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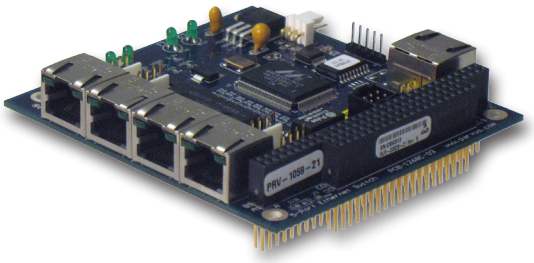
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Find the *Curtiss-Wright / Parvus PRV-1059-21* at our website: ***Click HERE***

Parvus PRV-1059

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

CURTISSWRIGHTDS.COM



Key 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

Application

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

Overview

The 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.

The PRV-1059 is also available integrated in a rugged enclosure featuring a MIL-STD-704 power supply and MIL-DTL-38999 connectors pre-qualified to MIL-STD-810 thermal, shock, and vibration conditions. See the DuraNET 1059 for additional information.

Specifications Summary

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 Architecture

- 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

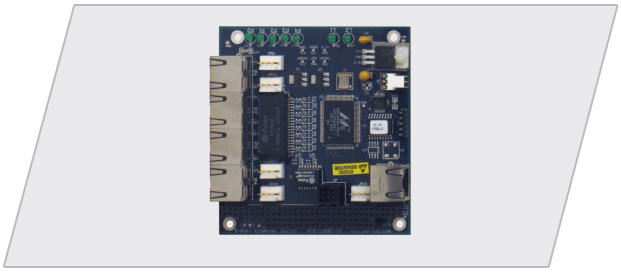
- 512Kb On-Chip Port Map Memory

Chipset

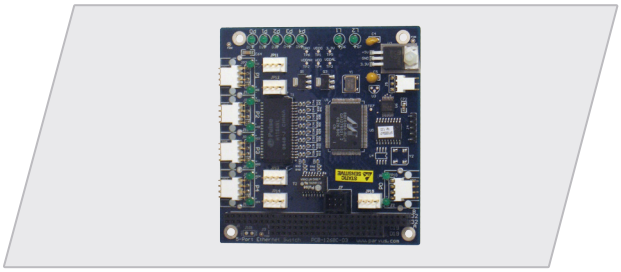
- Marvell 88E6060

Environmental:

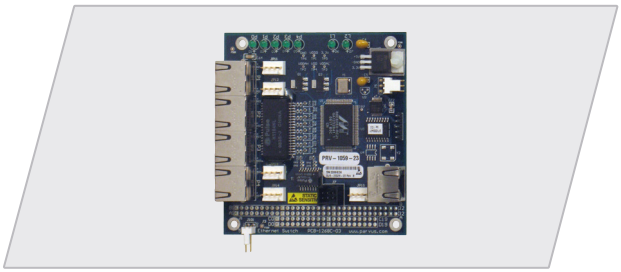
- Operating Temp: -40°C to +85°C (-40°F to +185°F) per MIL-STD-810F Method 501.4, 502.4
- Storage Temp: -55ºC to +100ºC (-67°F to +212°F)
- Shock: 20Gs, duration 11ms, 3-axis per MIL-STD-810F, Method 516.5
- Vibration: Per MIL-STD-810F, Method 514.5 (Jet & Helicopter Test Profiles)



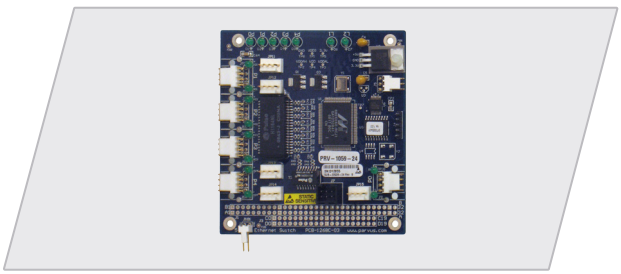
PC/104 Version with
RJ-45 Connectors (PRV-1059-21)



PC/104 Version with
M12 Connectors (PRV-1059-22)



Standalone Version with
RJ-45 Connectors (PRV-1059-23)



Standalone Version with
M12 Connectors (PRV-1059-24)

Specifications Summary

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

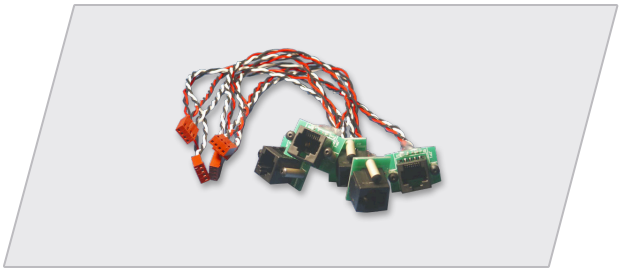
- Assembled to IPC-A-610 Class III Workmanship

