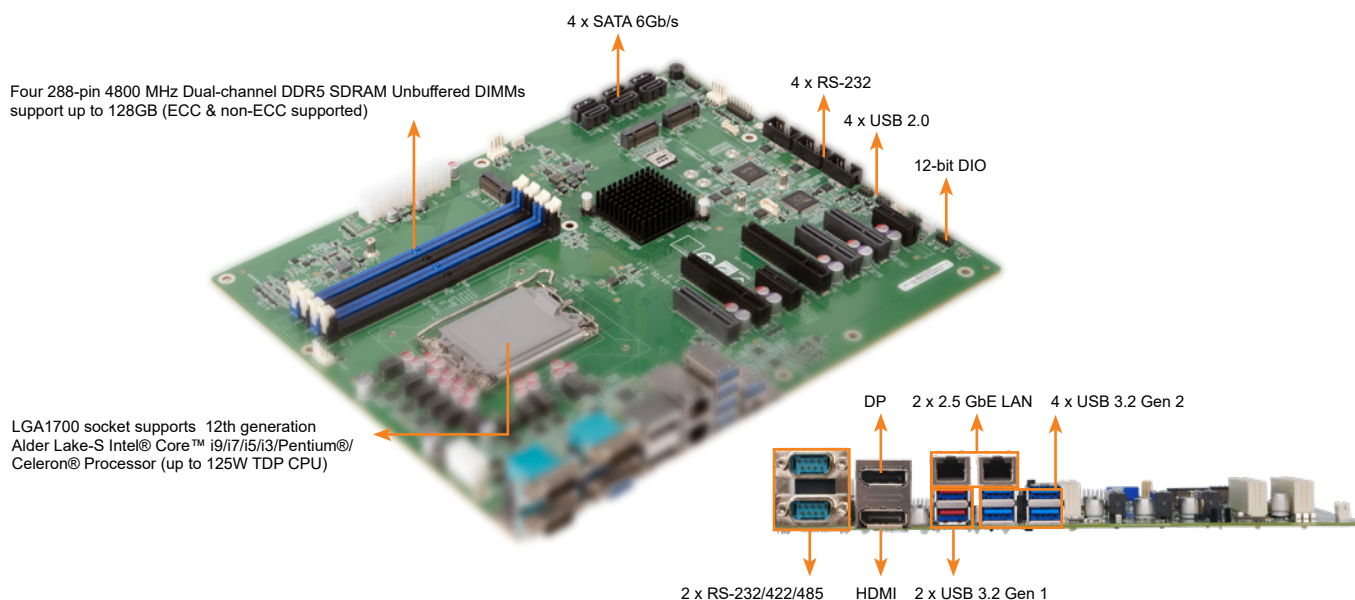


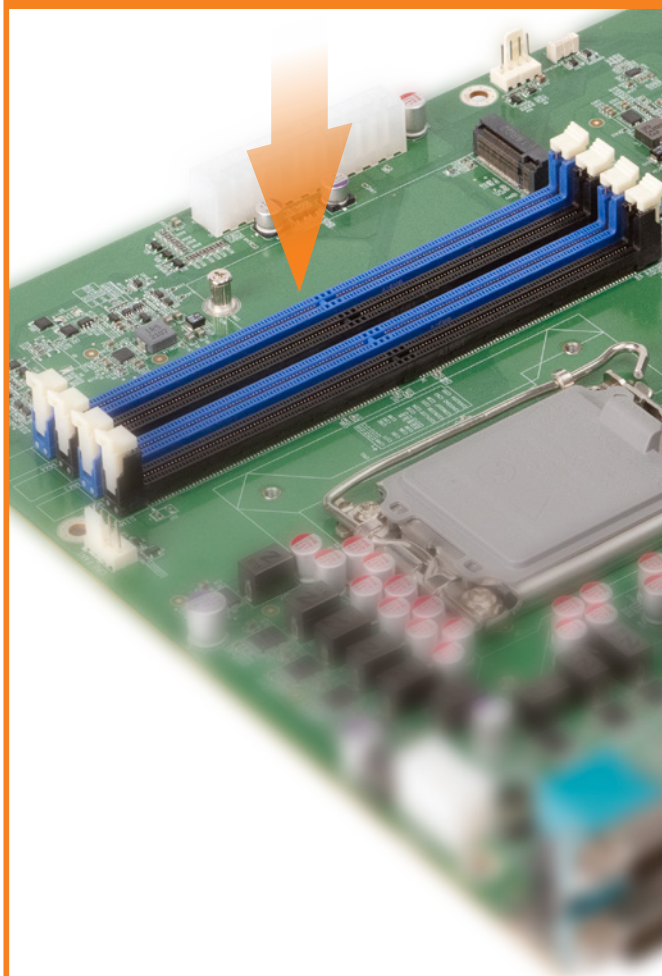
IMBA-R680

ATX motherboard supports LGA1700 12th/13th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR5, triple independent displays, dual 2.5GbE LAN, M.2, USB 3.2, SATA 6Gb/s, and RoHS

preliminary



Four 288-pin 4800 MHz Dual-channel DDR5
(up to 128GB)



Features

- LGA1700 12th/13th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processor (125W)
- Dual-channel DDR5 4800MHz
- Support DisplayPort 1.4a, HDMI & IDPM modules
- Support two M.2 M key for NVMe storage
- High-performance ATX motherboard with PCIe Gen4 & Gen5 expansion slots



Support 12th/13th Gen Intel® Core™ CPU

