# Blue Line Semi Rugged Server-2000

Blue Line A/S | Kappa 8 | 8382 Hinnerup, Denmark
T +45 8678 5000 | www.blue-line.com

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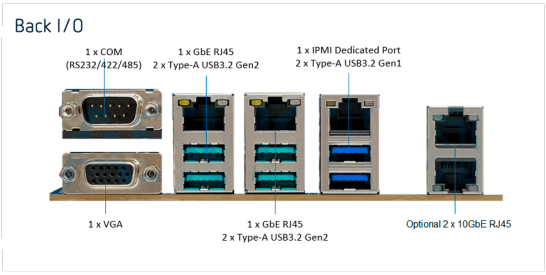


## Highlights

The Blue Line Semi Rugged Server-2000 gives you high performance without sacrificing valuable rack space. The short-depth 4U design combines the latest computing technology with the flexibility you need for both industrial and semi rugged applications.
Limited rack space should not limit your performance. The Semi Rugged Server-2000 gives you powerful computing and extensive expansion possibilities in installations where traditional servers may be too deep.

Configure the platform around your workload with flexible processing, storage, GPU and PCIe options.

Modern industrial applications demand more computing power than ever before. With support for high-performance GPUs, FPGA cards and advanced PCIe expansion, the Semi Rugged Server-2000 helps you accelerate AI inference, machine vision and real-time data processing while maintaining reliable operation.

The Semi Rugged Server-2000 gives you one flexible platform for both industrial and semi rugged applications.

Robust construction and configurable cooling options help you adapt the system to different operating environments.

Optional liquid cooling gives your Semi Rugged Server additional thermal control. In cold environments, heated water can also be circulated through the system to help maintain suitable operating conditions.

• Fast & flexible industrial PC

• Intel Granite Rapids Workstation processor



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• Windows 10/11, Server 2022/2025 & Linux

• Support wide range of GPU and FPGA

• Option for COM, USB, DIO, LAN

• Long product life cycle

• Short depth chassis (550mm)

• Build-to-order configured to the requirements

## Specifications

### Model Type

Rack PC

### Form Factor

2U

### Construction

Heavy duty cold rolled steel 1.2mm~2.0mm thick

### Cooling

Three 80 x 80 x 38mm system front fan
Easy acces to front dustfilter (Washable)
Option for 80x240mm liquid cooling radiator
Option for low noise PWM fan
Option for high performance PWM fan

### Environment

| | |
|---|---|
| Operating temperature | 0°C to 60°C (-10°C to 70°C w/wide temp. Grade SSD & MEM) |
| Storage temperature | -30°C~70°C |


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| | |
|---|---|
| Humidity | 10% to 95%, non-condensing @ 40°C |

## Certification

CE

## Processor

Intel Xeon 600 Series Granite Rapids Workstation Processor
Single Socket E2, LGA4710-2 (Up to 350W TDP)

## Chipset

Intel W890 Chipset
AST2600 graphics engine
WINBOND BIOS. Model Name: W25Q512JVEIN
Watchdog Timer Software Programmable supports 1 to 255 sec. System reset
ST TPM 2.0 module. Model Name: ST33KTPM2X32CKE2

## RAM

8 x DDR5 RDIMM & 3DS RDIMM Slots. (3DS RDIMM Up to 5200MT/s (2DPC) support up to 2TB / 256GB Pr. slot

## Storage

2 x 3.5" drive bay
Option for 2.5" Hotswap drive bay
Option for 1 x 2.5" internal drive

## Front Input / Output

2 x USB 3.2 Gen1 Type A via internal header
Power on/off & reset button
Power status LED, HDD activity LED & dual LAN activity LED
Pull-out TAG 10 to 70mm, for COA labels / serial number identification

## Rear Input / Output


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| | |
|---|---|
| External | 1 x VGA<br>2 x Intel i210-AT 1GbE controller via RJ-45 LAN Port<br>1 x Realtek RTL8211F (RGMII from AST2600, for IPMI) Via RJ-45 LAN Port<br>4 x USB 3.2 Gen2 Type A (Support Wake on USB)<br>2 x USB 3.2 Gen1 Type A (Support Wake on USB)<br>1 x RS-232/422/485 via DB9 Port |
| Option for onborad Dual Intel E610 XAT2 10GbE via RJ-45 LAN Port | |
| Internal | 4 x USB 3.2 Gen1 via header<br>2 x Vertical Type-A USB 2.0 Connector<br>1 x RS-232 via header<br>2 x Vertical Slimline SAS connector, Support 8 x SATA3.0, or 2 x PCIe 4.0 x4 device*<br>8 Bit GPIO +3.3V signals via header<br>Line In & Line Out via header (Codec ALC897)<br>1 x SPI TPM header |
| | *PCIe Device support Intel VROC |

