

HDS6705

6U OpenVPX Xeon Scalable HPEC multiprocessing board with BuiltSECURE technologies

Securely solving complex data problems in the most inhospitable places

- True data center processing capability
- Robust data confidentiality/integrity hardware protections
- Optimized for size, weight, power and cooling
- Key building block for developing AI-capable processing systems



Secure, actionable information when you need it, where you need it
 The environmentally rugged OpenVPX HDS6705 processing module provides smart, autonomous edge applications the on-platform security and multifunction processing capability needed to solve the most complex data problems in the most inhospitable environments.

The HDS6705 features the same AI-enabling Intel® Xeon® Scalable processor that powers modern data centers. Protected by Gen 4 BuiltSECURE™ SSE IP that is built in, not bolted on, it delivers secure, data-center performance that protects sensitive algorithms even if the platform is compromised. The HDS6705 is integral to developing secure, software-agnostic, embedded AI-capable processing systems that operate at the tactical edge.

Highlights

- Manages big data workloads on physically and environmentally challenged platforms with optimized server-class processing technology
- Provides on-platform data confidentiality/integrity hardware protections even if the platform is compromised
- Optimized for size, weight, power and cooling to deliver the best performance and highest MTBF for consistent and efficient operation - anywhere

Compared to Xeon D-based 6U OpenVPX boards, Xeon-SP based boards deliver:

150%
more memory bandwidth

22%
improved power efficiency

11
additional years of lifecycle support

3x
more memory

4x
DMIPS

[CONTACT US](#)

TECHNICAL SPECIFICATIONS

Processor (default)

Intel® Xeon® SP 6238T 1.9 GHz 22-core (Cascade Lake) server-class processor with AVX512 acceleration

BuiltSECURE® Embedded Framework

FPGA complex to support secure boot and application load options

Memory

96 GB DDR4 SDRAM with ECC

PCIe to Switched Fabric Bridge

Mellanox ConnectX-5 Ethernet adapter

System Management

Out-of-band VITA46.11 IPMI controller running on auxiliary voltage

IPMI

On-board IPMI controller

OpenVPX Multi-Plane Architecture

System Management via IPMB-A and IPMB-B link on P0 management plane

10/40 GB Ethernet on data plane; 10 GB Ethernet on control plane

Full x16 or dual x8 PCIe Gen3 interfaces on P2 and P5 expansion plane

Mechanical

6U OpenVPX, 1.0" slot pitch

VITA 65/48/46

SOSA aligned

Options

[MOTS+ rugged packaging](#) for extreme environmental protection

VITA 48 cooling options: AC (48.1), CC (48.2), AFB (48.7), LFT (48.4)

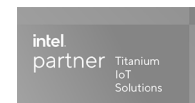
Mercury's Processing Ecosystem

To build a secure, AI-capable processing subsystem, combine:

- 1x HDS6705 (multiprocessing)
- 4x GSC6204 (GPU)
- 2x SFM6126 (network switch)
- 1x IOM-400 (I/O interface)
- 1x SMA-301 (system management)
- 2x SCM6010 (storage)
- 1x ruggedized chassis

Or, choose from our broad portfolio of hardware and software interoperable building blocks to design your own edge-ready [processing subsystem](#)

