# IMB-A1003
## Mini-ITX Motherboard



## KEY FEATURES

· AMD EPYC™ 4005/4004 and AMD Ryzen™ 9000/8000/7000 Series Processors with B650 Chipset

· 2 x 262-pin ECC/non-ECC SO-DIMM DDR5 5200 MHz, up to 96GB (48GB per DIMM)

· 1 x PCIe x16 (Gen5), 4 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 2 x COM, 2 x SATA3

· 2 x Realtek Gigabite LAN

· Supports Quad display, 4 x DP 1.2++

· TPM 2.0 onboard IC

## 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 3.7 cm) |

### Processor System

| | |
|---|---|
| CPU | AMD EPYC™ 4005/4004 and AMD Ryzen™ 9000/8000/7000 Series Desktop Processors*, up to 65W <br> *The availability of expansion slots may vary by CPU. Please refer to PCIe Bandwidth Table for details |
| Chipset | AMD Promontory B650 |
| Socket | AM5 |
| BIOS | AMI SPI 256 Mbit |

### Memory

| | |
|---|---|
| Technology | Dual Channel DDR5 5200 MHz |
| Capacity | 96GB (48GB per DIMM) |
| Socket | 2 x 262-pin SO-DIMM |

### Graphics

| | |
|---|---|
| Controller | AMD RDNA™ 2 Architecture |
| DisplayPort | DisplayPort 1.2, DP++ <br> Max resolution up to 4096x2160@60Hz |
| MultiDisplay | Quad Display |

### Expansion Slot

| | |
|---|---|
| PCIe | 1 x PCIe x16 (Gen5) |
| M.2 | 1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 for Wireless |

### Audio

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

### Ethernet

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

### Rear I/O

| | |
|---|---|
| DisplayPort | 4 x DP 1.2++ |
| Ethernet | 2 x 1 Gigabit LAN |
| USB | 4 x USB 3.2 Gen 2 <br> 2 x USB 2.0 |
| Audio | 2 (Mic-in, Line-out) |

### Internal Connector

| | |
|---|---|
| USB | 2 x USB 3.2 Gen1 <br> 2 x USB 2.0 (1 x 2.54 pitch header) |
| COM | COM1, COM2 <br> (RS-232/422/485/TTL 5V/ccTalk, switch by Jumper setting) |

### Storage

| | |
|---|---|
| M.2 | 1 x M.2 Key M (2242/2280) with PCIe Gen4 x4, and USB 2.0 |
| 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 <br> - AT : Directly PWR on as power input ready <br> - ATX : Press button to PWR on after power input ready |

### Environment

| | |
|---|---|
| Operating Temp | -20ºC ~ 60ºC |
| Storage Temp | -40° C – 85° C |
| Operating Humidity | 5% ~ 90% |
| Storage Humidity | 5% ~ 90% |