

ComEth4080a

3U VPX Gigabit Ethernet Switch

- 3U VPX
- Managed Layer 2+/ 3 switch
- VITA 65.0 Slot Profile SLT3-SWH-8U12T-14.4.10
- up to 21 ports
- 10/100/1000BASE-T / 1000BASE-SX (front)
- 10/100/1000BASE-T & 1000BASE-KX (rear)



Overview

The **ComEth4080a** provides up to 21 Giga ports and covers a lack of the current OpenVPX release by offering a mix of 1000BASE-T (12/TP: thin pipes) and 1000BASE-KX (8/UTP: ultra-thin pipes) ports on the backplane.

Description

In an embedded system, the **ComEth4080a** meets the 1000-KX CPUs interconnexion requirement via the backplane, but also allows to connect legacy boards, external sensors or systems via 1000BASE-T interfaces.

Like the other products of the ComEth40xx family, this switch supports full-wire speed L2 bridging and L3 routing with L2-L4 advanced traffic classification, filtering and prioritization with an optimized power consumption.

It is fully upward compatible with the Switchware of our ComEth40xx range ; it thus benefits from all the latest developments including : IPv6 support (management and unicast routing), RIPng, OSPF v3, VRRP, additional security features (HTTP/SSH client authentications), configurable memory allocation, new status counters.

Moreover, the **ComEth4080a** implements optimized PBITs and power-up sequence to ensure a boot-time of less than 10 seconds.

Ethernet interfaces

- 8 * 1000BASE-BX ports on P1 (UTP)
 - 12 * 1000BASE-T ports on P1/P2 (TP)
 - 1 * front (*) auto media detect Ethernet port: 10/100/1000 BASE-T copper Ethernet (RJ45), or 1000 BASE-SX (or LX) optical Ethernet (LC)
- (*) : air-cooled version

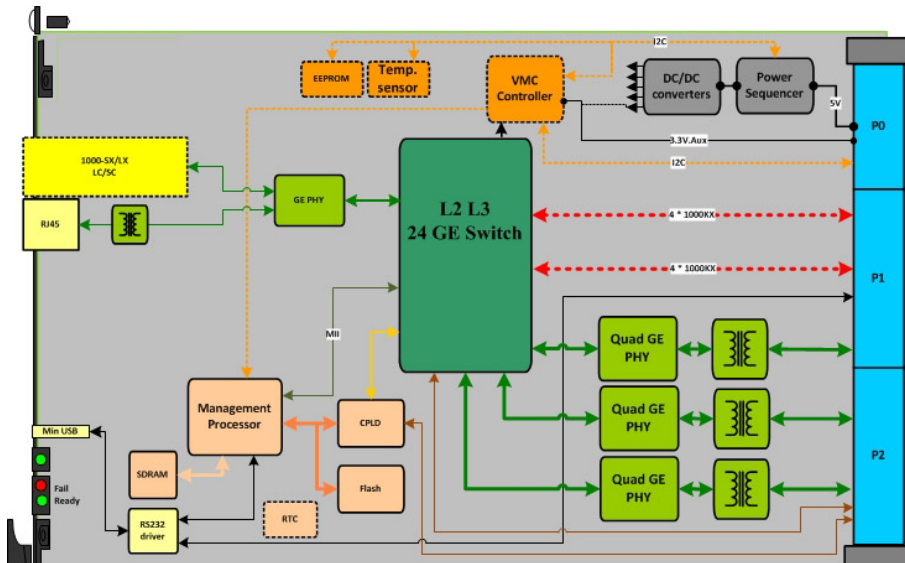
Miscellaneous

- 1 * RS232 port, front mini-USB or on P1 connector
- Status Led indicators (front)
- μ -controller for System Management (per VITA 46.11)

The **ComEth4080a** is a 3U VPX board compliant with 3U module definitions of the VITA 46.0 standard.

It is available in air-cooled (1") and conduction cooled (0.8") versions compliant with VITA 47 classes.

Block Diagram



The **ComEth4080a** is compliant with VITA 65.0 SLT3-SWH-8U12T-14.4.10 slot profile.

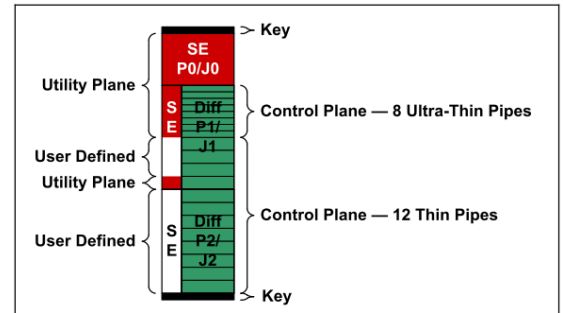


Figure 14.4.10-1 SLT3-SWH-8U12T-14.4.10

Main features

Layer 1/2

- 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/MLD snooping

Security Management

- Login/password, key or certificate authentication
- Secure switch management by HTTPS, SSH or SNMPv3
- 802.1X port-based authentication

QoS

- Layer 2 802.1p User Priority tagging
- Layer 3 IP DSCP (Diffsev)
- Access Control Lists (L2, L3, L4)

Multicast

- IGMP snooping (v1, v2, v3)
- MLD snooping (v1, v2)

Layer 3

- ICMP
- Proxy-ARP
- DHCP-relay
- NAT
- IPv4 routing (unicast/multicast)
- Static IP routing (unicast and multicast)
- RIPv1, RIPv2 (IPv4)
- RIPv6 (IPv6)
- OSPFv2 (IPv4) / OSPFv3 (IPv6)

Others

- PBIT results
- Temperature information
- CPU load
- Switch state
- 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 counters
- IGMP snooping state by
- VLAN and by port
- MAC address table access
- IPM address table access
- STP/RTSP state

Switch management

Switchware is a comprehensive switch management stack running on Interface Concept's Ethernet switch product line. It is running on the **ComEth4080a** 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)

Real Transition Modules

Two rear transition modules have been designed for the **ComEth4080a**.

The **RTM14_01_Tool** features:

- 4 * 10/100/1000BT from P1 [TP01 to TP04]
- 6 * 10/100/1000BT from P2 [TP05 to TP10]
- 1.0" pitch wide according to VITA 46.0
- Available in air-cooled version
- 4TE RTM (2-slot width)



The **RTM14_02_Tool** features:

- 8 * SFP cages - P1 (DP01 to DP08)
- 2 * 10/100/1000BT from P2 [TP11 and TP12]
- 1.0" pitch wide according to VITA 46.0
- Available in air-cooled version
- 4TE RTM (2-slot width)



Grades

Criterion	Coating	Operation Temperature	Rec. Airflow	Oper. HR% no cond.	Storage Temperature	Sinusoidal Vibration	Random Vibration	Shock 1/2 Sin. 11ms
Standard	Optional	0 to 55°C	1 .. 2 m/s	5 to 90%	-45 to 85°C	2G [20..2000]Hz	0.002g2 /Hz [10..2000]Hz	20G
Extended	Yes	-20 to 65°C	2 .. 3 m/s	5 to 95%	-45 to 85°C	2G [20..2000]Hz	0.002g2 /Hz [10..2000]Hz	20G
Rugged	Yes	-40 to 71°C or 85°C (+)	2 .. 5 m/s	5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.05g2 /Hz [10..2000]Hz	40G
Conduction Cooled 71°C	Yes	-40 to 71°C at the thermal interface(+)		5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.1g2 /Hz [10..2000]Hz	40G
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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