

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 Range



Reversed Power Insertion Protection

System

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|----------------|--|
| 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

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| 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

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

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

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| Windows 10/11, Ubuntu 22.04 |
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Qualification

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| Certification | CE, FCC |
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External I/O

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| 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 |

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|---------------|--|
| 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

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|----------------|--|
| 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

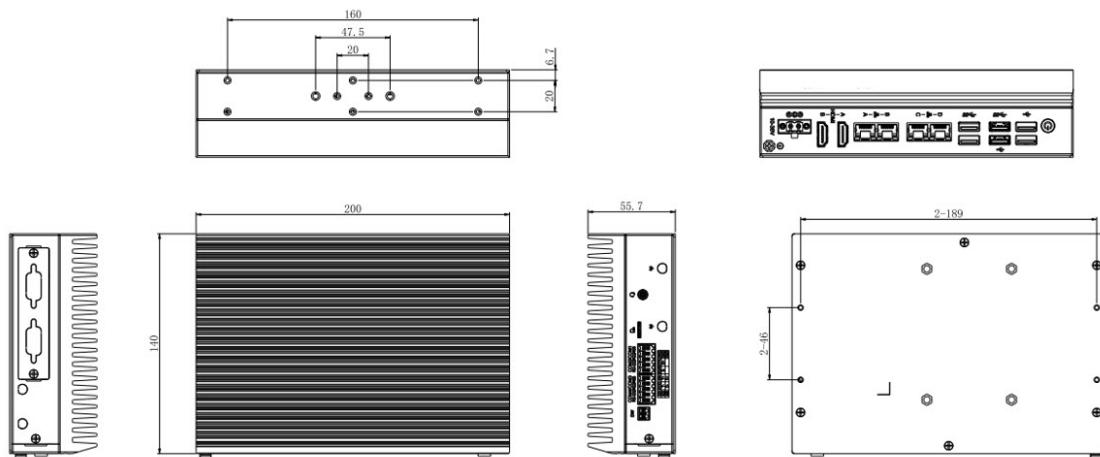
| | |
|--------------|----------------------|
| Construction | Aluminum alloy |
| Mounting | Wall-mount, Din-Rail |
| Dimension | 200 x 140 x 55.7 mm |
| Weight | 1.8kg |

Environmental

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|--------------------|---|
| 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

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|---------------------------|---|
| 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

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|-----------------------------|---|
| 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 |