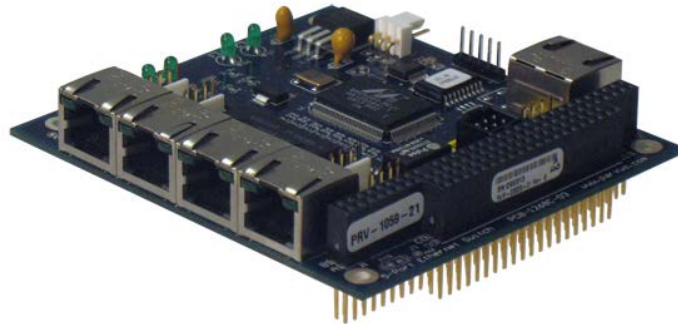


PRV-1059

5-Port PC/104 10/100 Fast Ethernet Switch

Features



Applications:

- Civil / Military In-Vehicle/Aircraft Networking
- C4ISR Network-Centric Operations / Situational Awareness
- Layer 2 Switching in Local Area Network (LAN)

General Features:

PORTS: 5 Auto-Crossover Ethernet/ Fast Ethernet Ports.

VLAN: Port-Based Field-Programmable VLAN (select models only). Settings stored in local onboard memory.

SIMPLE NETWORK INSTALLATION: Auto-MDI/MDIX, Auto-Negotiation and Speed Auto-Sensing

LOCAL/REMOTE ETHERNET: Choice of onboard RJ-45 jacks or 4-pin locking Molex headers for Ethernet connections

STANDALONE CAPABLE: Can be used as a standalone network switch or in combination with an embedded system supporting a PC/104 bus.

BUS OR EXTERNAL POWERING: 16-bit PC/104 Bus or 2-Pin Molex Power Header for External Power Connections

SWITCHING: Pause Frame-Based Switch Fabric Delivers True Non-Blocking

ACTIVITY INDICATION: LED Activity Indicators for Each Channel

PRV-1059 is a rugged VLAN-capable 5-port PC/104 Fast Ethernet switch featuring very low power consumption (2.2 watts typical) and highly reliable extended-temperature operation up to +85°C (185°F). Supporting auto-MDI-MDIX network installation, the board is designed for simple plug-and-play operation, enabling up to five embedded computing devices to be networked together using 10BaseT or 100BaseTX Local Area Network (LAN) connections.

Field programmable, port-based VLAN functionality is supported on select models. This powerful feature enables any combination of ports to be connected together in subnets for use in a small secure or non-secure network. Fully IEEE 802.3 and IEEE 802.3u compliant, its five transceiver ports are flexibly designed so that any port can serve as an uplink. The module can either be used as a standalone network switch (no processor board required) or in combination with embedded systems that support a PC/104 (ISA) bus.

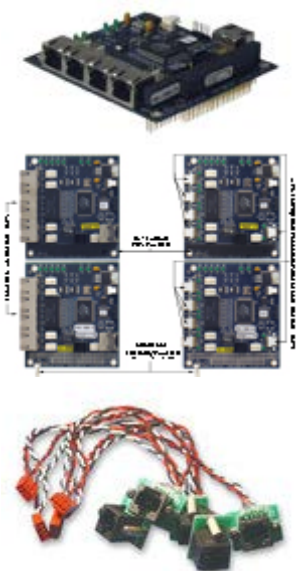
The card integrates fully independent media access controllers (MACs), an embedded frame buffer memory, and a high-speed address look-up engine, along with support for auto-crossover, auto-polarity, auto-negotiation, and bridge loop prevention.

Qualified to MIL-STD-810 environmental standards, the compact PRV-1059 switch is ideally suited to space-constrained, high reliability aviation, industrial, military, and transportation applications where extreme temperature and high shock/vibration exist. The unit is only 3.550" x 3.775" (90x96 mm) in size. All versions include mounting holes to facilitate simple installation, as well as support for local or remote monitoring of LED activity for data RX/TX and connectivity.

Ethernet connections are made through either onboard RJ-45 jacks or right-angle, locking Molex connectors. The 4-pin Molex headers enable embedded systems to optionally mount RJ-45 jacks in a faceplate, endcap or enclosure using a Parvus cable set (sold separately), which includes five female Molex to RJ-45 adapters. Power connections can be made through either the PC/104 (ISA) bus or externally through a 2-pin Molex connector.

