TRENTON SYSTEMS®

MADE IN USA

REAR MODULAR
Blade Servers | 7th Gen Core® or Xeon® E

Modular Blade Servers - Rear Modular are a compact, high-density solution carrying multiple blades per chassis. Each blade houses its own CPUs, memory, storage, and networking capabilities, creating a self-contained unit that can be easily inserted or removed via the rear of the chassis.

COMPUTE DENSITY-DRIVEN

Unlock unprecedented levels of computing power with multiple single-CPU blades, tackling demanding workloads to achieve exceptional processing capabilities.

MODULAR ARCHITECTURE

Scalable and consolidated computing power, maximum space utilization, and simplified management with self-contained blade modules for flexibility + performance.

FAST NVMe SSDs

Up to 4 high-capacity, ultra-fast SSDs in a 1U or 2U bladed architecture for faster/ secure data access, reduced latency, and enhanced overall system efficiency.

Overview

1U and 2U modules and chassis in a single CPU form factor (per blade). Each blade is rear-removable, which allows you to have application-specific flexibility to scale your hardware infrastructure as your projects evolve over time.

This feature eliminates the need to disconnect I/O cables when removing each blade for the fastest MTTR (mean-time-to-replace) on the market today!

intel

NVIDIA

SOLUTION HIGHLIGHTS

Multi-layer cybersecurity creates a secure computing platform while enhancing resilience against sophisticated cyberthreats.

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

In-house engineers (hardware, software, mechanical, and electrical) control the design of your system down to the board and chip level.

Five-year warranty means we will repair, replace, or refund for any potential defects in material, workmanship, and design.

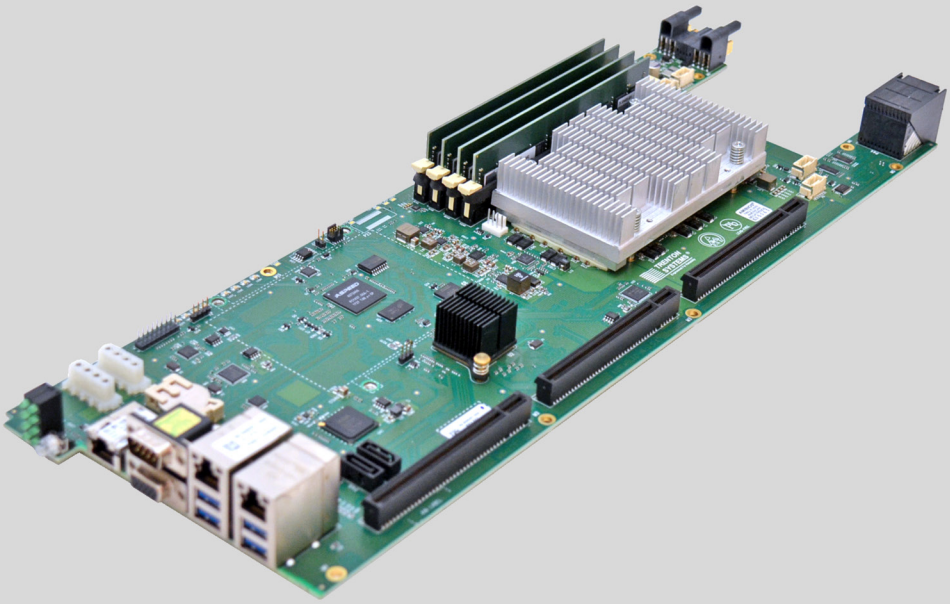
Counterfeit Protection Program (CPP) helps Trenton detect, remove, and destroy counterfeit parts and components.

TAA compliance is achieved because Trenton manufactures PCIe Expansion Kits, and its other solutions, in the United States.

Lifetime support gives you unlimited access to our team of experts that help troubleshoot problems and offer solutions.

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

CSfC, ITAR, ISO9001, and AS9100 adherence and compliance allow Trenton to consistently provide secure, high-quality computing solutions.



MBK8257
BOARD

Technical Overview (Per Blade)

SPECIFICATION	DETAILS
CPUs	Single Intel® 7th Gen Core® or Xeon® E (Kaby Lake), per blade
Memory	4x DDR4-2400 ECC RDIMM slots
Storage	Up to 2x SATA, 4x M.2 NVMe SSDs, per blade (FIPS 140-2/3 available)
Form Factors	1U/2U rack servers ranging from 19“ - 25.75“ depth
Network Interface	3x 1GbE ports, 1x supporting IPMI, per blade
PCIe Interconnect	1x PCIe 3.0 x16 slot, 1x PCIe 2.0 x4 slot via riser card
Power	Up to 2x 1200W, redundant and non-redundant

The Modular Blade Servers can be customized to your most complex technical, performance, and environmental specifications in consultation with our team.

Contact us for pricing and availability.

