



Fast & Giga Ethernet Switch PICMG2.16 & VITA31.1

5100b

Provides 24 Fast Ethernet, 6 Gigabit Ethernet channels.

Compliant with PICMG 2.16 or VITA 31.1 system.

High speed non-blocking Layer 2 switch with :

- Store-and-forward
- 8 000 MAC addresses
- Static or Automatic MAC address management
- Broadcast filtering
- Trunking

Auto-negotiation and auto-crossover for true Plug-n-Play.

Prevents packet loss with back pressure and IEEE 802.3x flow control.

QoS layer 2/3 using four priority-queue with advanced congestion management.

Supports VLANs based on ports or/and MAC addresses to simplify network management.

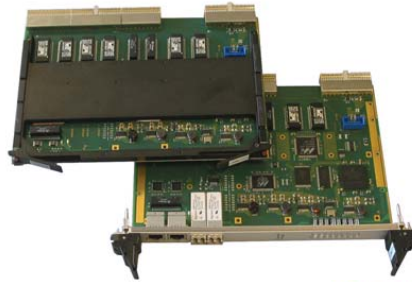
Multicast's flow management with IGMP snooping, IGMP V2

RSTP/STP protocol for more reliable network

Provides flexible management :

- PC Windows, Browser or console interface
- Full MIB and RMON counters
- Optional SNMP agent
- Thermal monitoring
- Comprehensive built-in test
- Front leds
- PICMG2.9 (IPMI) option
- On-line Virtual cable tester

L3 software routing functions



Description

ComEth 5100b is a range of highly integrated Layer 2+ Ethernet switches that provides twenty four 10/100TX Ethernet ports and six Gigabits ports. All these capabilities are implemented on a single slot 6U board.

ComEth 5100b ports are compatible both with PICMG 2.16 or VITA 31.1 system. A rear I/O transition interface is available to provide a set of RJ45 rear connectors. This switch is fully upward compatible with ComEth5100a. It provides more Giga Ethernet ports and adds some L2 enhanced functions as the port aggregation, traffic rate shaping, etc.

Twenty Fast Ethernet ports are routed on rear I/O in compliance with PICMG 2.16 (J3/J5). The remaining four Fast Ethernet plus four Giga Ethernet are available on J4 and can be used through a rear transition module. According to the version, up to four additional front Giga Ethernet channels are available : two in 10/100/1000BT and two with an auto-media selection between a 10/100/1000BT (RJ45) or a 1000SX/LX (LC). An optional mezzanine board can provide two additional 1000SX/LX ports.

Its **ultra low-power** design together with the thermal monitoring makes it ideal for integration in high-demanding application. The switch is available in standard, rugged or conduction-cooled grade.

Managed capabilities

ComEth5100b products are proposed as end-user switches with IC's **SwitchWare** embedded software. ComEth5100b acts as a full Layer 2/3 managed switch. It can be operated from a browser, PC Windows application or SNMP. The entire functionalities can be easily managed and monitored. This switch is powered by a PowerPC. The software update can be downloaded and stored in Flash memory.

The Enhanced Switchware package provides some software layer 3 functions, allowing local IP forwarding (IPv4/ IPv6), static and dynamic protocols (RIP, OSPF) routing, proxy-ARP and DHCP-relay. These L3 functions are managed through a CLI interface. **ComEth5100b** combines in a single equipment a layer 2+ switch and a layer 3 router.

COMETH 5100b

Fast & Giga Ethernet Switch - PICMG2.16 and VITA31.1 Ethernet switch

Main features

Base unit

Twenty four auto-crossover 10/100BT and up to four (Max 6 GE directly on the base board) 10/100/1000BT ports available on the rear panel (J3/4/5).

