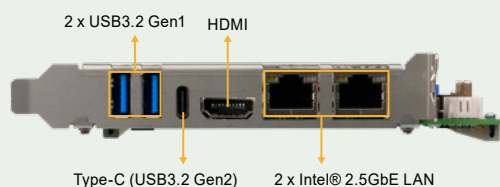
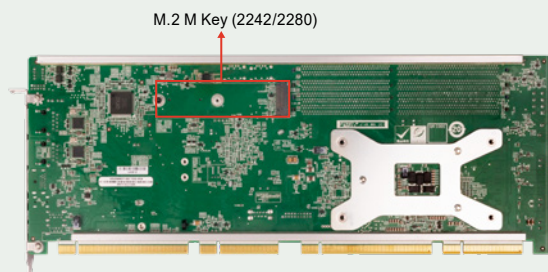
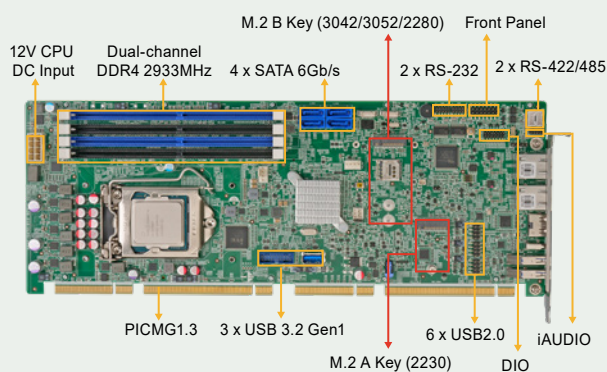
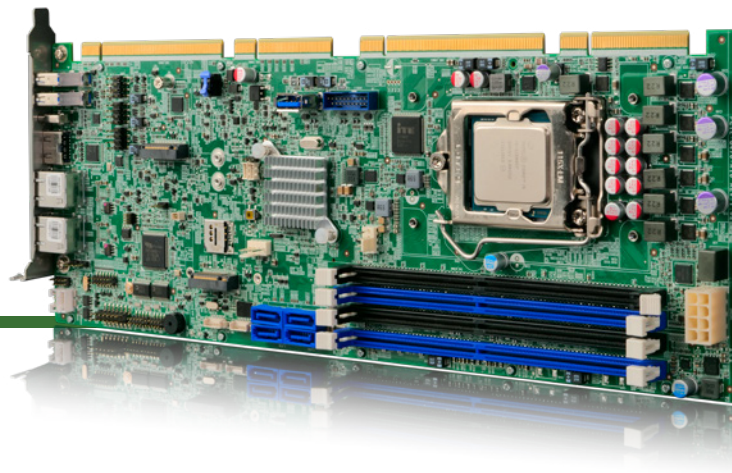


# PCIE-Q470

Full-size PICMG 1.3 CPU Card supports LGA1200 Intel® 10th/11th Gen. Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor with Q470, DDR4, HDMI, Dual Intel® 2.5GbE, USB 3.2, SATA 6Gb/s, M.2, iAUDIO and RoHS



## Support Intel® 10th/11th generation processor

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



## Support Intel® I225-V/I226-V 2.5GbE Ethernet Controller

Support dual RJ45 network interfaces, based on Intel® I225-V/I226-V 2.5GbE network controller core Chip to achieve network transmission rate up to 2.5GbE



