



## L2 & L3 Versatile GigaEthernet Switch VME or CompactPCI

### 4030a

12 or 24 Giga Ethernet ports with a full-wire speed switching.

**Layer2 Switching capabilities :**

- 16K entry forwarding database
- Automatic or controlled learning and aging routing table
- Full-line rate switching engine
- Port and MAC access control
- Flow control and backpressure
- 9 KB Jumbo Frame
- IPV4 IGMP snooping

**Link aggregation static or LACP**

**Bandwidth management :**

- Multicast & broadcast limiting
- Egress rate shaping with rate ranging port from 64K to 1Gbs
- Minimal bandwidth guarantee per traffic Class
- L2..4 Access List

**VLANs services :**

- 4K active VLANs
- 1K Bridge multicast groups
- 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
- Traffic Class assignment according to 802-1p tag, MAC address, Port, DiffServ CP or Policy engine

**L3 IPV4 routing :**

- 1K UC ARP entries
- RIPV2, OSPF V2
- Proxy-ARP, DHCP relay
- IGMP Querier

**Advanced Security features :**

- 802.1X Port authentication
- MAC flooding prevention
- Multicast/Broadcast limiting
- STP/RSTP protocol

**Flexible management tools :**

- Web or CLI management
- Standard & private MIBs
- Enhanced port mirroring
- Easy software updating



### Description

ComEth4030a is built on the latest generation of Gigabit switch engine and PHY transceivers. It combines in a single equipment a layer 2+ switch and a full layer 3 router with an optimized power consumption. Thanks to its cages for Small Form Pluggable Transceiver, this switch provides the flexibility required by the current networks.

ComEth4030a supports full-wire speed L2 bridging and L3 routing with L2-L4 advanced traffic classification, filtering and prioritization. It can forward up to 37 Mpps. The eight levels of queue priority combined with QoS policy and the Access List management makes easier the network bandwidth tuning in critical applications.

Its high level of integration allows the Cometh4030a to offer a twelve front pluggable Giga Ethernet transceivers version in only one 4TE slot. According to the model, the twelve other channels are usable on a mezzanine card or on the P0/J3 backplane connector. Standard or specific extensions provide up to 12 additional Giga ports with fiber or 10/100/1000BT transceivers, thus configuration with optical 1000SX/LX, even 100FX, and 10/100/1000BT ports can be used in mixed networks.

The base board can be equipped with only 8 SFP cages. Thereby, a mezzanine card will provide the additional specific ports, as two 100FX with SC connector, in a single slot.

The optical interfaces provide a full immunity against radiated or conducted interferences. Fiber lines can be routed regardless of high power conductors. These interfaces comply easily with EMC directives and provide a completed electrical isolation. The ComEth4030a optical channels are the current best solution to secure critical data transfer.

The switch functions are fully compatible with ComEth4000a, 4020a, 4050a, 4070a range.

### Management Capabilities

The ComEth4030a can be monitored from a browser, a remote application via UDP or SNMP. The whole system can be easily managed and handled. A comprehensive Built-in test makes the maintenance of this switch easier. 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 protocols, MAC security
- Monitoring of all statistical counters and an extensive list of RMON counters
- Advanced Security (secure access, network shield, MAC flooding control, etc)

The Switchware software provides layer 3 functions, allowing local IP forwarding, static and dynamic protocols (RIP, OSPF) routing, proxy-ARP and DHCP-relay. These L3 functions are managed through a CLI interface. The IP routing and the L3 protocols are carried out by the processor and the forwarding by a full-speed L3 engine router. More information about the switches services are shown in the Switchware user's manual.

### Flexible configurations

Its 6U form factor allows the ComEth4030a to be integrated in VME, cPCI or stand-alone applications. ComEth4030a is available from standard to rugged grades.



# COMETH 4030a

## L2 & L3 Fiber GigaEthernet Switch—VME or CompactPCI

### Main features

#### Physical layer

- ▶ 11000SX transceivers :
  - LC-duplex connectors : 850nm source
  - maximum link lengths : 275m for 62.5/125µm MM fiber 550m for 50/125µm MM fiber.
- ▶ 1000LX transceivers :
  - LC-duplex connectors : 1300nm source
  - maximum link lengths : 550m for 62.5/125µm or 550m for 50/125µm MM fiber. 10 Km for 8/125µm SM fiber (20 or 40 Km in option)
  - WDM using only one fiber is also available
- ▶ 10/100/1000BT transceiver
  - Auto-sensing triple speed copper ports with :
    - Auto-Negotiation with Downshift
    - Automatic MDI/MDIX crossover for all 3 speeds
    - Automatic polarity correction.
- ▶ 8TE Mezzanine extension :
  - v1 : 12 other SFP cage
  - V2 : 12 \* 10/100/1000BT channels
  - V3 : 12 \* 1000SX or LX with LC connectors
  - Vx : Custom version
- ▶ 4TE Mezzanine extension :
  - v1 : 4 \* 10/100/1000BT
  - V2 : 2 \* 1000SX SC connectors (1X9)
  - V3 : 2 \* 100FX SC connectors (1X9)
  - Usable only with the 8 SFP board version

#### VME

3.3VDC or 5 VDC Power Supply.

#### CompactPCI

3.3VDC Power Supply.

#### Power supply

Pest = 18W (12 \* 1000SX one slot board)

#### Switch Management

Onboard firmware are implemented with comprehensive Built-In Test (loop back mode used during the diagnostic), maintenance functions and network (BootP) updating functions.

Management software named **SWITCHWARE**, is carried out by a PowerPC processor.

### Standard Conformance

#### Laser AEL Class I

per US 21 CFR(J) and IEC60825-1

#### Emissions

EN55022 Class A

#### Immunity

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

#### Security

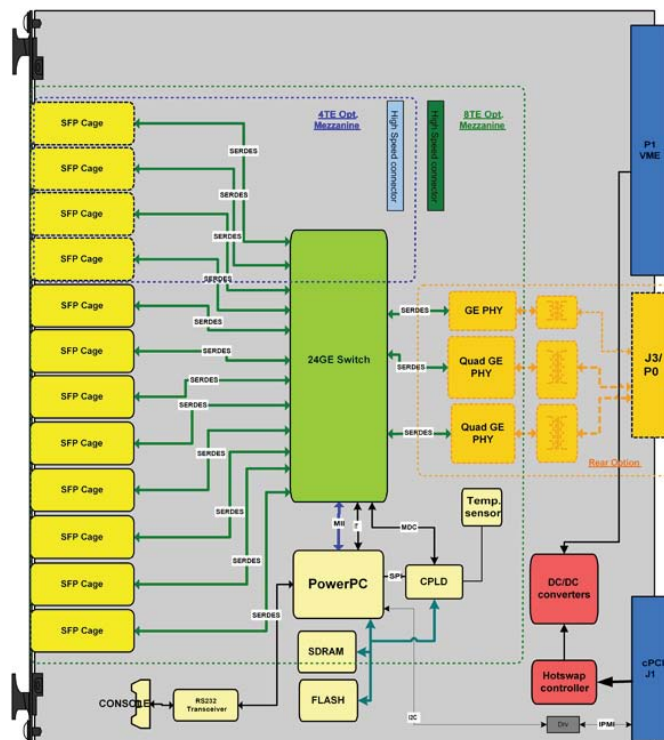
EN60950

#### MTBF

TBD

#### Environment

See ordering grade Information.



### Environment Specifications:

Please refer to information below.

### Ordering Information:

Please consult the **ComEth 4030a datasheet** at [www.interfaceconcept.com](http://www.interfaceconcept.com) (listing all products reference and environment grades availability).

*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.*

