ASSURED SYSTEMS

ASRock Industrial
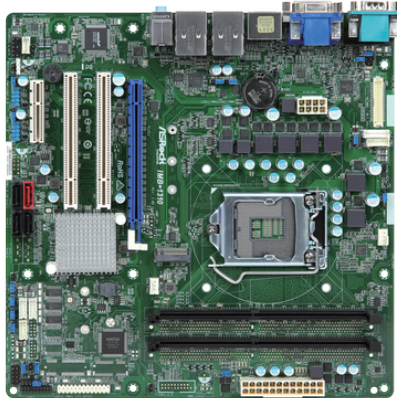
intel IoT Solutions Alliance

IMB-1310
Micro-ATX Motherboard

KEY FEATURES

- Intel® 9th/ 8th Gen (Coffee Lake-S) Core™ Processors with H310 chipset
- 2 x 288-pin Long-DIMM up to 64GB* DDR4 2666 MHz
- 1 x PCIe x16 (Gen3), 1 x PCIe x4 (Gen2), 2 x PCI, 4 x USB 3.1 Gen1,
  4 x USB 2.0, 1 x M.2 Key M, 4 x COM, 4 x SATA3
- 2 x Intel 1 Gigabit LAN
- Supports dual display, 1 x HDMI 1.4, 1 x DP 1.2, 1 x VGA, 1 x LVDS, 1 x DVI-D
- TPM Header
- ATX PWR

SPECIFICATIONS

Form Factor

Dimensions	Micro ATX (9.6-in x 9.6-in)

Processor System

CPU	Intel® 9th/ 8th Gen (Coffee Lake-S) Core™ Processors, up to 95W
	*For cooling the CPU exceeding 90W and its surrounding components, please install a CPU cooler with a top-down blowing design.
Chipset	Intel® H310
Socket	LGA1151
BIOS	AMI SPI 128 Mbit

Memory

Technology	Dual Channel DDR4 2666 MHz
Capacity	64GB*
	* Intel Core i9/i7/i5 CPUs support up to 64GB (32GB per DIMM)
	Intel Core i3/Pentium/Celeron CPUs support up to 32GB (16GB per DIMM)
Socket	2 x 288-pin Long-DIMM

Graphics

Controller	Coffee Lake integrated graphics
HDMI	HDMI 1.4
	Max resolution up to 4096x2160@24Hz
DisplayPort	DisplayPort 1.2, DP++
	Max resolution up to 4096x2304@60Hz
VGA	Max resolution up to 1920x1200@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz
eDP	N/A
DVI-D	Max resolution up to 1920x1200@60Hz
MultiDisplay	Dual Display

Expansion Slot

PCIe	1 x PCIe x16 (Gen3)
	1 x PCIe x4 (Gen2)
PCI	2
mini-PCIe	N/A
M.2	N/A

Audio

Interface	Realtek ALC887, High Definition Audio. Line-out,Mic-in,Line-in

Ethernet

Controller/ Speed	LAN1: 1 x Intel® I210 with 10/100/1000 Mbps
	LAN2: 1 x Intel® I219V with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 1.4
DisplayPort	1 x DP 1.2
VGA	1
DVI-D	1
Ethernet	2 x 1 Gigabit LAN
USB	4 x USB 3.1 (Gen1)
Audio	3 (Mic-in, Line-in, Line-out)
COM	COM3(RS-232/422/485)
PS2	1

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)
COM	COM1, 2, 4(RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)
TPM	TPM Header
LVDS	1
eDP	N/A
VGA	N/A
SATA PWR Output	N/A
Speaker Header	1

Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with shared SATA3 for SSD
mSATA	N/A
SATA	4 x SATA3 (6Gb/s), SATA3_1 shared with M.2 Key M
eMMC	N/A

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	ATX PWR (24+8-pin)
Power On	AT/ATX Supported
	- AT : Directly PWR on as power input ready
	- ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0ºC ~ 60ºC
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Assured Systems

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