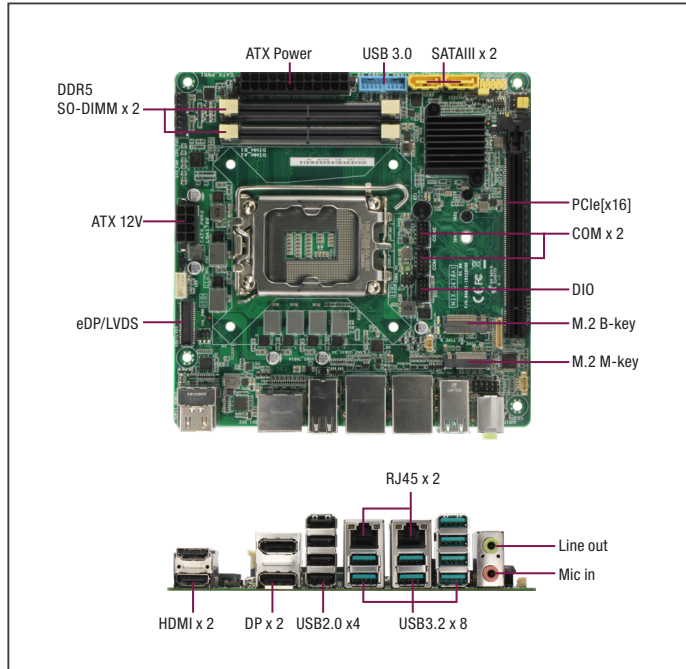


# MIX-Q670A1 PRELIMINARY

Mini-ITX with Intel® 12th Generation Core™ LGA1700 Socket Processor, Max. 65W TDPs, HDMI2.0 x 2 + DP1.2 x 2, Giga-LAN x 2, DDR5x2 Max. 64GB



## Features

- 12th Gen. Intel® Core™ LGA1700 Processor
- DDR5 DRAM Support, 4800MHz, Max. 64GB
- HDMI2.0 x 2 + DP1.2 x 2
- M.2 Slot (M key) x 1, M.2 Slot (B key) x 1
- USB 3.2 Port x 8, USB 2.0 Port x 4
- Intel GbE LAN x 2
- SATA 6.0 Gb/s x 2
- PCI-Express [x16] x 1
- ATX Power



MTBF (Hours)	—
<b>Rear Panel I/O Ports</b>	
USB	USB 3.2 Gen1/2 x 8, USB 2.0 x 4
Display I/O	HDMI x 2, DP x 2
Audio I/O	Mic-in x 1, Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	—
PS/2 Port	—
Others	—
<b>Internal I/O Connectors</b>	
Storage	SATA3.0 (6.0Gb/s) x 2, M.2 M-key (2280)
USB	USB 3.0 pin header x 1 (support additional USB3.2 Gen1 x 2ports)
Display I/O	—
Audio I/O	AAFP x 1, Speaker x 1
Serial Port	Box header for COM (RS-232/422/485) x 1, Box header for COM (RS-232) x 1
PS/2 Port	—
Parallel Port	—
DIO	Digital I/O box header x 1
FAN	4-pin CPU Fan connector x 1, 4-pin Chassis Fan connector x 1
Power	—
Others	Front Panel connector x 1, Chassis Intrusion x 1, Buzzer onboard x 1, CMOS jumper x 1
<b>OS</b>	
OS Support	Windows® 10 64-bit, Windows® 11 64bit

