BMX-P820A

Intel® 14th Gen Core™ i7 Processor (35W/65W) CPU
Barebone system



Features

- 14th Generation Intel® Raptor Lake-S Refresh (35 W / 65 W) Processors
- 2 x 288-pin DDR5 4800MHz U-DIMM socket, supports up to 64GB Max. (non ECC only)
- 2 x Intel® i219V, I225LM Ethernet
- Realtek ALC888S HD Audio Decoding Controller
- 1 x HDMI (2.0b) 4K x 2K@60Hz (with HDR), 2 x DP (DP1.4a): Max: 7680 x 4320@60Hz (2 x DP++: 1920 x 1080@60Hz)
- 3 x SATA III (1 x SATAIII shared with M.2)
- 2 x USB 2.0 Type A, 4 x USB 3.2 Gen1 Type A
- 1 x Gen 5 PCIe x16 (x16 Physical Black)(Slot 1)
- 1 x Gen 3 PCIe x1 (x4 Physical Open Ended)(Slot 2)
- 2 x Gen 3 PCIe x1 (x16 Physical Yellow)(Slot 3 & 4)
- 1 x M.2 M-Key 2242/2280/22110 NVMe (PCIe x4 + SATA III)
- 1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 Share with Slot4 + USB 2.0)

Wall Mount Support | Smart Fan Control | Mini-ITX / Micro ATX | Nvidia the latest Graphic Card | PCIe x16 Slot

Specifications

System Information	
Processor	14th Gen Intel® Core™ Processors, LGA 1700 (former Raptor Lake-S Refresh) Intel® Core™ i7-14700T Processor, 20C28T, 33M Cache, 1.3GHz (5.2GHz), TDP: 35W (Default) Intel® Core™ i7-14700 Processor, 20C28T, 33M Cache, 2.1GHz (5.4GHz), TDP: 65W (Project Base)
Platform Controller Hub	Intel® H610E Chipset
System Memory	2 x 288-Pin DDR5 4800MHz Dual Channel U-DIMM Socket Supports Up to 64GB
SBC	Micro ATX 244mm x 244mm (RX610H)
H/W Status Monitor	CPU Temperature Monitoring Voltages Monitoring CPU Fan Speed Control
Watchdog Timer	H/W Reset, 5~255 Seconds/5~255 Minutes
TPM	Onboard infineon SLB 9670VQ2.0 support TPM2.0
I/O Chipset	nuvoton NCT6126D
BIOS Information	AMI 256Mb UEFI BIOS
Expansion Card	A2000 Ada for opt.
Expansion	
M.2	1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 Share with Slot4 + USB 2.0)
PCIe	1 x Gen PCIe x16 (x16 Physical Black)(Slot 1) 1 x Gen 3 PCIe x1 (x4 Physical Open Ended)(Slot 2) 2 x Gen 3 PCIe x1 (x16 Physical Yellow)(Slot 3 & 4)
Expansion	4 x Full-Height Expansion Slots
CD ROM	1 x 5.25" CD ROM
Storage	
M.2	1 x M.2 M-Key 2242/2280/22110 NVMe (PCIe x4 + SATA III)
Drive Bay	1 x Internal 2.5" Drive Bay, 2 x Internal 3.5" Drive Bay
Front I/O	
HDMI	1 x HDMI 2.0 4Kx2K@60Hz
LAN Port	1 x Intel® I219V Gigabit Ethernet PHY 1 x Intel® i225LM 2.5 Gigabit Ethernet
DP	2 x DP (DP1.4a): Max: 7680 x 4320@60Hz (2 x DP++: 1920 x 1080@60Hz)
Power Button	1 x PWR
Audio	Mic-in, Line-out
LED Indicator	1 x PWR LED, 1 x HDD Data Access LED
USB	4 x USB 3.2 Gen1x1, 2 x USB 2.0

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
Onboard I/O	
CPU/System FAN	CPU FAN: 1 x 4P CPU FAN System FAN: 2 x SYS FAN
Display	
Graphic Chipset	Intel® UHD Graphics 770 (Depends on CPU)
Resolution	HDMI 2.0 4Kx2K@60Hz Dual Mode DisplayPort (DP++) Max: 7680 x 4320@60Hz
Audio	
Audio Codec	RealTek ALC888S
Ethernet	
LAN Chipset	1 x Intel® I219V Gigabit Ethernet PHY 1 x Intel® i226V 2.5 Gigabit Ethernet
Power Requirement	
ACPI	Single power ATX support S0, S3, S4, S5
Power Mode	AT/ATX (ATX is default setting)
Power Supply Unit	AC to ATX PSU
Voltage Input Spec.	+12V/+5V/5VSB/+3.3V/-12V (ATX power)
Voltage Input Connector	4P ATX connector
DC Output Spec.	ATX power, 300W PSU
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)	320 x 371.2 x 164mm
Vibration Test	With SSD : 1 Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 0.5hr/axis
Drop Test	Package drop test Reference ISTA 1G

