

# 1U BAM SERVER

The industry's leading cybersecure, ruggedised, SWaP-C-optimised, high-performance computing solution. Supports full-length option cards. Designed with aerospace and defence applications at top of mind.



## INCORPORATE GPU<sub>s</sub> FOR EDGE-DEPLOYED AI

Incorporate up to 2x single-wide, full-height, full-length GPUs for fast and efficient AI/ML/DL applications providing real-time system insights.



## MADE IN THE USA

Trenton Systems' secure, high-performance computing solutions are designed, manufactured, assembled, integrated, tested, and supported in the USA.



## SCALABLE. FLEXIBLE. CUSTOMISABLE

Scale easily with varying configurations to support the evolving nature of mission-critical systems deployed at the tactical edge.



## Overview



Dual Intel® 2nd Gen Xeon® CPUs or a single Core i series CPU per processor board



Up to 2x PCIe Gen 3 slots



Up to 8x memory slots per processor board



Up to 6x high-speed SSDs per processor board



Designed to meet MIL-STD-810, MIL-STD-461, DO-160, CE



BMC to IPMI for integrated server control & management

## SYSTEM HIGHLIGHTS



**Intel® TXT** uses hardware-based mechanisms that help protect against software-based attacks and disclosure of sensitive data.



**Strict revision control** is achieved through Trenton's approved vendor list (AVL), ensuring engineer-vetted parts.



**45-Day Loaner Programme** lets customers verify that they're acquiring a cybersecure computing solution that integrates seamlessly into their vetted cybersecurity infrastructure.



**Intel® Execute Disable Bit** reduces exposure to viruses and malicious code attacks and prevents harmful software from propagating.



**Counterfeit Protection Programme (CPP)** helps Trenton detect, remove, and destroy counterfeit parts and components.



**TAA compliance** is achieved because Trenton manufactures the 1U BAM, and its other solutions, in the United States.



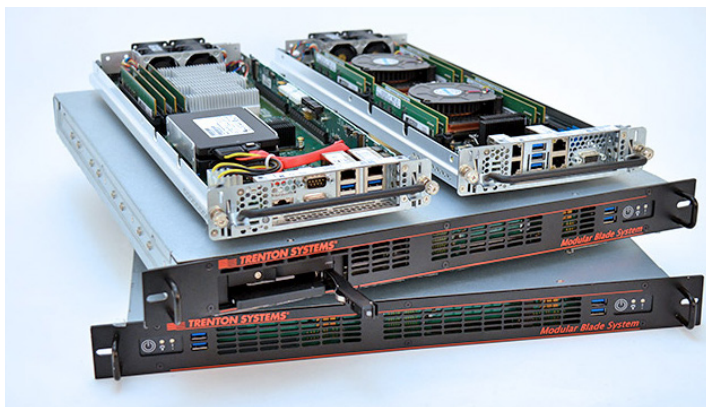
**Mode-Based Execution (MBE) Control** more reliably verifies and enforces the integrity of kernel-level code.



**Vetted supply chain** helps protect your system from potentially compromised counterfeit electronic parts and components.



**CSFC and ISO9001 adherence and compliance** allow Trenton to consistently provide secure, high-quality computing solutions.



## The 1U BAM: Powerful. Durable. Light.

The 1U BAM Server boasts unparalleled performance, artful SWaP-C optimisation, and resistance to the world's most inhospitable conditions. Endure the austerity of the tactical edge while benefiting from 1U BAM's lightweight modular design with easily accessible processor boards housing your choice of option cards. Configure from standard COTS options or customise the 1U BAM to meet the dynamic requirements of your programme or application.

### PROCESSORS

Intel® 2<sup>nd</sup> Gen Xeon® Scalable Processors (Cascade Lake) up to 125W  
 Intel® 7<sup>th</sup> Gen Core® & Xeon® E Processors (Kaby Lake) up to 73W  
*22 cores maximum per CPU.*

### MEMORY

Up to 8x DDR4-2933 four-channel ECC RDIMM slots **OR** up to 4x DDR4-2666 DIMM slots

### ON-BOARD DEVICES

- ▶ **SATA:** Up to 2x SATA3 SSD/HDD connectors
- ▶ **M.2 NVMe:** Up to 4x M.2 NVMe connectors with riser
- ▶ **USB:** 3x USB 3.0 ports
- ▶ **IPMI:**
  - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
  - ASPEED AST2400 BMC
- ▶ **Network Controllers:**
  - Intel® i350 Gigabit Ethernet
- ▶ **Graphics:** VGA 1920x1200@60Hz 32bpp
- ▶ **TPM 2.0:** Infineon SLB9670

### INPUT / OUTPUT

- ▶ **USB:** 4x USB 3.0 ports via midplane or riser
- ▶ **Display:** 1x VGA port
- ▶ **LAN:** 2x RJ-45 10 Gigabit Ethernet ports; 2x RJ-45 Gigabit Ethernet ports with shared IPMI
- ▶ **Serial:** 1x RS232 serial port

### PCIe GEN 2 & 3 SLOTS

- ▶ Up to 2x PCIe Gen 2 & 3 slots with riser
  - All slots are x16 mechanical slots.
  - 1 x16 electrical & 1 x16 electrical (Gen 3) **OR** 1 x16 electrical (Gen 3) & 1 x4 electrical (Gen 2)

### DIMENSIONS & WEIGHT

**Dimensions:** 19" x 1.75" x 19" (48.26 cm x 4.45 cm x 48.26 cm)

**Weight:** 12 lbs. (5.4 kg)

### FRONT PANEL

Up to 2x front-removable drive bays with up to 2x SATA SSDs

### SYSTEM COOLING

6x chassis fans & 1x fan per CPU

### REMOVABLE POWER SUPPLY

- ▶ **1200W autorange:** 110-230VAC

### SYSTEM BIOS

- ▶ **BIOS Type:** 128Mb SPI Serial EEPROM (SPI Flash)
- ▶ **BIOS Features:**
  - Plug and Play (PnP)
  - APM 1.2
  - PCI 2.2
  - ACPI 1.0 / 2.0
  - USB keyboard support
  - SMBIOS 2.3
  - UEFI

### SYSTEM MANAGEMENT

ASPEED AST2400 baseboard management controller: rKVM, system monitoring, out-of-band management

### ENVIRONMENTAL SPECIFICATIONS

- ▶ Operating Temperature: 0°C - 50°C
- ▶ Storage Temperature: -20°C - 70°C
- ▶ Operating Humidity: 5% - 90% non-condensing
- ▶ Non-Operating Humidity: 5% - 90% non-condensing
- ▶ Shock: 3 axis, 35g, 25ms
- ▶ Vibration: 4.76Grms, 10Hz to 2000 Hz (SSD)
- ▶ Altitude: 0 to 10,000 ft (3,048m)
- ▶ Non-Operating Altitude: 0 to 30,000 ft (9,144m)

### COMPLIANCE

**Designed to meet the following standards/certifications:**

- ▶ MIL-STD-810G
- ▶ MIL-STD-461G
- ▶ DO-160G
- ▶ CE with Low Voltage Directive (2014/35/EU)