Two Gigabits ports 1000BT and two mixed Copper/Fiber ports. In the dual configuration the selection between fiber or copper is automatic. The 1000SX or LX characteristics are :

VCSEL (850nm) or FP Laser (1300nm) model :

- 850nm > 220m with MMF 62.5/125µm or 500m with MMF 50/125µm
- 1300nm > 550m with MMF 62,5 or 50/125µm and 10 Km with SMF 9/125µm
- 1550nm or WDM (consult us)

Front panel LEDs

Power supply and CPU Status

Switched ports : activity/link

3.3VDC Power supply

Up to 18 Watts according to the configuration.

Hot insertion.

Rear Transition module routes ports to the rear panel

Please refer to ordering information.

Switching

Store-and-Forward with low last-bit-in to first-bit-out delay.

Full wire-speed on each port even with 64-byte frames.

Link aggregation (802.3ad) with static or LACP management.

MAC level

8000 MAC unicast address with automatic aging, self-learning mechanism or static configuration.

Tag extraction and insertion (802.1p), security with locked port mode, etc.

Queue Buffer

Four levels of priorities queuing per port with fixed or weighted priority

Flow Control

Back pressure and pause frame-based flow control schemes are included to support zero packet loss under temporary traffic congestion.

Filtering/Forwarding Rate

Ingress storm limiting for instance broadcast discard above a threshold. Egress rate shaping.

Spanning Tree Algorithm

STP (802.1D) or RSTP (802.1w) provide redundant link support and Fast port capabilities.

VLANS

Port based VLANS or VLANS full compliant with 802.1Q standard and per-VLAN forwarding databases.

QoS

Layer2 : Tagged frames according to 802.1p (Tagged or untagged frames supported on each port).

Layer3 : IPv4 TOS/DS, IP V6 TC, priority override.

Port Mirroring

Allows the administrator to mirror traffic from a port to an external network analyser for in-depth traffic analysis.

Rear Transition Module:

Ref. RTM08

Environnement Specifications:

Please consult the **ComEth 5100b** page at www.interfaceconcept.com.

Ordering Information:

Please contact our sales department : tel. +33 (0)2 98 573 030 - email : info@interfaceconcept.com

Virtual cable tester

Some of possible problems that can be diagnosed include opens, shorts, cable and termination impedance mismatches, bad connectors, etc.

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, RST/STP parameters, mirroring, etc.

Supervision functions get lots of information in real time on the switch status in particular the local temperature. Optionally the management can be done through an out-of-band Ethernet port.

MIB and RMON counters and private information are reachable from SNMP agent, HTTP web-browser via Ethernet.

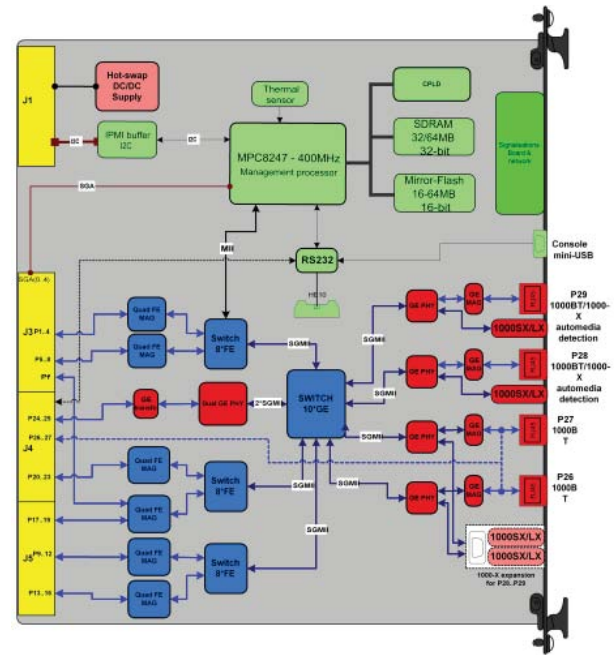
Standard Conformance

Emissions

EN55022A

Immunity

CEI61000-4-2 (ESD), 61000-4-3 (Electric field), 61000-4-4 (fast transient), 61000-4-5 (Surge), 61000-4-6 (Electric conduction).



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.

