

NETernity SWE440S

Fully Managed 3U VPX 10/40GigE Ethernet Switch, Aligned with SOSA

The NETernity™ SWE440S is a fully managed (Layer 2/3) 3U VPX Ethernet switch designed to meet the most demanding requirements for network switching in tactical applications.

The SWE440S is designed to align with two SOSA switch profiles, as well as being compatible a range of OpenVPX profiles. Up to 32 10GigE or 8 40GigE ports (or combination of the two) plus up to 3 1GigE ports are supported. OpenWare™ switch management software comes as standard and is designed to support high performance embedded computing (HPEC) applications.

Each 40GBASE-KR4/10GBASE-KX4 port can be quickly and easily configured through OpenWare to operate as 4x 10GBASE-KR/1000BASE-KX ports.

The SWE440S supports multiple Ethernet rear I/O connectivity options including 10GBASE-KR, 10GBASE-KX4, 40GBASE-KR4, 1000BASE-KX, and 1000BASE-T, as well as supporting 10GBASE-SR and 10GBASE-LR SFP+ modules for front panel configured variants.

The SWE440S delivers full wire-speed switching that can be fully managed and easily deployed. Proven, high-performance

architecture and a multilayer switching fabric provide a rich feature set, broad functionality, scalability, and product longevity.

Based on leading edge high-performance switch fabric with integrated processor, the SWE440S has Layer 2/3 switching capabilities as well as the ability to support higher Layer 4-7 functionality when required.

The switch management environment for the SWE440S is Abaco's in-house developed and supported OpenWare™. OpenWare™ offers comprehensive management features for Layer 2/3 switching and dynamic routing, and provides support for a wide range of network protocols and MIBs with extensive capabilities for multicast, Quality of Service, VLANs, and Differentiated Services.

OpenWare™ can be modified to meet customer requirements and provides a number of ways to manage the switch via serial console, SNMP, Telnet, SSH or web interface. The sanitization capability allows a user to overwrite non-volatile storage as required.

The SWE440S provides a migration path for current 3U switches allowing customers to adopt new, industry-leading network speeds.

FEATURES:

- 3U VPX form factor
- SOSA profile aligned for:
 - MOD3-SWH-6F1U7U-16.4.15
 - MOD3-SWH-6F8U-16.4.16
- VITA 65 OpenVPX compliant
- Various OpenVPX profiles including:
 - MOD3-SWH-6F8U-16.4.10-n
 - MOD3-SWH-6F6U-16.4.1-n
- Supports connectivity and performance options for 40GBase-KX4, 10GBase-KR, 10GBase-KX4 and 1000BaseKX.
- Serial Console
- OpenWare™ Switch Management Software
- Wire speed Layer 2/3 switching including IPv6
- Multicast support: IGMP Snooping Querier and MLD Snooping Querier
- Allows up to 4,096 VLANs
- L-3 protocol support including OSPF, RIP and VRRP
- Precision Time Protocol 1588v2 Transparent Clock Support
- Conduction-cooled
- Rugged Levels 1 and 5 available
- Built-in Test
- Denial-of-service attack prevention
- Sanitization capability
- Board Management Microcontroller (BMM)
- Spanning Tree and Link Aggregation
- Remote management via Telnet, SSH and SNMPv3

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Key Specifications

- IEEE 802.3-2005
- IPMI 2.0
- IEEE 802.1D (Prioritization)
- IEEE 802.3ad (Link Aggregation)
- IEEE 802.1Q (VLAN tagging)
- IEEE 802.1Q-2005 (Multiple Spanning Tree)
- IEEE 802.1X (Port Authentication)
- IEEE 802.3az Energy Efficient Ethernet
- IETF RFC 4541 (IGMP & MLD Snooping)
- RoHS 2011/65/EC compliant
- ANSI/VITA 46.0-2007
- ANSI/VITA 46.7-2012
- VITA 48.2 (REDI)

Physical Interface

- Up to 8x 40GBASE-KR4 ports to the rear VPX connectors
- MOD3-SWH-6F6U-16.4.1-n 6 40GBase-KR-4 + 6 10GBase-KR ports.
- MOD3-SWH-6F8U-16.4.10-n 6 40GBASE-KR4 and 8 10GBASE-KR ports routed to the VPX backplane, along with
- Ethernet management port and serial console ports.
- MOD3-SWH-32U 32 10Base-KR ports
- SOSA MOD3-SWH-6F1U7U-16.4 (6F1U7U) – Single Domain
- SOSA MOD3-SWH-6F8U-16.4.16 (6F8U) – Ethernet Only and Single Domain
- Front panel for air cooled models, 10/100 Management Port and Out-of-Band Serial Console
- Rear 10/100/1000BASE-T in-band port option
- Air cooled front panel 2x 10G capable SFP+ cages (converts 2x rear-IO ports to 1000BASE operation only)
- Option for LVCMOS management interface with SOSA variants

Form Factor

- 3U OpenVPX

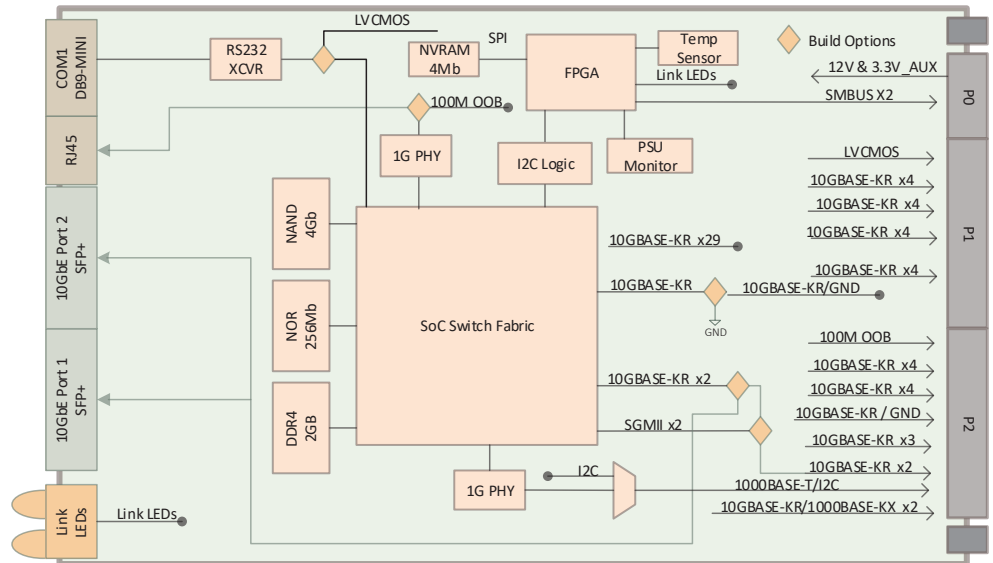
Power Requirements (Typical)

- Estimated power is 30 - 40 watts depending on configuration

MTBF

- 1,188,917 hours for Ground Benign, 30°C environment

Block diagram



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Abaco Systems is a business unit of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices with 2021 sales of more than \$5.5 billion.