

BMX-P820

Intel® 14th Gen Core™ i7/i5/i3 Processor
(35W/65W) CPU 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) Intel® Core™ i7-14700 / i5-14500 Processor (65W, Project Base)
Platform Controller Hub	Intel® H610E Chipset
System Memory	2 x 262P SO-DIMM Socket (Capacity Max. Up to 64GB DDR5 4800)
SBC	Mini-ITX 170mmx170mm (MX610H)
H/W Status Monitor	Monitoring CPU Temperature, Voltage with Auto Throttling Control
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
TPM	Onboard infineon SLB 9670VQ2.0 support TPM2.0
I/O Chipset	nuvoton NCT6126D
BIOS Information	AMI 256Mb UEFI BIOS

Expansion

M.2 1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 + USB 2.0)

PCIe PCIe x 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)

Drive Bay 2 x Internal 2.5" Drive Bay

Front I/O

Power Button 1 x PWR

Audio 1 x Audio jack (Mic in/Line out)

LED Indicator 1 x PWR LED
1 x Data Access LED

USB 2 x USB 2.0
2 x USB 3.2 (Gen 1 x 1)

Rear I/O

USB 4 x USB 3.2 Gen1x1
2 x USB 2.0

HDMI 1 x HDMI 1.4b 4K@30Hz

LAN Port 1 x Intel® I219LM Gigabit Ethernet PHY
1 x Intel® i226V 2.5 Gigabit Ethernet

Audio Mic-in, Line-out

DP 2 x Dual Mode DisplayPort (DP++) 1.4a 4K@60Hz

COM Port 2 x RS-232/422/485

Onboard I/O

CPU/System FAN CPU FAN: 1 x CPU Smart FAN Only
System FAN: 2 x SYS FAN

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

Ethernet

LAN Chipset	1 x Intel® I219LM Gigabit Ethernet PHY 1 x Intel® i226V 2.5 Gigabit Ethernet
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Power Requirement

ACPI	Single power ATX support S0, S3, S4, S5
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Power Mode	AT/ATX (ATX is default setting)
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Power Supply Unit	AC to ATX PSU
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Voltage Input Spec.	+12V/+5V/5VSB/+3.3V/-12V (ATX power)
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Voltage Input Connector	4P ATX connector
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DC Output Spec.	ATX power
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Software Support

OS	Win10, Win11, Linux
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Mechanical & Environmental

Operating Temp.	0°C ~ 40°C (32°F ~ 104°F) with 0.5m/s air flow
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Storage Temp.	-30~70C° (-22°F ~ 158°F)
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Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
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Dimension (W x L x H)	309 x 185 x 354mm (12.16"x 7.28"x 13.93")
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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)
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