

ComEth4682e

3U VPX 1/10/25/40/100 Gigabit Ethernet Switch and IP router

- 3U VPX
- Managed Layer 2+/3 switch
- VITA 65.0 SLT3-SWH-2F24U-14.4.3
- VITA 65.0 SLT3-SWH-6F1U7U-14.4.14 (option)
- Up to 57 ports - 24 optical ports (2 front MPO)
- 1GBASE-T, 1GBASE-KX, 10/25GBASE-KR, 40/100GBASE-KR4 (rear)
- Aligned with the SOSA™ Technical Standard



Overview

The **ComEth4682e** is a 3U VPX Gigabit Ethernet switch, based on a new generation of multi-layer Ethernet matrix for high-speed embedded interconnect applications requiring 10/25G and 40/100G connectivity.

Description

The **ComEth4682e** integrates a Layer 2 (Ethernet) and Layer 3 switch, and a control processor to support virtually separated Control and Data Planes for highly secured 3U VPX systems.

The Ethernet packet processor, managed by the dual-core ARM processor, offers remarkable switching capabilities with 1G, 10G, 25, 40 and 100G Ethernet configurations.

Ethernet interfaces

Rear interfaces

8 Fat Pipes support 40GBASE-KR4 or 100GBASE-KR4 mode on the backplane. Each Fat Pipe can be separated in 4 Ultra-Thin Pipes and support 1GBASE-KX, 10GBASE-KR or 25GBASE-KR mode.

There is one additional 1GBASE-T port.

These multiple configurations allow the **ComEth4682e** to comply with the following slot profiles:

- SLT3-SWH-2F24U-14.4.3
- SLT3-SWH-4F16U-14.4.13
- SLT3-SWH-8F-14.4.2

Other **ComEth4682e** versions support the following profiles, aligned with the SOSA™ Technical Standard:

- SLT3-SWH-6F8U-14.4.15 (32 ports)
- SLT3-SWH-6F1U7U-14.4.14 (31 ports - build option)

Front panel interfaces

24 * optical ports support 1GBASE-SR, 10GBASE-SR or 25GBASE-SR mode on two MPO connectors.

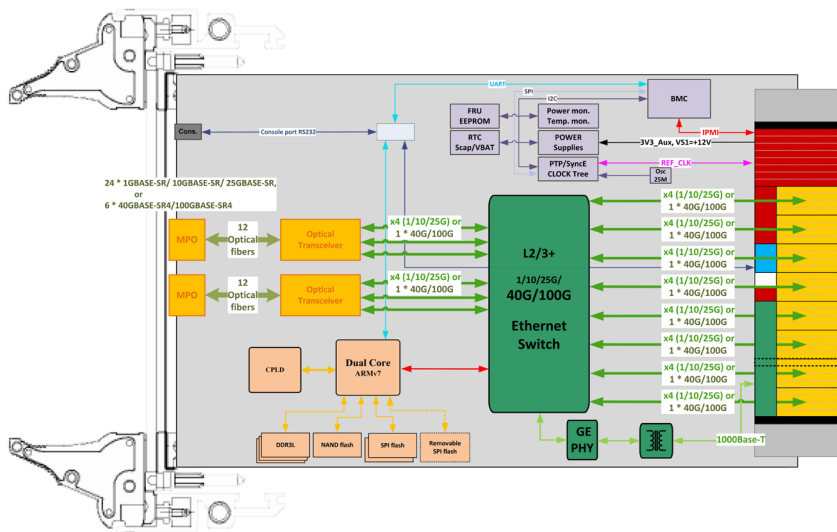
Each set of 4 ports can be merged in 40GBASE-SR4 or 100GBASE-SR4 mode.

The **ComEth4682e** is compliant with VITA 46.0 standard. It is available in air-cooled (1") and conduction-cooled (0.8") versions.

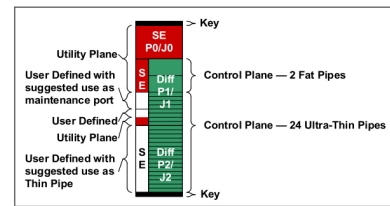
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Block Diagram

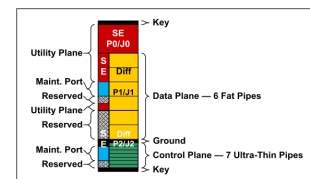


The **ComEth4682e** is compliant with VITA 65.0 SLT3-SWH-2F24U-14.4.3 Slot Profile.



SLT3-SWH-2F24U-14.4.3

The **ComEth4682e** is available (build option) in a version compliant with VITA 65.0 SLT3-SWH-6F1U7U-14.4.14 Slot Profile.



SLT3-SWH-6F1U7U-14.4.14

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)

Layer 3

- 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)

Miscellaneous

- 1 * console port, front mini-USB or on P1 connector
- Status Led indicators (front)
- μ -controller for System Management (as per VITA 46.11)

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
- 1588-PTP-Transparent mode

Switch management

Switchware is a comprehensive switch management stack running on Interface Concept's Ethernet switch product line. It is running on the **ComEth4682a** 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)

IC's Switchware management application provides IPv6 support, RIPng, OSPF v3, VRRP, security features, configurable memory allocation, new status counters.

The **ComEth4682a** also supports VPX System Management in compliance with VITA 46.11 and based on the Intelligent Platform Management Interface for sensor management (temperature, voltage), inventory management, system configuration, recovery and diagnostic management.

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	0.002g ² /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	0.002g ² /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	0.05g ² /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	0.05g ² /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	0.1g ² /Hz [10..2000]Hz	40G

(*) : Temperature grades are subject to availability according to IC products. Please consult us.

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