

IMBA-Q471

ATX industrial motherboard supporting 10 th /11 th Intel® Core™ i9/i7/i5/i3, Celeron®, Pentium® processors

- support HDMI、DP、VGA triple independent display output
- support triple Intel® I226-V 2.5GbE controller
- support 2x PCIe x16, 3x PCIe x4 , 2 x PCIe x1 and 1 x M.2 M key expansion slots
- support 2 x USB 3.2 Gen2、 4 x USB 3.2 Gen1、 8x USB 2.0, transfer rate up to 10Gb/s
- support 3x RS-232、 1 x RS-422/485、 5 x SATA 6Gb/s connector

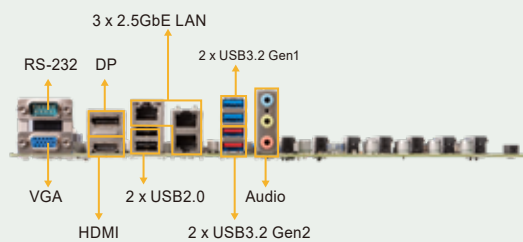
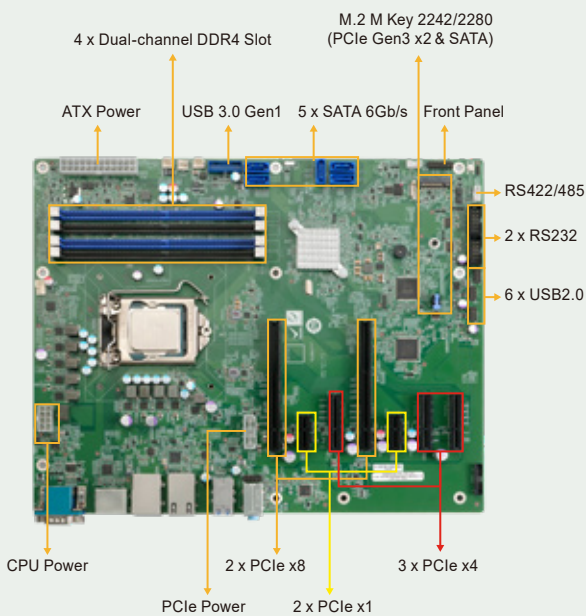
**PURE PCIe Expansion Slots
High Performance**



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IMBA-Q471

ATX Motherboard Supports 10th/11th Gen. LGA1200 Intel® Core™ i9/i7/i5/i3, Celeron® and Pentium® Processors, DDR4, Triple Independent Displays, Triple 2.5GbE, M.2, USB 3.2, SATA 6Gb/s, HD Audio and RoHS



Support Intel® 10th/11th generation processor



Support Intel® 10th/11th generation Core™ i9/i7/i5/i3, Celeron® and Pentium® Serise processor (LGA 1200 slot), release super performance, and can handle multiple tasks at the same time

Support Intel® I226-V 2.5GbE Controller



The IMBA-Q471 is equipped with 3 Gigabit RJ45 network ports via Intel® I226-V 2.5GbE network controllers to achieve up to 2.5GbE network transmission rate.

