3U 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 bolster firmware security and configure to your exact needs.

- Dual Intel® 3rd Gen Xeon® Ice Lake SP CPUs
- 11x PCIe Gen 4 slots
- 24x DDR4-3200 ECC RDIMM slots
- 6x SATA ports to connect storage devices at 6 Gbps
- 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).

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

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

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

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

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

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

TAA compliance is achieved because Trenton manufactures the 3U BAM, and its other solutions, in the United States.

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

LEARN MORE

The BAM: Powerful. Durable. Protected.

- Protected by a trusted supply chain and advanced hardware, firmware, and software security

- Ruggedized to withstand the world's harshest conditions

- x16 slots are double-spaced apart for improved incorporation of double-wide GPUs

- PCIe slots have no switches for maximum throughput

- Designed to meet your exact requirements

MODEL NUMBER

BAC3000 (3U)

MOTHERBOARD

BAM8270

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

- ► **SATA:** 6x SATA ports
- ► **NVMe:** 2x NVMe ports
- ► **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

- ► 11x PCIe Gen 4 x16 mechanical slots
  - • 5x PCIe Gen 4 x16 electrical slots
  - • 6x PCIe Gen 4 x8 electrical slots
- ► I2C connectivity
  - • monitors PCIe slots and NVIDIA cards via the I2C bus

DIMENSIONS

BAC3000: 19" x 5.25" x 20"
Weight: 34 lbs.

FRONT PANEL

The front panel comes with three drive bays that support a mixture of front-removable drives and optical-drive bay carriers.

SYSTEM COOLING

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

POWER / POWER SUPPLY

- ► **N+1 redundant power supply**
  - • **220VAC:** output power = 2850W
  - • **115VAC:** output power = 1900W

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% - 95% non-condensing
- ► Non-Operating Humidity: 5% - 95% 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)