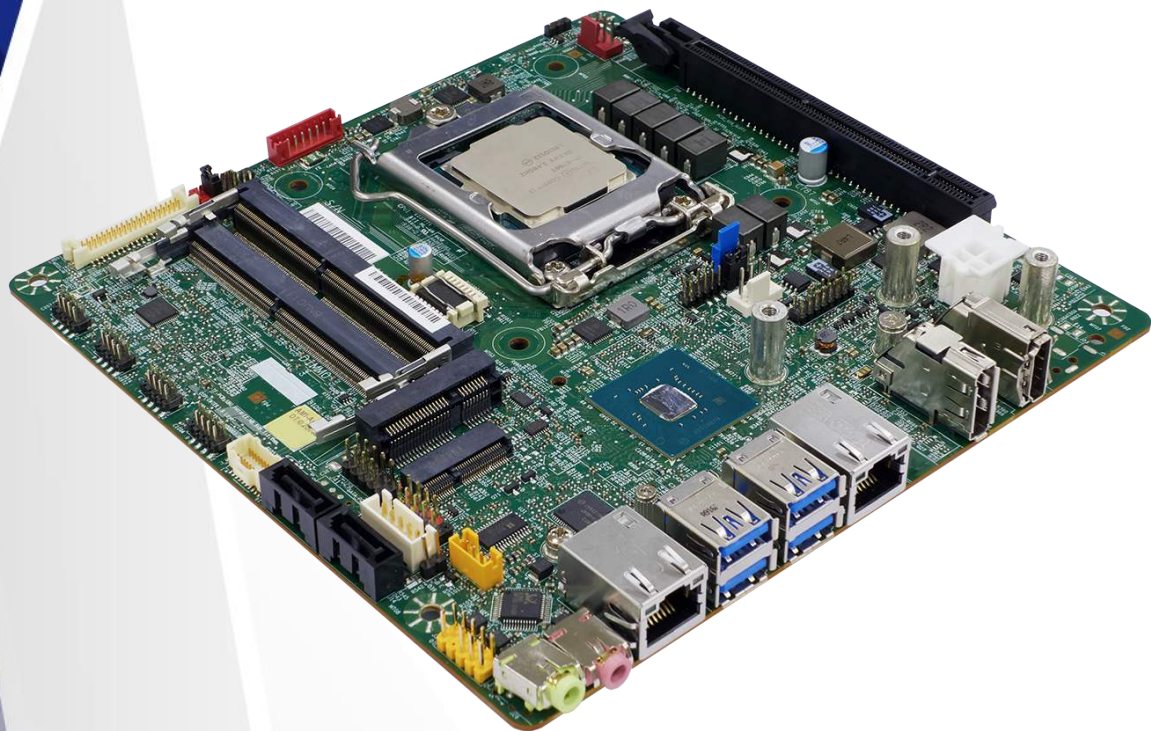




INS89658

INTEL® 8TH/ 9TH GEN.
CORE™ i9/ i7 PROCESSORS MINI-ITX



- Support Intel® Core™ i9/ i7/i5/i3 Coffee Lake LGA1151 Socket Processor
- Intel® Q370 Chipset
- Intel® vPro technology support
- 2 x DDR4 SO-DIMM up to 64GB
- 1 x M.2 M 2280, 1 x M.2 E 2230, 1 x mPCIe Full size, 1 x PCIe X16
- DC-in 12V

Specification

System

CPU	9th & 8th Gen Intel® Coffee Lake LGA1151 Socket Processor, Core i9-9900T (8core/35W) Core i7-8700K (6core /95W) Core i7-9700TE (8core/35W) Core i5-9500TE (6core /35W)
Chipset	Intel Q370 (Support RAID 0 / 1) support vPro
Memory	DDR4 2666MHz, 2 x 260-pin SO-DIMM, Max. 64GB (Non-ECC)
Graphics	Intel HD Graphics
Ethernet	Intel I219-LM Giga LAN + Intel I210-AT Giga LAN
Audio	Realtek ALC662
Super I/O	Nuvoton NCT6116D
TPM	TPM Header (option TPM-SPI-NPCT750)
BIOS	AMI BIOS, 256 Mbit SPI
Watchdog	1~255 Steps by Software
H / W Monitor	Temperature Monitor, Voltage Monitor, Fan Monitor
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Expansion Slot	1 x PCIe X16 slot 1 x Mini PCIe Full size (SATA, USB, PCIe) 1 x M.2 2260 / 2280 M key (PCIe, SATA) 1 x M.2 2230 E key (PCIe, USB 2.0)

Display

HDMI	Up to 4K (4096 x 2160) @30 Hz
DisplayPort	Up to 4K (4096 x 2304) @60 Hz
2nd DisplayPort	Up to 4K (4096 x 2304) @60 Hz
LVDS	Up to 1920 x 1200 @60 Hz

Rear I/O

USB 4 x USB 3.1 Gen. 2 (10Gb/S)(Q370) / 4 x USB 3.0 (H310)

Display I/O 1 x HDMI 1.4, 2 x DisplayPort 1.2

Audio I/O 1 x Mic-in ,1 x Line-out

LAN 2 x RJ-45

Others 1 x DIN 4-pin DC Jack

Internal I/O

Storage 2 x SATAIII

USB 5 x USB 2.0 (Q370) , 4 x USB 2.0 (H310)

Display I/O 1 x LVDS (Optional eDP SKU available)
1 x Backlight Connector

Audio I/O 1 x Speaker 2W

Serial Port 4 x RS232 (two supports RS232/422/485 select by BIOS)

GPIO 1 x MiAPI Header (Programmable)