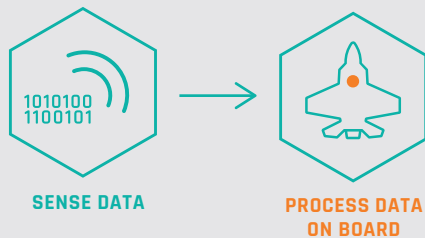
Partnering with



CLOUD COMPUTING



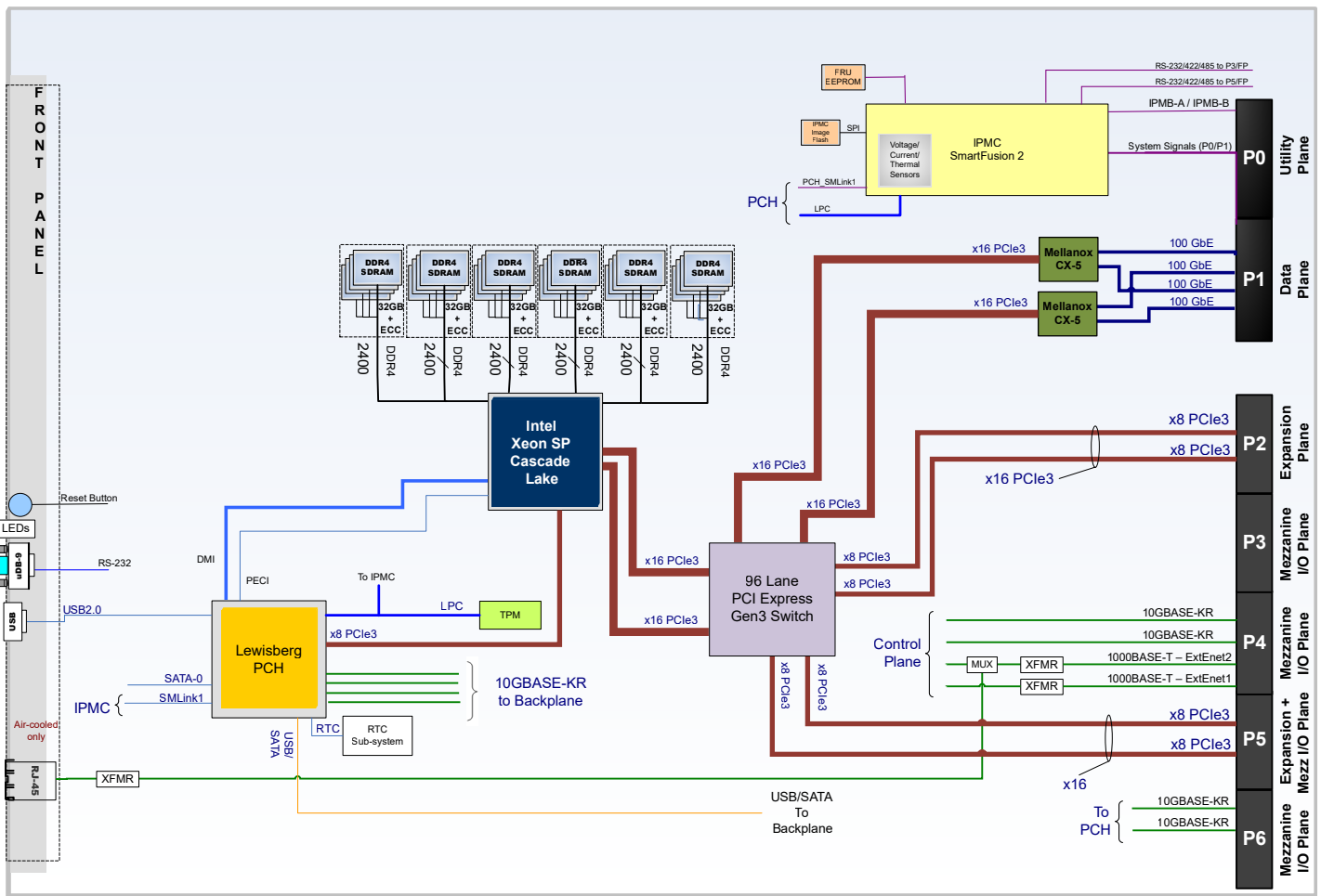
TACTICAL EDGE COMPUTING



ON-PLATFORM DATA CENTER PROCESSING CAPABILITY AT THE TACTICAL EDGE

Mercury's HDS6705 provides the same processing capabilities as Cloud servers to bring the most environmentally challenged, space-constrained platforms the highest processing capability and integrated security protection.

HDS6705 functional block diagram



Corporate Headquarters

50 Minuteman Road
 Andover, MA 01810 USA
 +1 978.967.1401 tel
 +1 866.627.6951 tel
 +1 978.256.3599 fax

International Headquarters

Mercury International
 Avenue Eugène-Lance, 38
 PO Box 584
 CH-1212 Grand-Lancy 1
 Geneva, Switzerland
 +41 22 884 51 00 tel

Learn more

Visit: mercy.com/hds6705



The Mercury Systems logo and the following are trademarks or registered trademarks of Mercury Systems, Inc.: Mercury Systems, Innovation That Matters, and BuiltSECURE. Other marks used herein may be trademarks or registered trademarks of their respective holders. Mercury believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice.

