



### KEY FEATURES

- AMD Ryzen™ Embedded 8000 Series processors
- 2 x 262-pin ECC/non-ECC SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x8 (Gen4), 1 x USB 3.2 Gen2, 3 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key M, 1 x M.2 Key E, 5 x COM, 2 x SATA3, 1 x ccTalk
- 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Quad display, 4 x DP 1.4a
- 12~28V DC-In (Lockable DC Jack)

### 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  | AMD Ryzen™ Embedded 8000 SoC processors<br>-IMB-A8000P (PRO 8845HS, 8/16, 3.8GHz, 35-54W)<br>-IMB-A8000S (PRO 8645HS, 6/12, 4.3GHz, 35-54W)<br>-IMB-A8000M (PRO 8840U, 8/16, 3.3GHz, 15-30W)<br>-IMB-A8000V (PRO 8640U, 6/12, 3.5GHz, 15-30W) |
| BIOS | AMI SPI 256 Mbit                                                                                                                                                                                                                              |

#### Memory

|            |                                        |
|------------|----------------------------------------|
| Technology | Dual Channel ECC/non-ECC DDR5 5600 MHz |
| Capacity   | 96 GB (48 GB per DIMM)                 |
| Socket     | 2 x 262-pin SO-DIMM                    |

#### Graphics

|              |                                                               |
|--------------|---------------------------------------------------------------|
| Controller   | AMD RDNA™ 3                                                   |
| DisplayPort  | DisplayPort 1.4a, DP++<br>Max resolution up to 4096x2160@60Hz |
| MultiDisplay | Quad Display                                                  |

#### Expansion Slot

|            |                                                                                                                                                          |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCIe       | 1 x PCIe x8 (Gen4)                                                                                                                                       |
| M.2        | 1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 for Wireless<br>1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.0, USB 2.0 and SIM Socket for 4G/5G |
| SIM Socket | 1 x Socket connected to M.2 Key B                                                                                                                        |

#### Audio

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

#### Ethernet

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

#### Rear I/O

|             |                                          |
|-------------|------------------------------------------|
| DisplayPort | 4 x DP 1.4a                              |
| Ethernet    | 1 x 1 Gigabit LAN<br>1 x 2.5 Gigabit LAN |
| USB         | 1 x USB 3.2 Gen2<br>3 x USB 3.2 Gen1     |
| Audio       | 2 (Line-in, Line-out)                    |
| COM         | COM1, COM2 (RS-232/422/485)              |

#### Internal Connector

|                    |                                                                      |
|--------------------|----------------------------------------------------------------------|
| USB                | 4 x USB 2.0 (2 x 2.00 pitch header, 1 x USB 2.0 Type-A vertical con) |
| COM                | COM3, COM4, COM5 (RS-232)                                            |
| cc Talk            | 1                                                                    |
| SATA PWR Output    | 1                                                                    |
| GPU Card PWR Input | 1                                                                    |

#### Storage

|      |                                                      |
|------|------------------------------------------------------|
| M.2  | 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD |
| SATA | 2 x SATA3 (6Gb/s)                                    |

#### Security

|     |            |
|-----|------------|
| TPM | AMD FW TPM |
|-----|------------|

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

## BLOCK DIAGRAM

