

SB-244-RPLU

Industrial Fanless Rugged Controller w/ Intel® 13th Raptor Lake U Series Processor & Discrete TPM



Features

- 13th Generation Intel® Core i7 / i5 / i3 Processors (Raptor Lake)
- 1 x DDR5 4800MHz SO-DIMM Slot, up to 32GB
- Support 2 x HDMI
- Support 1 x GbE PHY LAN, 3 x 2.5GbE
- Support 10-36V Wide DC Input
- Support Over-voltage and Reserved Power Insertion Protection
- Support M.2 SSD, M.2 Wi-Fi, Mini-PCIe, M.2 3052 5G
- Support Discrete TPM 2.0



HDMI

Over-voltage
Protection

USB 3.2



-20~60°C

Wide Voltage
RangeReversed
Power Insertion
Protection

System

CPU	13 th Generation Intel® Core™ i7/ i5/ i3 Processor (Raptor Lake U series)
Memory	1 x 262-pin DDR5 SO-DIMM sockets supporting 4800 MHz SDRAM up to 32GB
Chipset	Integrated in CPU
Graphics	Intel® UHD Graphics for 13 th Gen Processors
LAN Chipset	1 x Intel® I219-LM GbE PHY 3 x Intel® I226-V 2.5GbE controllers
Watchdog Timer	1~255 levels reset
TPM	Nuvoton NPCT760AABYX TPM 2.0 chip

Storage

Device	1 x M.2 B Key 2242 slot (SATA signal) 1 x SATA 3.0 (2.5" HDD/SSD Drive Bay) (Note: Both M.2 2242 and 2.5" support RAID 0/1 by BIOS configuration) 1 x M.2 M Key 2280 slot (PCIe x4 signals [NVMe]) *CTOS is available
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Audio

Type	1 x audio (Line-out & Mic-in) (Chipset ALC888S/897)
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Power System

Power Input	10-36V DC, 2-pin phoenix connector
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OS

Windows 10/11, Ubuntu 22.04

Qualification

Certification	CE, FCC
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External I/O

Serial Ports	4 x RS232/422/485 (default RS232) with auto flow control (5-pin phoenix terminal head interface)
USB Ports	3 x USB3.2 3 x USB2.0

LAN	4 x RJ45
Video Ports	2 x HDMI (Max Resolution: 4096 x 2304@60Hz)
Power Button	1 x power button w/ LED
Remote on-off	1 x SW

Internal I/O

Expansion Slot	1 x full-size MiniPCIe slot (PCIe x1 / USB2.0 Signals) 1 x M.2 E Key 2230 slot (PCIe x1 / USB2.0 Signals) 1 x M.2 M Key 2280 slot (PCIe x4 Signals[NVMe]) 1 x M.2 B Key 2242 slot (SATA signal) or 3042/3052 cellular module (USB3.2 Signals) [Note: M.2 2242 SATA, M.2 3042, M.2 3052 share one card slot, only one of the cards can be inserted]
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SIM Card	1 x SIM Card socket for 4G/5G module
USB Port	2 x USB2.0 by pin head
COM Port	2 x R232 by 3-wire pin head
GPIO	1 x 8bit programmable GPIO pin header (3.3V / 5V jumper voltage adjustable)