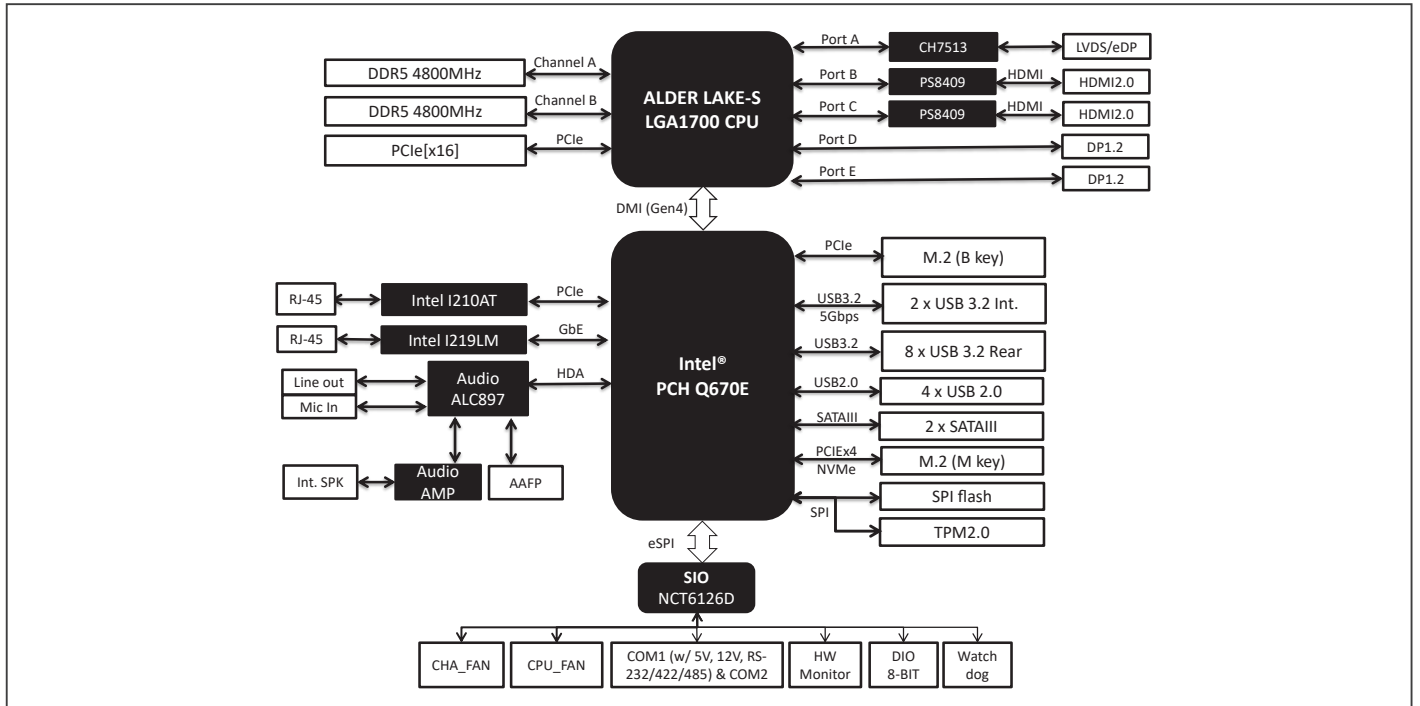
## Specifications

System	
Processor	Intel® Alder lake-S Core™ Processors, 8+8;65W
Chipset	Q670E
Memory	SODIMM x 2, max. 64GB, Dual Channel DDR5 4800 MHz
I/O Chipset	Intel® UHD Graphics
Ethernet	Intel® GbE LAN 219LM x 1 Intel® GbE LAN 210AT x 1
Audio	Realtek® ALC897 with Amp
TPM	TPM2.0 IC on board
Expansion Slots	PCIex16 slot x 1, M.2 B key (3042/3052;PCIex1) x 1
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/12V, Fan Monitor on CPU/Chassis
WatchDog Timer	1~255 step by software program
Smart Fan Control	CPU Fan/ Chassis Fan
Wake On LAN/ PXE	Yes (WOL / PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® UHD Graphics
Graphics Multi Display	HDMIx2+DPx2, HDMIx2+DPx1+LVDSx1, HDMIx2+DPx1+eDPx1, HDMIx1+DPx2+LVDSx1, HDMIx1+DPx2+eDPx1
VGA	—
DVI	—
HDMI	Up to 4096 x 2160 @60 Hz(HDMI 2.0)
Display Port	Up to 4096 x 2160 @60 Hz
LVDS	Up to 1920 x 1080 @60Hz, Dual Channel 18/24 bit
eDP	UP to 1920x 1080 @60Hz (via CH7513) co-layout LVDS
Backlight Control	PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	ATX
Operating Temperature	32°F ~140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~185°F (-40°C ~85°C)
Operating Humidity	0%~90%RH, non-condensing
Certificate	CE & FCC
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)

## Packing List

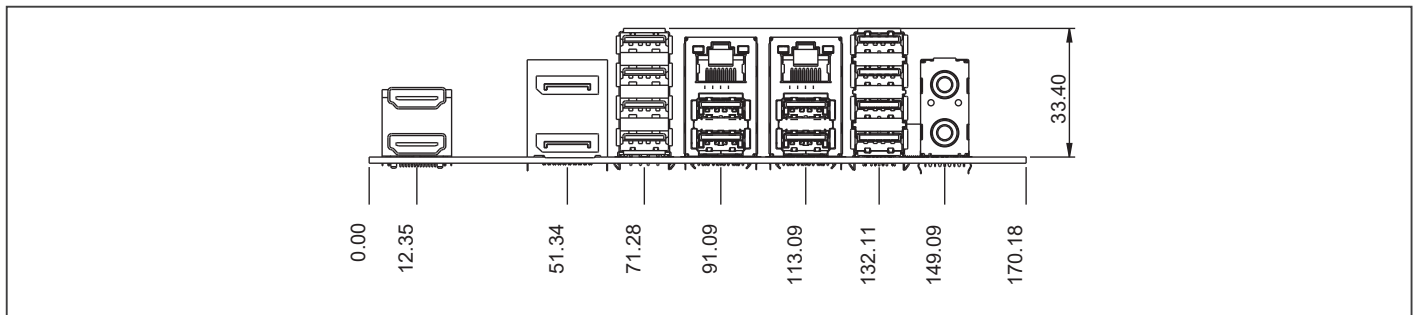
- MIX-Q670A1
- I/O Shield
- SATA Cable

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	Fan/Fanless	Display	LVDS/eDP	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
MIX-0670A1-A10	Socket	SODIMM x 2	Fan	HDMIx2, DPx2 LVDS/eDPx1	1	SATA3 x2, M.2(M-key)	GbE x 2	USB2.0 x 4 USB3.2 x 8	1	1	PCIe slot [x16] x 1, M.2(B-Key) x 1	ATX	2.0	0~60°C

## Optional Accessories

Part Number	Description
1701100206	COM Cable (200MM, p=2.00mm)