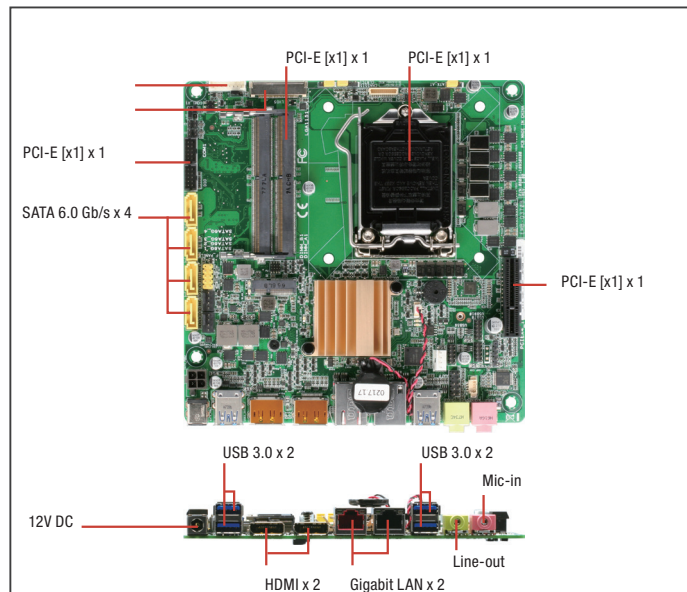


Mini-ITX, 8th Generation Intel® Core™ i7/ i5 /i3, Pentium® LGA1151 Socket Processor, Max. 65W TDPs



## Features

- DDR4 SODIMM x 2, Up to 32 GB
- Three Independent Display: DP x 2, eDP x 1, LVDS x 1
- Intel® LAN 211AT x 1, 219LM for iAMT 12.0 x 1
- M.2 Slot (M-key) x 1
- M.2 Slot (E-key) x 1
- PCIe [x4] x 1
- Low Profile



## Specifications

System	
Processor	8th Generation Intel® Core™ i7/ i5 /i3, Pentium® LGA 1151 socket Processor (CoffeeLake-S), Max. 65W TDPs
Chipset	Intel® Q370 Express Chipset
Memory	SODIMM x 2, Max. 32GB, DDR4 2400/2133 MHz, Non-ECC, Un-buffered Memory, Dual channel
Graphics	Intel® HD Graphics
I/O Chipset	NCT6793D
Ethernet	Intel® PHY i219LM Giga LAN (support Intel® AMT 12.0) x 1 Intel® i210AT Giga LAN x 1
Audio	Realtek® ALC887
TPM	Nuvoton TPM version 2.0
Expansion Slots	PCIe 3.0 [x4] x 1 M.2 M key (22 x 80mm) x 1 at Bottom side, SATA & PCIe [x4] M.2 E key (22 x 30mm) x 1 for Wireless-wifi module (PCIe+USB)
BIOS	128Mbit 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® HD Graphics
Graphics Multi Display	Three Independent Display
VGA	—
DVI	—
HDMI	Up to 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz, with Digital Audio
Display Port	Up to 4096 x 2160 @ 24 Hz / 3840 x 2160 @ 60 Hz, with Digital Audio, DP++ supported
LVDS	LVDS Up to 1920 x 1200 @ 60 Hz, Dual Channel 18/24 bit (via Chronitel 7511)
eDP	eDP UP to 4096 x 2340 @ 60Hz
Backlight Control	Voltage/PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12V DC
Power Compliance	—
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% R/H, non-condensing
Certificate	CE & FCC (Class A)
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	—

### Rear Panel I/O Ports

USB	USB 3.1 Gen. 2 x 4
Display I/O	DP x 2
Audio I/O	Mic-in x 1, Line out x 1
LAN I/O	LAN (RJ45) port x 2
Serial Port	DB-9 COM x 1 (support RS-232/422/485)
PS/2 Port	Combo Port (Keyboard & Mouse) x 1
Others	—