## Support Multiple Interface

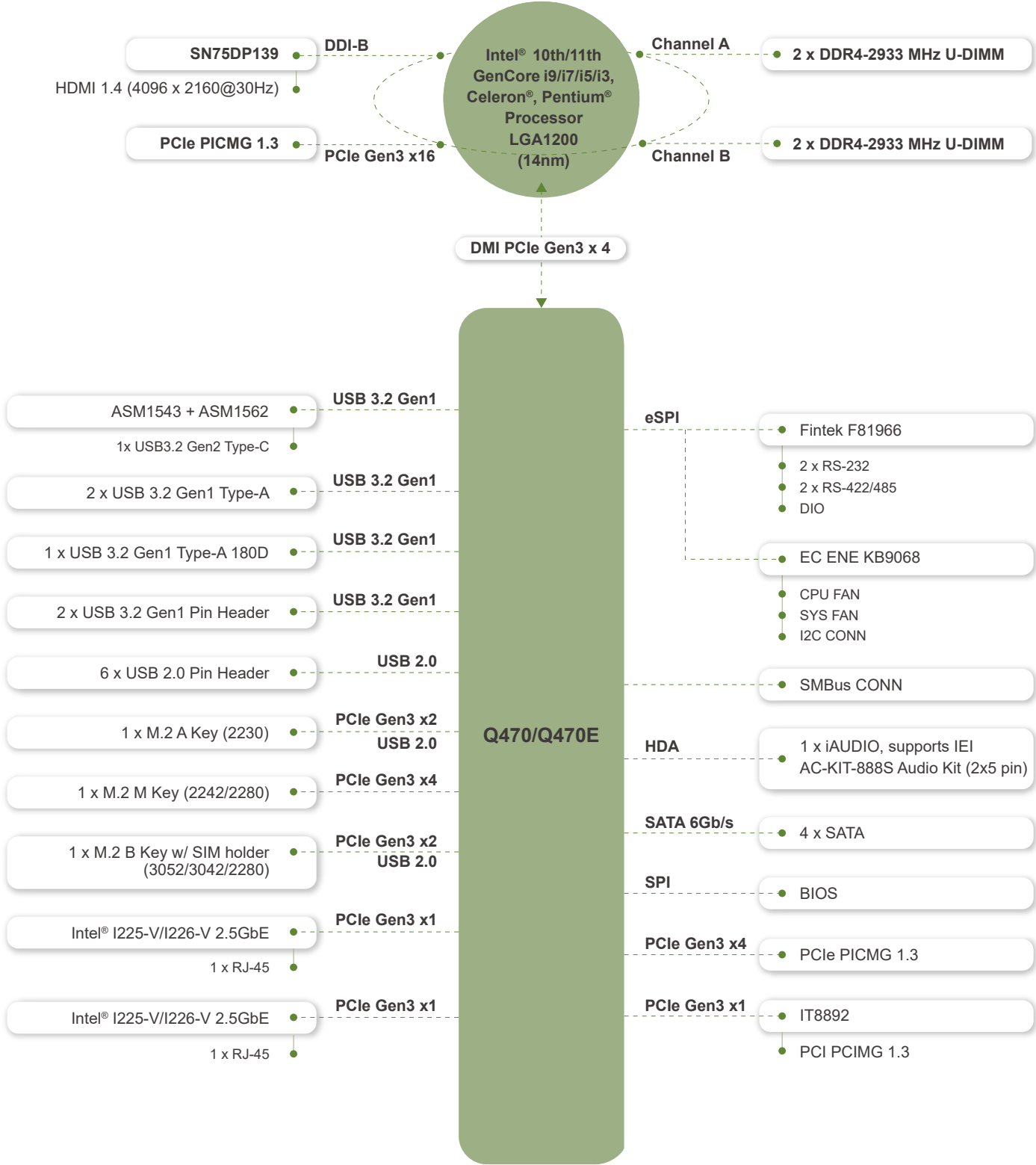
Support 1 x PCIe x16 signal via golden finger (Support x16, or x8 + x8, or x4 + x4 + x8), 4 x PCIe x1 signal from PCH via golden finger (support1 x4, or 4 x1), 4 x PCI signal via golden finger , M.2 A key for Bluetooth, WiFi module expansion, M.2 B key can be used for 5G module expansion and M.2 M key for NVME storage expansion



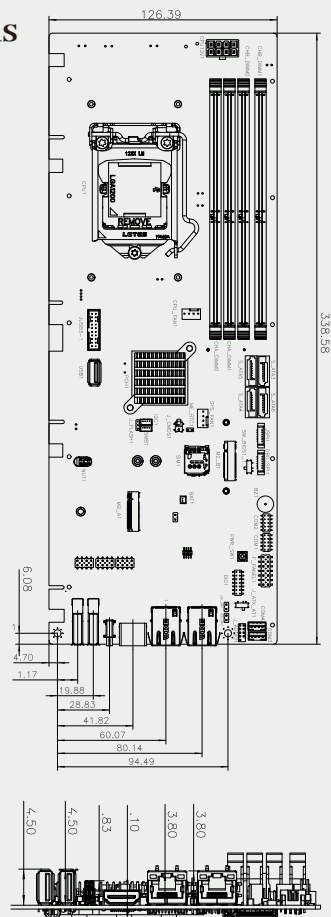
## USB 3.2 Gen1/USB 2.0 interface, transmission rate up to 10Gb/s

The motherboard design is based on the USB 3.2 protocol, the I/O layout is 1 x Type-C (10Gb/s), 2 x USB 3.2 Gen1(5Gb/s), and there are USB 3.2 Gen1 and USB 2.0 ports for wiring expansion

