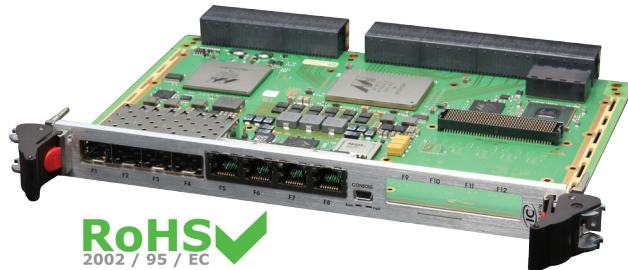# COMETH

Ethernet Control & Data Plane Switch

6U OpenVPX Gigabit & 10/40Gigabit L3+ IP Router

4510a

- 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
- Ring
- IGMP/MLD snooping

- Login/password, key or certificate authentication
- 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)

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

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

- 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
- ...

OpenVPX

RoHS ✓
2002 / 95 / EC

Description

The **ComEth4510a** is a combined Control and Data Plane switch for demanding 6U OpenVPX Ethernet architectures.
The Ethernet packet processor of our well-proven **ComEth 43xxa** range is used for the Control Plane ; the Data Plane is implemented thanks to the Second-Generation Marvell Prestera CX platform, offering leading performance and port density with multiple 40 GbE/10 GbE configurations and full duplex line rate switching capability.

The two Ethernet switches are managed by a Multicore 64-bit PowerPC, offering two optional out-of-band 1000Base-T ports (front and rear) and traffic log recording on NAND Flash.

Control Plane:

- **16 * 1000BASE-BX** ports available on P1 connector. ▬
- **4 * 1000Base-T ports** on the front (RJ45)
- **4** ports available as :
  SFP cages on the front for copper/fiber SFP modules, or
  1000Base-T ports on the rear (P6)

Data Plane:

- **16 * Fat Pipe** ports routed on rear I/O (P2 to P5 connectors), ▬ configurable in **10GBase-KX4 (XAUI)** mode

  note: those lanes can also be configured to provide **16 * 40Gbase-KR4, 48 * 10GBase-KR, 48 * 1000Base-KX** ports or mixed configurations (consult us for details)

  Option: custom Mezzanines offer
  - **2 * 10GBase-T (RJ45)** ports available on the front and **2 * 10GBase-KX4 (XAUI)** ports available on P6 connector (Control Plane), or
  - **4 * 10GBase-T (RJ45)** ports available on the front (Data Plane) (consult us for details)

The **ComEth4510a** also implements a micro-controller dedicated to the *management plan* (VITA 46.11).
The **ComEth4510a** is compliant with the 6U module definitions of the VITA 48.1.
It is available in air-cooled (1") and conduction cooled (0.8" / without front IO) versions. (Please consult us for other configurations)

The **ComEth 4510a** is compliant with the *OpenVPX* slot profile (VITA 65):

MOD6-SWH-16U16F-12.4.5-4

} User defined

IC INTERFACE CONCEPT
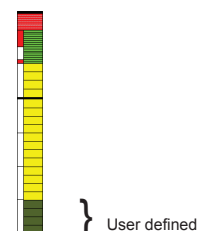
ComEth4510a

Switch Management

The **ComEth 4510a** can be monitored via:
 CLI: CONSOLE (RS323) ou any of the Ethernet ports (TELNET or SSH),
 WEB: any of the Ethernet ports (HTTP or HTTPS),
 MIB browser or SNMP agent: any of the Ethernet ports (SNMPv2c or SNMPv3).

The Switchware and configuration files can be updated by FTP (or SFTP) and it is always possible to restore the previous release or the default factory configuration.

Many additional functions are provided on this full-managed version : Configuration of all the PHY and switch parameters, ports monitoring, static MAC address, QoS policy, Multicast and VLAN control, STP/RSTP protocols, MAC security, monitoring of all statistical counters and an extensive list of RMON counters...

The management application, named **SWITCHWARE**, is carried out by the processor of the **ComEth 4510a**.
Please consult the **Switchware User's Manual** for a comprehensive overview of all the product features.