Fan 1 x 4-pin CPU Fan Connector, 1 x 4-pin System Fan Connector

Power 1 x ATX 4-pin Power Connector, 1 x AT / ATX Mode Select Jumper

Others 1 x Front Audio Header (Mic-in / Line-out), 1 x CMOS Jumper, 1 x panel power select header, 1 x backlight power select header, 1x buzzer header

Power Requirement

Power Input DC-in 12V DIN 4-pin connector / ATX 4pin 12V

Environmental

Operating Temperature -20 ~ 70°C ET

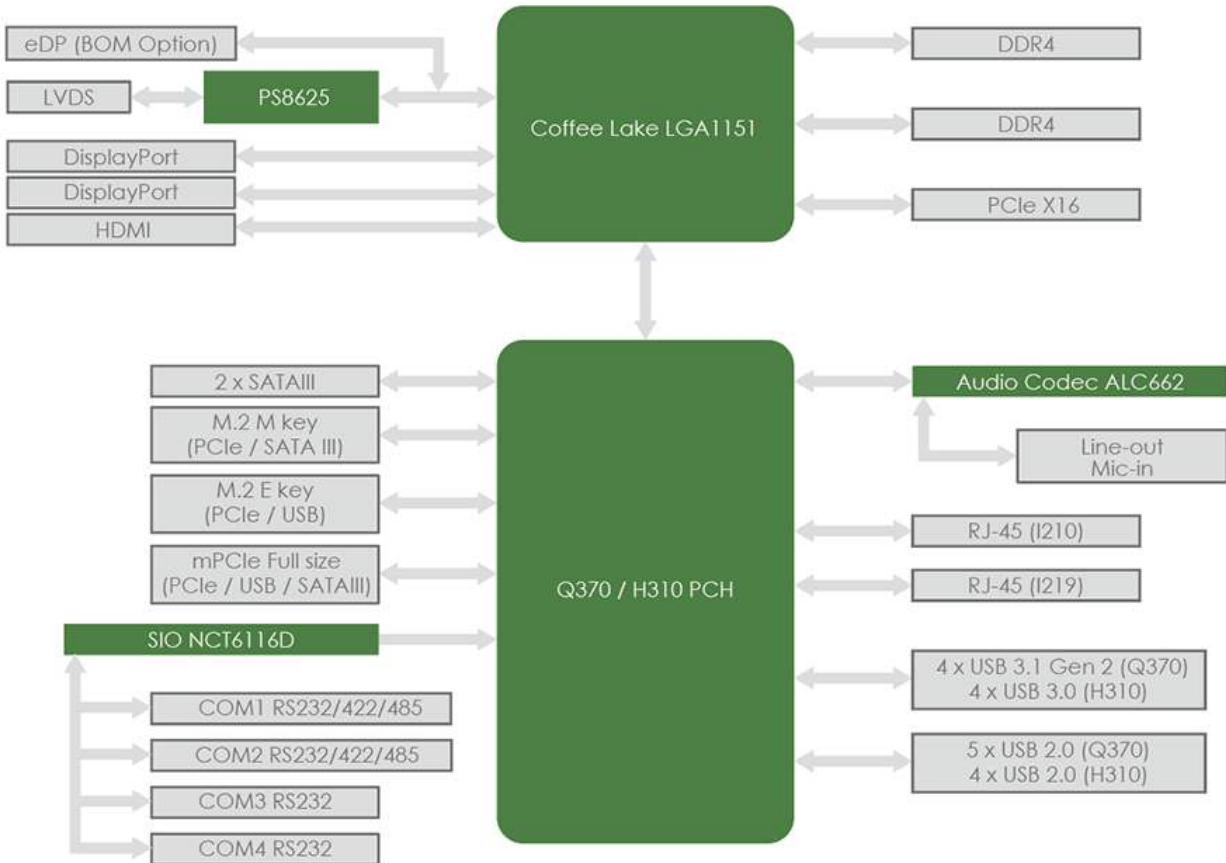
Temperature -40 ~ 85°C UT

Storage Temperature -40 ~ 85°C

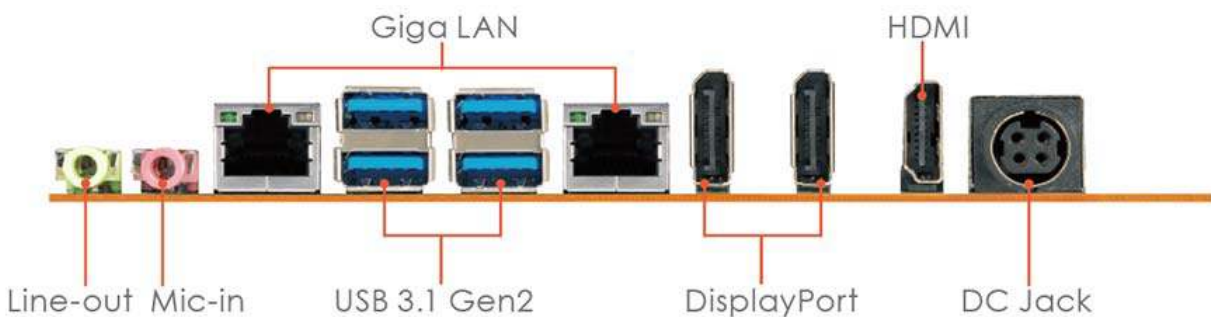
Operating Humidity 10% ~ 95% R/H, non-condensing

Certification CE & FCC Class B

Block Diagram



Edge I/O



Ordering Information

Model Number	PCH	DisplayPort/ HDMI	USB 3.0 / 2.0 Port	USB 3.1 Gen.2 Support	vPro Support	RAID 0 / 1 Support	Power Input
INS8365B-1	Intel Q370	2 / 1	4 / 5	V	V	V	DC-in 12V