



MILTECH™ 800G3UVPX - SOSA™ ALIGNED

Military Grade 6 x 100G Ethernet Data Plane + 8 x 25G Ethernet Control Plane Switch L2/L3 3U VPX Form Factor

In the past decade, technological progress has witnessed remarkable advancements. As a 3U VPX Ethernet Switch, the MILTECH 800G3UVPX stands at the forefront of innovation. Its cutting-edge technology includes secure boot capabilities with a dedicated FPGA, BIT functionality, zeroization, and data declassification. Its monitoring and management are seamlessly executed through the IPMI SOSA™-aligned interface. Housed in an appropriate chassis, The MILTECH 800G3UVPX complies with standards like MIL-STD-461E and MIL-STD-810F/G.

In order to support sophisticated intelligence, these platforms may have to carry and connect a variety of high-speed Ethernet-based devices including computers, sensors, and targeting systems—all in compact platforms that must communicate with each other.

Advanced network features, including routing protocols, virtual LANS (VLANs), traffic prioritization (QoS), bandwidth aggregation, Sync-E, PTP, TSN, and more.

The MILTECH800G3UVPX offers instant compatibility with any VPX SOSA™-aligned platform, showcasing its versatility and seamless integration capabilities within sophisticated systems.



SPECIFICATIONS

<p>ETHERNET PORTS:</p>	<ul style="list-style-type: none"> • Slot Profiles (per SOSA™): <ol style="list-style-type: none"> 1. SLT3-SWH-6F1U7U - 14.4.14 (1-800G3UVPX-000/1-800G3UVPX-001) 2. SLT3-SWH-6F8U - 14.4.15 (1-800G3UVPX-010/1-800G3UVPX-011) 3. Front panel: <ul style="list-style-type: none"> • 1 X 40GE Fiber (MM) Data Plane, MPO connector • 1 X 10G Fiber (MM) Control Plane, LC connector • 1 X 1G Copper Control plane, HARTING P/N 09451812560 • USB type C for CLI to Control & Data Planes
<p>NETWORKING and Management:</p>	<ul style="list-style-type: none"> • Quick boot time with enhanced Built-in-Test (PBIT, IBIT, CBIT) • Secure Boot via FPGA. • IPMI SOSA™ Aligned per VITA 46.11 tier II and tier III • Data Switch and Control Switch CLI - LVCMOS or RS232 via backplane • Spanning Tree (802.1d), RSTP (802.1w) and multiple Spanning Tree (802.1S) for fast recovery rings • Security via Radius Authentication 802.1x, Port Security, Port Mirroring • Multicasting (IGMP Snooping), GARP, GMRP, and GVRP Broadcasting and flooding Control up to 8K Groups • 802.1q Tagged based VLAN up to 4K VLAN groups • QoS Multi-Layer Classifier, 802.1p, ToS/DSCP traffic classification. WFQ, Strict Queuing • Bridge support for Q-in-Q • Full L3: VRRP, OSPF V3, PIM, RIP V1/V2, ECMP • Link Aggregation 802.3AD • WEB, CLI, Telnet Management



SPECIFICATIONS

TIMING AND SYNCHRONIZATION:	<ul style="list-style-type: none"> • IEEE-STD-1588v2, sub-nanosecond-accurate for one-step and two-step timestamping • Hardware processing and PTP frame generation • Sync-E • NTP
TSN:	<ul style="list-style-type: none"> • IEEE 802.1AS – gPTP • IEEE 802.1Qbu - enhancements to the forwarding frame preemption • IEEE 802.3br - allows the transmission of express traffic • IEEE 802.1Qci - Forwarding and Queuing Enhancements • IEEE 802.1Qbv - enhancements for scheduled traffic • IEEE 802.1Qch - synchronized cyclic enqueueing and queue draining procedures
STANDARDS:	<ul style="list-style-type: none"> • MIL-STD-461E, MIL-STD-810F/G, when installed in an appropriate chassis
PERFORMANCE:	<ul style="list-style-type: none"> • Data Plane Switch: <ul style="list-style-type: none"> • 6 x 100G-KR4 backplane ports, configurable also to 24 x 10GKR or 25G-KR • Front panel 40G optical module port • Non-blocking, wire speed forwarding rate • Control Plane Switch: <ul style="list-style-type: none"> • 7 x 10/25G-KR backplane ports (or 8 port variation) • 1 x 10G front panel fiber port • Non-blocking, wire speed forwarding rate
STANDARD COMPLIANCE:	<ul style="list-style-type: none"> • Fully VITA 65 SOSA™ Aligned • IEEE 802.1x MAC based Authentication • IEEE 802.1Q Vlan Tagging • IEEE 802.1P QoS • IEEE 802.1S Multiple STP • IEEE 802.1W Rapid STP • IEEE 802.1AD Link Aggregation • IEEE 802.1X
POWER:	<ul style="list-style-type: none"> • Voltage Input: 12VDC (Backplane) + 3.3VDC secondary supply per SOSA™ guidelines • Power Consumption: Typical 85W • Led indications: Power and Status
ELECTROMAGNETIC:	<ul style="list-style-type: none"> • MIL-STD-461E Electromagnetic compatibility • CE-102, CS-114, CS-115, CS-116, RE-102, RS-103 (when installed in an appropriate chassis)
ENVIRONMENTAL:	<ul style="list-style-type: none"> • MIL-STD-810F/G/GM: • Random vibration (514.5I), Bench Handling (516.6VI), High Temp.(501.5I,II), Low Temp.(502.5I), Humidity (507.5II), Air Pressure (500.5I,II), Blowing Rain (506.5I), Immersion (512.5I), Salt Atmosphere (509.5I), • Blowing Dust (510.5I), Loose Cargo Vibration (514.6II), Wind Analysis (when installed in an appropriate chassis)
PHYSICAL:	<ul style="list-style-type: none"> • 3U VPX Form Factor, 1" pitch. Weight: 375g • Two level maintenance (2LM) covers
COOLING:	<ul style="list-style-type: none"> • No Moving Parts, Conduction Cooling
OPERATING TEMP:	<ul style="list-style-type: none"> • -40°C to +85°C (-40°F to +185°F) Cold Start-Up
STORAGE TEMP:	<ul style="list-style-type: none"> • -40°C to +85°C (-40°F to +185°F)