Block diagram :
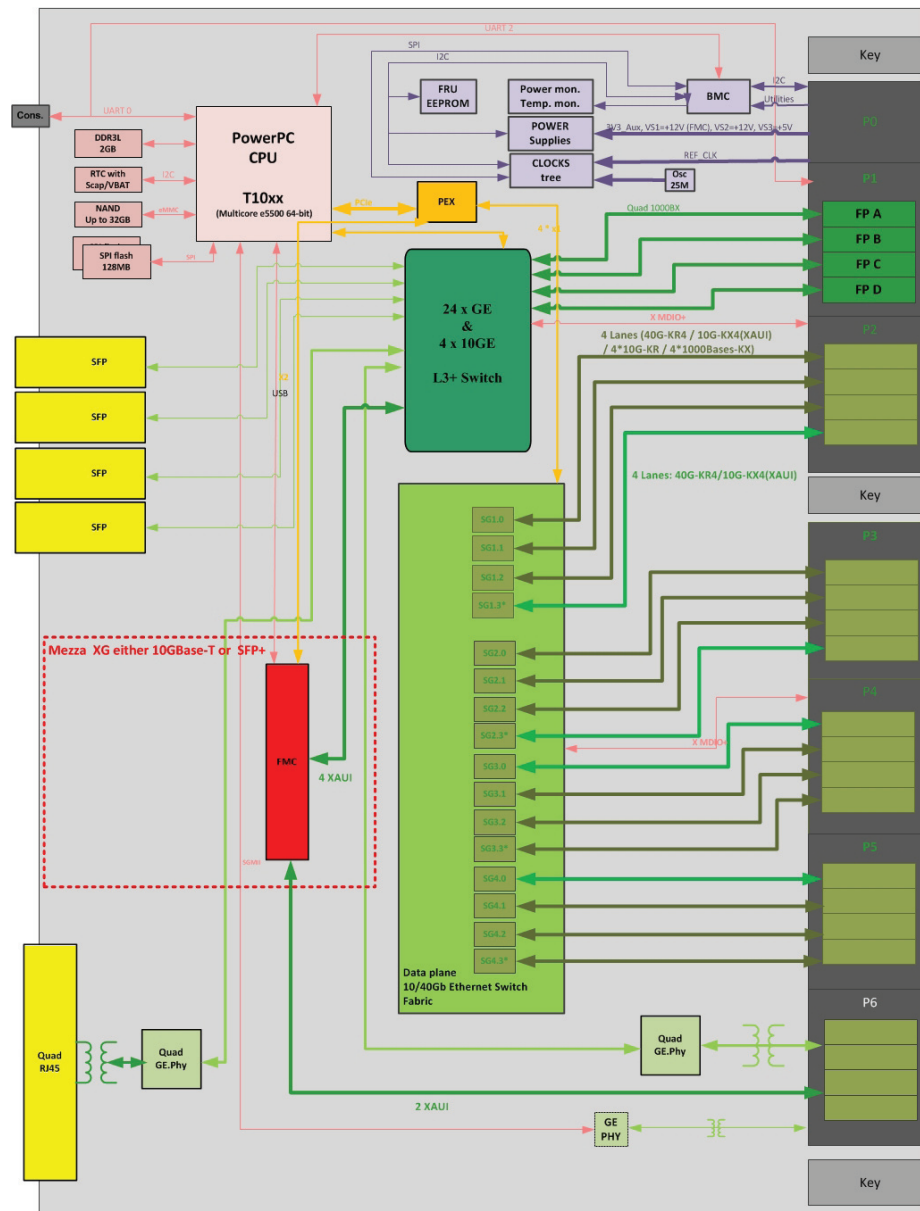
Environmental Specifications:

Please consult the **ComEth4510a** page at **www.interfaceconcept.com**.

Ordering Information:

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

This document supersedes any earlier documentation relating to the products referred to herein. The information contained in this document is current at the date of publication. It may subsequently be updated or withdrawn without notice.

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