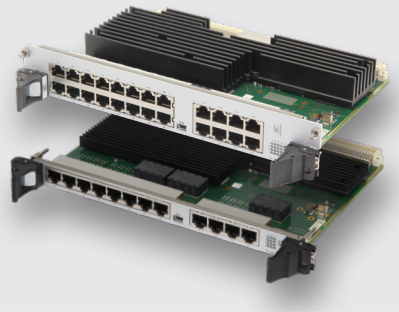
ComEth4000e

6U VME 1/10/40 Gigabit Ethernet Switch

- *6U VME (1 or 2 slots)*
- *Managed Layer 2+/3 switch*
- *Up to 32 ports*
- *1000BASE-T, SFP+, QSFP (front)*
- *1000BASE-T (rear)*



Overview

The **ComEth4000e** is a cutting-edge 6U VME Layer 2/3 Ethernet switch compatible with VME 64x systems.

Description

Powered by a state-of-the-art highly integrated Marvell system-on-chip (SoC) with programmable packet processors, the **ComEth4000e** family not only offers complete backward compatibility with the previous generation of products, but also provides 10/40 Gigabit Ethernet ports via a dedicated mezzanine board, making these products unique compared to other VME Ethernet switch products.

The **ComEth4000e** matrix coupled with an independent management processor is controlled by Switchware, the field-proven Interface Concept network management application.

Switchware supports a wide range of Ethernet protocols and has an easy to use graphical user interface (GUI).

The **ComEth4000e** can be offered with a removable Flash disk option to store the switch configuration files and logs, providing flexibility to the user and allowing an additional sanitization method.

The **ComEth4000e** is available in standard, extended, rugged air-cooled grades.

Ethernet interfaces

The **ComEth4000e** supports up to 32 Ethernet ports and various configuration options. It is offered in two 6U VME form factors:

Single height form factor: 1 * 6U VME slot

Dual height form factor: 2 * 6U VME slots

Each configuration can also be built with or without a P0 connector.

6U VME single slot configuration:

- on the P0 connector (optional):
  - 8 * 1000BASE-T ports
- on the front panel:
  - 8 * 1000BASE-T ports

And

- either 4 * 1000BASE-T ports
- or 4 * SFP+ (1000/10G) ports (Mezzanine)
- or 1 * QSFP (40G) port (Mezzanine)
- or 4 * 2.5G/5G/10GBASE-T ports (Mezzanine)

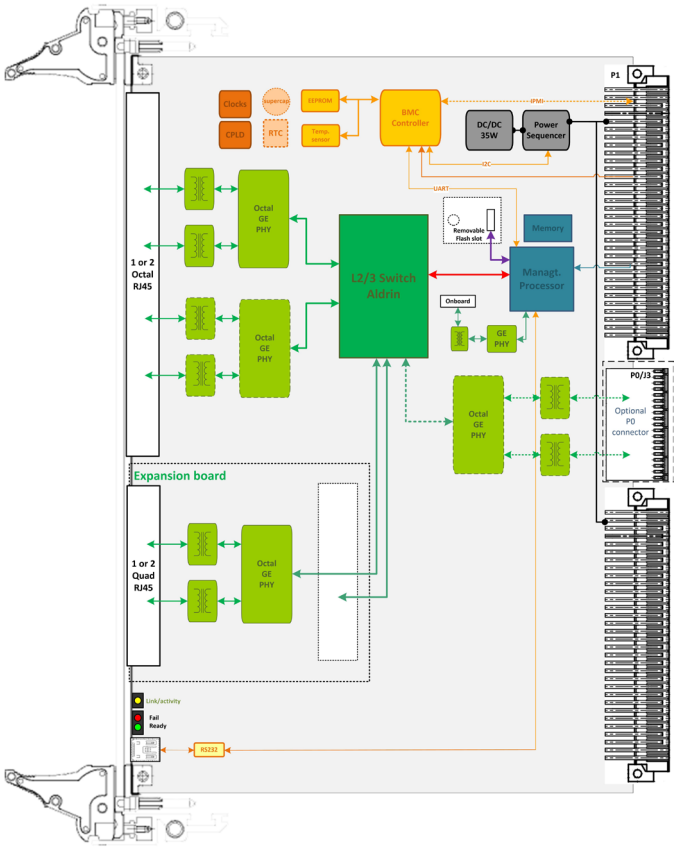
6U VME dual slot configuration:

- on the P0 connector (optional):
  - 8 * 1000BASE-T ports
- on the front panel:
  - 16 * 1000BASE-T ports

And

- either 8 * 1000BASE-T ports
- or 8 * SFP+ ports (Mezzanine)

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
- IEEE 1588 (PTP)

Switch management

Switchware is a comprehensive switch management stack running on Interface Concept's Ethernet switch product line. It is running on the **ComEth4000e** on-board processor and supports a rich set of Layer 2/3 features controlled through the following interfaces:

- Graphical User Interface (GUI)
- Command Line Interface (CLI)
- SNMP (v2c or v3)

The **ComEth4000e** also supports VPX System Management in compliance with VITA 46.11 and based on the Intelligent Platform Management Interface (IPMI v1.5) for sensor management (temperature, voltage, current), inventory management, system configuration, recovery and diagnostic management.

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

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 75°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.

For more information, please contact:

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