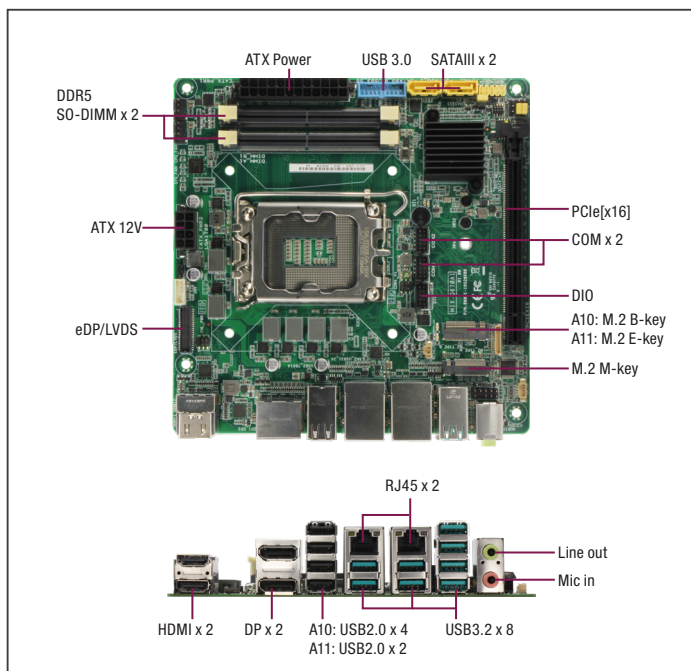


MIX-Q670A1

MIX with 13th & 12th Gen Intel® Core™ Processors (formerly Raptor Lake-S/Alder Lake-S)



Features

- 13th & 12th Gen Intel® Core™ Processors (Raptor Lake-S/Alder Lake-S)
- DDR5 SO-DIMM Support, 4800MHz, Max. 64GB
- HDMI 2.0 x 2 + DP 1.2 x 2
- M.2 2280 M-Key x 1, M.2 3042/3052 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
- PCIe Gen 5 [x16] x 1



| | |
|--------------------------------|--|
| Weight | 1.1 lb. (0.5Kg) |
| MTBF (Hours) | — |
| Rear Panel I/O Ports | |
| USB | A10: USB 3.2 Gen 2 x 8 + USB 2.0 x 4 A11-EK: USB 3.2 Gen 2 x 8 + USB 2.0 x 2 |
| Display I/O | HDMI x 2, DP x 2 |
| Audio I/O | Mic-in x 1, Line-out x 1 |
| LAN I/O | LAN Port x 2 (RJ-45) |
| Serial Port | — |
| PS/2 Port | — |
| Others | SIM Socket x 1 (A10 only) |
| Internal I/O Connectors | |
| Storage | SATA III x 2 (6.0Gb/s), M.2 2280 M-Key |
| USB | USB 3.0 Pin Header x 1 (Supports additional USB 3.2 Gen 1 x 2) |
| Display I/O | — |
| Audio I/O | AAFP x 1, Speaker x 1 |
| Serial Port | Box Header for COM x 1 (RS-232/422/485) Box Header for COM 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 Chassis Fan Connector x 1 |
| Power | — |
| Others | Front Panel Connector x 1, Chassis Intrusion x 1, Onboard Buzzer x 1, CMOS Jumper x 1 |
| OS | |
| OS Support | Windows® 10 64-bit, Windows® 11 64-bit |

