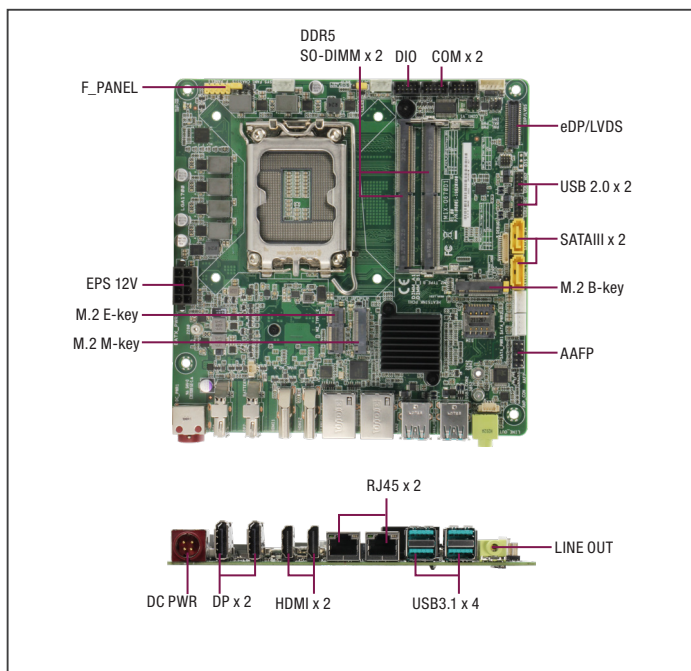


# MIX-Q670D1 PRELIMINARY

Mini-ITX with Intel® 12th Generation Core™ LGA1700 Socket Processor, Max. 65W TDPs, HDMI x 2 + DP x 2, Giga-LAN x 2, DDR5x2 Max. 64GB, DC 12V input, Low Profile



## 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(Non-ECC)
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	M.2 B-key (3042/3052; PCIe1; USB3.2 Gen1/USB2.0) x 1 M.2 E-key (2232; PCIe1(Optional: dual PCIe1); USB2.0) x 1
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V, Fan Monitor on CPU/Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan/ System 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(DP1.2)
LVDS	Up to 1920 x 1080 @60Hz, Dual Channel 18/24 bit (via CH7513) co-layout eDP (default LVDS)
eDP	Up to 1920 x 1080 @ 60Hz
Backlight Control	PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	DC 12V
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)

## 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; PCIe4; NVMe;2280) x 1, M.2 Slot (E-key;2230) x 1, M.2 Slot (B-key; 3042; 3052) x 1 with SIM slot
- USB 3.2 Port x 4, USB 2.0 Port x 4
- Intel GbE LAN x 2
- SATA 6.0 Gb/s x 2
- DC 12V input

