

# Q470EA-IM-A

ATX, LGA 1200 Socket for 10<sup>th</sup> Gen. CPU, Q470E Chipset, 4\*U-DIMM  
2\*PCIe x16 slots, VGA, HDMI, DP, 3\*M.2 slot, USB 3.2 Gen2, USB Type C

## Features

- Support up to 125W Intel® 10<sup>th</sup> Gen. CPU
- 2\* PCIe x16 slots support dual graphic cards
- Up to triple displays: VGA/ HDMI/ DP
- M.2 B key support 4G/5G
- Up to 7-year longevity supply



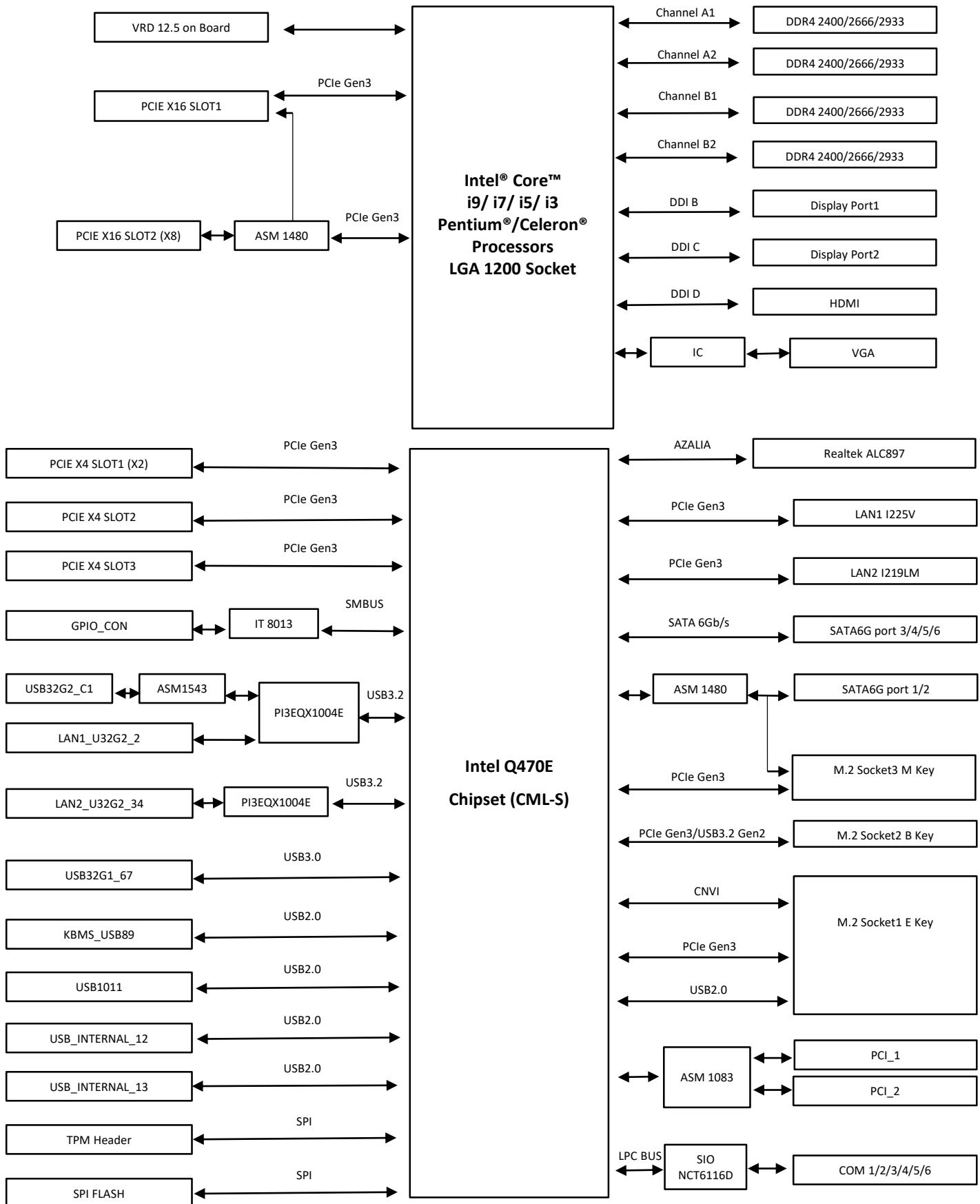
## Specifications

<b>Processor System</b>	CPU	Intel® Socket 1200 for 10th Generation Core™ i9/ i7/ i5/ i3/Pentium®/Celeron® Processors
	TDP	Up to 125W
	Chipset	Intel® Q470E Chipset
<b>Memory</b>	Technology	DDR4 2400/2666/2933 MHz
	Max.	128GB (32GB per U-DIMM)
	Socket	4 x U-DIMM
<b>Display</b>	VGA	1, up to 1920 x 1200 @ 60Hz
	HDMI	1, up to 4096 x 2160 @ 30Hz
	DP	2, up to 4096 x 2160 @ 60Hz
	Triple Display	VGA + HDMI + DP/ DP + HDMI + DP/ VGA + DP + DP
<b>Expansion Slot</b>	PCIe	2 x PCIe 3.0/2.0 x16 slot (1 x16 mode/ 2 x8 mode) *If any expansion card is installed on the second x16 slot, BIOS automatically switches the signal from 1 x16 mode to 2 x8 mode.
	PCI	3 x PCIe 3.0/2.0 x4 slot (x4, x4, x2 mode) 2
	M.2	1 x M.2 M key, type 2242/2260/2280 (PCIe x4/ SATA mode)
		1 x M.2 B key, type 3042/3052/2260/2280 (PCIe x1/USB 3.2 Gen1/USB 2.0) *type 3042/3052 support 4G/5G module
	SIM Socket	1 x M.2 E key, type 2230 (PCIe x1/USB 2.0) 1
<b>Ethernet</b>	Speed	10/100/1000Mbps/2500Mbps
	Controller	1 x Intel® i219LM (1 GbE), support WOL/PXE 1 x Intel® i225V (2.5 GbE), support WOL/PXE
	Connector	2 x RJ-45
<b>Audio</b>	Codec	Realtek ALC897 High Definition Audio
	Connector	Line-Out, Line-In, Mic in
<b>Storage</b>	SATA port	Up to 6 x SATA Gen 3.0, up to 6Gb/s*, RAID 0/1/5/10 *If install M.2 PCIe x4/ SATA SSD on M.2 M key slot, 2/ 1 SATA port will be disabled.
