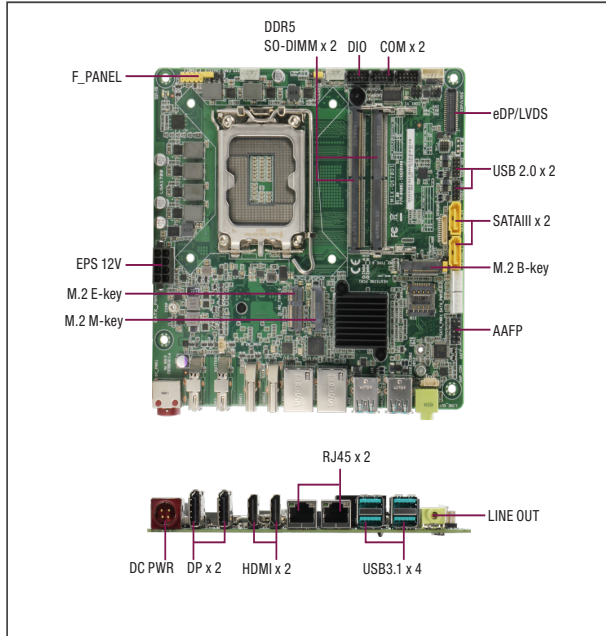


MIX-Q670D1

Mini-ITX with 12th & 13th Generation Intel® Core™ LGA1700 Socket Processor, Max. 65W TDPs

Industrial Motherboards



Features

- 12th & 13th Gen Intel® Core™ LGA1700 Processors
- DDR5 4800MHz SODIMM x 2, Max. 64GB
- HDMI 2.0 x 2 + DP 1.2 x 2
- M.2 2280 M-Key x 1 (PCIe [x4], NVMe), M.2 2230 E-Key x 1, M.2 3042/52 B-Key x 1 w/ SIM slot
- USB 3.2 x 4, USB 2.0 x 4
- GbE LAN x 2
- SATA III x 2
- DC 12V Input



MTBF (Hours)	—
Rear Panel I/O Ports	
USB	USB 3.2 Gen 2 x 4
Display I/O	HDMI x 2, DP x 2
Audio I/O	Line-out x 1
LAN I/O	RJ-45 LAN Port x 2
Serial Port	—
PS/2 Port	—
Others	—
Internal I/O Connectors	
Storage	SATA III x 2 with SATA Power Connector x 2 (1A) M.2 2280 M-Key (PCIe [x4]/NVMe) x 1
USB	USB 2.0 x 4 via 2x5P Header x 2
Display I/O	40-pin LVDS/eDP connector x 1 with Inverter
Audio I/O	HD Audio x 1 (via AAFF Header), Internal Speaker x 1 (2W/40hmΩ)
Serial Port	COM Box Header x 1 (RS-232/422/485) COM Box Header x 1 (RS-232)
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

Specifications

System	
Processor	12th & 13th Gen Intel® Core™ Processors (Raptor Lake-S/Alder Lake-S)
Chipset	Intel® Q670E
Memory	Dual-Channel DDR5 4800MHz SODIMM x 2 (Non-ECC, Max. 64GB)
I/O Chipset	Intel® UHD Graphics
Ethernet	Intel® I219-LM GbE LAN x 1 Intel® I210-AT GbE LAN x 1
Audio	Realtek® ALC897 with Amp.
TPM	Onboard TPM 2.0 IC
Expansion Slots	M.2 3042/3052 B-Key x 1 (PCIe [x1], USB 3.2 Gen 1/USB 2.0) M.2 2230 E-Key x 1 (PCIe [x1], Optional: dual PCIe [x1], USB 2.0)
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	HDMI x 2 + DP x 2, HDMI x 2 + DP x 1 + LVDS x 1, HDMI x 2 + DP x 1 + eDP x 1, HDMI x 1 + DP x 2 + LVDS x 1, HDMI x 1 + DP x 2 + eDP x 1
VGA	—
DVI	—
HDMI	HDMI 2.0, Up to 4096 x 2160 @60Hz
Display Port	DP 1.2, Up to 4096 x 2160 @60Hz
LVDS	Dual-Channel 18/24 bit LVDS via CH7513, up to 1920 x 1080 @60Hz, colay eDP
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)
Weight	1.1 lb (0.5 Kg)