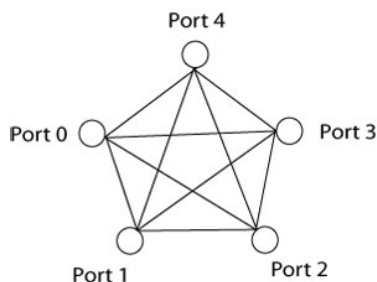
PRV-1059

Specifications

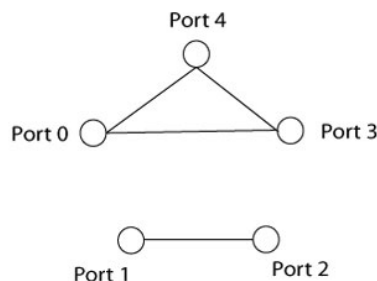
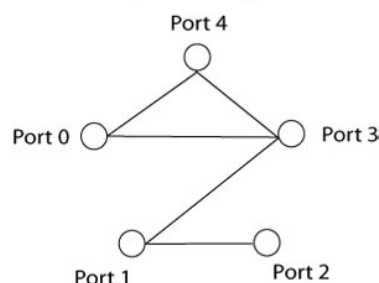
	100BaseTX / 10BaseT	IEEE 802.3, IEEE 802.3u Compliant
	Data Transfer	10 Mbits/sec or 100 Mbits/sec, Full Duplex or Half Duplex Mode
	Bus	16-bit PC/104 (ISA) for power only (optional)
	Molex Connectors	Ethernet (4-pin right angle) P/N: 22-12-2044; mating P/N: 10-11-2043 LED's (4-pin straight) P/N: 22-11-2042; mating P/N: 10-11-2043 Power (2-pin right angle) P/N: 22-12-2024; mating P/N: 10-11-2023
	Power Consumption	Max: +5 VDC @ 0.44A or 2.2 Watts (0.45W base + 0.35W per port used)
	Frame Buffer	512Kb On-Chip Port Map Memory
	Chipset	Marvell 88E6060
	Operating Temperature	-40°C to +85°C (-40°F to +185°F) per MIL-STD-810F Method 501.4, 502.4
	Storage Temperature	-55°C to +100°C (-67°F to +212°F)
	Shock	Operational acceleration 20Gs, duration 11ms, 3-axis per MIL-STD-810F, Method 516.5 (Jet & Helicopter Test Profiles)
	Vibration	Operational Vibration per MIL-STD-810F, method 514.5 (Jet & Helicopter Test Profiles)
	Weight	86.6 grams (0.190 lbs)
	Dimensions	3.550" x 3.775" (90x96 mm)
	MTBF	Calculated per MIL-HDBK-217F @ 40°C: 1,503,217 Hours (Ground Benign, Controlled GB, GC) 157,971 Hours (Airborne Inhabit Fighter, AIF) 60,164 Hours (Airborne Rotary Winged, ARW)
	Workmanship	Assembled to IPC-A-610 Class III Workmanship
	Options	Conformal Coating
	RoHS	RoHS (2002/95/CE) Compliant
	Ordering Note	Product formerly known as Switch104

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Default Configuration or Non-VLAN

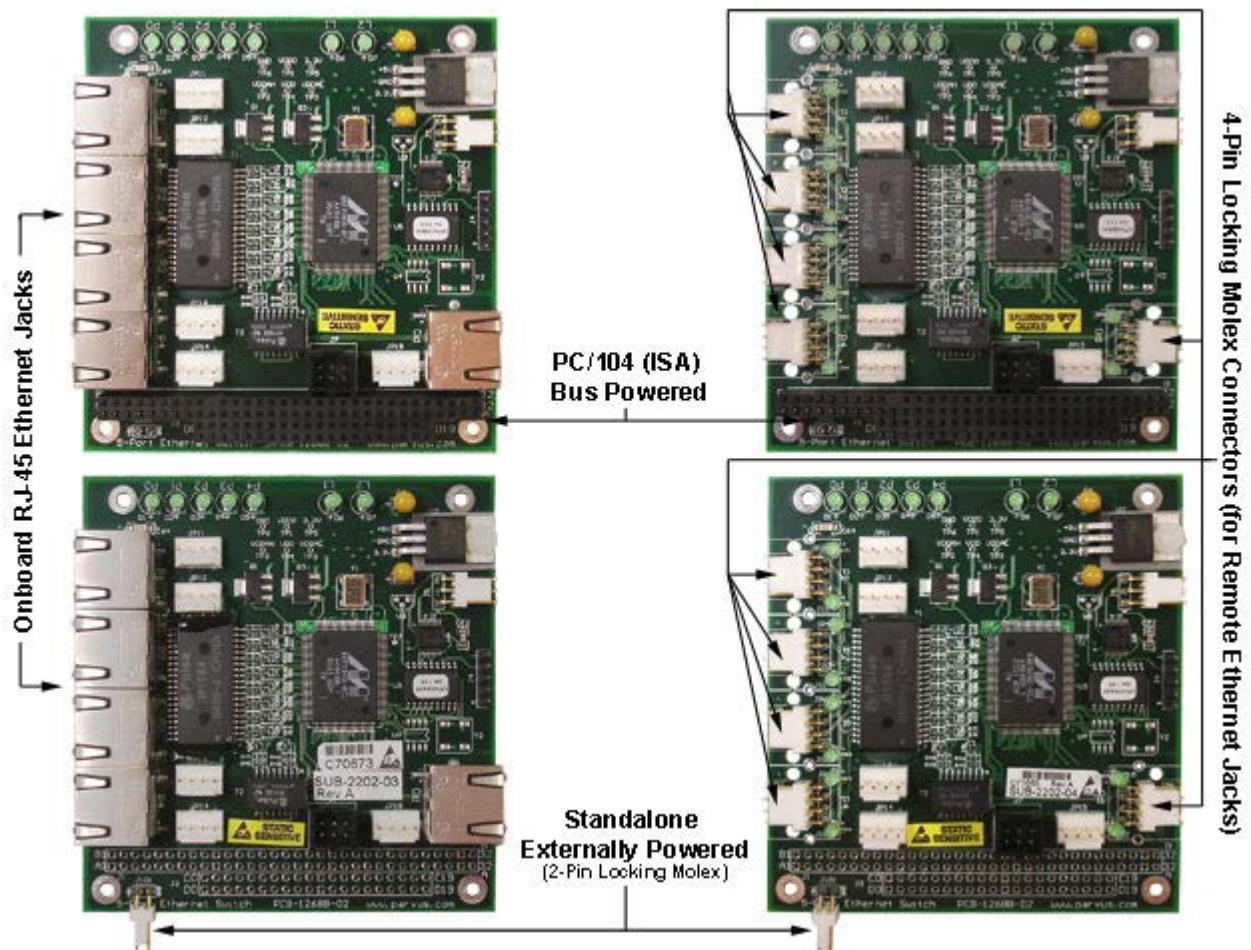


Sample VLAN Configurations



PRV-1059

RELATED IMAGES / ADAPTERS



Ethernet and Power Connection Options