

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 PCle x16 (Gen3), 1 x PCle x4 (Gen2), 2 x PCl, 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

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

Processor System

Manaami	
BIOS	AMI SPI 128 Mbit
Socket	LGA1151
Chipset	Intel®H310
CPU	Intel® 9 th / 8 th Gen (Coffee Lake-S) Core™ Processors, up to 65W

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

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

Audio

l-+f	Dealth ALCOOP High Deficition And a line and Michaeline in
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	0°C~60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5%~90%
Storage Humidity	5%~90%