# THS5090

## HDEC® Series 5U RACKMOUNT COMPUTER with LOCAL STORAGE and MEDIA



**THS5090 HDEC Series Rackmount Computer**
Shown with two SFF backplanes and two SHBs

## FEATURES

- Rackmount computer with independent 2-in1 high density embedded computing (HDEC) platforms/system segments in a rugged chassis
- Supports two small form factor HDEC Series® backplanes including the HDB8236
- Each HDB8236 is a switchless backplane that supports five PCI Express card slots with four card slots configured for x16 PCI Express 3.0/2.0/1.1 electrical interfaces
- Features two long-life HDEC Series system host boards each with two Intel® Xeon® E5-2600 v3 series processors delivering 80 native PCIe 3.0 links per system segment
- Provides multiple, built-in Ethernet network interfaces including 10GbE and 1GbE
- Each system segment includes a front access 3.5" drive bay to support up to two, 2.5" front removable/hot swap HDD/SDDs and a Slim-line optical media drive bay
- Four USB 3.0 device interfaces supported in each segment
- Stable 2-in-1 system platform, Made in U.S.A.

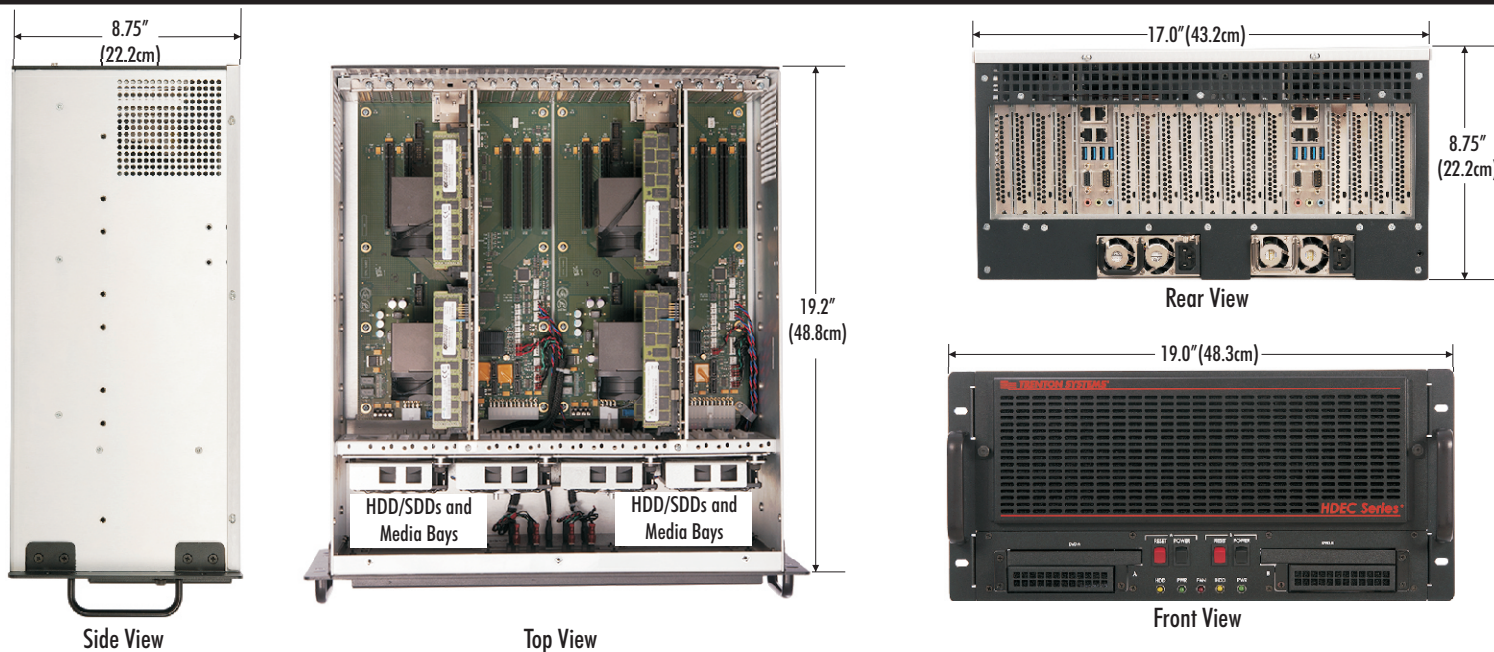**TRENTON SYSTEMS®**
*Engineered For Reliability*

## THS5090 OVERVIEW:

The Trenton THS5090 is an HDEC Series 5U rackmount computer that features two HEP8225 HDEC Series system host boards and two HDB8236 backplanes. Each backplane/SHB combination or segment, operates independently in order to provide total software application isolation in enhanced data security applications. Each THS5090 segment has one optical media drive bay and one 3.5" drive bay that may be populated with up to two HDD/SDD storage drives. This 19" industrial rackmount computer features a rugged, lightweight, aluminum chassis design with a shallow chassis depth, and the two-in-one system configuration maximizes 19" component rack space utilization. Each system segment is driven with its own independent and rear-removable ATX/EPS power supply.

