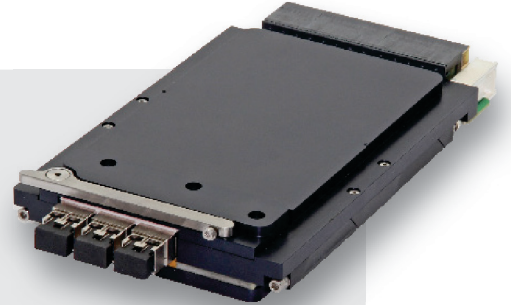


ComEth4591a

3U VPX Dual-Plane 40G Ethernet Switch for hybrid copper-optical backplanes

- 3U VPX
- Managed Layer 2+/ 3 switch
- Switching for 2 separate and independent domains
- Slot profile SLT3-SWH-4F1U7U1J-14.8.7-n
- Up to 38 * 1/10/40 GbE on VITA 46 & 66.5 connectors
- Developed in alignment with the SOSA™ Technical Standard



Overview

The **ComEth4591a** is a high performance ruggedized dual plane 3U VPX Layer 2/3 Ethernet switch developed in alignment with the SOSA™ (Sensor Open Systems Architecture) Technical Standard.

Description

It integrates two sets of independent layer 2 (Ethernet) and layer 3 switches & control processors to support physically separated Control and Data Planes for highly secured 3U VPX systems.

The **ComEth4591a** supports the new VITA 66.5 style C optical VPX connector through a *LightCONEX™* 12-lane optical transceiver module.

Together with its two Ethernet packet processors, its two dual-core ARM processors, and its comprehensive Software Management stack, the **ComEth4591a** offers a cutting-edge solution for 1G, 10G and 40G Ethernet switching needs.

The **ComEth4591a** is available as a conduction-cooled type 1 plug-in unit compliant with the VITA 48.2 standard (version without front panel optical ports).

It includes a secondary side cover and supports 2 Level Maintenance (2LM) environments.

Ethernet interfaces

10G/40G Data Plane Switch:

- 4 * Fat Pipe ports capable of 40GBASE-KR4/10GBASE-KX4 operation [VPX backplane P1a/P1b]
(each Fat Pipe can also be split into 4 * 10GBASE KR/1000BASE-KX ports)
- 8 * optical lanes through VITA 66.5 style C connector supporting 10GBASE-SR or 1000BASE-SX
(they can be grouped to support 2 * 40GBASE-SR4 ports)
- 2 * 10GBASE-SR or 1000BASE-SX on front panel (optional)

10G Control Plane Switch:

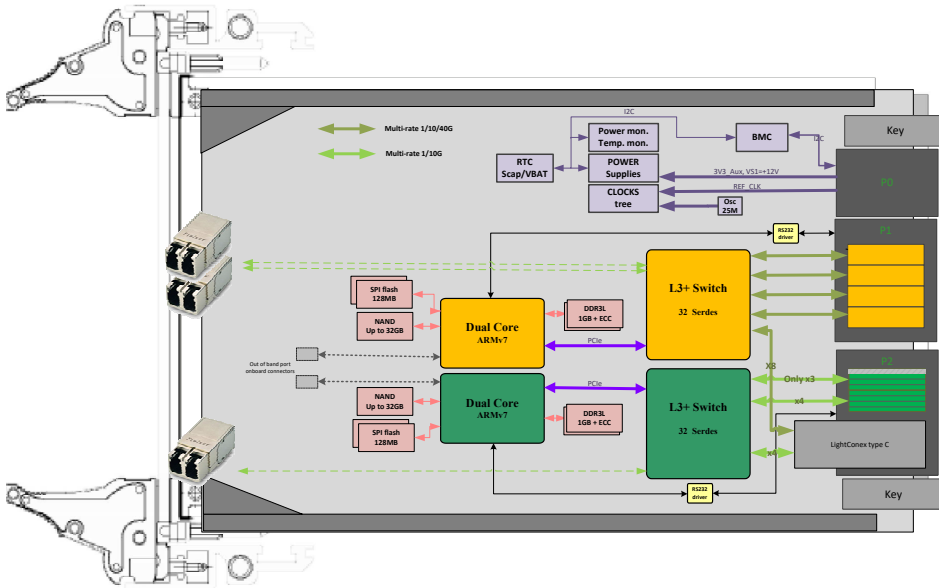
- 7 * Ultra-Thin Pipe ports capable of 10GBASE-KR/1000BASE-KX operation [VPX backplane P2a]
- 4 * optical lanes through VITA 66.5 C connector supporting 10GBASE-SR or 1000BASE-SX
(they can be grouped to support 1 * 40GBASE-SR4 port)
- 1 * 10GBASE-SR or 1000BASE-SX on front panel (optional)