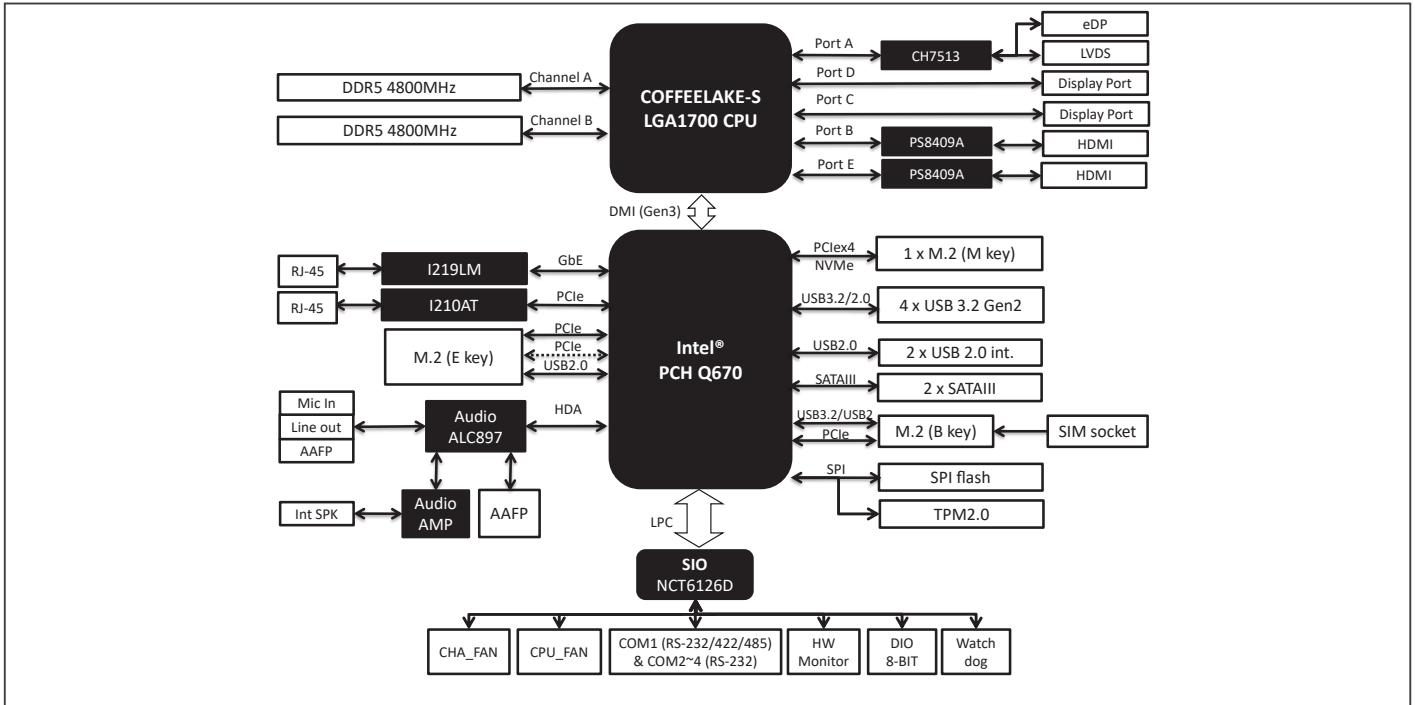


Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	—
Rear Panel I/O Ports	
USB	USB 3.2 Gen2 x 4
Display I/O	HDMI x 2, DP x 2
Audio I/O	Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	—
PS/2 Port	—
Others	—
Internal I/O Connectors	
Storage	SATA 6.0Gb/s x 2 with SATA power conn x 2(1A) M.2 M key(2280) x1, [PCIe4/NVMe]
USB	USB2.0 x 4 ports using 2 x 5-pin headers x 2
Display I/O	40-pin LVDS/eDP connector x 1 with Inverter
Audio I/O	HD Audio using AAFP header x 1, Internal Speaker (2W/40hm) 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 System Fan connector x 1
Power	—
Others	Front Panel connector x 1, Chassis Intrusion x 1, Buzzer onboard x 1, CMOS jumper x 1
OS	
OS Support	Windows® 10 64-bit, Windows® 11 64bit

## Packing List

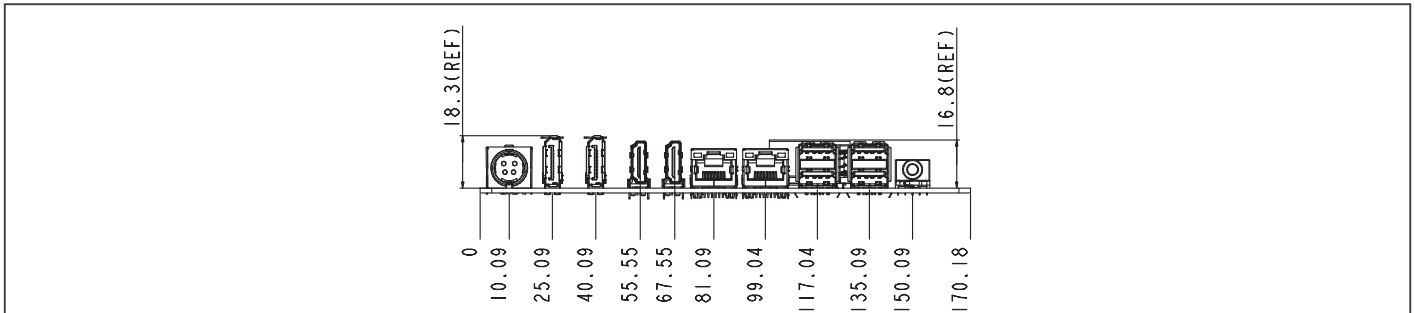
- I/O Shield
- SATA Cable
- SATA Power Cable
- MIX-Q670D1

## 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-Q670D1-A10	Socket	SODIMM x 2	Fan	HDMI x2, DP x2, LVDS/eDP x1	1	SATA3 x2, M.2(M-key)	GbE x 2	USB2.0 x 4 USB3.2 x 4	1	1	M.2(B-Key) x 1, M.2(E-Key) x 1	DC 12V	2.0	0-60°C

## Optional Accessories

Part Number	Description
1701100206	COM Cable (200MM, p=2.00mm)
1255X00011	(TF)AC/DC Adapter.12V.192W.16A.FSP192-AHAN3.9NA1920100