<b>Rear I/O</b>	VGA	1
	HDMI	1
	DP	2
	USB 3.2 Gen2	4 (3 x type A, 1 x Type C)
	USB 2.0	2
	Ethernet	2
	COM Port	1 x RS232/422/485
	PS/2	1
	Audio jack	3 (Line-Out, Line-In, Mic in)

## Specifications

<b>Internal Connector</b>	COM header	1 x (RS232/422/485); 4 x RS232
	USB2.0	1 x Header support additional 2 x USB2.0 connectors 2 x Vertical connector
	USB3.2 Gen 1	1 x Header support additional 2 x USB3.1 Gen1 connectors
	CPU Fan Connector	1 (PWM mode)
	Chassis Fan Header	3 (PWM mode)
	Chassis Intrusion Header	1
	Front Panel Audio Connector (AAFP)	1
	System Panel Header	1
	Clear CMOS Jumper	1
	Speaker Connector	1
	LPC Debug Header	1
	I <sup>2</sup> C Header	1
	Parallel (LPT Header)	1
	Buzzer	1
	GPIO Header	1 (8 Bit)
	SPDIF	1
	AT/ATX Select Header	1
	Power Connector	1 x 8-pin ATX 12V Power Connector & 1 x 24-pin ATX Power Connector
<b>Watchdog Timer</b>	H/W	YES
<b>Security</b>	TPM	1 x SPI TPM header
<b>Power</b>	vPro	yes
	Power Type	AT mode/ ATX mode
<b>Operating System</b>	Microsoft Windows	Windows 10 (64bit ) / Win10 IoT Enterprise
	Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
<b>Environment</b>	Operating Temperature	0~60° C
	Non-Operating Temperature	-40~85° C
	Relative Humidity	15%~95%
<b>Dimension</b>	Form Factor	ATX, 305 x 244 mm
<b>Certification</b>	EMI & Safety	CE, FCC

# Block Diagram



## Order Information

Model name	Part number	Description
Q470EA-IM-A	90ME03F*	LGA1200, Q470E, DP, HDMI, VGA, MB

\* The part number might vary for different regulations and package. Please consult the TPM in your region for exact 90PN.

## Packing List

Part number	Description	Quantity
13020*	IO shield	1
14013*	SATA 6G CABLE	1
13020*	M.2 screw pack	3

\* The part number might vary due to part number revision.