

# ComEth 4050e

## 6U cPCI 1/10/40 Gigabit Ethernet Switch

- *Managed Layer 2+/3*
- *Up to 32 ports*
- *SFP+ (front)*
- *10/100/1000Base-T (rear)*
- *PICMG 2.16 & VITA 31.1*



## Description

The **ComEth4050e** is a cutting-edge 6U cPCI Layer 2/3 Gigabit Ethernet switch, PICMG 2.16 and VITA 31.1 compliant.

It is powered by a state-of-the-art highly integrated Marvell system-on-a-chip (SoC) with programmable packet processors supporting a maximum bandwidth of 320 Gbps and a forwarding rate of 240 Mpps. The ComEth40x0e line not only offers complete backward compatibility with the previous product generation, but also provides a large number of 10/40 Giga Ethernet ports, making these products unique compared to other cPCI and VME Ethernet switch products.

The ComEth40x0e matrix coupled with an independent management processor is controlled by **Switchware**, our field-proven network management application.

In addition to a non-Flash device, a removable Flash disk allows storing switch configuration files and logs, offering flexibility to the user, and allowing sanitization when needed.

### ComEth4050e configurations

The **ComEth4050e** provides up to 32 Ethernet ports:

- 24 rear GbE ports and 8 front SFP+ (1/10Gbs)
- or
- 20 rear GbE ports, 8 front SFP+ (1/10Gbs) and a front interface mezzanine

Mezzanines available for this switch provide:

- 4 front SFP+ (1/10Gbs)
- 4 front 1/2.5/5/10GbE-Base-T
- 1 front QSFP+ (40Gbs)

### Switch Management

Supported by an on-board processor, **Switchware** provides a large number of Ethernet protocols (Layer 1/2/3) and it provides an easy to use Graphical User Interface (GUI).

The **ComEth 4050e** can be monitored via:

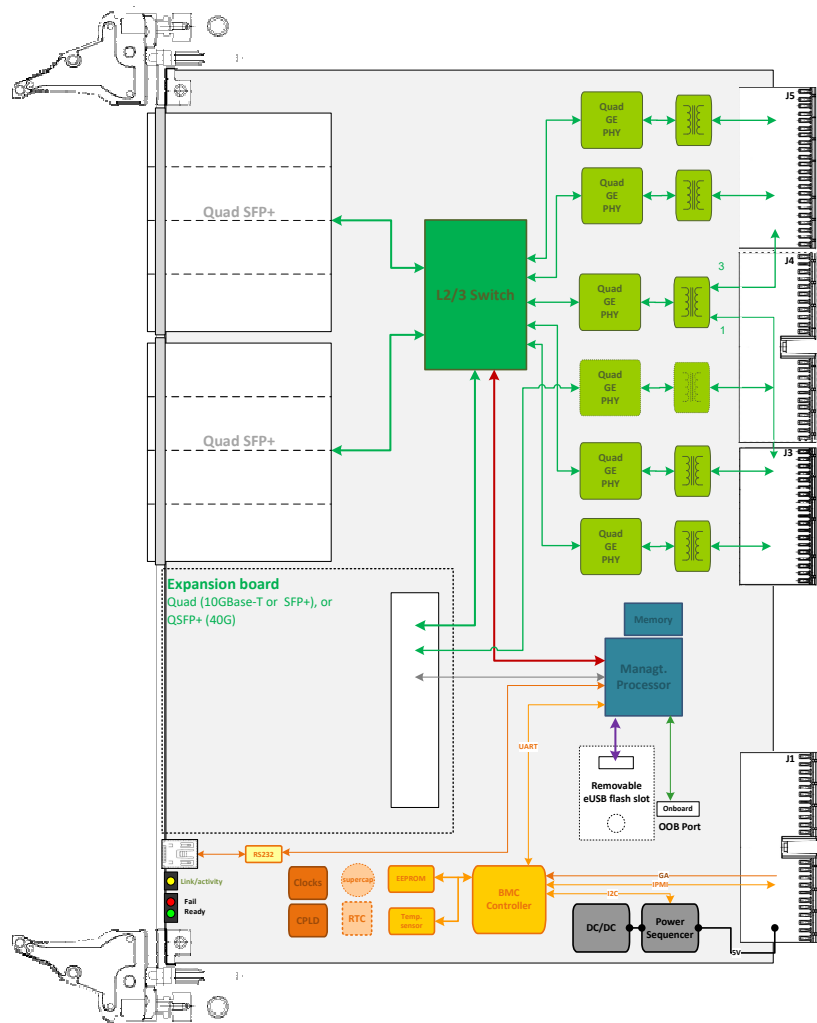
- RS232 serial interface: CLI CONSOLE
- Ethernet ports: TELNET or SSH, HTTP or HTTPS, SNMPv2c or SNMPv3 (including private MIB)

FTP (or SFTP) can be used to:

- update or downgrade the switchware
- upload switchware configuration files
- download up-to-date MIB files.

The **ComEth 4050e** is available in standard, extended, rugged air-cooled and conduction-cooled grades, as per Interface concept environmental grades.

### Block Diagram



### 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)

#### Layer3

- 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)

#### 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

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## 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.

All information contained herein is subject to change without notice.

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