Packing List

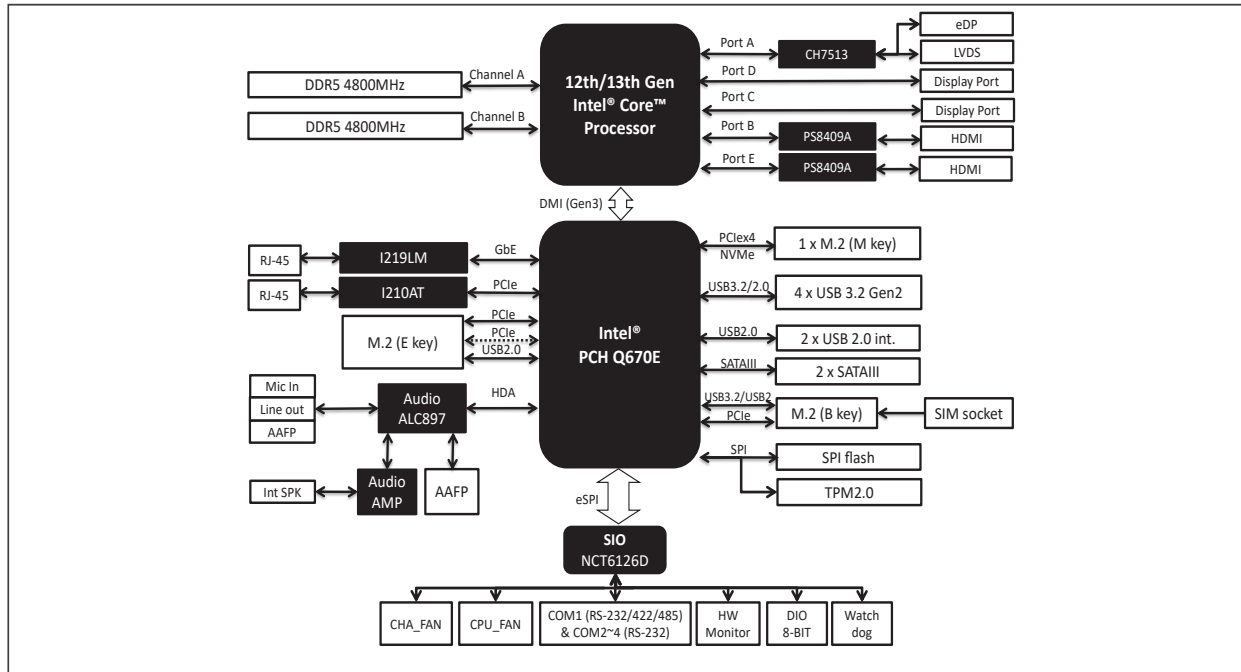
- I/O Shield
- SATA Cable
- SATA Power Cable
- MIX-Q670D1

MIX-Q670D1

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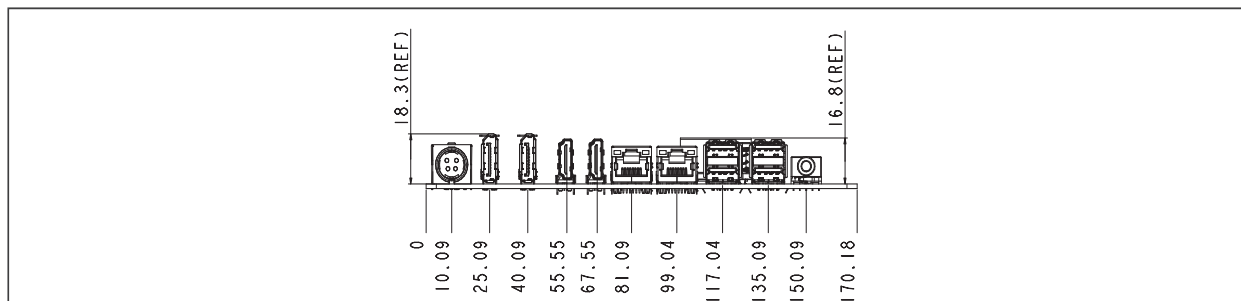
Industrial Motherboards

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 x 2, DP x 2, LVDS/eDP x 1	1	SATA III x 2, M.2 M-Key	GbE x 2	USB 2.0 x 4, USB 3.2 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
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1701100206	COM Cable (200MM, p=2.00mm)
1700100491	USB 2.0 Cable (10P, 490mm, p=2.00mm)

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Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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