

SCM6010 and CAN6000 Plug-In Storage

6U OpenVPX SSD Carrier with PCIe Switching and Removable Canister

Removable high-speed storage for rapid mission refresh

- Up to 24 TB of high-speed storage
- 48x PCIe Gen3 low-latency, high-bandwidth read/write lanes
- Removable storage canister
- Optimized for size, weight, power and cooling for versatility
- Key building block for developing AI, EO/IR, and radar processing systems



High-speed storage module with removable canister for rapid mission updates. EnsembleSeries™ SCM6010 are rugged, 6U OpenVPX™ storage modules that utilize a low-latency PCIe architecture accessed via the system backplane's expansion plane. When integrated with other Mercury OpenVPX modules, the SCM6010 supplies the storage required for intense AI, EO/IR image/video and radar processing applications.

Designed for aerospace and defense applications, SCM6010 modules package the latest commercially developed M.2 NVME technology into rugged, easily removed canisters (CAN6000) that provide for rapid mission refresh or removal of sensitive IP. Out-of-the-box software and drivers make for easy adoption and manageability of SCM6010 modules, which carry a single CAN6000 storage canister. Canisters are removable with a hex drive screwdriver.

Storage Carrier Module

Each SCM6010 6U carrier module utilizes a Microsemi Switchtec™ PM8573 switch that delivers 16 PCIe Gen3 read/write lanes to the OpenVPX backplane. M.2's native PCIe wideband, low-latency interconnect with significantly less device software overhead produces greater performance than other approaches. Each CAN6000 canister holds up to six M.2 SSDs (4 TB ea.), up to 24 TB of total module storage capability, and is rated up to 1000 insertion/removal cycles.

System Management

SCM6010 storage modules implement the VITA 46.11 advanced system management functionality to remotely monitor system health, manage alarms and validate hardware revision. Using the standard IPMI-A and IPMI-B bus, SCM6010 storage modules implement full IPMC on-board system management.

TECHNICAL SPECIFICATIONS

Module

Supports 16 Gen3 PCIe interfaces to the backplane with each link configurable to Gen2 or Gen1 data rates

Supports six M.2 SSDs at x4 Gen3 PCIe

Supports OpenVPX management plane; dual IPMB interfaces per VITA 65

Designed for installation into VITA 46 and VITA 65-compliant chassis

Power Requirements

Input voltages

12V payload power

3.3V_AUX management power

Packaging

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

Mechanical

6U OpenVPX, 1.0" slot pitch

OpenVPX Slot Profile

VITA 65 slot profile:
SLT6-PER-1Q-10.3.5

VITA 65 module profile:
MOD6-PER-1Q-12.3.5-n

System Management

Read sensor values

Read and write sensor thresholds, allowing an application to react to thermal, voltage, or current variations that exceed those thresholds

Reset the entire module

Power up/down the entire module

Retrieve module field replaceable unit (FRU) information

Interface with and be managed remotely by a VITA 46.11-compliant chassis manager

Option

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

Mercury's Processing Ecosystem

To build an AI intensive processing subsystem, combine:

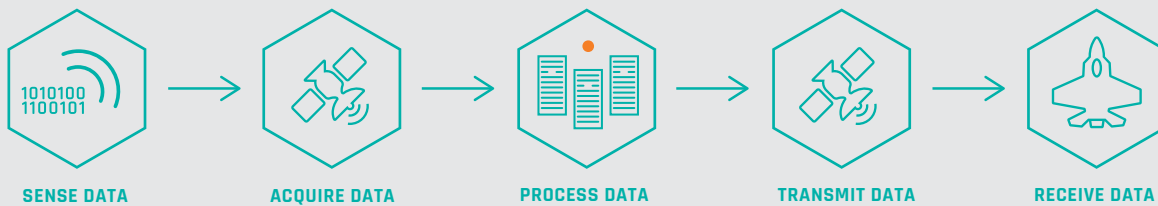
- 1x HDS6605 (high density server)
- 1x SFM6126 (network switch) configured with 2x IOM-400 (I/O interface)
- 1x SMA-301 (system management)
- 2x SCM6010 (storage)
- 1x ruggedized chassis

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



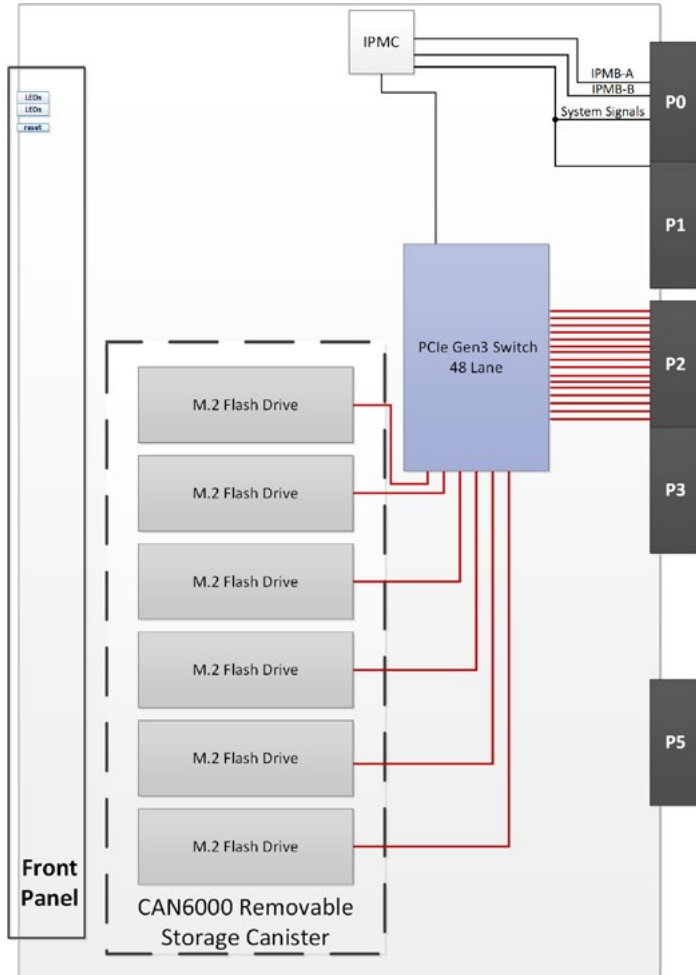
CLOUD COMPUTING



TACTICAL EDGE COMPUTING



Functional block diagram



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