



EMX-H310DP

Intel® 8/9th Gen. Core™
i7/i5/i3/Pentium®/Celeron® Processor Thin 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
- > 2 x Intel® I210AT PCIe Gigabit Ethernet
- > 3 x HDMI, Dual-CH LVDS co-layer eDP (By BOM option)
- > 2 x SATA III
- > 1 x M.2 (2230) E-Key, support WiFi module
- > 1 x M.2 (3042/2242/2260/2280) B-Key, support WWAN+GNSS (USB2.0) with SIM card slot & SSD (SATA)
- > 1 x PCIe x16
- > 4 x USB3.1 Gen 1 at I/O, 3 x USB2.0 by pin header
- > 3 x RS232, 1 x RS232/422/485
- > Onboard Infineon SLB9665 support TPM 2.0
- > DC in +12~26V, 4pin DC in

+ 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
TPM	Onboard Infineon SLB9665 supports TPM 2.0
Board	Thin Mini ITX Board
Expansion	
Expansion	1 x PCIe x16 1 x M.2 (2230) E-Key, supports WiFi module 1 x M.2 (3042/2242/2260/2280) B-Key, support WWAN+GNSS (USB2.0) with SIM card slot & SSD (SATA)
I/O	
USB Port	4 x USB 3.1 Gen 1 at I/O 3 x USB 2.0 by pin header
COM Port	3 x RS232 1 x RS232/422/485
SATA	2 x SATA III, 2 x SATA power
DIO	1 x 16-bit GPIO
Display	
Graphic Chipset	Intel® 8/9th Generation CPU integrated
Spec. & Resolution	HDMI: 3840 x 2160 @ 30 Hz
Multiple Display	Dual Display
LVDS	Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS)- By BOM option
Audio	
Audio Codec	Realtek ALC888S
Audio Amplifier	6W Amplifier
Ethernet	
LAN Chipset	1 x Intel® I219LM Gigabit Ethernet PHY 2 x Intel® I210AT PCIe Gigabit Ethernet
LAN Port	3 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	DC in +12V~26V(+/-5%) 4-pin DC-in
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-H310DP-B1R Intel® 8/9th Gen. Core™ i7/i5/i3/Pentium®/Celeron® Processor Thin Mini ITX Motherboard With Intel® H310 Chipset Intel® 8th Gen Supports LGA 1151 CPU Up to 65W Max. Intel® 9th Gen Supports LGA 1151 CPU 4 core & 6 core CPU Up to 65W, but kindly note: with 8 core CPU, only support CPU up to 35W Max.