ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Interface Concept ComEth 4115* at our website: *Click HERE*

PRODUCTS
CUSTOM DESIGN
ABOUT US
CONTACT US
NEWS
JOBS
HOME PAGE

10/100/1000 Ethernet Switch

cPCI - VME - Standalone low-power Giga-Ethernet Switch

[Description]
[Specifications]
[Ordering Info]
[User manual]



6U cPCI model



6U VME model

info doc (197Ko)

Description

ComEth4100 is built on the latest generation of Gigabit switch engine combined with an optional PowerPC processor for the management. The switch core contains a high-speed non blocking four traffic class QoS switch fabric.

ComEth4100 is designed specifically for embedded systems.

Each port is compliant with 802.3 standard. It performs all the physical layer functions for 100BT and 1000BT full or half-duplex Ethernet on CAT5 cable and 10BT full or half-duplex on CAT3,4,5. It supports Auto-MDI/MDIX.

The ComEth4100 provides the ideal solution for multi-gigabit stand-alone switches or high-density switching systems.

Auto-crossover, auto-polarity, auto-negotiation and automatic MAC address management make ComEth 4100 a true Plug&Play layer2 switch.

Configurable version
The unmanaged switch is “factory” configured from an on-board EPROM. However it is lightly manageable. It can be configured by a specific EPROM. As well a software running on a PC allows to configure and to control the ComETh4100. In this case the PC is connected to the switch by its parallel port. Only a part of the functionalities are available in this version of ComEth4100.

Managed version
The ComEth4100 full-managed version can be operated from a browser, PC Visual application, local console or optionally SNMP. The entire system can be easily managed and monitored. Many complementary functions are provided by this version : all the PHY and switch parameters configuration, monitoring of all statistical counters, ports monitoring, static MAC address, Multicast and VLAN control, STP/RSTP protocols, MAC based authentication for layer-2 security, extensive list of RMON counters for management in particular for SNMP.

Flexible configurations
Variants from 8 to 10 ports are available for standard or rugged environments. 6U form factor allows the integration in VME, cPCI or stand-alone applications. Depending on the models, connections are available on the front or rear side.

ComEth 4100

Provides up to 10 Ethernet ports compliant with 10/100/1000BT. One channel can be used with an optical fiber SX or LX

9 * 1000BT Conduction Cooled Version

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Main layer2 bridging capabilities :

- *Non-blocking switch with full-wire speed performance*
- *4K MAC addresses*
- *Automatic learning and ageing*
- *802.1 Q support for 4K VLANs or port based VLAN,*

Flow Control : backpressure on half-duplex port and Pause-frame on full duplex port

QoS with four traffic classes :

- *determined by port, IEEE802.1p tagged frames, IPV4's TOS & Differentiated services, IPV6's traffic class, IEEE802.1Q VID, Destination MAC or Source MAC address*
- *Fixed priority & programmable weighted fair queuing*

MAC authentication compliant with IEEE802.1X

Plug and Play switch :
No configuration required for basic switching.

Provides flexible management tools :

- *User controllable Built-in test*
- *SNMP, HTTP management and Telnet*
- *Full MIB and RMON counters*
- *Port mirroring*
- *STP/RSTP for more reliable network communications*

LED and Thermal sensor for easy network monitoring

6U-Form Factor for VME, cPCI or stand-alone integration

Board specifications

Main Features

Physical layer

8 / 9/ 10 auto-sensing 10/100/1000Mbs ports
RJ45 connectors for front panel version or
J3/P0 connector for rear I/O version
One optional 1000Base-FX channel (SX or LX)
On-Line Virtual cable tester for Cable diagnostic
Compliant with IEEE802.3, IEEE802.3u & IEEE802.3x

Layer 2 MAC

4000 MAC unicast address with automatic ageing, self-learning mechanism, Tag extraction and insertion (802.1p),
Full-wire speed performance
Back pressure for half-duplex, IEEE802.3x for full duplex
Auto-MDI/MDIX crossover and polarity correction
Port mirroring

