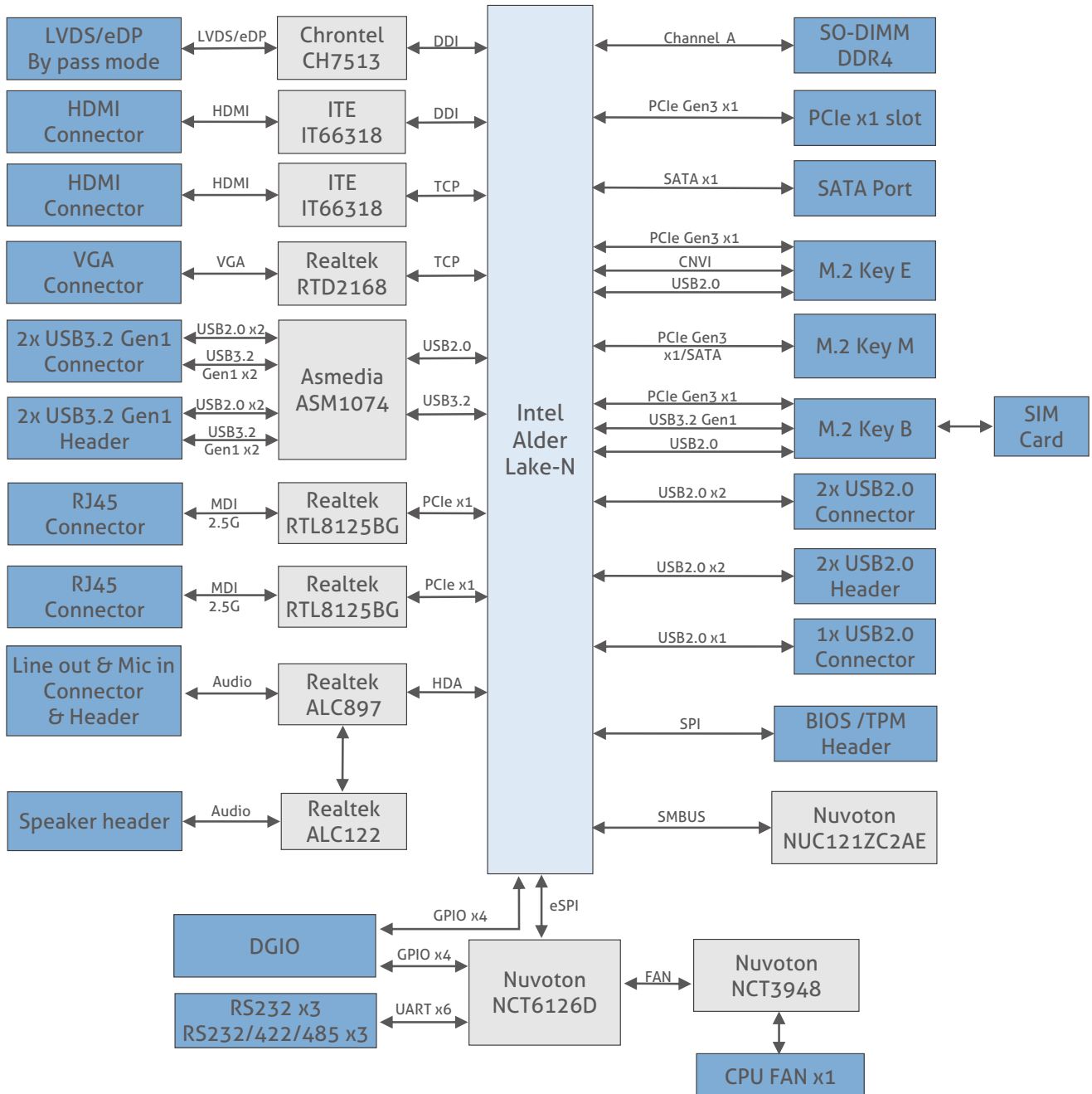
|           |                                                                                                                           |
|-----------|---------------------------------------------------------------------------------------------------------------------------|
| Input PWR | ATX-PWR (24+4-pin) and 12~28V DC-In co-design                                                                             |
| 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     | -20°C ~ 70°C |
| Storage Temp       | -40°C ~ 85°C |
| Operating Humidity | 5% ~ 90%     |
| Storage Humidity   | 5% ~ 90%     |

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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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