The **ComEth4591a** is available in conduction-cooled version.

ComEth4591a

3U VPX Dual-Plane Ethernet Switch for hybrid copper-optical backplanes

Block Diagram



The **ComEth4591a** is compliant with VITA 65.0 Slot Profile SLT3-SWH-4F1U7U1J-14.8.7-n

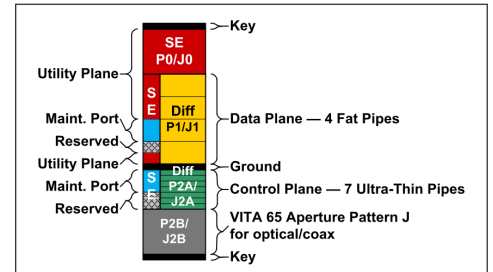


Figure 14.8.7-1 SLT3-SWH-4F1U7U1J-14.8.7-n

Main features

- Speed, duplex, auto-negotiation, flow control and power management on all ports
- VLAN support / 802.1Q tagging
- Port mirroring
- Port rights management
- Static MAC address list
- Static IPM address list
- Port static authentication
- IEEE 802.1X authentication
- Ingress filtering
- Storm prevention
- QoS on all ports
- Ingress / egress access lists
- Rate limiting
- QoS remarking
- Static trunking / LACP
- STP / RSTP
- IGMP snooping (v1, v2, v3)
- MLD snooping (v1, v2)
- Login/password, key or certificate authentication
- Switch management by HTTP, TELNET, FTP or SNMPv1/v2c
- Secure switch management by HTTPS, SSH or SNMPv3
- 802.1X port-based authentication
- Layer 2 802.1p User Priority tagging
- Layer 3 IP DSCP (Diffsev)
- Access Control Lists (L2, L3, L4)
- ICMP
- Proxy-ARP
- DHCP-relay
- NAT
- IPv4 & IPv6 routing (unicast/multicast)
- Static IP routing (unicast and multicast)
- RIPv1, RIPv2 (IPv4)
- RIPng (IPv6)
- OSPFv2 (IPv4) / OSPFv3 (IPv6)
- PIM-SSM (IPv4)
- PBIT results
- Temperature information
- CPU load
- Global and detailed ports statistics
- VLANs statistics
- Bridge egress, ingress and RMON statistics
- Ingress and egress access lists statistics
- Rate limiting statistics
- Queues and ingress buffers statistics
- MAC address table access
- IPM address table access

Switch management

Switchware is a comprehensive switch management stack running on Interface Concept's Ethernet switch product line. It is running on the **ComEth4591a** on-board processor and supports a rich set of Layer 2/3 features controlled through the following interfaces:

- Graphical User Interface (GUI)
- Command Line Interface (CLI)
- SNMP (v2C or v3)

The **ComEth4591a** also supports VPX System Management in compliance with VITA 46.11 and based on the Intelligent Platform Management Interface (IPMI v1.5) for sensor management (temperature, voltage, current), inventory management, system configuration, recovery and diagnostic management.

Grades

Criterion	Coating	Operation Temperature	Rec. Airflow	Oper. HR% no cond.	Storage Temperature	Sinusoidal Vibration	Random Vibration	Shock 1/2 Sin. 11ms
Conduction Cooled 85°C	Yes	-40 to 85°C at the thermal interface(*)		5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.1g2 /Hz [10..2000]Hz	40G

(*) Temperature grades are subject to availability according to IC products. Please consult us.

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