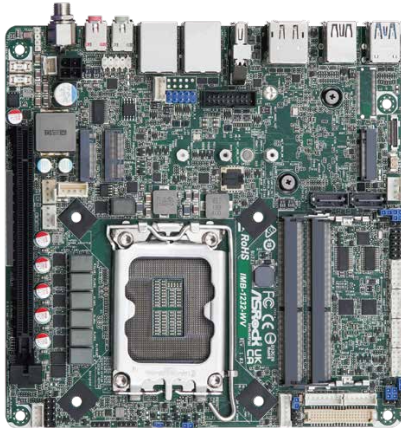




# IMB-1232-WV

## Mini-ITX Motherboard

### KEY FEATURES

- Intel® 13th/12th Gen (Raptor Lake-S/Alder Lake-S) Core™ Processors with H610 chipset
- 2 x 260-pin SO-DIMM DDR4 3200 MHz , up to 64GB (32GB per DIMM)
- 1 x PCIe x16 (Gen4), 2 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 5 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 2 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 2 x DP1.4a, 1 x LVDS, 1 x eDP1.4b
- TPM 2.0 onboard IC
- 12~28V DC-In (Lockable DC Jack)

### SPECIFICATIONS

#### Form Factor

|                    |                                                                 |
|--------------------|-----------------------------------------------------------------|
| Dimensions (LxWxH) | Mini-ITX (6.7-in x 6.7-in x 1.0-in, 17.0 cm x 17.0 cm x 2.5 cm) |
|--------------------|-----------------------------------------------------------------|

#### Processor System

|         |                                                                               |
|---------|-------------------------------------------------------------------------------|
| CPU     | Intel® 13th/12th Gen (Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 65W |
| Chipset | Intel® H610                                                                   |
| Socket  | LGA1700                                                                       |
| BIOS    | AMI SPI 256 Mbit                                                              |

#### Memory

|            |                            |
|------------|----------------------------|
| Technology | Dual Channel DDR4 3200 MHz |
| Capacity   | 64 GB (32 GB per DIMM)     |
| Socket     | 2 x 260-pin SO-DIMM        |

#### Graphics

|              |                                                               |
|--------------|---------------------------------------------------------------|
| Controller   | Intel® UHD Graphics                                           |
| HDMI         | HDMI 2.0b<br>Max resolution up to 4096x2160@60Hz              |
| DisplayPort  | DisplayPort 1.4a, DP++<br>Max resolution up to 4096x2160@60Hz |
| LVDS         | Dual channel 24 bit up to 1920x1200@60Hz                      |
| eDP          | eDP1.4b<br>Max resolution up to 4096x2160@60Hz                |
| MultiDisplay | Triple Display                                                |

#### Expansion Slot

|            |                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| PCIe       | 1 x PCIe x16 (Gen4)                                                                                                                                |
| 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/USB3.2 Gen1/USB 2.0 and SIM for 4G/5G |
| SIM Socket | 1 x Socket connected to M.2 Key B                                                                                                                  |

#### Audio

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

#### Ethernet

|                   |                                                                                                  |
|-------------------|--------------------------------------------------------------------------------------------------|
| Controller/ Speed | LAN1: Intel® I225LM with 10/100/1000/2500 Mbps<br>LAN2: Intel® I225LM with 10/100/1000/2500 Mbps |
| Connector         | 2 x RJ-45                                                                                        |

#### Rear I/O

|             |                                   |
|-------------|-----------------------------------|
| HDMI        | 1 x HDMI 2.0b                     |
| DisplayPort | 2 x DP 1.4a++                     |
| Ethernet    | 2 x 2.5 Gigabit LAN               |
| USB         | 2 x USB 3.2 (Gen2)<br>2 x USB 2.0 |
| Audio       | 2 (Mic-in, Line-out)              |

#### Internal Connector

|                 |                                                                              |
|-----------------|------------------------------------------------------------------------------|
| USB             | 1 x USB 3.2 Gen1 (1 x USB 3.2 header)<br>3 x USB 2.0 (1 x 2.54 pitch header) |
| COM             | COM1, COM2 (RS-232/422/485)<br>COM3, COM4 (RS-232)                           |
| GPIO            | 4 x GPI, 4 x GPO                                                             |
| TPM             | TPM 2.0 onboard IC                                                           |
| LVDS            | 1                                                                            |
| eDP             | 1                                                                            |
| SATA PWR Output | 1                                                                            |
| Speaker Header  | 1                                                                            |

#### Storage

|      |                                                           |
|------|-----------------------------------------------------------|
| M.2  | 1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x4 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(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     | 0°C ~ 70°C     |
| Storage Temp       | -40° C ~ 85° C |
| Operating Humidity | 5% ~ 90%       |
| Storage Humidity   | 5% ~ 90%       |

## Assured Systems

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