

3U OpenVPX Fabric Switch

PCI Express Data Plane & Ethernet Control Plane

4410a

Ethernet features

Layer2 Switching capabilities
(16K entries forwarding database, Automatic or controlled learning and aging routing table, Port and MAC access control, Flow control and backpressure, 10 KB Jumbo Frame, IGMPv3 & MLDv2 snooping, Rapid Reconfiguration 802.1w...)

Link aggregation static or LACP

Bandwidth management
(rate limiting, minimal bandwidth guarantee...)

VLANs services
(4K active VLANs, Flexible VLAN assignment 802.1Q port-based, protocol based 802.1v, service VLANs 802.1ad, Policy-based VLANs...)

Quality of Service engine
(8 priority queues per port, Flexible bandwidth management with hierarchical shaping...)

Unicast and Multicast routing engine (RIPV2, OSPF V2 Routing, proxy-ARP, DHCP relay...)

IPV6 capable

Security features
(802.1X Port authentication, Multicast/Broadcast limiting, STP/RSTP protocol, Virtual cable tester...)

PCI Express features

PCIe Gen1 2.5GT/s or Gen2 5.0GT/s (Link speed configurable, Automatic x4, x2, x1 link width negotiation, two consecutive x4 ports can be merged to form a x8 port, automatic lane reversal, automatic differential pair polarity inversion...)

Ports configuration :

- Upstream, Downstream, Disabled or Unattached modes
- Non-transparent bridging

Switch Advanced Features
(switch Partitioning, DMA controllers*, Multicast*, Failover*, Flow control...)

* require additional drivers



Description

Through the **ComEth 4410a**, Interface Concept provides the OpenVPX hybrid switch market with all its experience regarding managed Ethernet switches.

Built on the same architecture as the **ComEth 40xx** family, for the **control plan**, the Ethernet switch supports full-wire speed L2 bridging and L3 routing with L2-L4 advanced traffic classification, filtering and prioritization. The **ComEth 4410a** is managed by our tried and tested Switchware, regularly enriched with new functionalities.

For the **data plan**, the **ComEth 4410a** implements a modular PCI Express Gen2 switch, delivering up to 32GBps of switching capacity and ensuring very low latency thanks to its cut-through architecture. This switch supports multiple simultaneous peer-to-peer traffic flows in high demanding applications.



Each port can be configured as the upstream switch port ; Non-Transparent bridging (NTB mode) feature allows to support multiple NT endpoints (for external PCIe domains or CPUs). Moreover, it is possible to split the switch in independant partitions.

Incorporating a micro-controller dedicated to the **management plan** (VITA 46.11), the **ComEth 4410a** represents the most modular and powerful OpenVPX 3U fabric switch solution.

Data Plane : PCI Express interfaces

- 6 * 4-lanes PCIe ports on P1/P2 

Control Plane : Ethernet interfaces

- 6 (or 8) * 1000BASE-BX ports on P2 (8 ports => MOD3-SWH-6F8U version) 
- 2 (or 1) * 1000Base-T ports on P2 (1 port => MOD3-SWH-6F8U version) 
- 1 * front auto media detect Ethernet port, 10/100/1000 Base-T Copper Ethernet (RJ45) - 1000 Base-SX (or LX) optical Ethernet (LC)

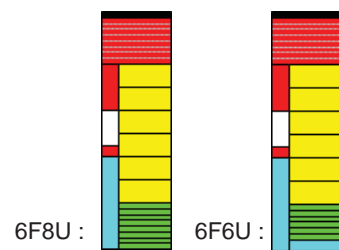
Miscellaneous :

- 1 * RS232 port, front mini-USB or on P1 connector
- Status Led indicators (front and onboard)

The **ComEth 4410a** is a VPX board compliant with 3U module definitions of the VITA 46.0 standard. It is available in air cooled and conduction cooled versions compliant with VITA 47 classes.

The **ComEth 4410a** is compliant with the **OpenVPX** module profiles (VITA 65) :

- MOD3-SWH-6F6U-16.4.1 (-2 & -3)
- MOD3-SWH-6F8U-16.4.10 (-1 & -2)



ComEth 4410a

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Switch Management

The **ComEth 4410a** can be monitored from a browser, a CLI or SNMP, via the console port or any of the Ethernet ports.

