HDEC Servers | 2nd Gen Xeon® SP

2U, 4U, and 5U rugged servers equipped with the SEP8253 processor board to tackle the widest range of industrial and embedded computing challenges. Customize and scale your system as workloads evolve according to your most complex requirements.

MAXIMUM FLEXIBILITY AND SCALABILITY

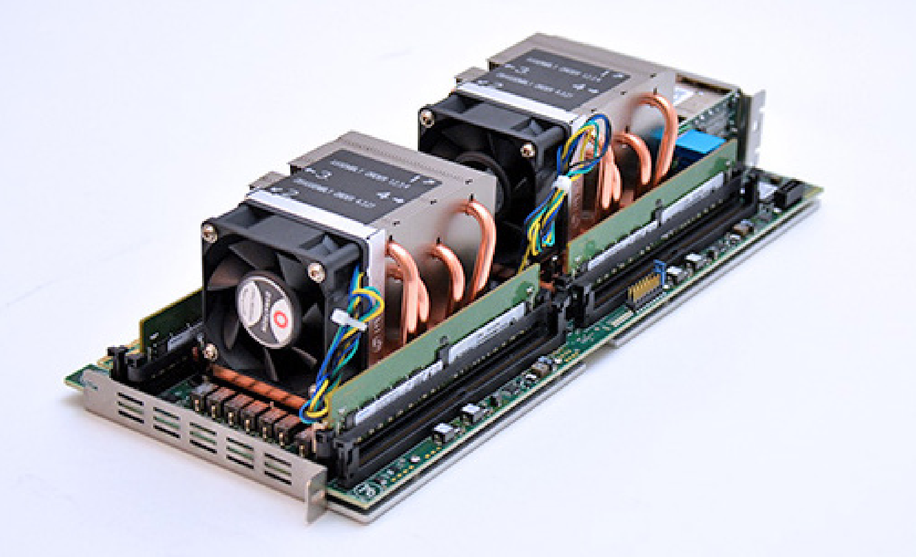
Configure/reconfigure a system to meet increasingly demanding tasks for critical applications, networks, and services.

MODULAR DESIGN FOR INTEROPERABILITY

Easily integrate the processor board into various chassis and backplane configurations without compatibility issues.

CONFIGURABLE TO YOUR SPECS

Choose your rugged chassis, a PCIe backplane, rugged storage options, and customize your own I/O interface.



Overview

The HDEC servers--in 2U, 4U, and 5U height--utilize a standard processor board (SEP8253) within system architectures, simplyfing upgrades and reducing total cost of ownership.

Deliver enhanced compute and connectivity within a flexible, SWaP-C optimized solution that can easily adapt to changing workload requirements, all without loss of performance!

SOLUTION HIGHLIGHTS

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

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

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

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.

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

TAA compliance is achieved because Trenton manufactures its solutions in the United States.

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

Technical Overview

SPECIFICATION	DETAILS
CPUs	Dual Intel® 2nd Gen Xeon® SP (Cascade Lake)
Memory	8x DDR4-2400/2666/2933 ECC RDIMM slots
Storage	Up to 8x U.2 NVMe, 16x SATA SSDs (FIPS 140-2/3 available)
Form Factors	Up to 2U/4U/5U rack servers ranging from 16“ - 26“ depth
Network Interface	2x 1GbE ports, 1x supporting IPMI, 2x 10GbE ports
Power	Low/Mid/High Wattage, redundant/non-redundant, 461/non-461, fixed/removable

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

Dual Intel® 2nd Gen Xeon® Scalable Processors (Cascade Lake), up to 65 W
Chipsets: Intel® C622 Lewisburg

MEMORY (UP TO 1.5 TB)

8x DDR4-2400/2666/2933 ECC RDIMM slots

I/O

- **SATA:** 6x SATA ports
- **USB:** 4x USB3 ports
- **IPMI:** IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- **Graphics:** Intel® Integrated Graphics & ASPEED AST2500 BMC
- **Video:** 1x VGA port
- **LAN:** 2x 1GbE RJ-45 (1x Shared IPMI) ports, 2x 10GbE RJ-45 ports
- **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 AST2500 baseboard management controller: rKVM, system monitoring, out-of-band management

OS COMPATIBILITY

- Windows 11 Enterprise, Server
- Linux
  - RHEL
  - Ubuntu
  - SUSE

**Contact us for the full compatabilities list*

DIMENSIONS

5.75 in. x 13.35 in. (14.6 cm x 33.9 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

**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 2U/4U/5U chassis.*

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

SYSTEM VARIATIONS

#	CHASSIS	BACKPLANES	POWER SUPPLY	DEPTH	STORAGE	SLOTS
1	THS2085 (2U)	8227	1X 650W NON-REDUNDANT, NON-461, FIXED, OR 2X 600W REDUNDANT, NON-461, REMOVABLE	18.2“	UP TO 6X FRONT-REMOVABLE SATA DRIVES OR 4X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	3X FHFL PCIE 3.0 X16
2	THS4095 (4U)	8231, 8259	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	26“	UP TO 16X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
3	THS4086 (4U)	8228	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	16.5“	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	8X FHFL PCIE 3.0 X16 (8228 BACKPLANE)
4	THS5087 (5U)	8231, 8259	1550W N+1, 2430W N+1, 3800W N+1, 3X-4X DEPENDING ON ZIPP MODEL, NON-461, REMOVABLE	23“	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
5	THS5091 (5U)	8237	1X 800W, NON-REDUNDANT, NON-461, REMOVABLE (PER SEGMENT)	19.2“	- - -	- - -
6	THS5095 (5U)	8231, 8259	2X 1200W REDUNDANT, NON-461, REMOVABLE	19“	UP TO 6X FRONT-REMOVABLE SATA DRIVES OR 4X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
7	2U-5U	TRENTON BACKPLANE	LOW/MID/HIGH WATTAGE, REDUNDANT OR NON-REDUNDANT, 461-OPTIONAL, FIXED OR REMOVABLE	18.2“-26“	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.

Contact us for pricing and availability.

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TRENTON SYSTEMS®