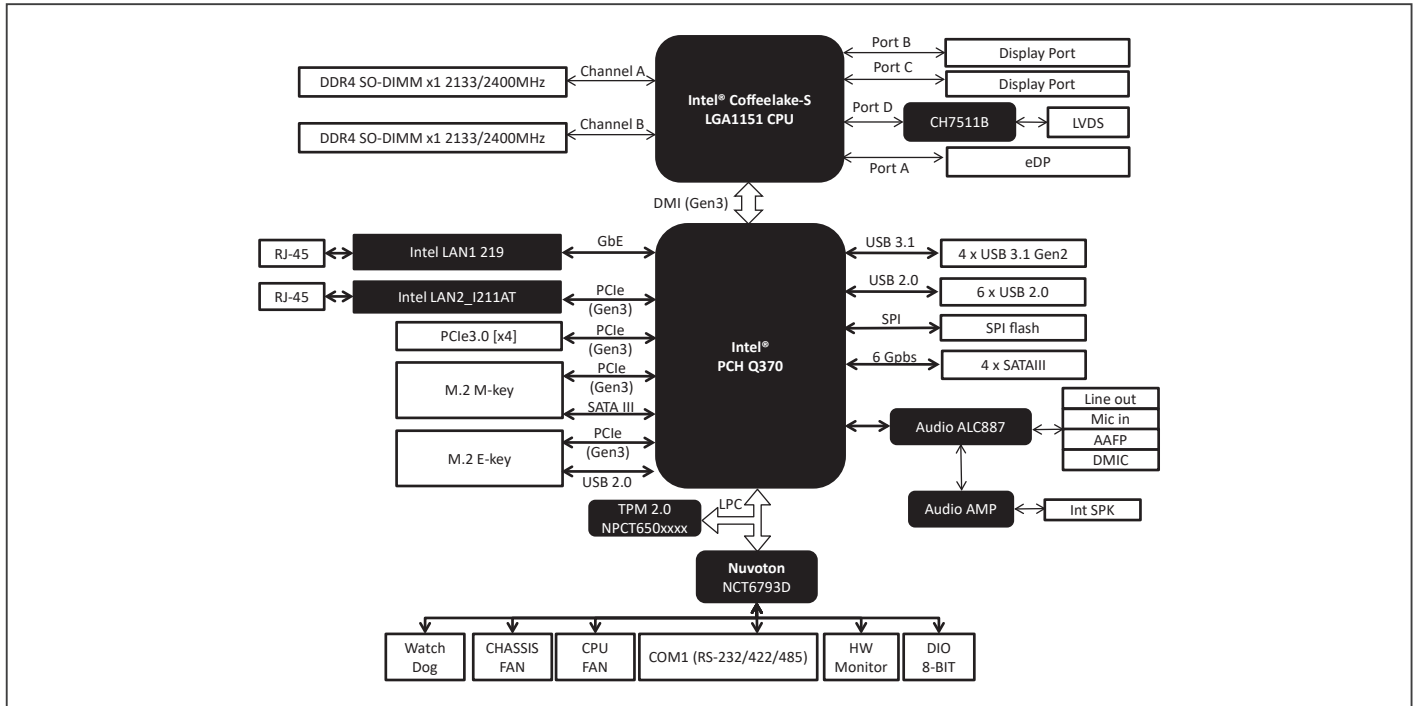
### Internal I/O Connectors

Storage	SATA 6.0Gb/s x 4M x 2 M key (22 x 80mm) x 1 at Bottom side 4-pin SATA power x 1
USB	3 x USB 2.0 pin header support additional 6 USB ports
Display I/O	40-pin LVDS connector x 1 40-pin eDP connector x 1 LCD backlight connector (inverter) x 1
Audio I/O	Speaker for 2W/4Ω x 1 AAFP follow ASUS pin out x 1
Serial Port	Boxer header x 1 for COM (COM1: RS-232/422/485 supports 5V/12V/RI)
PS/2 Port	—
Parallel Port	—
DIO	8-bit x 1 (In/Out programmable)
FAN	4-pin Chassis Fan connector x 1 4-pin CPU Fan connector x 1
Power	12V DC Power jack x 1
Others	Front panel header x 1 Clear CMOS jumper x 1 AT/ATX select jumper x 1 Chassis Intrusion x 1
OS	
OS Support	Windows 10 64 bit, Ubuntu 16.04 LTS

## Packing List

- SATA Cable
- SATA Power Cable
- I/O Shield
- Product CD
- EMB-Q370B

## Block Diagram



## Dimension Unit: mm



## Ordering Information

Part number	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
EMB-Q370B-A10	Socket	SODIMM x 2	Fan	DP x 2, LVDS, eDP	SATA3 x 4, M.2(M-key)	Dual Channel 18/24 bit	GbE x 2	USB2.0 x 6, USB3.1 x 4	—	1	PCIe3.0[x4] x 1, M.2(M-key) x 1, M.2(E-Key) x 1	12V DC	—	32°F ~140°F (0°C ~ 60°C)

## Optional Accessories

Part Number	Description
1759200172	(TF)CPU Cooler Fan, LGA 1156 socket, 4P, 12V, 2-Ball Bearing, Dynatron, K785, (2U cooler)
175921156B	(TF)CPU Cooler Fan, LGA 1156 socket, 12V, 4P, 2Ball (Tray), Dreamer, DSA-00273
COOLER-65W-01	CPU Cooler, LGA 1156, 12V, 65W, 4P, Kingcooler, 0571-1463R
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1700100491	USB 2.0 Cable (2 x 5P, 490mm, p=2.00mm)
1709050201	USB 2.0 Cable (5P, 220mm, p=2.00mm)
1701100206	COM Cable (200MM, p=2.00mm)
1702150300	SATA Power Cable (4P, 300MM p=2.54mm)
1702151201	SATA Power Cable (4P, 120MM, p=2.5mm)
1255900846	Adapter 12V/84W