mercury

LDS6708

6U OpenVPX Intel-base single board computer with BuiltSECURE

Secure processing for mission critical applications at the edge

- Balanced processing capability with minimal power consumption
- Robust data confidentiality/ integrity hardware protections
- Optimized for size, weight, power and cooling for versatility
- Key building block for developing C4ISR processing systems

Secure processing turns the unintelligible into uncompromised insight Mercury's SWaP-optimized OpenVPX single board computer provides C4I edge applications the on-platform security and processing capability needed to transform multifaceted data into actionable intel, while protecting key algorithms from bad actors.

The LDS6708 delivers best-in-class physical security protections and the reliability of Intel® Xeon E or Core i3/i5/i7 processing performance. Protected by proven Gen 4 BuiltSECURE™ system security engineering (SSE) IP that is **built-in, not bolted on**, it delivers secure processing performance that protects sensitive algorithms and data – even if the platform is compromised.

Maintain system-wide integrity with BuiltSECURE technologies deployed on over four generations of Intel microarchitectures. OpenVPX modules with BuiltSECURE can be configured with a variety of nation-state-level security features that mitigate reverse engineering. A hardware-based Root of Trust and cyber-resilient BIOS mitigate reduce security threats by reducing attack surfaces and minimizing boot devices. Built-in interfaces allow OpenVPX modules to participate in platform-wide security architectures. System security features enable customer Foreign Military Sales (FMS) or Direct Commercial Sales (DCS) program success. Detailed security capability offerings can be requested.

EDGE APPLICATIONS

C4ISR

Electronic Warfare

EO/IR

Image Processing

Radar Processing

Sensor Fusion

Signals Intelligence

BuiltSECURE™

TECHNICAL SPECIFICATIONS

Processor (default)

Intel® Xeon® E-2276ME 6-core 2.8 GHz processor (Coffee Lake) with AVX2 and on-die Intel UHD GPU (other options available)

BuiltSECURE Embedded Framework

FPGA complex to support secure boot and application load options

Memory

32 GB DDR4 SDRAM with ECC

Fabric Interfaces

x8 Gen3 PCIe routed to P2 expansion plane

10GbE on P1 data plane (optional)

System Management

Via IPMC mgmt and data planes links on P0/P1

I/O

2x 10GBASE-KR or 1000BASE-BX

1x 1000BASE-BX to FPGA complex

2x 1000BASE-T

2x TIA-232/422/485 serial ports*

2x TIA-232 serial ports*

6x USB 3.0 and 4x USB 2.0 ports*

5x SATA ports*

1x DisplayPort

Multiple LVTTL GPIO

Mechanical

6U OpenVPX, 1.0" slot pitch

VITA 65/48/46 compliant

SOSA aligned

Options

MOTS/MOTS+ rugged packaging

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

Mercury's Processing Ecosystem

To build a secure, C4ISR processing subsystem, combine:

- 1x LDS6708 (single board computer)
- 1x SFM6126 (network switch) configured with 2x IOM-400 (I/O interface)
- 1x SMA-301 (system management)
- 2x SCM6010 (storage)
- 1x ruggedized chassis

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

*depends on mechanical configuration

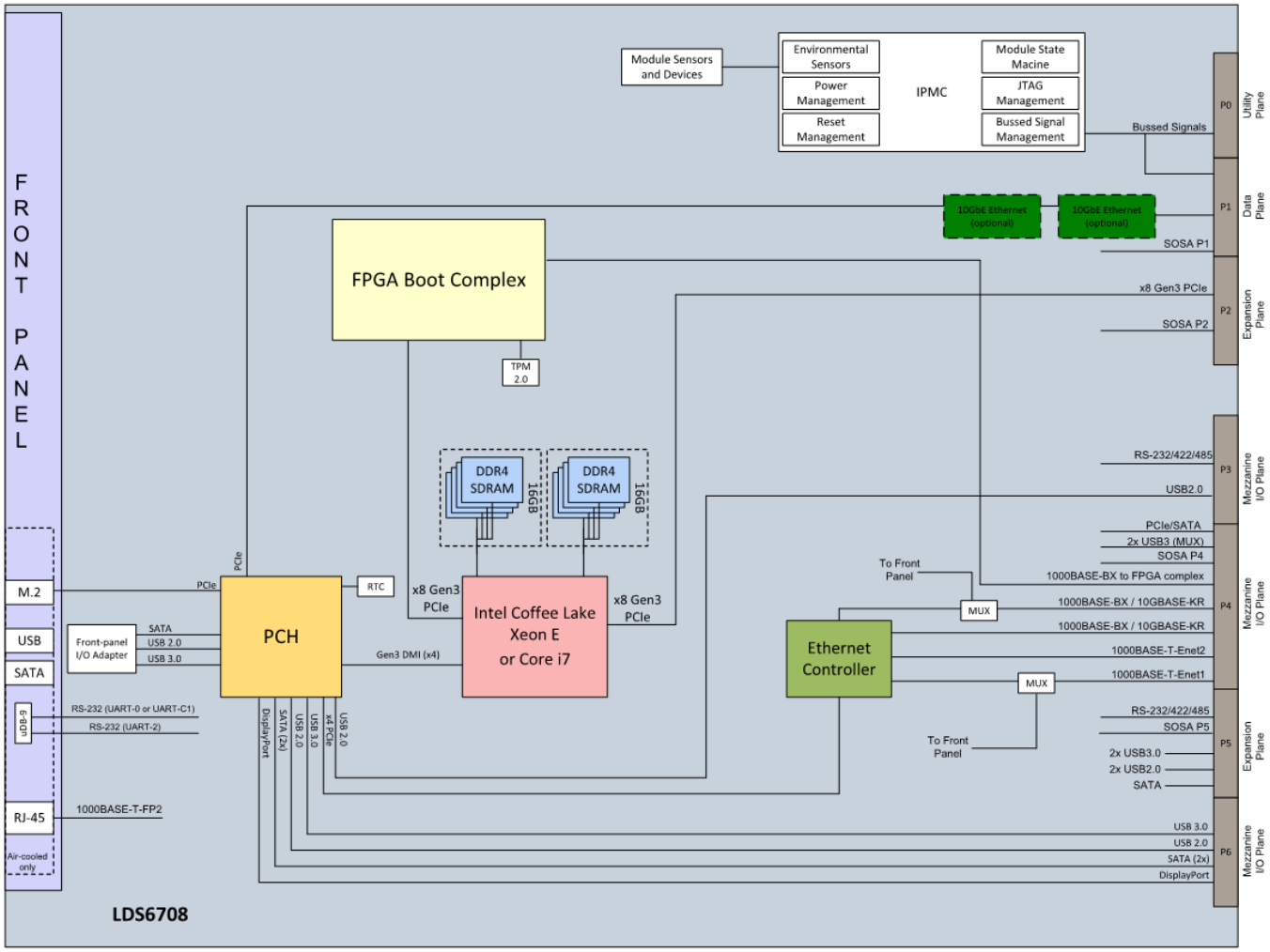
Partnering with

intel partner Titanium IoT Solutions

What is Secure Processing?

Mission-critical systems at the core of aerospace and defense applications are subject to the same security vulnerabilities found in other industries. However, the consequences of a security breach can be far worse. FPGA-based cryptography, root of security, secure boot, sensors, fingerprinting and physical protections against system infiltration are just a few ways we protect mission-critical systems.

LDS6708 functional block diagram



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