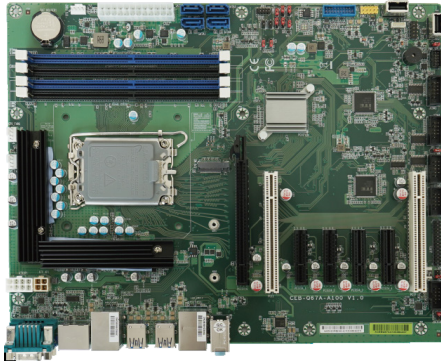


MB-i93QA-Q670

13th / 12th Generation Intel® Core™ Processor Embedded ATX Motherboard



System

CPU	Intel® 12 th /13 th Gen. Core™ i3/i5/i7/i9, Pentium®, Celeron® Processor, LGA1700, TDP up to 125W
Chipset	Q670E
Memory	4 x DDR4 2400/2666/2933/3200 MHz U-DIMM Slot, up to 128GB
BIOS	AMI UEFI BIOS
Watchdog Timer	System Reset, Programmable via software from 1 to 255 seconds

External I/O

Serial Port	1 x RS232/422/485 with Auto Flow
USB Port	2 x USB3.2 Gen1 2 x USB3.2 Gen2 4 x USB2.0
Ethernet	1 x Intel® I226-V co-layer I225-LM (10/100/1000/2500 Mbps) 1 x Intel® I219V GbE
Audio Interface	Realtek® ALC888S/ALC897 HD Audio codec, supports 5.1-channel

Display

Graphic Chipset	Intel® UHD Graphics 1 x VGA: max resolution up to 1920 x 1200 @ 60Hz 1 x HDMI2.0: max resolution up to 4096 x 2160@60Hz 1 x DP++: max resolution up to 4096 x 2304 @ 60Hz Support Triple Displays
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Internal I/O

Internal I/O	1 x RS232/422/485 with Auto Flow 4 x RS232 2 x USB3.2 Gen1 4 x USB2.0 (2 x Type-A) 1 x 8 bit GPIO 4 x SATA3.0 1 x PS/2 (for Keyboard and Mouse) 1 x CPU_FAN 2 x SYS_FAN 1 x LPT 1 x FP(power button, power led, reset, HDD led)
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Rear I/O

Rear I/O	2 x USB3.2 Gen2 6 x USB3.2 Gen1 2 x RJ45 1 x RS232/422/485 (with Auto Flow control) 1 x Line-out, Line-in, Mic-in
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Features

- Support Intel® 12th/13th Gen Core™ i9/i7/i5/i3 Pentium®/ Celeron® Processor, TDP up to 125W
- Dual Channel Quad DIMM Slot DDR4 2400 / 2666 / 2933 / 3200MHz, up to 128GB
- Support VGA, HDMI2.0 and DP++ triple display
- Support dual Intel GbEs, USB3.2 Gen1/2, 8bit GPIO
- Support 4 x SATA3.0, RAID0/1/5/10
- Support 2 x RS232/422/485, 4 x RS232, 5V/12V output
- 1 x PCIe4.0 X16 (x16 link), 3 x PCIe4.0 X4 (X4 link), 1 x PCIe3.0 X4 (X4 link) , 2 x PCI,, 1 x M.2 2242/2280(Pcie4.0 x 4 NVMe)

Expansion	1 x PCIe4.0 X16 (X16 link) 3 x PCIe4.0 X4 (X4 link) 1 x PCIe3.0 X4 (X4 link) 2 x PCI 1 x M.2 2242/2280(Pcie4.0 X4 NVMe)
Storage	4 x SATA 3.0 (RAID 0/1/5/10), 1 x M.2 2242/2280(PCIe4.0 X4 NVMe)

OS

OS	Windows 10 64bit, Windows 11 64bit, Linux
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Certification

