



MOSARC™ SMART NETWORK ACCESS POINT

OPEN SYSTEMS ARCHITECTURE, FUTURE-READY AVIONICS

Next-generation, safety-critical, deterministic networking

In today's complex and rapidly changing global environment, it's important to keep pace with evolving threats and technologies.

Collins Aerospace can help you take advantage of deterministic Time Sensitive Networking (TSN) technology with our Smart Network Access Point (SNAP). Collins' SNAP enables the next generation of digital backbone, providing flexible, safe and secure networking with avionics design assurance levels. SNAP future-proofs avionics systems allowing modular capability throughout the aircraft lifecycle.

SNAP supports both copper and fiber Ethernet interfaces and is designed with an open systems architecture. Collins' SNAP offers data isolation, prioritization, filtering and policing for each connection in multiple network topologies in small to large network deployments. Our advanced design offers a flexible range of applications for both commercial and military platforms.

Developed to meet safety-critical levels up to Design Assurance Level (DAL) A, SNAP interfaces with cross domain guards and encryption devices to enable multi-level classification data distribution. With Collins SNAP, your network is protected from unauthorized configuration, execution and access.



KEY FEATURES & BENEFITS

- Deterministic, non-blocking Layer 2 switching
- IEEE 802.1 TSN with aerospace TSN profile
- Interoperable with IEEE 802.3 and ARINC 664 Ethernet devices
- Design Assurance Level A
- Built-in testing
- User-friendly configuration tools

Specifications

FEATURES

- Compliant with Modular Open Systems Approach (MOSA) and Sensor Open Systems Architecture (SOSA™)
- Rugged 3U OpenVPX single slot switch Ethernet switch module
- Supports civil certification-critical applications compliant with ARP4754A, DO-178C and DO-254
- Data isolation, prioritization, filtering and policing using IEEE 802.1 based standards
- Interoperability with IEEE 802.3 and ARINC 664 devices
- Toolchain for network configuration and analysis

CHARACTERISTICS

Form Factor	3U OpenVPX, 1.0 in. pitch
Cooling method	Conduction cooled
Operating temperature	-40 to 70° C
Power	50 W (baseline configuration)
Weight	1.1 lbs. (0.5 kg)

ETHERNET INTERFACES

Baseline configuration	Twelves (12) 1-Gbps ports (1000BASE-KX) Four (4) 10-Gbps ports (10GBASE-SR)
Optional configuration(s)	Up to 15 10-Gbps ports (10GBASE-KR/SR) Up to 24 1-Gbps ports Path to 25-Gbps and 40-Gbps ports

TIME-SENSITIVE NETWORKING

- IEEE 802.1Q for base bridges and bridged networks capabilities along with virtual LAN and priorities
- IEEE 802.1AS for time synchronization and clock failover
- IEEE 802.1Qav for configurable bandwidth reservation for each traffic class via credit based shaper
- IEEE 802.1Qbv for configurable scheduled traffic via time aware shaper
- IEEE 802.1Qci for configurable bandwidth reservation and flow control for each stream via per-stream filtering and policing
- IEEE P802.1DP/SAE AS6675 to build deterministic Ethernet networks for aerospace onboard communications
- IEEE 802.1Qcc for network management reporting via NETCONF and YANG data
- IEEE 802.1CB for configurable redundant network via frame replication and elimination for reliability (optional)

OPEN SYSTEMS STANDARDS

SNAP is designed to lower life cycle costs and interoperability challenges between modules. It is aligned with switch module profiles of SOSA and HOST technical standards.

- SOSA Switch slot profile SLT3-SWH-4F1U7U1J-14.8.7-0
- SOSA Switch module profile MOD3-SWH-4F1U7U1J-16.8.7-1

Specifications subject to change without notice.



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