

BMX-P820

Intel® 14th Gen Core™ i7/i5/i3 Processor
(35W) CPU Fanless Barebone System



Product Features

- 14th Generation Intel® Raptor Lake-S Refresh (35 W) Processors
- 2 x Intel® i219LM, I226V Ethernet
- 1 x HDMI 1.4b 4K@30Hz, 2 x DP++ 1.4a 4K@60Hz
- 4 x USB 3.2 Gen1 x 1, 4 x USB 2.0 Type-A
- Onboard infineon SLB 9670VQ2.0 support TPM2.0
- ATX power
- Two 262-pin DDR5 4800MHz SO-DIMM socket, supports up to 64GB Max. (non ECC only)
- RealTek ALC897 Audio Codec
- 3 x SATA III
- 1 x PCIe x16 (Gen4), 1 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III), 1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 + USB 2.0)
- 3 x Audio (Mic in and Line out for Rear IO, Mic in/Line out for Front IO)

Specification

System Information	
Processor	Intel® Core™ i7-14700T / i5-14500T Processor (35W, Default)
Platform Controller Hub	Intel® H610E Chipset
System Memory	2 x 262P SO-DIMM Socket (Capacity Max. Up to 64GB DDR5 4800)
I/O Chipset	nuvoton NCT6126D
BIOS Information	AMI 256Mb UEFI BIOS
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
H/W Status Monitor	Monitoring CPU Temperature, Voltage with Auto Throttling Control
TPM	Onboard infineon SLB 9670VQ2.0 support TPM2.0
SBC	Mini-ITX 170mmx170mm (MX610H)

Expansion

M.2	1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 + USB 2.0)
PCIe	PCIex 16 (NVIDIA RTX 2000 Ada Generation graphic card, by optional)

Storage

M.2	1 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III)
2.5 Drive Bay	2 x Internal 2.5" Drive Bay

Front I/O

USB	2 x USB 2.0 2 x USB 3.2 (Gen 1 x 1)
Power Button	1 x PWR
LED Indicator	1 x PWR LED 1 x Data Access LED
Audio	1 x Audio jack(Mic in/Line out)

Rear I/O

USB	4 x USB 3.2 Gen1x1 2 x USB 2.0
COM Port	2 x RS-232/422/485
LAN Port	1 x Intel® I219LM Gigabit Ethernet PHY 1 x Intel® i226V 2.5 Gigabit Ethernet
DP	2 x Dual Mode DisplayPort (DP++) 1.4a 4K@60Hz
HDMI	1 x HDMI 1.4b 4K@30Hz
Audio	Mic-in, Line-out

Display

Graphic Chipset	Intel® UHD Graphics 770 (Depends on CPU)
Resolution	HDMI 1.4b 4K@60Hz Dual Mode DisplayPort (DP++) 1.4a 4K@60Hz

Audio

Audio Codec	RealTek ALC897
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Ethernet

LAN Chipset	1 x Intel® I219LM Gigabit Ethernet PHY 1 x Intel® i226V 2.5 Gigabit Ethernet
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Power Requirement	
Power Supply Unit	AC to ATX PSU
Voltage Input Spec.	+12V/+5V/5VSB/+3.3V/-12V (ATX power)
ACPI	Single power ATX support S0, S3, S4, S5
Power Mode	AT/ATX (ATX is default setting)
Voltage Input Connector	4P ATX connector
DC Output Spec.	ATX power
Software Support	
OS	Win10, Win11, Linux
Mechanical & Environmental	
Operating Temp.	0°C ~ 40°C (32°F ~ 104°F) with 0.5m/s air flow
Storage Temp.	-30~70C° (-22°F ~ 158°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Dimension (W x L x H)	309 x 185 x 354mm (12.16"x 7.28"x 13.93")
Onboard I/O	
CPU/System FAN	CPU FAN: Fanless System FAN: 2 x SYS FAN
Packing List	
Items	1-BMX-P820 1 x AC 350W / 500W PSU (by opt.) 1 x Screws kit (For M.2, SATA 2.5" cables)