

TRENTON SYSTEMS
Rugged Computers

SEP8253
Processor Board

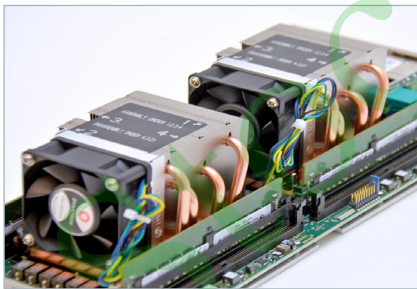
XEON® SCALABLE PERFORMANCE SILVER AND GOLD

HDEC Series Architecture delivers 88 lanes of PCIe to a compatible Backplane

Ruggedized, designed and made in USA x86 single board computer for demanding applications

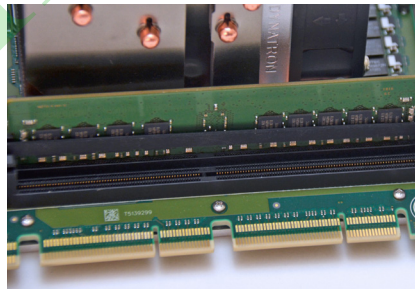
Up to 44 cores/88 threads and 8 ECC RDIMMs with up to 3TB of DDR4-2933 standard memory with Optane™ DC Persistent Memory support! The SEP8253 is designed to tackle the toughest industrial and embedded computing challenges.

PRODUCT DETAILS



Xeon® Cascade Lake CPUs

Dual CPUs deliver high performance and 11+ years of availability for embedded applications.



88 Lanes of PCIe Gen 3

Pair with a compatible HDEC Series Backplane to integrate large numbers of COTS PCIe cards.



IPMI / Out-of-Band

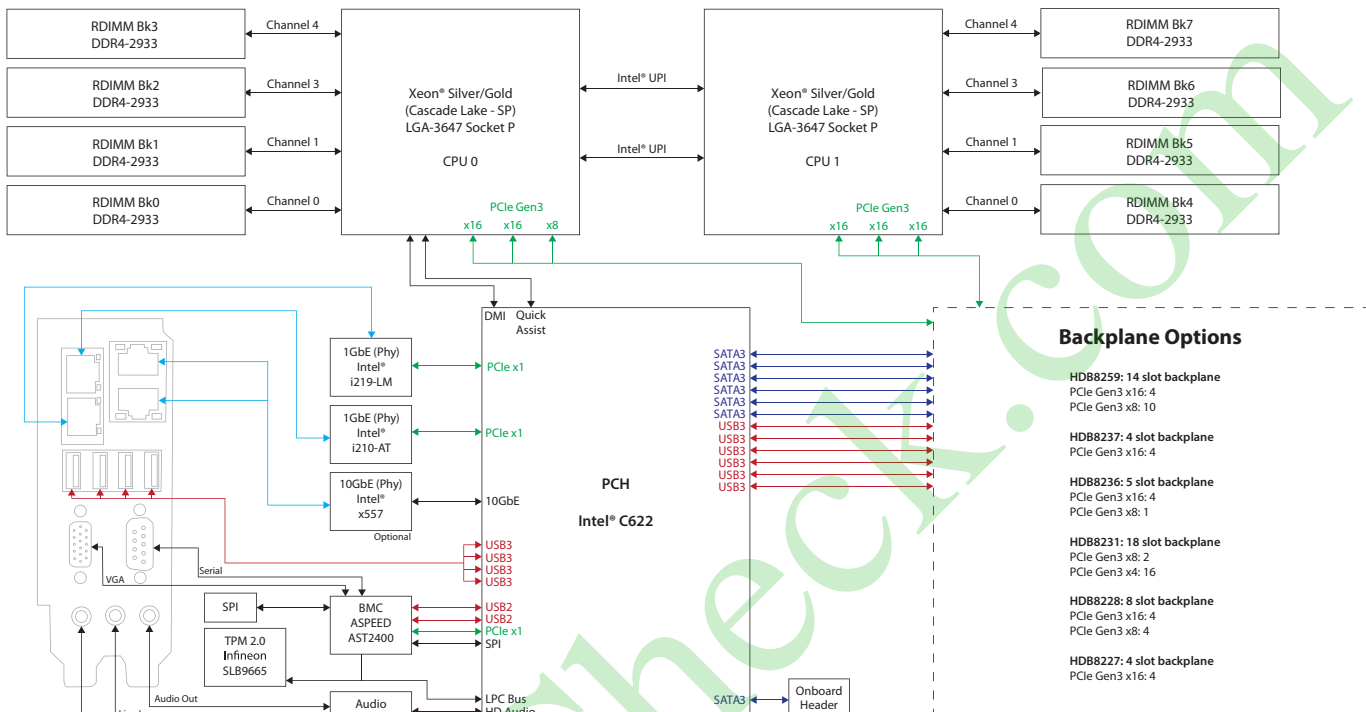
Trenton Smart System Management provides industry standard IPMI 2.0 support for monitoring and control.



