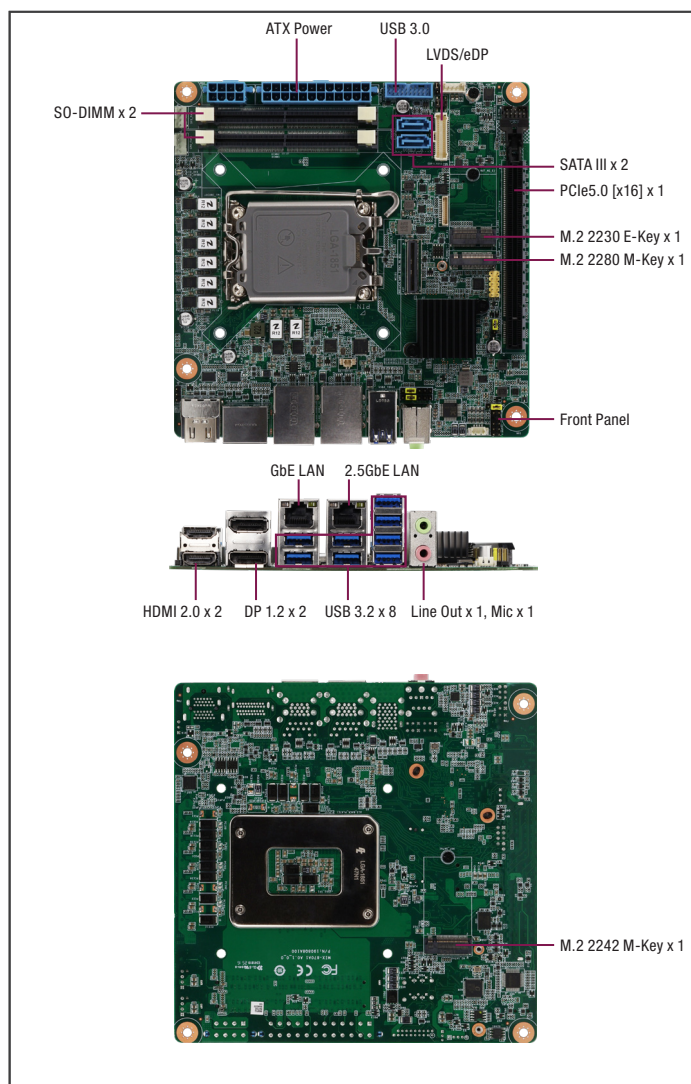


MIX-Q870A1 PRELIMINARY

Mini-ITX with Intel® Core™ Ultra 200S Series Processors



Specifications

System	
Processor	Intel® Core™ Ultra 200S Series Processors, 65W, LGA1851 Socket
Chipset	Intel® Q870 Chipset
Memory	CSODIMM/SODIMM x 2, Max 96GB, Dual-Channel DDR5, up to 6400MHz
I/O Chipset	Nuvoton NCT5525D
Ethernet	Intel® Ethernet Connection I219-LM, 1GbE LAN x 1 Intel® Ethernet Controller I226-V, 2.5GbE LAN x 1
Audio	Realtek® ALC897 (with audio AMP)
TPM	TPM 2.0
Expansion Slots	PCIe Gen 5 [x16] x 1 (Jumper for Bifurcation selection ([x16] x 1 or [x8] + [x8] or [x8] + [x4] + [x4])) M.2 2230 E-Key x 1 (PCIe [x1]/NVMe)
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis
WatchDog Timer	1~255 steps 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	Quad Independent Display
VGA	—

Features

- Intel® Core™ Ultra 200S Series Processors
- DDR5, 6400MHz, Max 96GB
- PCIe Gen 5 [x16] x 1
- M.2 E-Key x 1 + M.2 M-Key x 2
- USB 3.2 Gen 2 x 10
- SATA 6Gb/s x 2
- HDMI 2.0 x 2, DP 1.4 x 2
- 1GbE LAN x 1 + 2.5GbE LAN x 1
- ATX Power