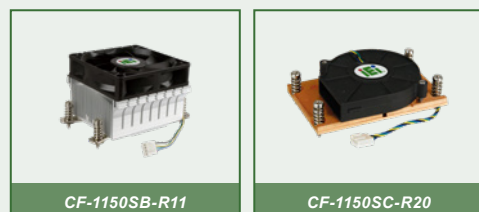
# PCIE-Q470 Block Diagram



## Dimensions



## Optional accessories



## Specifications

| Model                  | PCIE-Q470                                                                                                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                    | LGA1200 Intel® 10th/11th Gen. Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor (Support up to 65w) *                                                                                                                                       |
| Chipset                | Intel® Q470/Q470E                                                                                                                                                                                                                         |
| BIOS                   | AMI UEFI BIOS                                                                                                                                                                                                                             |
| Memory                 | 4 x 288-pin 2933 MHz Dual-channel DDR4 DIMMs support up to 128G                                                                                                                                                                           |
| Graphics Engine        | Intel® UHD Graphics                                                                                                                                                                                                                       |
| Display Output         | 1 x HDMI 1.4 (up to 4096 x 2160@30Hz)                                                                                                                                                                                                     |
| Ethernet               | LAN1: Intel® I225-V/I226-V 2.5GbE controller<br>LAN2: Intel® I225-V/I226-V 2.5GbE controller                                                                                                                                              |
| External I/O Interface | 2 x USB 3.2 Gen1 (5Gb/s)<br>1 x USB 3.2 Gen2 (10Gb/s) by USB Type-C                                                                                                                                                                       |
| Internal I/O Interface | 4 x SATA 6Gb/s (Support RAID 0/1/5/10 )<br>6 x USB 2.0 (2x4 pin, P=2.54)<br>2 x USB 3.2 Gen1 (5Gb/s) (2x10 pin)<br>1 x USB 3.2 Gen1 (Type A 180°)<br>2 x RS-232 (2x5 pin, P=2.0)<br>2 x RS-422/485 (1x4 pin, P=2.00) (RS-485 support AFC) |
| SMBus/ I²C             | 1 x SMBus (1x4 pin)                                                                                                                                                                                                                       |
| I²C                    | 1 x I²C (1x4 pin)                                                                                                                                                                                                                         |
| Audio                  | 1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2 x 5 pin)                                                                                                                                                                              |
| Front Panel            | 1 x Front panel connector (2x7 pin)<br>Power LED&HDD LED, Power Button Reset Button                                                                                                                                                       |
| LAN LED                | 2 x LAN LED (1x2 pin)                                                                                                                                                                                                                     |
| Expansion              | 1 x M.2 A Key 2230 (PCIe Gen3 x2 & USB 2.0)<br>1 x M.2 B Key 3042/3052/2280 (PCIe Gen3 x2 & USB 2.0)<br>1 x On-board SIM card socket (hinge type) for M.2 B key<br>1 x M.2 M Key 2242/2280 (PCIe Gen3 x4)                                 |
| Digital I/O            | 1 x 12bit digital I/O (2x7 pin)                                                                                                                                                                                                           |
| TPM                    | Intel® PTT (TPM 2.0)                                                                                                                                                                                                                      |
| Fan Connector          | 1 x CPU fan connector (1x4 pin)<br>1 x System fan connector (1x4 pin)                                                                                                                                                                     |
| Chassis Open           | 1 x Chassis intrusion (1x2 pin)                                                                                                                                                                                                           |
| Power Supply           | ATX/AT power supply<br>Support AT/ATX mode<br>ErP/EuP Compliant                                                                                                                                                                           |
| Watchdog Timer         | Software programmable, support 1~255 sec. system reset                                                                                                                                                                                    |
| Power Consumption      | 3.3V@1.04A, 5V@8.61A, 12V@12.33A<br>(Intel® Core™ i9-11900K CPU with 4 GB 3200 MHz DDR4 memory)                                                                                                                                           |
| Operating Temperature  | 0°C ~ 60°C                                                                                                                                                                                                                                |
| Storage Temperature    | -30°C ~ 70°C                                                                                                                                                                                                                              |
| Operating Humidity     | 5% ~ 95%, non-condensing                                                                                                                                                                                                                  |
| Dimension              | 338 mm x 126 mm                                                                                                                                                                                                                           |
| Weight                 | GW:1000g / NW:500g                                                                                                                                                                                                                        |
| Certification          | CE/FCC compliant                                                                                                                                                                                                                          |

\*\*Recommended for CPU less than 4 GHz (CPU VR power supply design limitations)

## Packing List

|                                     |                      |
|-------------------------------------|----------------------|
| 1 x PCIE-Q470 single board computer | 1 x Mini jumper pack |
| 1 x SATA cable                      | 1 x QIG              |

## Ordering Information

|               |                                                                                                                                                                                                          |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCIE-Q470-R10 | Full-size PICMG 1.3 CPU Card supports LGA1200 Intel® 10th/11th Gen. Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor with Q470, DDR4, HDMI, Dual Intel® 2.5GbE, USB 3.2, SATA 6Gb/s, M.2, iAUDIO and RoHS |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Optional Accessories

|                     |                                                                            |
|---------------------|----------------------------------------------------------------------------|
| CB-USB02-RS         | Dual port USB cable with bracket, 300mm, P=2.54                            |
| 32102-000100-200-RS | SATA power cable, MOLEX 5264-4P to SATA15P                                 |
| 32205-002700-200-RS | RS-232/422/485 cable, 200mm, P=2.0                                         |
| CF-1150SA-R10       | Special cooler kit for LGA1150/1151/1200, high-performance compatible, 95W |
| CF-1150SB-R11       | Special cooler kit for LGA1150/1151/1200, high-performance compatible, 65W |
| CF-1150SC-R20       | Special cooler kit for LGA1150/1151/1200, 1U chassis compatible, 65W       |
| CF-1150SE-R11       | Special cooler kit for LGA1150/1151/1200, high-performance compatible, 95W |