The THS5090 features two independent backplanes and system host boards that delivers the ultimate system solution for secure software applications that are common in government and defense applications. The high density system configuration flexibility and rugged computer design enables deployment across a wide spectrum of industries that demand longevity and robust computing performance. Like all of our rugged customer-driven computing solutions, the THS5090 is designed, integrated and supported by Trenton Systems in the United States. Our exclusive 5-year factory warranty on the system host boards and backplanes comes standard with the Trenton THS5090 HDEC Series 5U rackmount computer.

## THS5090 LAYOUT[1] - DUAL HDEC Series System Host Boards and SMALL FORM FACTOR "Shoebox" BACKPLANES:



Side View



8.75" (22.2cm)

HDD/SDDs and Media Bays     HDD/SDDs and Media Bays

19.2" (48.8cm)

Top View



17.0" (43.2cm)

8.75" (22.2cm)

Rear View



19.0" (48.3cm)

Front View

## TRENTON HDEC Series RACKMOUNT COMPUTER:  THS5090

| SYSTEM MODEL | DESCRIPTION |
| --- | --- |
| THS5090 | HDEC Series 5U rackmount computer with two independent computing segments each comprised of an HEP8225 system host board, an HDB8236 small form factor backplane, a front access 3.5" drive bay, an optical media bay, and a rear-access, easy swap segment power supply. |

## TECHNICAL SPECIFICATIONS:

| | |
|---|---|
| MODEL NAME | THS5090 |
| DESCRIPTION | 5U, HDEC Series 2-in1 rackmount computer chassis supports dual and independent HDEC Series SHB and small form factor "shoebox" backplane segments |
| CHASSIS STANDARD | EIA RS-310C 19" Rackmount Standard |
| CONSTRUCTION & COLOR | Lightweight, rugged aluminum — Black front |
| HDEC Series SYSTEM HOST BOARD | 2 - HEP8225 Dual Processor SHBs with two Intel® Xeon® E5-2600 v3 Processors (Haswell-EP), USB 3.0, USB 2.0, SATA, Ethernet, Serial, Video and Audio Interfaces |
| SYSTEM HOST BOARD I/O DETAILS | The HEP8225 SHB supports the following: 2 - 10GbE and 2 - GbE Ethernet interfaces, 6 - USB 3.0 and 4 - USB 2.0 interfaces, 2 - SATA/600 on-board ports, 6 - SATA/600 backplane interfaces, 1 - RS232/422/485 port, 1- VGA Video port, Audio Out/Line In/ Mic, Fan Speed Control lines, and System Diagnostics |
| HDEC Series BACKPLANE OPTIONS | 2 - Small Form Factor "shoebox" backplanes - Trenton HDB8236, or other standard HDEC Series small form factor backplanes |
| PCI EXPRESS PLUG-IN CARD SLOTS | HDB8236: 5 card slots[2]: 4 – x16 and 1 - x8 PCI Express 3.0/2.0/1.1 electrical/x16 mechanical |
| HDEC Series BACKPLANE I/O | HDB8236: PS2+ system power with an additional terminal block for high current applications, 4 - SATA/600, 2 - USB 3.0, System Fans, LED dimmer, System Speaker, ACPI soft power, intruder alert, PS/2 mouse and keyboard, temperature sensors, SMB, SHB Present, and Clear CMOS |
| DRIVE BAYS | Each THS5090 segment supports one front access 3.5" drive bay that supports either one 3.5" or two 2.5" hot swap HDD carriers. Each segment also supports a Slim-line device bay for optical drive media |
| DATA STORAGE CAPACITY | Each THS5090 system segment configured with 1TB HDDs could provide a storage capacity of up to 2TB, and about 1TB of storage capacity per segment when using typical 2.5" SSDs. Maximum system storage capacity will increase as the individual HDD/SDD storage capacity increases. |
| POWER SUPPLY | Each THS5090 segment supports one rear-mounted and removable, ATX/EPS, 1,000W nominal |
| COOLING | 4 — Hot Swap 92mm ball bearing fans, 102CFM each |
| INDICATORS | Each segment has LEDs for HDD activity, System Fans and Power Status |
| SWITCHES | Each segment has a Power On/Off, and System Reset switch |
| HOLD DOWN BAR | Flexible hold down bar for each segment's SHB and the PCI Express plug-in option cards for added security in high vibration environments |
| AIR FILTER | Front tool-less access to the system filter for easy cleaning and maintenance |
| CHASSIS NET WEIGHT | 43.2 Lbs. (19.6 Kg.) — includes chassis + 2, dual-processor HDEC Series SHBs + 2, small form factor shoebox format backplanes + 2, rear-access power supplies |
| METRIC DIMENSIONS | 48.3cm (W) x 22.2cm (H) x 48.8cm (D) (with 19" rackmount handles installed) |
| ENGLISH DIMENSIONS | 19.0" (W) x 8.75" (H) x 19.2" (D) (with 19" rackmount handles installed) |

Trenton Systems offers complete system integration of a wide variety of standard and customer supplied operating systems and application software packages. Various Microsoft®, Linux and RTOS operating systems can be loaded on to your system by our highly skilled factory technicians. Other system integration services include loading and testing of industry standard or COTS option cards. Industry certifications and approvals for specific system configurations are also available.

Final system weight, environmental specifications and total power consumption estimates are a function of the specific system configuration. Preliminary estimates and final validated values are provided by Trenton for each rackmount computer system we build.

NOTES:
1. The chassis photos are shown on page one are for illustrative purposes only.
2. The PCIe2 card slot on each backplane may not be available with high performance processor options.

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