

# IMB-X1714

## ATX Motherboard

### KEY FEATURES

- Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with Q670 chipset
- 4 x 288-pin ECC/non-ECC Long-DIMM DDR5 4400/5600 MHz , up to 192GB (48GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 2 x PCIe x4 (Gen4), 3 x PCIe x1 (Gen3)
- 1 x USB 3.2 Gen2x2 Type C, 5 x USB 3.2 Gen2, 2 x USB3.2 Gen1, 4 x USB 2.0
- 1 x M.2 Key B, 1 x M.2 Key E, 2 x M.2 Key M, 6 x COM, 8 x SATA3
- 3 x Intel 2.5 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP1.4a, 1 x VGA
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+24 Pin)

### SPECIFICATIONS

#### Form Factor

|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| Dimensions (LxWxH) | ATX (12-in x 9.6-in x 1.4-in, 30.5 cm x 24.4 cm x 3.6 cm) |
|--------------------|-----------------------------------------------------------|

#### Processor System

|         |                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU     | Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 125W |
| Chipset | Intel® W680                                                                                                                                              |
| Socket  | LGA1700                                                                                                                                                  |
| BIOS    | AMI SPI 256 Mbit                                                                                                                                         |

#### Memory

|            |                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technology | Dual Channel ECC/non-ECC DDR5 4400/5600 MHz*<br>*Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to <a href="https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&amp;faq_id=90">https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&amp;faq_id=90</a> technical FAQ<br>*For DDR5 5600 support refer to memory support list |
| Capacity   | 192GB (48GB per DIMM)                                                                                                                                                                                                                                                                                                                                                                      |
| Socket     | 4 x 288-pin Long-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 |
| VGA          | Max resolution up to 1920 x 1200@60Hz                         |
| MultiDisplay | Triple Display                                                |

#### Expansion Slot

|            |                                                                                                                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCIe       | 2 x PCIe Gen5 Slots (PCIe1/PCIe4:single at x16(PCIe1); dual at x8 (PCIe1) / x8 (PCIe4)) (PCIe1: Support Riser card x8/x8)<br>2 x PCIe x4 (Gen4)<br>3 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, USB3.2 Gen1, USB 2.0 and SIM for 4G/5G                  |
| SIM Socket | 1 x SIM socket connected to M.2 Key B                                                                                                                                 |

#### Audio

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

#### Ethernet

|                   |                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller/ Speed | LAN1: Intel® I226V with 10/100/1000/2500 Mbps, supports PoE<br>LAN2: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro<br>LAN3: Intel® I226V with 10/100/1000/2500 Mbps |
| Connector         | 3 x RJ-45                                                                                                                                                                     |

#### Rear I/O

|             |                                                        |
|-------------|--------------------------------------------------------|
| HDMI        | 1 x HDMI 2.0b                                          |
| DisplayPort | 1 x DP 1.4a++                                          |
| VGA         | 1                                                      |
| Ethernet    | 3 x 2.5 Gigabit LAN                                    |
| USB         | 5 x USB 3.2 Gen2<br>1 x USB 3.2 Gen2x2 (Type-C, 5V/3A) |
| Audio       | 3 (Mic-in, Line-in, Line-out)                          |
| COM         | COM1, COM2 (RS-232/422/485)                            |

#### Internal Connector

|                    |                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------|
| USB                | 2 x USB 3.2 Gen1 (1 x USB 3.2 header)<br>4 x USB 2.0 (1 x 2.54 pitch header, 2 x USB 2.0 Type-A vertical con) |
| COM                | COM3, COM4, COM5, COM6 (RS-232)                                                                               |
| Parallel           | 1                                                                                                             |
| GPIO               | 8 x GPI, 8 x GPO (shared with LPT header)                                                                     |
| PS2                | 1 x PS2 header                                                                                                |
| Thunderbolt header | 1                                                                                                             |

#### Storage

|      |                                                                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M.2  | 1 x M.2 (Key M, 2242/2260/2280/22110/25110) with PCIe Gen4 x4 for SSD<br>1 x M.2 (Key M, 2242/2260/2280/22110/25110) with PCIe Gen3 x4 for SSD                         |
| SATA | 8 x SATA3 (6Gb/s)                                                                                                                                                      |
| RAID | Intel® VMD RAID 0/1/5/10<br>**supported by identical interface (PCIe or SATA)<br>PCIe interface: M.2 Key B + M.2 Key M1/2 or 2**M.2 Key M<br>SATA interface: SATA port |

#### 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 | ATX PWR (8+24 Pin)                                                                                                        |
| 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

