NETernity SWE440A

Fully Managed 3U VPX 10/40GigE Ethernet Switch

The NETernity™ SWE440A 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 SWE440A, with its configuration options of up to 32 10GigE or 8 40GigE ports (or combination of the two) and OpenWare™ switch management software, is designed to support high performance embedded computing (HPEC) applications.

The switch is conduction-cooled, providing multiple OpenVPX configurations supporting a mix of dataplane and control plane ports. The SWE440A supports multiple Ethernet rear I/O connectivity options including 10GBase-KR, 10GBase-KX4, 40GBase-KR4 and 1000Base-KX.

The SWE440A 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 SWE440A 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 SWE440A 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 particular 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 SWE440A provides a migration path for current 3U switches allowing customers to adopt new, industry-leading network speeds.

FEATURES:

- 3U VPX form factor
- VITA 65 OpenVPX compliant
- OpenVPX profiles:
  - MOD3-SWH-6F8U-16.4.10-n
  - MOD3-SWH-6F6U-16.4.1-n
  - MOD3-SWH-32U
  - Other profiles are supported - on request
- 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 4 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
- Support for Jumbo Frames up to 9KB
- Support for IGMP Snooping Querier and MLD Snooping

abaco
SYSTEMS

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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)

Block diagram
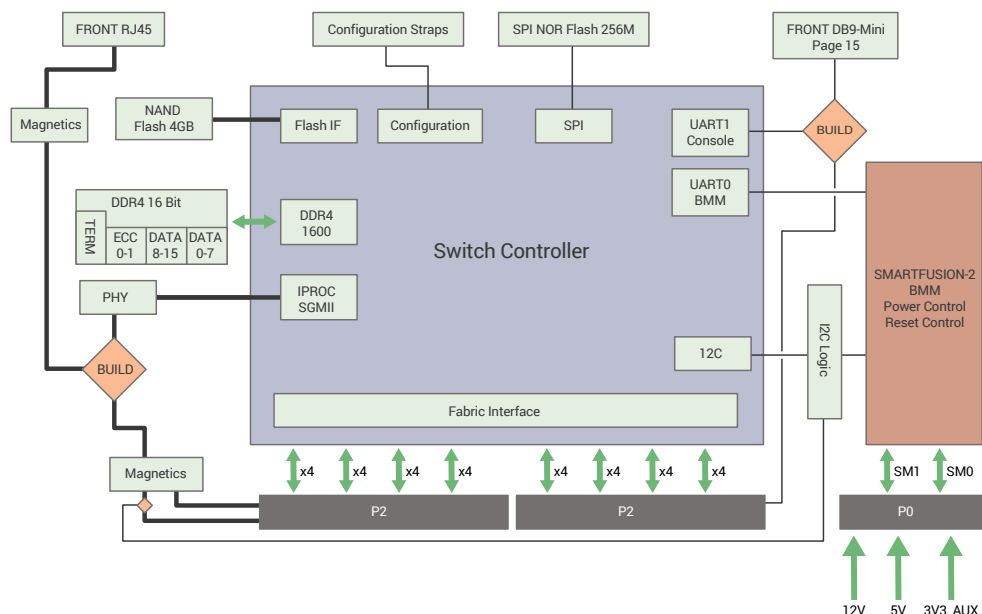
Specifications

Physical Interface

- 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
- Front panel for air cooled models, 10/100 Management Port and Out-of-Band Serial Console

Form Factor

- 3U OpenVPX

Power Requirements (Typical)

- Estimated power is 30 - 40 watts depending on configuration

MTBF

- 994,218 hours per Ground Benign, 30 degress celsius

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