Support USB 3.2 Gen 1 / Gen 2 up to 10Gb/s



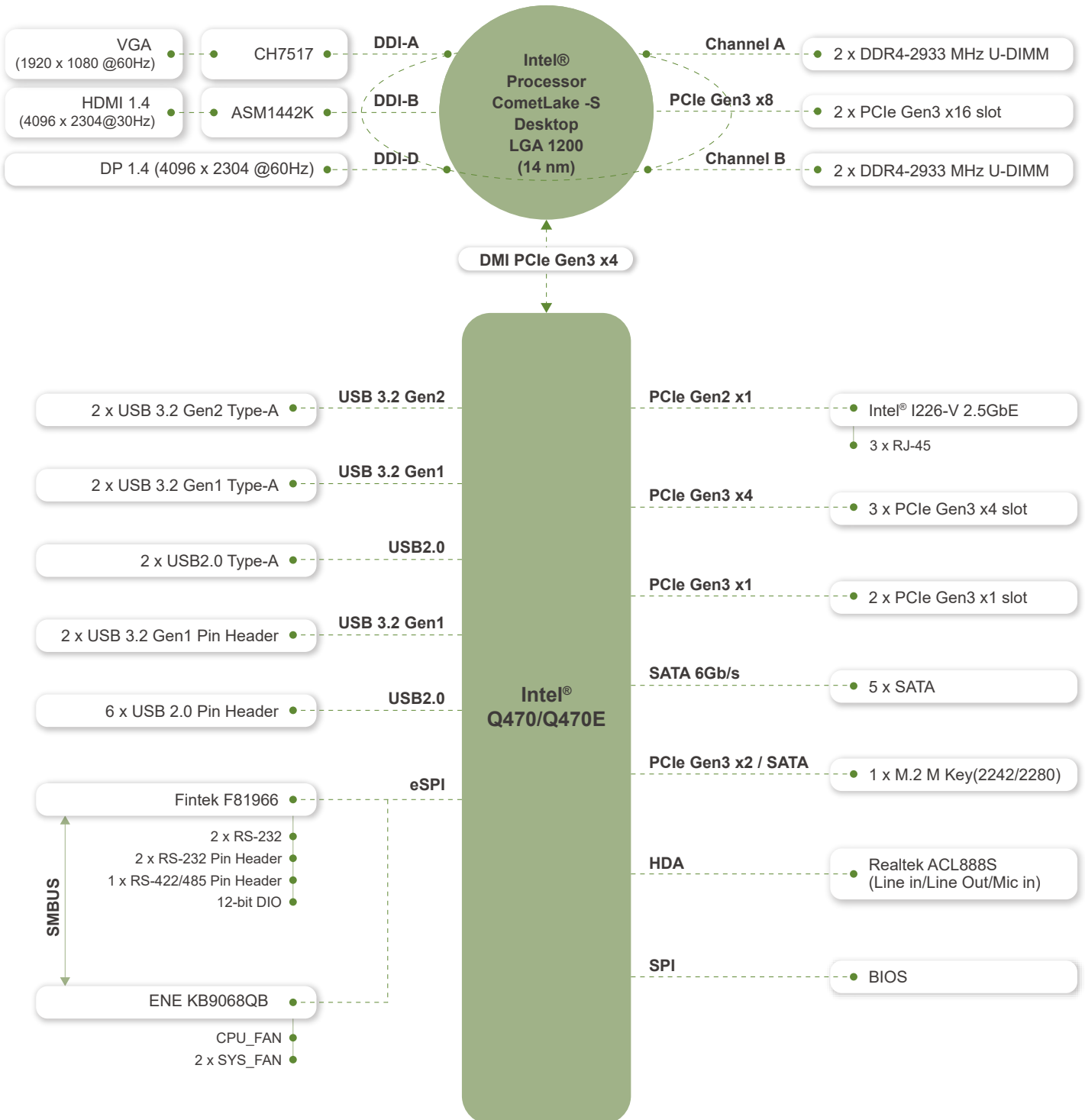
The design of the motherboard is based on USB 3.2 protocol. Two USB 3.2 Gen 1 (5Gb/s) and two USB 3.2 Gen 2 (10Gb/s) are provided through external I/O for faster data transfer rate. The IMBA-Q471 also has internal USB 3.2 Gen 1 and USB 2.0 ports for additional wiring options..

Full-featured PCIe Expansion Slot

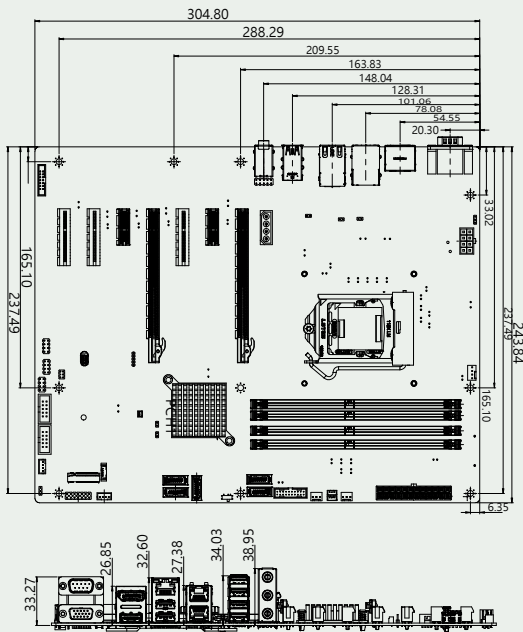


The IMBA-Q471 features two PCIe Gen3 x16 slots that support PCIe Gen3 x8 signals, enabling it to accept two independent graphics cards at the same time. There are also three PCIe Gen3 x4 slots and two PCIe Gen3 x1 slots that support PCIe expansion cards such as network cards, sound cards or motion control cards.