DVI	—
HDMI	HDMI 2.0: Up to 4096 x 2160 @60Hz/2560 x 1600 @60Hz, with Digital Audio
Display Port	DP 1.4: Up to 4096 x 2160 @120 Hz (HBR2)
LVDS	Up to 1920 x 1080 @60Hz, Dual-Channel 18/24 bit, co-layout eDP (default LVDS)
eDP	Up to 1920 x 1080 @60Hz
Backlight Control	PWM

Environment & Power & ME

Battery	Lithium battery
Power Requirement	ATX
Operating Temperature	32°F ~ 140°F (0 ~ 60°C) (Operational humidity: 60°C @90% RH Non-Condensing)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Certificate	CE & FCC (Class A)
Form Factor	6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5Kg)
MTBF (Hours)	—

Rear Panel I/O Ports

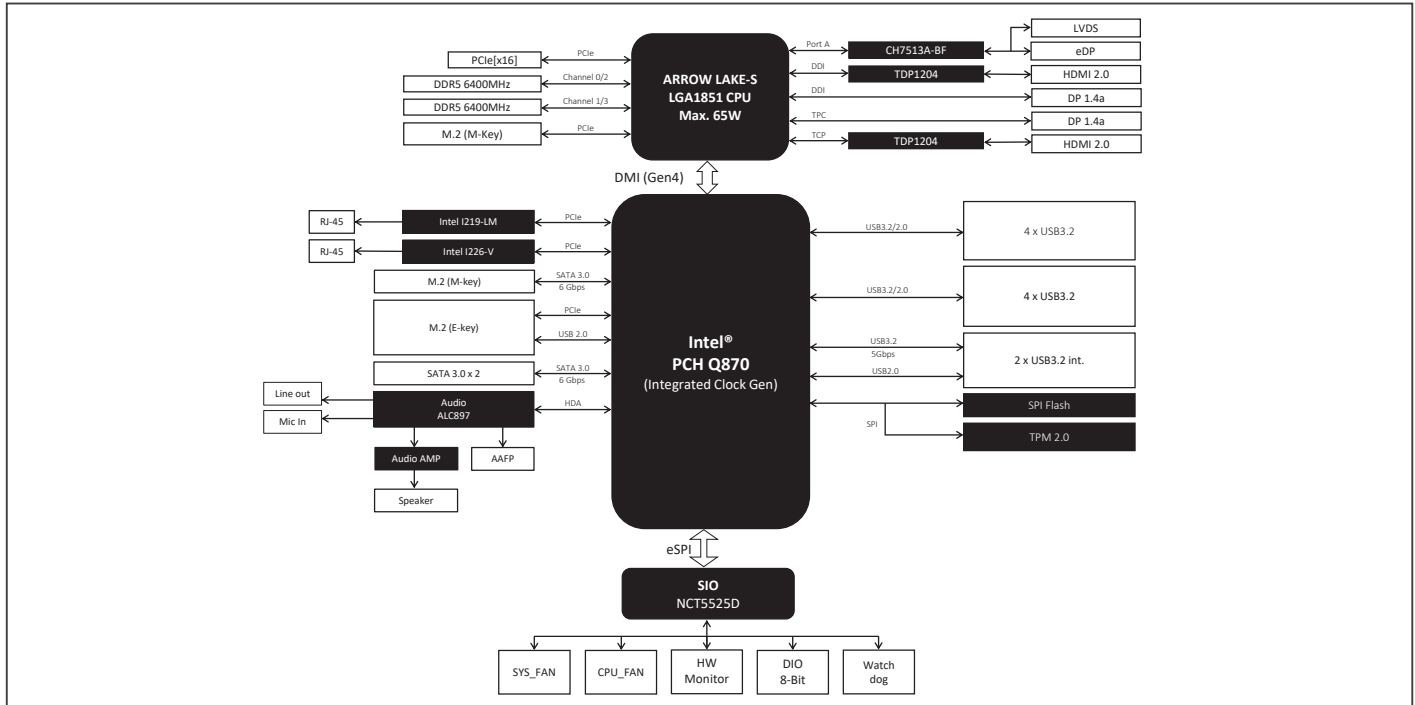
USB	USB 3.2 Gen 2 x 8
Display I/O	HDMI 2.0 x 2, DP 1.4 x 2
Audio I/O	Line Out x 1, Mic x 1
LAN I/O	RJ-45 x 2
Serial Port	—
PS/2 Port	—
Others	—

