



EMX-H310P

Intel® 8/9th Gen. Core™
i7/i5/i3/Pentium®/Celeron®/Processor Mini ITX
Motherboard With Intel® H310 Chipset

- > Intel® 8/9th Gen. Core™ i7/i5/i3/Pentium®/Celeron®/Processor
- > Intel® H310 Chipset
- > 2 x 260-pin DDR4 2400/2666MHz SO-DIMM socket, supports up to 64GB
- > 1 x Intel® I219LM Gigabit Ethernet PHY
- > 3 x Intel® I210AT PCI-e Gigabit Ethernet
- > VGA, HDMI, DP++, Dual-CH LVDS co-lay eDP (By BOM option)
- > 3 x SATA III
- > 1 x M.2 (2242/2260/2280) B-Key, support WWAN+GNSS with SIM card slot & SSD (SATA)
- > 1 x M.2 (2230) E-Key, support WiFi module
- > 1 x PCI-e x16
- > 6 x USB3.1 Gen1, 2 x USB 2.0, PS2 KB/MS + 2 x USB 2.0 at I/O, 2 x USB2.0 by pin header
- > 4 x RS232, 2 x RS232/422/485
- > ATX Power

+ Spec

System Information

Processor	Intel® LGA1151 Socket Supports 8/9th Generation Core™ i7/ i5/ i3/ Pentium®/Celeron® Processors
Platform Controller Hub	Intel® H310 Chipset
System Memory	2 x 260-pin DDR4 2400/2666MHz SO-DIMM supports up to 64GB
I/O Chipset	Nuvoton® NCT6106D
BIOS Information	AMI uEFI BIOS, 256Mbit SPI Flash ROM
Watchdog Timer	H/W Reset, 5~255 seconds/5~255 minutes
H/W Status Monitor	CPU temperature monitoring, Voltages monitoring, CPU fan speed control
Board	Mini ITX Board

Expansion

Expansion	1 x PCI-e x16 1 x M.2 (2242/2260/2280) B-Key, supports WWAN+GNSS with SIM card slot & SSD (SATA) 1 x M.2 (2230) E-Key, supports WiFi module
------------------	---------------------------------------------------------------------------------------------------------------------------------------------------

I/O

USB Port	6 x USB 3.1 Gen1, 2 x USB 2.0, PS2 KB/MS + 2 x USB2.0
COM Port	4 x RS232 2 x RS232/422/485
SATA	3 x SATA III
DIO	1 x 16-bit GPIO

Display

Graphic Chipset	Intel® 8/9th Generation CPU integrated
Spec. & Resolution	VGA: 2048 x 1536 @ 60 Hz HDMI: 3840 x 2160 @ 30 Hz, 2560 x 1600 @ 30 Hz DP++: 4096x2160 @ 30Hz Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS)- By BOM option
Multiple Display	Dual Display
LVDS	Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS)- By BOM option

Ethernet

LAN Chipset	1 x Intel® I219LM Gigabit Ethernet PHY 3 x Intel® I210AT PCI-e Gigabit Ethernet
LAN Port	4 x RJ-45

Mechanical & Environmental

Operating Temperature	0~60°C (32~140°F)
Storage Temperature	-40 ~ 75°C
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.4 kg
Power Requirement	+12V/+5V/5VSB/+3.3V/-12V
ACPI	Single power ATX Support S0, S3, S4, S5
Power Mode	AT/ATX
Dimension (L x W)	6.7" x 6.7" (170mm x 170mm)

Ordering Information

Ordering Information	EMX-H310P-A1-02R Intel® 8/9th Gen. Core™ i7/i5/i3/Pentium®/Celeron® Processor Mini ITX Motherboard With Intel® H310 Chipset (No Audio Function) Intel® 8th Gen Supports LGA 1151 CPU Up to 95W Max. Intel® 9th Gen Supports LGA 1151 CPU 4 core & 6 core CPU Up to 95W, but kindly note: with 8 core CPU, only support CPU up to 35W Max.
-----------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------