IMBA-Q471 Block Diagram



Dimensions



Specifications

Model	IMBA-Q471
CPU	10th/11th Generation LGA1200 Intel® Core™ i9/i7/i5/i3, Celeron® and Pentium® processors
Chipset	Intel® Q470/Q470E
BIOS	AMI UEFI BIOS
Memory	Four 288-pin 2933 MHz dual-channel unbuffered DDR4 SDRAM DIMM slots supporting up to 128 GB memory
Graphics Engine	Up to Intel® UHD Graphics 630; Intel® HD Graphics Gen 9 Engines with 16 low-power execution units, supporting DX2015, OpenGL 5.x, OpenCL2.x and ES 2.0
Display Output	Triple independent displays 1 x VGA (up to 1920 x 1080 @ 60 Hz) 1 x DP (up to 4096 x 2304 @ 60 Hz) 1 x HDMI (up to 4096 x 2304 @ 30 Hz)
Ethernet	LAN1: Intel® I226-V controller LAN2: Intel® I226-V controller LAN3: Intel® I226-V controller
External I/O Interface	2 x USB 3.2 Gen 2 (10Gb/s) (Type-A) 2 x USB 3.2 Gen 1 (5Gb/s) (Type-A) 2 x USB 2.0 (Type-A) 1 x RS-232
Internal I/O Interface	5 x SATA 6Gb/s (RAID 0/1/5/10 supported) 6 x USB 2.0 (2x4 pin, P=2.54) 2 x USB 3.2 Gen1 (2x10 pin, P=2.0) 2 x RS-232 (2x5 pin, P=2.54) 1 x RS-422/485 (1x4 pin, P=2.0)
SMBus	1 x SMBus (1x4 pin)
I ² C	1 x I ² C (1x4 pin)
Audio	Realtek ALC888S HD codec supports 7.1-channel 3 x Audio jacks (line-out, line-in, mic-in) on rear IO 1 x Front audio (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)
Expansions	2 x PCIe Gen3 x16 (x8 signal) 3 x PCIe Gen3 x4 open-end 2 x PCIe Gen3 x1 M.2 M key 2240/2280 (PCIe x2 &SATA signal)
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	Support Intel® PTT (TPM 2.0)
Fan Connector	1 x CPU fan connector (1x4 pin) 2 x System fan connector (1x3 pin)
Chassis Intrusion	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	3.3V@1.1A, 5V@3.359A, 12V@2.18A, 5VSB@0.12A (Intel® Core™ i5-10500TE CPU with four 8 GB 2933 MHz DDR4 DIMMs)
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

Optional accessories

CB-USB02-RS	19800-010500-200-RS
19800-020100-100-RS	32102-000100-200-RS
19100-000318-00-RS	CF-115XA-R10
CF-1156C-R20	CF-1156D-R30
CF-115XE-R10	

Packing List

1 x IMBA-Q471 single board computer	1 x I/O shielding
2 x SATA cable	1 x QIG

Ordering Information

IMBA-Q471-R11	ATX Motherboard Supports 10th/11th Gen. LGA1200 Intel® Core™ i9/i7/i5/i3, Celeron® and Pentium® Processors, DDR4, Triple Independent Displays, Triple 2.5GbE, M.2, USB 3.2, SATA 6Gb/s, HD Audio and RoHS
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Optional Accessories

CB-USB02-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0/USB3.2 cable 450mm with bracket
19800-020100-100-RS	RS-232 cable (230mm) P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
19100-000318-00-RS**	High-performance LGA1155/1156/1200 cooler kit, 4U chassis compatible 125W, 0°C~50°C
CF-115XA-R10	High-performance LGA1155/1156/1200 cooler kit, 1U chassis compatible 73W
CF-1156C-R20	LGA1155/1156/1200 cooler kit, 1U chassis compatible, 45W
CF-1156D-R30	LGA1155/1156/1200 cooler kit, 1U chassis compatible, 65W
CF-115XE-R10	High-performance LGA1155/1156/1200 cooler kit, 95W

**For more 125W CPU FAN details, Please refer to Chapter 12, Page31