Support LGA1700 socket 12th/13th generation Alder Lake-S Intel® Core™ i9/i7/i5/i3, Pentium®, Celeron® processor (up to 125W TDP), up to 16 cores / 24 threads for outstanding multi-thread performance.



Support DDR5-4800MHz

The IMBA-R680 is designed to support four 288-pin 4800 MHz dual-channel DDR5 SDRAM unbuffered DIMMs (system max. 128GB, ECC & non-ECC supported).



Pure PCIe Expansion Slot

It supports two PCIe Gen5 x16 slots with x8 signals, three PCIe Gen4 x4 open-ended slots and two PCIe Gen3 x1 slots for installing multiple PCI Express cards.



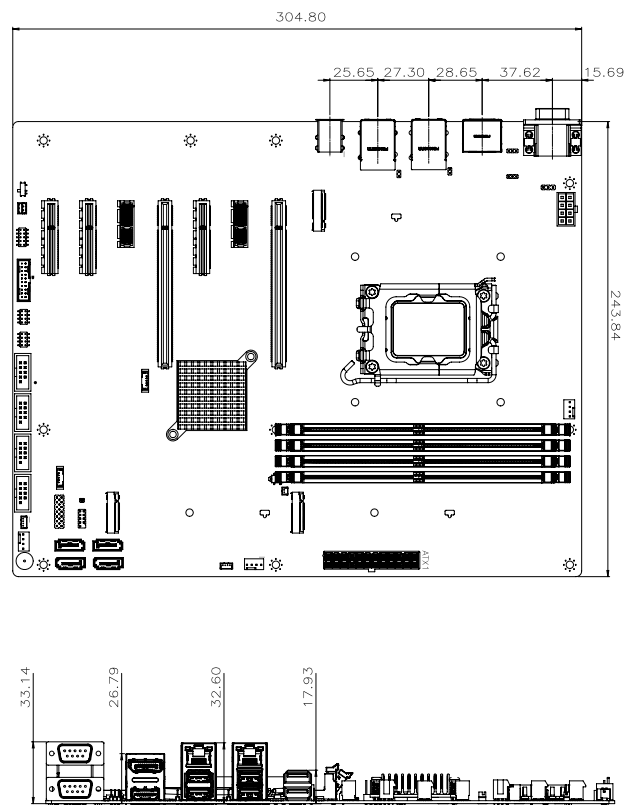
Support Six SATA for Storage

It supports six SATA 6Gb/s and RAID 0/1/5/10. In addition, there are two M.2 M key with PCIe signal supporting NVMe storage.