www.trentonsystems.com
Visit our website for more info.

Phone: (770) 287-3100
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BLOCK DIAGRAM



The SHB's overall dimensions are 13.345" (33.858cm) L x 5.750" (14.605cm) H. The standard cooling solution used on the SEP8253 SHBs enables placement of option cards approximately 2.975" (75.57mm) away from the top component side of the SHB. Some system integration applications using chassis such as 2U rackmount computers require lower profile cooling solutions. A low profile heat sink option is available for the HEP8225 board that allows option card placements of 1.550" (39.37mm) from the topside of the board. A low profile cooling solution usually results in a 25-30% reduction in a system's maximum operating temperature rating. Contact Trenton Systems for more information on cooling solution options for the SEP8253 system host board.



SEP8253 HDEC SERIES SBC

TECH SPECS

Model Number

SEP8253

Board Type

HDEC Series SHB driving 88 lanes of PCIe Gen3 via card edge fingers to a compatible backplane.

Environmental

Temperature: -10° C to 50° C (operating)* and -30° C to 70° (storage) *processor dependent

Humidity: 5% to 90% non-condensing

Environmental ratings assume 350LFM of airflow across the board. Additional cooling solutions may be available. Contact Trenton for more information.

Both standard and low profile cooling solutions are available. Contact Trenton for more information.

A low profile cooling solution usually results in a 25-30% reduction in a systems maximum operating temperature rating.

Processors

The SEP8253 supports Intel® Xeon® Scalable Performance Silver and Gold processors (LGA-3647 "Socket P") up to 125w TDP each.

Additional Cascade Lake-SP/Skylake-SP processors may be supported, depending on application. Contact Trenton for more information.

Memory

8x 288-pin RDIMM slots supporting DDR4-2400/2666/2933 ECC up to 1.5TB standard memory and 4.5TB of Intel® Optane™ DC memory per CPU

*Speed and capacity processor dependent. Registered DIMMs are required for use on the SEP8253.

Chipset

Intel C622 Platform Controller Hub (Lewisberg LBG-2)

Management and Security

ASPEED AST2400 BMC supporting IPMI 2.0, TPM 2.0 support via Infineon SLB9665

I/O

Rear Bracket: 2x 10GbE (RJ45 via Intel x557) 2x 1GbE (RJ45 via Intel i210-AT and i219-LM) 4x USB 3.0, Line Out, Line In, Mic In (3.5mm), RS232/422/485 (DB9), VGA video (DB15, up to 1920x1200)

Routed to Backplane: 6x SATA600, 6x USB 3.0

Onboard: 1x SATA600

Dimensions

13.345 (33.9cm)" (L) 5.570 (14.6cm) W



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Visit our website for more info.

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SEP8253 SINGLE BOARD COMPUTER



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