Internal I/O Connectors

Storage	SATA 6Gb/s x 2, RAID 0,1 supported M.2-1A 2280 M-key x 1 (PCIe [x4]/NVMe) M.2 2242 M-Key x 1 (SATA)
USB	USB 3.0 pin header x 1 (supports additional USB 3.2 Gen 1 x 2)
Display I/O	40-pin LVDS/eDP connector x 1 with Inverter (Default LVDS)
Audio I/O	AAFP follows ASUS pin out x 1
Serial Port	—
PS/2 Port	—
Parallel Port	—
DIO	8-bit programmable (4-in/4-out) x 1
FAN	4-pin Chassis Fan Connector x 1 4-pin CPU Fan Connector x 1
Power	ATX
Others	Clear CMOS Jumper x 1 Front Panel Connector x 1 Chassis Intrusion x 1 Buzzer Onboard x 1 ATX/AT Mode Select x 1 ME Disable x 1 eDP/LVDS Tcon IC Voltage Select x 1 Backlight Voltage Select x 1
OS	
OS Support	Windows 11 64-bit; Linux Ubuntu 24.04 (TBD)

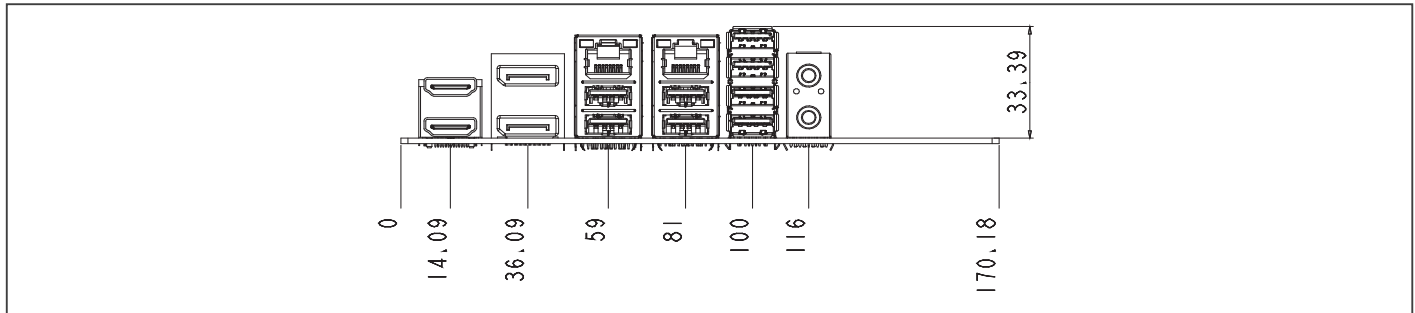


Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	RAM	Fan/Fanless	Display	LVDS/eDP	Storage	LAN	USB	Expansion Slot	Power	TPM	Temp.
MIX-Q870A1-A10	LGA1851 Socket	DDR5 SODIMM x 2	Fan	DP x 2 + HDMI x 2	1	SATA x 2 M.2 M-Key x 2	1GbE x 1 2.5GbE x 1	USB 3.2 x 10	M.2 E-Key x 1 PCIe [x16] x 1	ATX	2.0	0°C ~ 60°C

Optional Accessories

- TBD

Packing List

- MIX-Q870A1
- I/O Shield
- SATA Cable