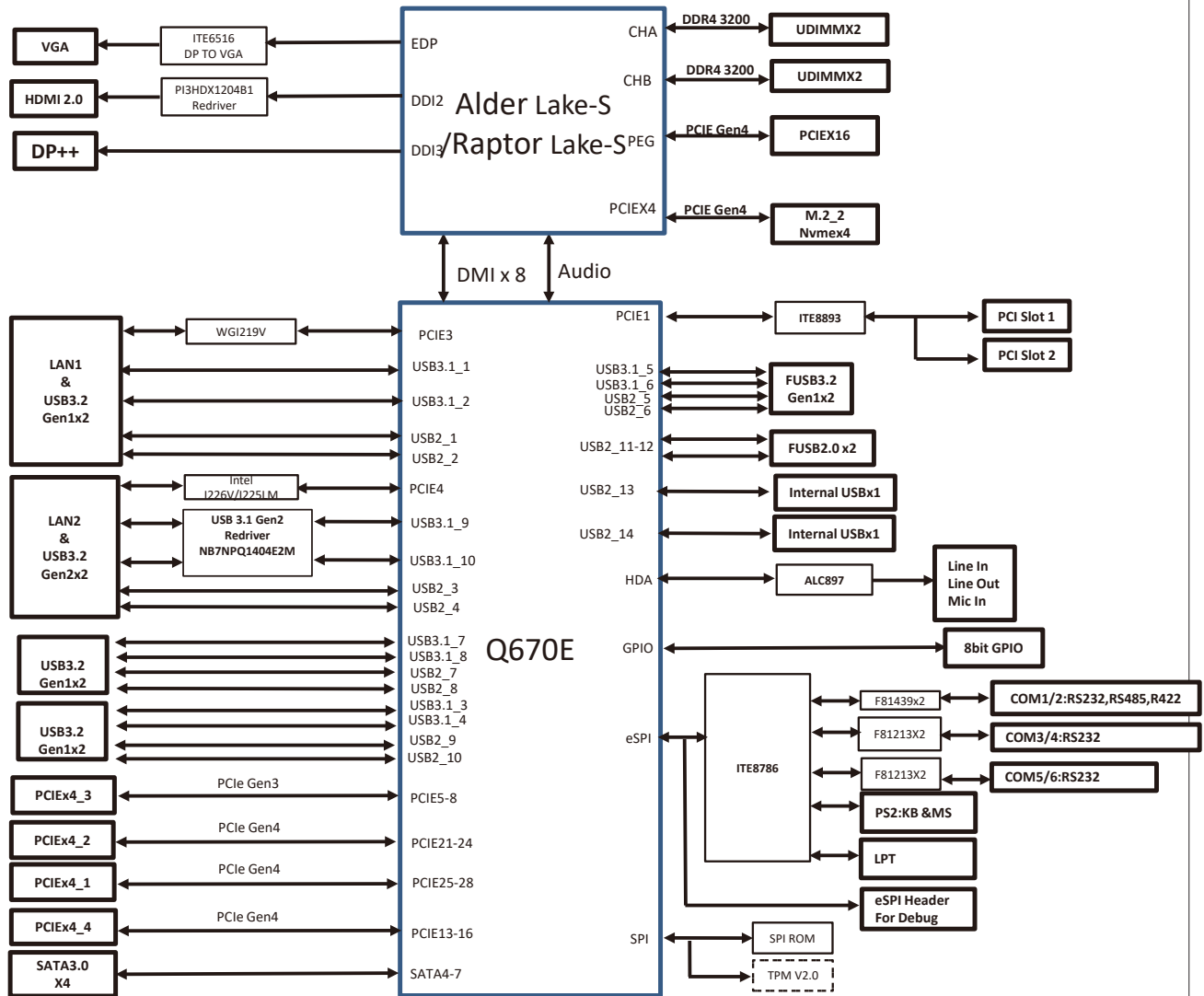
Certification	CE, FCC
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Mechanical & Environmental

Power Input	ATX
Operating Temp.	0 ~ 60°C (32 ~ 140°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Operation Humidity	5% ~ 90%, Non-condensing
Storage Humidity	5% ~ 95%, Non-condensing
Dimension (L x W)	304.8 x 244 mm (12" x 9.6")



Block Diagram



Standard Accessory

35091AW00-JTU-G	SATA Signal Cable Assembly,400mm+/-20mm
2T71BQ500-G9F-G	IO shielding, 154mm*2.5mm*40mm

Optional Accessory

35107V900-JTU-G	LPT cable with bracket, 450mm
351052K00-JTU-G	GPIO Cable Assembly,110mm
35106BR00-38L-G	2-port USB2.0 Cable with bracket, 300mm
351063G00-JTU-G	2-port USB3.0 Cable w/o bracket, 280mm
35108U500-3LG-G	COM2, 1-port COM Cable with Bracket, 700mm
35108U400-3LG-G	COM3~4/COM5~6, 2-port COM Cable with Bracket, 700mm
460209G00-3L5-G	CPU Cooler, support 125W, LGA1700 series
46010RA00-3L5-G	CPU Cooler, support 65W, LGA1700 series