VLAN

Full 802.1Q VLAN compliant or Port based VLAN

Security

802.1X MAC authentication

QoS

Four queues per port for traffic classes
QoS determined by port, 802.1P tagged frame, Diffserv, ToS IPV4 & IPV6 support, DA or SA MAC address
Fixed priority or weighed
Ingress and Egress Rate Limiting for bandwidth supervision for instance the multicast and broadcast flows control

Switch Management

Onboard firmware are implemented with Power on Built-In Test, maintenance functions and network (BootP/DHCP) updating functions.
Management software provides a wide range of configuration functions on any port : transmission speed/mode, VLAN, STP parameters, mirroring, etc.
Supervision functions get lots of information in real time on the switch status in particular the local temperature.
MIB and RMON counters and private information are reachable from SNMP agent, HTTP web-browser via Ethernet.
This Open Application, named **SWITCHWARE,** is carried out by a PPC processor module running under LINUX. Based on a PowerQuic this card implements 32MB SDRAM, 8MB Flash EPROM and several communication ports.

Redundancy capabilities

STP IEEE 802.1d provides redundant link support.
Rapid STP capability for minimizing STP convergence.

Front panel LEDs

Power supply and Switch status
Switched ports : activity & link

System interface

5VDC or 3.3VDC Power Supply only

Power supply

8 GE port base unmanaged board Ptyp=10 watts
10 GE ports : Ptyp=12.5 watts
Management PPC function : Ptyp = 0.8 watt
cPCI model : through J1 connector (5 or 3.3 VDC)
VME model : through P1 connector (5VDC)

Standard Conformance

Emissions

EN55022 Class A

Immunity

CEI 61000-4-2 (ESD), 61000-4-3 (Electric field), 61000-4-4 (Burst), 61000-4-5 (Surge), 61000-4-6,