The console port is available on the front panel and on P1 connector.

The whole system can be easily managed and handled. A comprehensive Built-In Test makes easier the maintenance of this switch.

Many additional functions are provided on this full-managed version, for both the Ethernet and the PCI Express switches :

Configuration of all the PHY and switch parameters, ports monitoring, static MAC address, QoS policy, Multicast and VLAN control, STP/RSTP protocols, MAC security, Non transparent bridging, partitioning, monitoring of all statistical counters and an extensive list of RMON counters...

This application, named **SWITCHWARE**, is carried out by a PowerPC processor.

Please consult the **Switchware User's Manual** for a comprehensive overview of the product features

Power supply

Estimated Pmax = TBC
VS3, 3V3 Aux, VBat

Standard Conformance

Emissions

EN55022 Class B

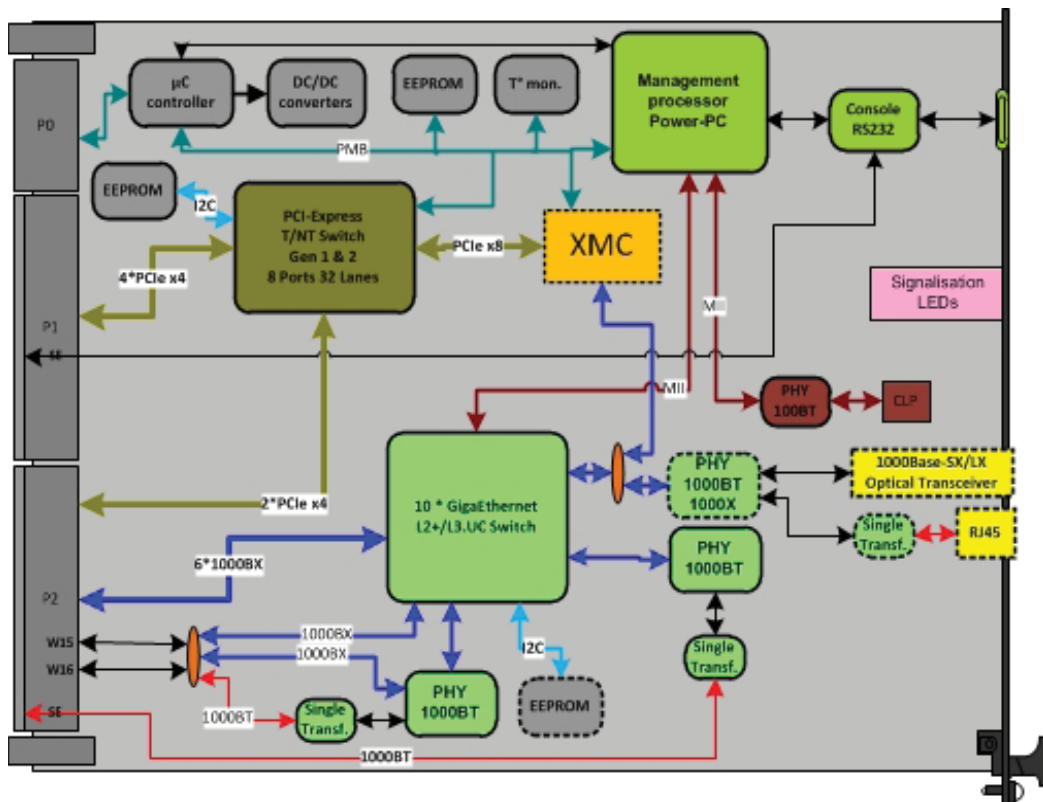
Immunity

CEI 6000-4-2 (ESD), 6000-4-3 (Electric field), 6000-4-4 (Burst), 6000-4-5 (Surge), 6000-4-6.

Security

EN60950

Block diagram :



Environnement Specifications:

For details, please consult the **ComEth4410a** page at www.interfaceconcept.com.

Ordering Information:

Please contact our sales department : tel. +33 (0)2 98 573 030 - email : info@interfaceconcept.com

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