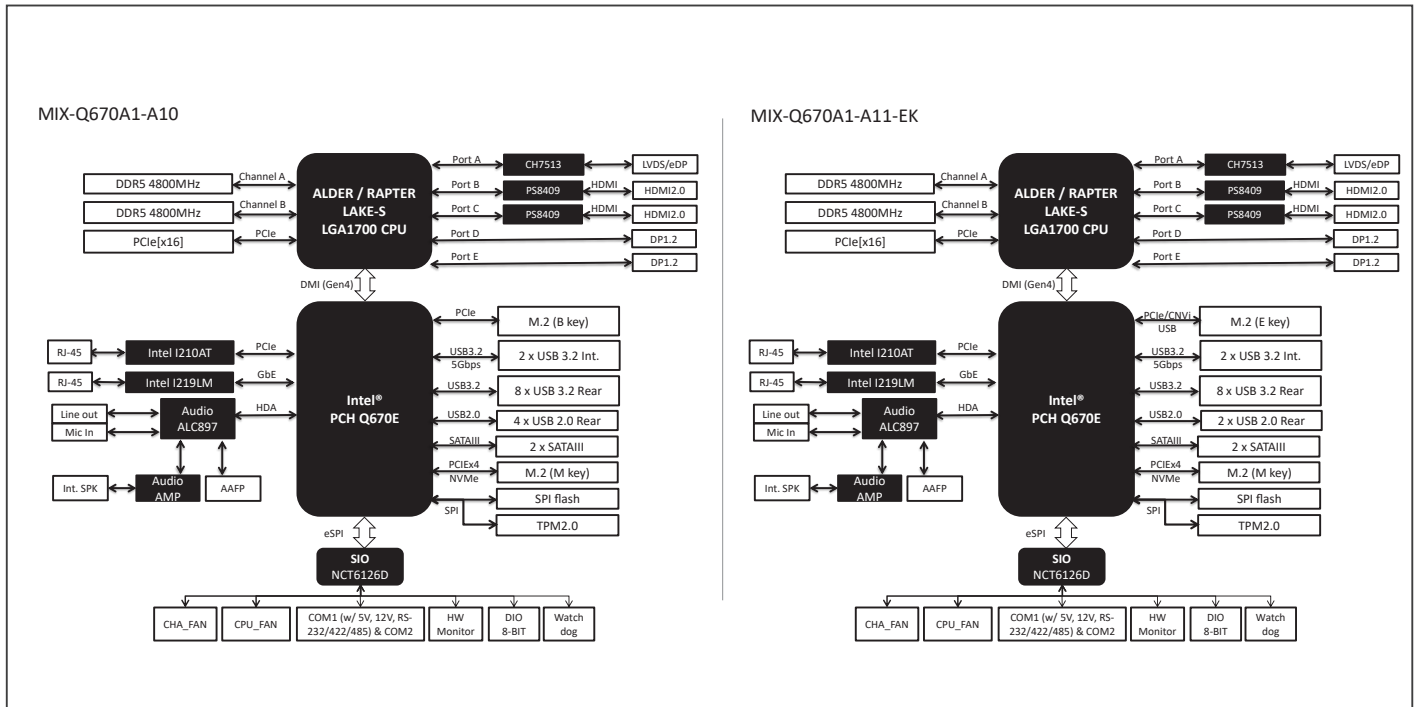
Specifications

| System | |
|--------------------------|--|
| Processor | 13th & 12th Gen Intel® Core™ Processors (Raptor Lake-S/Alder Lake-S) |
| Chipset | Q670E |
| Memory | Dual-Channel DDR5 4800MHz SODIMM x 2, Max. 64GB |
| 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 | Onboard TPM 2.0 IC |
| Expansion Slots | PCIe Gen 5 [x16] x 1 A10: M.2 3042/3052 B-Key x 1 A11-EK: M.2 2230 E-Key x 1 |
| BIOS | 256Mbit Flash ROM, AMI BIOS |
| H/W Monitor | Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5W/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 | 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 | Up to 4096 x 2160 @60Hz (HDMI 2.0) |
| Display Port | Up to 4096 x 2160 @60Hz |
| LVDS | Up to 1920 x 1080 @60Hz, Dual-Channel 18/24 bit |
| eDP | Up to 1920 x 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) |

Packing List

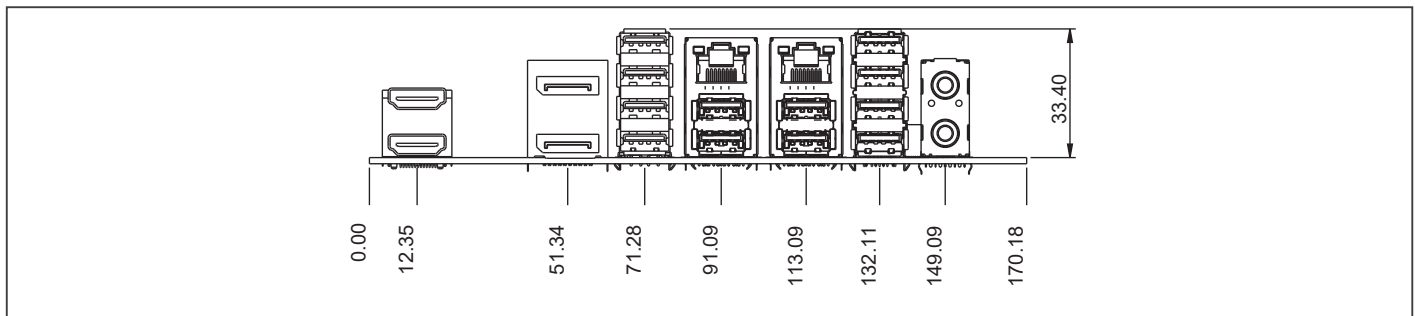
- I/O Shield
- SATA Cable
- MIX-Q670A1

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-Q670A1-A10 | Socket | SODIMM x 2 | Fan | HDMI x 2, DP x 2, LVDS/eDP x 1 | 1 | SATA III x 2, M.2 2280 M-Key | GbE x 2 | USB 2.0 x 4 USB 3.2 x 8 | 1 | 1 | PCIe [x16] x 1, M.2 3042/3052 B-Key x 1 | ATX | 2.0 | 0-60°C |

Optional Accessories

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