

# 2U BAM SERVER

The industry's leading cybersecure, ruggedized, made-in-USA, high-performance computing solution, designed with aerospace and defense at top of mind



## HARSH-ENVIRONMENT PROTECTION

All key components are stress-tested to pass stringent military standards, ensuring stability in harsh environments.



## MADE IN THE USA

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








## FULL CONTROL & CUSTOMIZATION

Our in-house software engineers can tweak BIOS source code to bolster firmware security and configure to your exact needs.



## Overview

-  Dual Intel® 3rd Gen Xeon® Ice Lake SP CPUs
-  10x PCIe Gen 4 slots
-  24x DDR4-3200 ECC RDIMM slots
-  6x NVME connectors
-  Designed to meet MIL-STD-810, DO-160, CE

36  
Cores

3TB+  
Storage

1.5TB+  
Memory

## CYBERSECURITY HIGHLIGHTS



**Intel® PFR** protects against firmware attacks using an Intel® MAX 10 Field-Programmable Gate Array (FPGA).



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



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



**Intel® SGX** includes predefined portions of memory that can better protect sensitive information.



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



**TAA compliance** is achieved because Trenton manufactures the 2U BAM, and its other solutions, in the United States.



**Intel® Total Memory Encryption** provides encryption of a computer system's physical memory.



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



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



## The BAM: Powerful. Durable. Protected.

- Protected by a trusted supply chain
- Protected by hardware, firmware, and software security
- Ruggedized to withstand the world's harshest conditions
- PCIe slots have no switches for maximum throughput
- Plenty of room for high-performance GPUs
- Designed to meet your exact requirements

### MODEL NUMBER

BAC2000 (2U)

### MOTHERBOARD

BAM8278

### PROCESSORS (36 CORES PER PROCESSOR, 72 TOTAL)

Dual Intel® 3<sup>rd</sup> Gen Xeon® Scalable Processors (Ice Lake) up to 235W

### MEMORY (UP TO 1.5 TB) | STORAGE (UP TO 72 TB)

24x DDR4-3200 ECC RDIMM slots.

### ON-BOARD DEVICES

- ▶ **NVMe:** 6x NVMe connectors
- ▶ **USB:** 1x USB3 headers
- ▶ **IPMI:**
  - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
  - ASPEED AST2500 BMC
- ▶ **Network Controller:**
  - Intel® i350 Gigabit Ethernet
- ▶ **Graphics:** ASPEED AST2500 VGA
- ▶ **TPM 2.0:** Infineon SLB9670

### INPUT / OUTPUT

- ▶ **USB:** 4x USB 3.0 ports
- ▶ **Display:** 1x VGA port
- ▶ **LAN:** 1x RJ-45 Gigabit Ethernet port; 1x RJ-45 Gigabit Ethernet Shared IPMI port
- ▶ **Serial:** 1x RS232 serial port

### PCIe GEN 4 SLOTS

- ▶ 10x PCIe Gen 4 x16 mechanical slots
- ▶ I2C connectivity
  - monitors PCIe slots and NVIDIA cards via the I2C bus

### DIMENSIONS

**BAC3000:** 19" x 3.5" x 20"

**Weight:** 28 lbs.

### FRONT PANEL

The front panel comes with a drive bay that supports a mixture of front-removable drives.

### SYSTEM COOLING

1x PWM CPU blower fan per CPU (1U and 2U fans)

### POWER / POWER SUPPLY

- ▶ **220VAC:** output power = 2850W

### SYSTEM BIOS

- ▶ **BIOS Type:** 128Mb SPI NOR Flash with Insyde BIOS
- ▶ **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 AST2500 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)

*\*Preliminary numbers noted. Final numbers expected to outperform current specifications.*

### COMPLIANCE

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

- ▶ MIL-STD-810H
- ▶ DO-160F
- ▶ 2014/35/EU (LVD)
- ▶ 2014/30/EU (EMC)