Mechanical

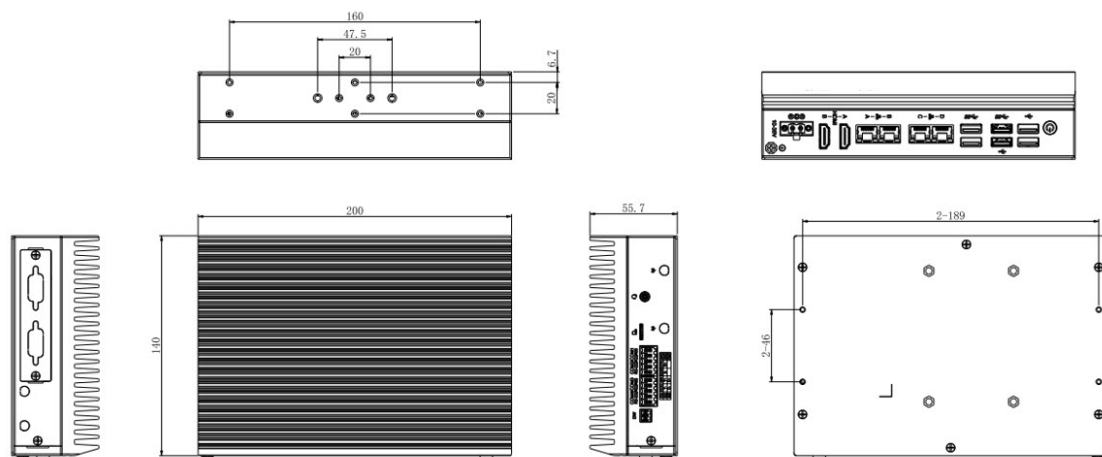
Construction	Aluminum alloy
Mounting	Wall-mount, Din-Rail
Dimension	200 x 140 x 55.7 mm
Weight	1.8kg

Environmental

Operating Temp.	-20 ~ 60°C (-4 ~ 140°F), ambient w/ air flow (WT RAM & SSD)
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	10% ~ 95% @ 40°C (non-condensing)
Vibration	5~500Hz, 2Grms operation
Shock	Operation: 10G@11ms Non-operation: 30G@11ms

*CTOS means Configure-to-Order Service.

Dimensions



Unit: mm

Packing List

SB-244-113XXX	1 pcs BOX PC
Wall mount bracket	2 pcs
DIN-Rail Kit	1 pcs
Thermal PAD	1 pcs for Memory, 2 pcs for M.2 2242/3042
2-pin terminal block	1 pcs 5mm for Power-input, 1 pcs 3.5mm for Remote on-off SW
DIP-10 Terminal block	2 pcs for serial ports
Screw Package	1 pcs
22-pin SATA & Power cable	150mm, 1 pcs

Ordering Information

SB-244-11315U	Barebone Fanless System with Core i3-1315U, 4xLAN, 4 x COM(up to 6), 6 x USB, 2 x HDMI, DC10-36V power input
SB-244-11315U-R8S128	Fanless System with commercial 8GB RAM & 128GB SSD, Core i3-1315U, 4 x LAN, 4 x COM(up to 6), 6 x USB, 2 x HDMI, DC10-36V power input
SB-244-11335U	Barebone Fanless System with Core i5-1335U, 4 x LAN, 4 x COM(up to 6), 6 x USB, 2 x HDMI, DC10-36V power input
SB-244-11335U-R8S128	Fanless System with commercial 8GB RAM & 128GB SSD, Core i5-1335U, 4 x LAN, 4 x COM(up to 6), 6 x USB, 2 x HDMI, DC10-36V power input
SB-244-11365U (OEM Request)	Barebone Fanless System with Core i7-1365U, 4 x LAN, 4 x COM(up to 6), 6 x USB, 2 x HDMI, DC10-36V power input
8bit GPIO Cable	250mm, DB9M TO HSG2 x 6P(2.0), 8bit GPIO, W/O BRACKET, W/SCREW
2 x RS232 Y Cable	250mm, DB9M x 2 TO HSG2 x 3P(2.0), COM5/6, RS232, W/O BRACKET, W/SCREW
PAC-120W-FSP-SPA-US R1.0	AC/DC Adapter Kit (w/ UKCA), 19V, 120W, 2 WIRE w/ US POWER CORD
PAC-120W-FSP-SPA-EU R1.0	AC/DC Adapter Kit (w/ UKCA), 19V, 120W, 2 WIRE w/ EU POWER CORD
PAC-120W-FSP-SPA-UK R1.0	AC/DC Adapter Kit (w/ UKCA), 19V, 120W, 2 WIRE w/ UK POWER CORD
PAC-120W-FSP-SPA-IN R1.0	AC/DC Adapter Kit (w/ UKCA), 19V, 120W, 2 WIRE w/ IN POWER CORD
PAC-120W-FSP-SPA-JP R1.0	AC/DC Adapter Kit (w/ UKCA), 19V, 120W, 2 WIRE w/ JP POWER CORD