770.287.3100 | info@trentonsystems.com

TECH SPECS - 8257 BOARD

PROCESSORS (UP TO 4 CORES PER CPU, UP TO 8 TOTAL)

Single 7th Gen Intel® Core® or Xeon® E (Kaby Lake) up to 65 W
Chipset: Intel® C236 Sky Lake

MEMORY (UP TO 1.5 TB)

4x DDR4-2400 ECC RDIMM slots, single DIMM per channel

PCIE GEN 2/3 SLOTS (CAN SUPPORT FHFL GPUs)

1x PCIe Gen 3 x16 slot, 1x PCIe Gen 2 x4 slot via riser card

I/O

- **SATA:** 2x SATA ports
- **USB:** 6x USB3 ports
- **IPMI:** IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- **Graphics:** ASPEED AST2400 BMC
- **Video:** 1x VGA port
- **LAN:** 3x RJ-45 1GbE ports, 2x driven from a dual Intel® i350 controller, 1x driven from a dual Intel® i210 controller (1x Shared IPMI)
- **Serial:** 1x RS232 serial port

SECURITY

- **TPM 2.0**

*For a comprehensive list of cybersecurity features, please contact one of our team members.

COOLING (BMC Controlled)

6x 4 pin system fan headers, 2x 4 pin CPU fan headers

SYSTEM BIOS

- InsydeH20 UEFI BIOS from Insyde
  - Plug and Play (PnP)
  - PCI 2.2
  - ACPI 1.0 / 2.0
  - USB Keyboard Support
  - SMBIOS 2.3
  - UEFI

SYSTEM MANAGEMENT (BMC)

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

OS COMPATIBILITY

- Windows Enterprise, Server
- Linux
  - RHEL
  - Ubuntu
  - SUSE

**Contact us for the full compatabilities list*

DIMENSIONS

17.62 in. x 6.19 in. (44.76 cm x 15.72 cm)

ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: 0°C - 50°C
- Storage Temperature: -40°C - 70°C
- Operating Humidity: 8% - 90% 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.*
**Conformal coating available upon request.*

COMPLIANCE

Designed to meet the following standards/certifications:

- MIL-STD-810H
- MIL-STD-1310
- MIL-STD-464C
- DO-160F
- 2014/35/EU (LVD)
- 2014/30/EU (EMC)

**Environmental specifications and compliance apply within Trenton 1U/2U chassis.*

SYSTEM VARIATIONS

#	SYSTEM	BLADES	BOARD	DEPTH	POWER	STORAGE	SLOTS
1	MBS1001 (1U)	UP TO 2X 1U, SINGLE-CPU BLADES	8257	19”	1X 1200W NON-REDUNDANT, NON-461, REMOVABLE	UP TO 4X M.2 NVME DRIVES VIA OPTIONAL RISER (PER BLADE)	---
2	MBS1002 (1U)	1X 1U SINGLE-CPU BLADE	8257	19”	1X 1200W NON-REDUNDANT, NON-461, REMOVABLE	UP TO 2X FRONT-REMOVABLE SATA DRIVES	1X FHFL PCIE 3.0 X16, 1X FHFL PCIE 2.0 X4 VIA RISER CARD
3	MBS2000 (2U)	UP TO 4X 1U, 2X 2U, OR 1X 2U, 2X 1U SINGLE-CPU BLADES	8257	19”	2X 1200W, NON-461, REMOVABLE (REDUNDANCY DEPENDS ON NUMBER OF BLADES)	2X OR 4X M.2 NVME DRIVES VIA PCIE RISER (DEPENDENT ON BLADE SELECTION)	1X FHFL PCIE 3.0 X16, 1X FHFL PCIE 2.0 X4 VIA RISER CARD (DEPENDENT ON BLADE SELECTION)
4	MBS2001 (2U)	UP TO 4X 1U, 2X 2U, OR 1X 2U, 2X 1U SINGLE-CPU BLADES	8257	25.75”	2X 1200W, NON-461, REMOVABLE (REDUNDANCY DEPENDS ON NUMBER OF BLADES)	UP TO 2X FRONT-REMOVABLE SATA DRIVES (PER BLADE), 2X OR 4X M.2 NVME DRIVES VIA PCIE RISER (DEPENDENT ON BLADE SELECTION)	1X FHFL PCIE 3.0 X16, 1X FHFL PCIE 2.0 X4 VIA RISER CARD (DEPENDENT ON BLADE SELECTION)
5	1U-2U	1U AND 2U SINGLE- OR DUAL-CPU BLADES	COTS, MOTS, CUSTOM	18”-28”	LOW/MID/HIGH WATTAGE, REDUNDANT OR NON-REDUNDANT, 461-OPTIONAL, FIXED OR REMOVABLE	SAS/SATA/NVME DRIVES (INTERNAL, FRONT-REMOVABLE, VIA RAID CONTROLLER, OR VIA RISER)	HALF-HEIGHT AND FHFL PCIE 3.0/4.0/5.0

If you need a different system variation not listed above, please contact a Trenton Systems engineer to configure a system or solution to your specific application or program requirements.