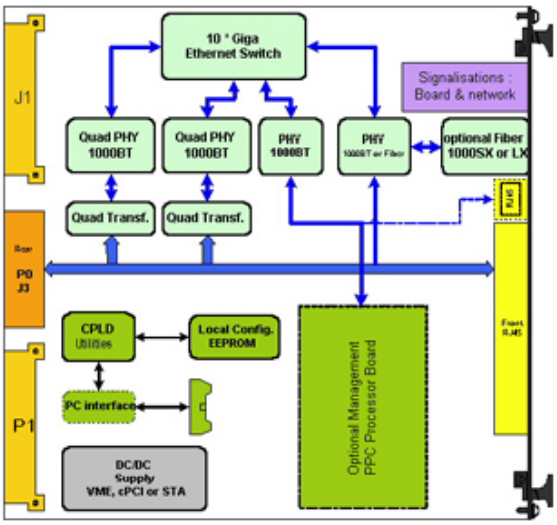
Security

EN60950

MTBF

TBD

Block diagram



Ordering information

Reference	Model	Features	Grade
6U form factor	**ComEth 4100**	**Full Gbs Ethernet Switches PICMG2.16 - VITA31.1 Front & Rear panel connections**	
VME or Stand-alone Front panel connections		**FP : Front Panel RP : Rear Panel LM : LightManaged Switch FM : Full Managed Switch**	
576 / 010 / 710	ComEth 4110	10 ports_LM : 10*10/100/1000BT (FP)	standard
576 / 010 / 720	ComEth 4110	10 ports_LM : 10*10/100/1000BT (FP)	extended
576 / 011 / 710	ComEth 4111	10 ports_LM : 9*10/100/1000BT (FP) + 1*1000 SX (FP)	standard
576 / 011 / 720	ComEth 4111	10 ports_LM : 9*10/100/1000BT (FP) + 1*1000 SX (FP)	extended
576 / 015 / 710	ComEth 4115	9 ports_FM : 9*10/100/1000BT (FP)	standard
576 / 015 / 720	ComEth 4115	9 ports_FM : 9*10/100/1000BT (FP)	extended
576 / 016 / 710	ComEth 4116	9 ports_FM : 8*10/100/1000BT (FP) + 1*1000 SX (FP)	standard
576 / 016 / 720	ComEth 4116	9 ports_FM : 8*10/100/1000BT (FP) + 1*1000 SX (FP)	extended
VME or Stand-alone Rear panel connections		**FP : Front Panel RP : Rear Panel LM : LightManaged Switch FM : Full Managed Switch**	
576 / 020 / 710	ComEth 4120	10 ports_LM : 9*10/100/1000BT (RP) 1*10/100/1000BT (FP)	standard
576 / 020 / 720	ComEth 4120	10 ports_LM : 9*10/100/1000BT (RP) 1*10/100/1000BT (FP)	extended
576 / 025 / 710	ComEth 4125	9 ports_FM : 9*10/100/1000BT (RP)	standard
576 / 025 / 720	ComEth 4125	9 ports_FM : 9*10/100/1000BT (RP)	extended
576 / 025 / 725	ComEth 4125	9 ports_FM : 9*10/100/1000BT (RP)	conduction cooled - TBD
cPCI Front panel connections		**FP : Front Panel RP : Rear Panel LM : LightManaged Switch FM : Full Managed Switch**	
576 / 040 / 710	ComEth 4140	10 ports_LM : 10*10/100/1000BT (FP)	standard
576 / 040 / 720	ComEth 4140	10 ports_LM : 10*10/100/1000BT (FP)	extended
576 / 041 / 710	ComEth 4141	10 ports_LM : 9*10/100/1000BT (FP) + 1*1000 SX (FP)	standard
576 / 041 / 720	ComEth 4141	10 ports_LM : 9*10/100/1000BT (FP) + 1*1000 SX (FP)	extended
576 / 045 / 710	ComEth 4145	9 ports_FM : 9*10/100/1000BT (FP)	standard
576 / 045 / 720	ComEth 4145	9 ports_FM : 9*10/100/1000BT (FP)	extended
576 / 046 / 710	ComEth 4146	9 ports_FM : 8*10/100/1000BT (FP) + 1*1000 SX (FP)	standard

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

576 / 046 / 720	ComEth 4146	9 ports_FM : 8*10/100/1000BT (FP) + 1*1000 SX (FP)	extended
cPCI Rear panel connections		**FP : Front Panel RP : Rear Panel LM : LightManaged Switch FM : Full Managed Switch**	
576 / 050 / 710	ComEth 4150	10 ports_LM : 9*10/100/1000BT (RP) 1*10/100/1000BT (FP)	standard
576 / 050 / 720	ComEth 4150	10 ports_LM : 9*10/100/1000BT (RP) 1*10/100/1000BT (FP)	extended
576 / 055 / 710	ComEth 4155	9 ports_FM : 9*10/100/1000BT (RP)	standard
576 / 055 / 720	ComEth 4155	9 ports_FM : 9*10/100/1000BT (RP)	extended
576 / 055 / 725	ComEth 4155	9 ports_FM : 9*10/100/1000BT (RP)	conduction cooled - TBD
Rear Tansition Module for ComEth4100_cPCI models			
900 / 230 / 710	RTM_1K_14	14*RJ45(10/100/1000Mbs) - 4TE - No EMC protections (J3,J4 & J5 connectors)	standard
900 / 230 / 720	RTM_1K_14	14*RJ45(10/100/1000Mbs) - 4TE - No EMC protections (J3,J4 & J5 connectors)	extended
900 / 232 / 710	RTM_1K_14	14*RJ45(10/100/1000Mbs) - 4TE - EMC protections (J3,J4 & J5 connectors)	standard
900 / 232 / 720	RTM_1K_14	14*RJ45(10/100/1000Mbs) - 4TE - EMC protections (J3,J4 & J5 connectors)	extended

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.

COPYRIGHT INTERFACE CONCEPT - 2003 - COMETH4100v04.pub. All names, products and services mentioned are trademarks or registred trademarks of their respective holders.

PAGE BACK | PRINT | HOME PAGE

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP