

2U BAM SERVER

A family of ruggedized, secure, AI-powered rack mount servers equipped with Intel Xeon Scalable Processors for high-performance edge computing and inferencing to deliver actionable insights at the strategic, tactical, and operational levels.



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 configure to your exact needs.



36
Cores

3TB+
Storage

1.5TB+
Memory

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

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® 3rd 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)