## Expansion Configuration 1*


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Total PCIe Slots 3

Slot 1 - 1 x PCIe 5.0 x16 Slot Low Profile (Activated by Expert1s)**

Slot 2 - 1 x PCIe 5.0 x16 Slot Full high / dual wide Profile (Activated by Expert1s)**

Slot 3 - 1 x PCIe 5.0 x16 Slot Full high Profiile (Mainstream)

2 x MCIO PCIe 5.0 x8 (2 x activated by Expert1s)**
**(Slot #1, #2 & MICIO will be activated by Expert1s SKU processor)
2 x M.2 M-key, Type 22110/2280 (PCIe 5.0 x4 from CPU, Support IntelVROC***)

***Note: Intel VROC offers basic functionality included with the Platform Controller Hub (PCH) with the

option to add three RAID enabled feature sets (Standard, Premium, RAID1 Only).

*Select between Expansion Configuration 1 or 2

## Expansion Configuration 2*

Total PCIe Slots 7 Low profile (Support up to 413mm expansion cards length)

Slot 1 - 1 x PCIe 5.0 x16 Slot (Activated by Expert1s)**

Slot 2 - 1 x PCIe 5.0 x16 Slot (Activated by Expert1s)**

Slot 3 - 1 x PCIe 5.0 x16 Slot (Mainstream)

Slot 4 - 1 x PCIe 5.0 x16 Slot (Only x8 Speed, Mainstream)

Slot 5 - 1 x PCIe 5.0 x16 Slot (Mainstream)

Slot 6 - 1 x PCIe 5.0 x16 Slot (Mainstream)

Slot 7 - 1 x PCIe 5.0 x16 Slot (Mainstream)

All slot are with Dedicated PCIe holder

2 x MCIO PCIe 5.0 x8 (2 x activated by Expert1s)**
**(Slot #1, #2 & MICIO will be activated by Expert1s SKU processor)
2 x M.2 M-key, Type 22110/2280 (PCIe 5.0 x4 from CPU, Support IntelVROC***)

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*Select between Expansion Configuration 1 or 2

## Operating System

Windows 10/11
Windows 10/11 IoT Enterprice
Windows Server 2022/2025
Ubuntu 24.04.3 LTS

## Power Supply

| | |
|---|---|
| Industrial PSU 2000W CRPS | ATX 12V v3.1, 80mm double ball bearing FAN, AC input, 80 PLUS Platinum<br>IEC 62368-1 compliant<br>ErP Lot 6 2013 compliant<br>EMI/EMC: CE and FCC Class B<br>Safety: CB 62368, TUV 62368, UL 62368 |
| Option | Option for Industrial PSU 2000W ATX 12V v3.1, 80mm FAN, 200~240V AC IEC-C19 input, Dual PCIe Gen5, 80 PLUS Platinum, FCC and CE approved |

## Power Consumption

TBD

## Dimension and Weight

| | |
|---|---|
| 19" | H 88,70 x W 438,00 x D 550,00mm |
| 19" w/Rack mount kit | H 88,70 x W 482,00 x D 579,50mm |
| Package | H TBD,00 x W TBD,00 x D TBD,00mm |
| Net weight | About 13 kg (standard configuration) |
| Gross weight | About 14 kg (standard configuration) |

## Mounting


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# Blue Line Semi Rugged Server-2000

Rack mount

## Accessories Included

Rack Monunting kit

## Accessories Optional

Fix Rear rack mounting kit for server chassis

Rack mount slide rail kit for server chassis (600mm 2-layer 3-travel universal rail (cabinet internal depth 600~1200mm compliant))

Chassis intrusion detector

Dedicated HW Raid controller

Intel Virtual RAID on CPU

Intel VROC Standard SKU (RAID 0/1/10) VROCSTANMOD Licensing*

Intel VROC Premium SKU (RAID 0/1/5/10) VROCPREMMOD Licensing*

*Intel VROC Hardware key is required

Ethernet Add on card (Copper or Fiber connector)

Video frame grabber Add on card

Power over Ethernet Add on card (2 x 30W port or 4 x 30W port) w/Intel I226V controller

1 x 2.5" Rugged Hot-swap w/Thumbscrews and key lock in 3.5" bay

2 x 2.5" Trayless Hot-swap w/key lock in 3.5" bay

4 x 2.5" Trayless Hot-swap w/key lock in 5.25" bay

Retention bracket for Air cool - Nvidia H100/Pro6000 GPU

Retention bracket for liquid cooling block - Nvidia H100/Pro6000 GPU

Dust cover kit for I/O port

Smart Keeper Professional for physical I/O port security

## Warranty and After Sales Support

Standard 1 year (option for 3 years)



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