

Ethernet Control & Data Plane Switch

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

4510a

- Speed, duplex, auto-negotia-tion, 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 and marcos
 counters
 IGMP snooping state by
 VLAN and by port
 MAC address table access
 IPM address table access
 STP/RTSP state



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



ComEth4510a

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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),

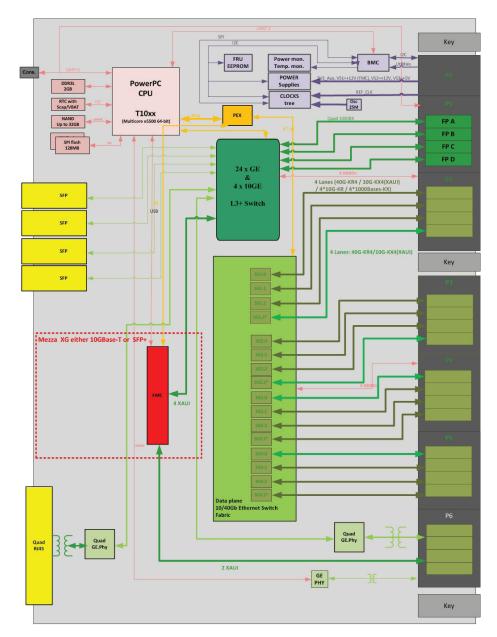
MIB browser or SNMP agent: any of the Ethernet ports (SNMPv2c or SNMPv3).

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

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