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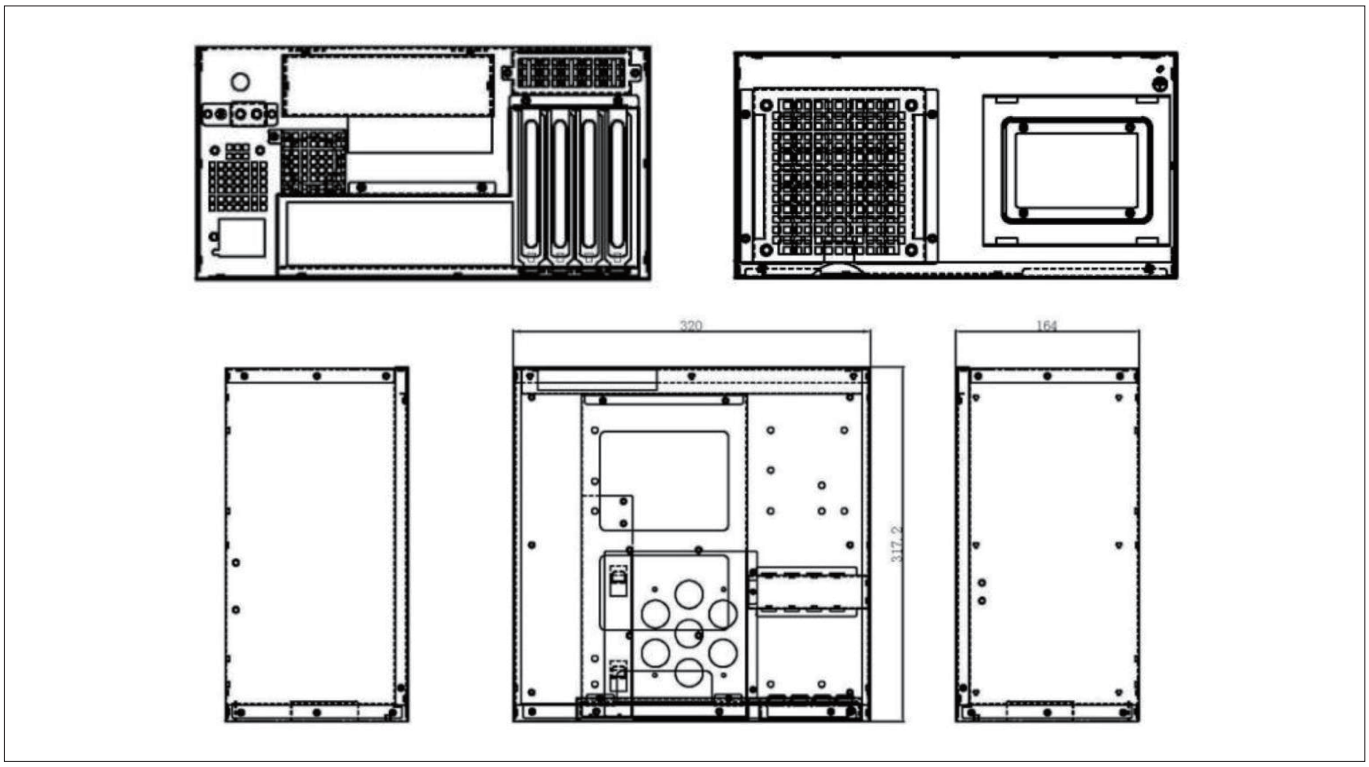
Mechanical Drawing



Ordering Information

P/N	Processor	Chipset	Memory	Storage	Adapter/PSU	Mounting Kit	Temp.
BMX-P820A-A0-1R	Intel® 14th Gen Core™ i7/i5/i3 Processor (35W/65W)	H610E	(Optional)	(Optional)	300W PSU	Wall Mount	0°C ~ 40°C

Packing List

Item	Quantity
Intel® 14th Gen Core™ i7/i5/i3 Processor (35W/65W) Desktop Chassis and Barebone system	1
Wall Mount Kits	1
Screw Kits for Peripheral	1

Optional Items

Item	P/N
Power Cord 3P(F)-3P(M) 183cm, USA type	E1702031833R
Power Cord SL-6+SL-3 183cm ,EU type	E1702031000R
Power Cord 3P(F)-3P(M) 183cm, Japan w/PSE type	E1702031834R
Power Cord QP-026+SL-3 183cm, UK type	E170P060380R
Power Cord 3P(F)-3P(M) 183cm, Australia type	E1702031831R

I/O Overview