Options

- Conformal Coating

RoHS

- RoHS (2002/95/CE) Complian



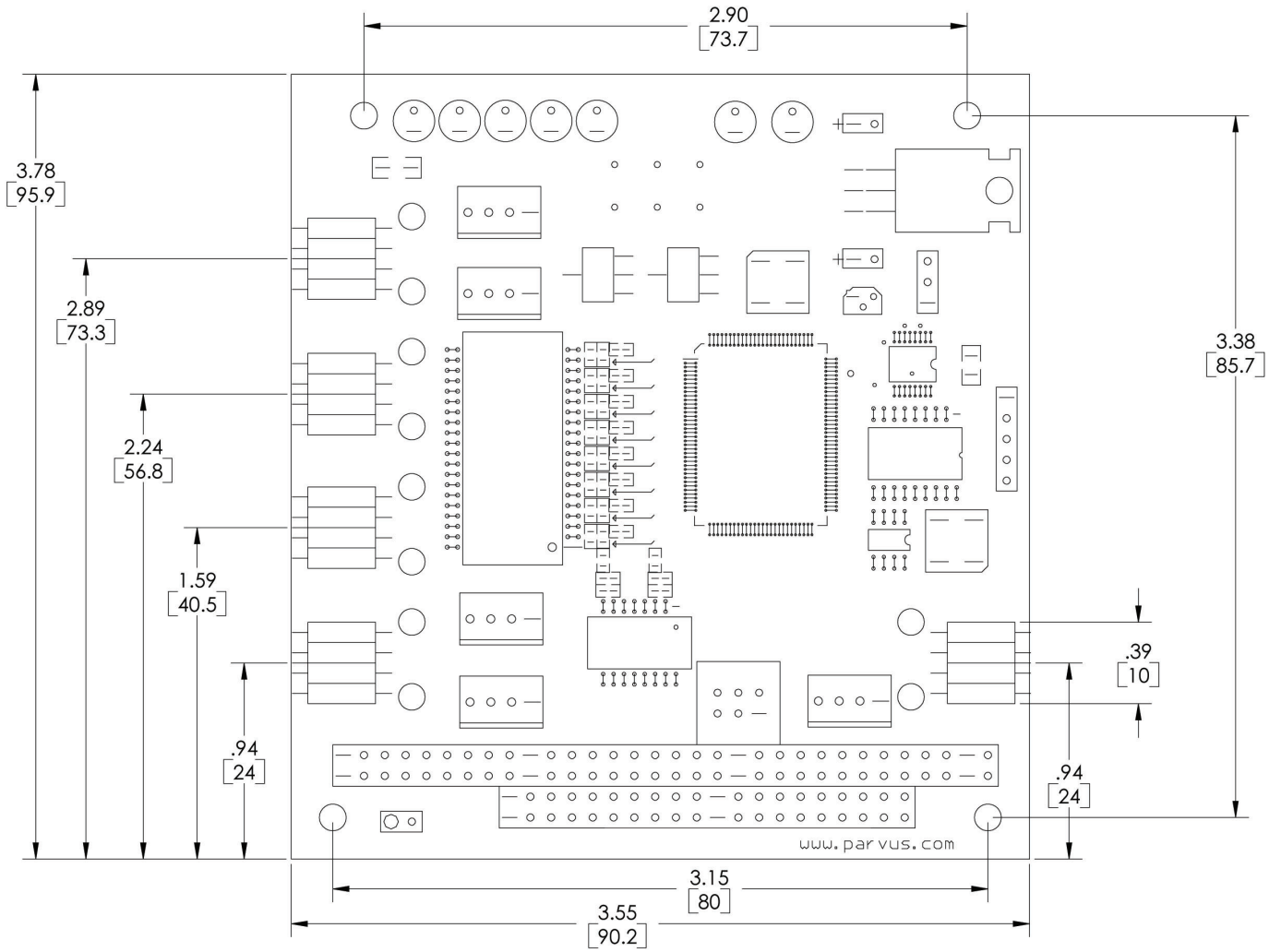
Mating Molex to RJ-45 Breakout CableSet

- PRV-1059-32: PRV-1059, PC/104 5-Port 10/100 Ethernet Switch - Molex, VLAN Support
- PRV-1059-33: PRV-1059, 10/100 5-Port Ethernet Switch - RJ-45 (Standalone- no PC/104 bus), VLAN Support
- PRV-1059-34: PRV-1059, 10/100 5-Port Ethernet Switch - Molex (Standalone - no PC/104 bus), VLAN Support
- PRV-1182-02: Molex to RJ-45 Adapter Cable Set for PRV-1059-X2 and -X4
- PRV-1304-01: VLAN Configuration Cable - PRV-1059

Ordering Codes

- PRV-1059-21: PRV-1059, PC/104 5-Port 10/100 Ethernet Switch - RJ-45
- PRV-1059-22: PRV-1059, PC/104 5-Port 10/100 Ethernet Switch - Molex
- PRV-1059-23: PRV-1059, 10/100 5-Port Ethernet Switch - RJ-45 (Standalone- no PC/104 bus)
- PRV-1059-24: PRV-1059, 10/100 5-Port Ethernet Switch - Molex (Standalone - no PC/104 bus)
- PRV-1059-31: PRV-1059, PC/104 5-Port 10/100 Ethernet Switch - RJ-45, VLAN Support

Specifications Summary



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