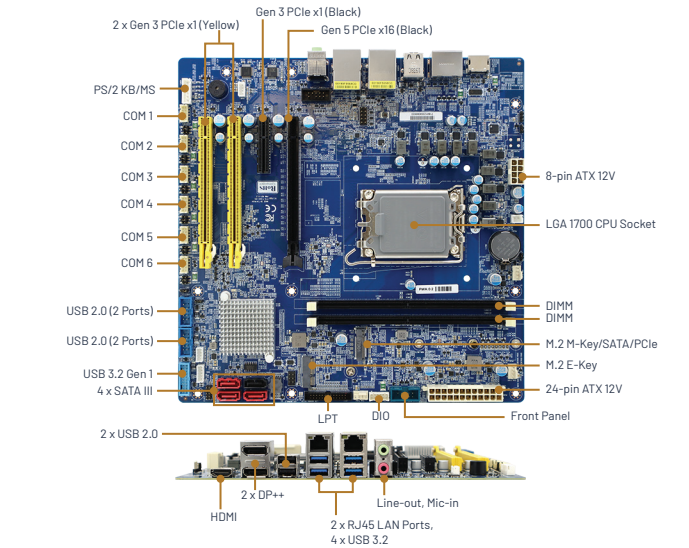


Features

- LGA 1700 Socket supports 12th/13th/14th Gen Intel® Core™ i 9/7/5/3 Processor, codenamed Alder Lake/Raptor Lake/Raptor Lake Refresh
- Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
- Intel® H610E PCH, x4 Gen4 DMI
- 2 x DIMM slots support Dual Channel DDR5 memory speed up to 5600MHz with UDIMM, up to 64GB
- Intel® I225-LM 2.5GbE
- 1 x Gen 5 PCIe x16, 1 x Gen 3 PCIe x1, 2 x Gen 3 PCIe x1
- 1 x M.2 NVMe M-Key, 1 x M.2 E-Key Supports CNVi
- TPM 2.0
- Supports 3 Independent Display: 1 x HDMI, 2 x DP++
- 6 x COM, 4 x SATA III
- 6 x USB 3.2 Gen 1, 6 x USB 2.0
- I²C, SMBus, PS/2, LPT, 8-bit GPIO
- Supports Win 10, Win 11, Linux

Specifications

| System | |
|--------------------|--|
| CPU | LGA 1700 Socket supports 12th Gen Alder Lake/ 13th Gen Raptor Lake/ 14th Gen Raptor Lake Refresh Intel® Core™ i 9/7/5/3, Pentium, Celeron Processor up to 16 Cores 24 Threads Hybrid |
| Chipset | Intel® H610E PCH |
| System Memory | 2 x DIMM slots support Dual Channel DDR5 5600MHz up to 64GB <ul style="list-style-type: none">● 12th Gen i3/i5/i7/i9: up to DDR5 4800 MT/s● 13th Gen i3/i5: up to DDR5 4800 MT/s (CPU dependent)● 13th Gen i7/i9: up to DDR5 5600 MT/s (CPU dependent)● 14th Gen i3/i5: up to DDR5 4800 MT/s (CPU dependent)● 14th Gen i7/i9: up to DDR5 5600 MT/s (CPU dependent) Note: BIOS update required. Please consult with BCM Tech Support for more information |
| BIOS | Socket Type 256Mb SPI BIOS |
| DMI | x4 Gen4 DMI |
| Expansion | 1 x Gen 5 PCIe x16 (x16 Physical Black) (Slot 1) 1 x Gen 3 PCIe x1 (x4 Physical Open Ended) (Slot 2) 2 x Gen 3 PCIe x1 (x16 Physical Yellow) (Slot 3 & 4) 1 x M.2 M-Key 2242/2280/22110 NVMe (PCIe x4 + SATA III) 1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 share with slot4 + USB 2.0) |
| TPM | Infineon® TPM 2.0 |
| Watchdog Timer | H/W Reset, 5~255 seconds/5~255 minutes |
| H/W Status Monitor | CPU temperature monitoring, Voltages monitoring, CPU fan speed control |
| Supported OS | Windows 10, Windows 11, Linux |
| Display | |
| Chipset | Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent) |
| Multi-Display | Supports 3 Independent Display |
| Audio | |
| Audio Codec | Realtek HD Audio Codec |
| Amplifier | 6W Per Channel Amplifier |



| Ethernet | |
|--------------|--|
| LAN 1 | Intel® Ethernet Controller I219-V |
| LAN 2 | Intel® Ethernet Controller I225-LM (2.5GbE) |
| External I/O | |
| Display | 1 x HDMI 2 x DP++ |
| USB | 2 x USB 2.0 Type A 4 x USB 3.2 Type A |
| LAN | 2 x RJ45 |
| Audio | Line-out, Mic-in |
| Internal I/O | |
| USB | 2 x USB 2.0 Headers (4 Ports) 1 x USB 3.2 Gen 1 Header (2 Ports) |
| COM | 5 x RS-232 1 x RS-232/422/485 |
| SATA | 3 x SATA III (Red) 1 x SATA III (Black) shared with M.2 |
| I²C | 1 x I²C Header |
| SMBus | 1 x SMBus Header |
| PS/2 | 1 x PS/2 Header |
| Other | 1 x SPI, 1 x Amplifier, Front Audio, Front Panel, 8-bit GPIO, LPT, CPU Fan, Chassis Fan, 1 x 2400Hz buzzer |

Mechanical & Environment

| | |
|----------------------------------|--|
| Power Connector | 1 x 24-pin ATX Connector 1 x 8-pin ATX 12 Connector |
| Power Type | AT/ATX (Default ATX) |
| Operating Temp. | 0°C ~ 60°C (32°F ~ 140°F) |
| Storage Temp. | -20°C ~ 80°C (-4°F ~ 176°F) |
| Operating Humidity | 5% ~ 90% Relative Humidity, Non-condensing |
| Storage Humidity | 5% ~ 90% Relative Humidity, Non-condensing |
| Dimensions | 9.6" x 9.6" (244mm x 244mm) |
| Certification Information | RoHS Compliant, CE, FCC Class B |
| Weight | 1.45 lbs (0.66 KG) |

Ordering Info

| | |
|---------------------|---|
| RX610H | Intel® H610E based Micro ATX Motherboard |
| Included | 1 x I/O Shield |
| 183000000006 | 2.00mm pitch 12" length serial cable |
| 182437200040 | 2.54mm pitch 14" length dual port USB 2.0 cable w/ full height bracket |
| 182000000073 | 2.00mm pitch 19.7" length dual port serial cable w/ full height bracket |

* All product specifications and images are subject to change without notice. Last update: 07/22/2024



BCM Advanced Research
11 Chrysler, Irvine, CA 92618 USA
An Industry Leader in Industrial Motherboards &
Embedded Computing

www.bcmcom.com
BCMSales@bcmcom.com
(949) 470-1888