Specifications

- ◆ CPU
LGA1700 socket supports 12th/13th generation Alder Lake-S Intel® Core™ i9/i7/i5/i3/ Pentium®/Celeron® Processor (up to 125W TDP CPU)
- ◆ Chipset
Intel® R680E
- ◆ BIOS
AMI UEFI BIOS
- ◆ Memory
Four 288-pin 4800 MHz dual-channel DDR5 SDRAM unbuffered DIMMs support up to 128GB (ECC & non-ECC supported)
- ◆ Graphics Engine
New Intel® Xe Graphics architecture with SRIOV, Genlock
- ◆ Display Output
Triple independent display
1 x DP (up to 4096 x 2304 @60Hz)
1 x HDMI (up to 4096 x 2304 @30Hz)
1 x IDPM IEI eDP/ LVDS/ VGA module
- ◆ Ethernet
LAN1: Intel® I225V 2.5GbE controller (colay I225-LM support vPro)
LAN2: Intel® I225V 2.5GbE controller (colay I225-LM support vPro)
- ◆ External I/O Interface
4 x USB 3.2 Gen 2 (Type-A) (10Gb/s)
2 x USB 3.2 Gen 1 (Type-A) (5Gb/s)
2 x RS-232/422/485 (RS-485 support AFC)
- ◆ Internal I/O Interface
6 x SATA 6Gb/s (RAID 0/1/5/10 supported)
4 x USB 2.0 (2x4 pin, P=2.54)
2 x USB 3.2 Gen 1 (2x10 pin, P=2.00, wafer) (5Gb/s)
4 x RS-232 (2x5 pin, P=2.54)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ Audio
1 x IAUDIO supports IEI AC-KIT-888S Audio Kit (2x5 pin)
- ◆ Front Panel
1 x Front Panel (2x7 pin, Power LED, HDD LED, Speaker, Power Button, Reset Button)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ Expansion
2 x PCIe Gen5 x16 slot with x8 Signal
3 x PCIe Gen4 x4 open-end
2 x PCIe Gen3 x1
1 x M.2 M Key (2242/2280, PCIe x4) NVMe supported
1 x M.2 M Key (2242/2280, PCIe x2 for SSD) NVMe supported
- ◆ Digital I/O
1 x 12-bit digital I/O (2x7 pin)
- ◆ TPM
Intel® PTT (TPM 2.0)
- ◆ Fan Connector
1 x CPU fan connector (1x4 pin)
2 x System fan connector (1x3 pin)
- ◆ Chassis Open
1 x Chassis intrusion (1x2 pin)
- ◆ Power Supply
ATX/AT power supply
Support AT/ATX mode
ErP/EuP Compliant
- ◆ Watchdog Timer
Software Programmable support 1~255 sec. System reset
- ◆ Power Consumption
TBD
- ◆ Operating Temperature
0°C~60°C
- ◆ Storage Temperature
-30°C ~ 70°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
244mm x 305mm
- ◆ Weight
GW:1200g / NW:700g
- ◆ Certification
CE/FCC compliant

Dimensions (Unit: mm)



Packing List

1 x IMBA-R680 single board computer	1 x I/O shielding
2 x SATA cable	1 x QIG

Ordering Information

Part No.	Description
IMBA-R680-R10	ATX motherboard supports LGA1700 12th/13th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR5, triple independent displays, dual 2.5GbE LAN, M.2, USB 3.2, SATA 6Gb/s, and RoHS

Optional Accessories

Part No.	Description
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board,RoHS
CB-USB02-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 457mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-000702-100-RS	RS-232 cable, 230mm, P=2.54

