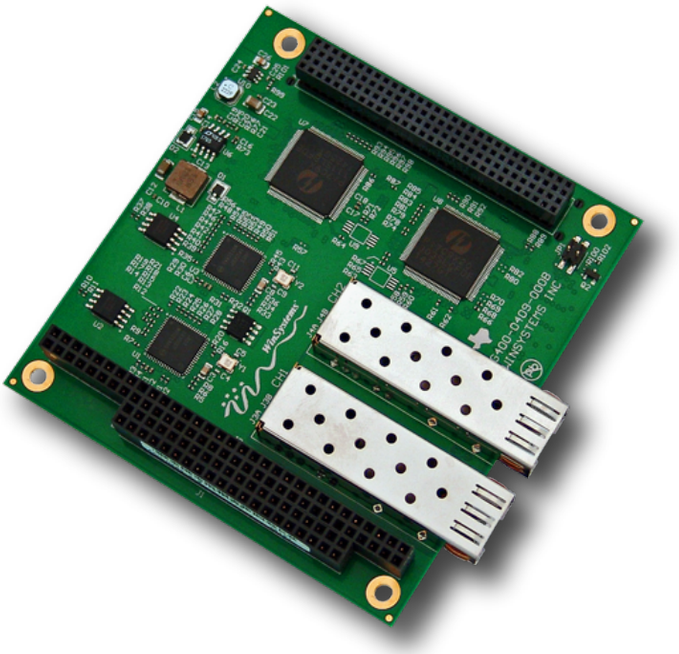
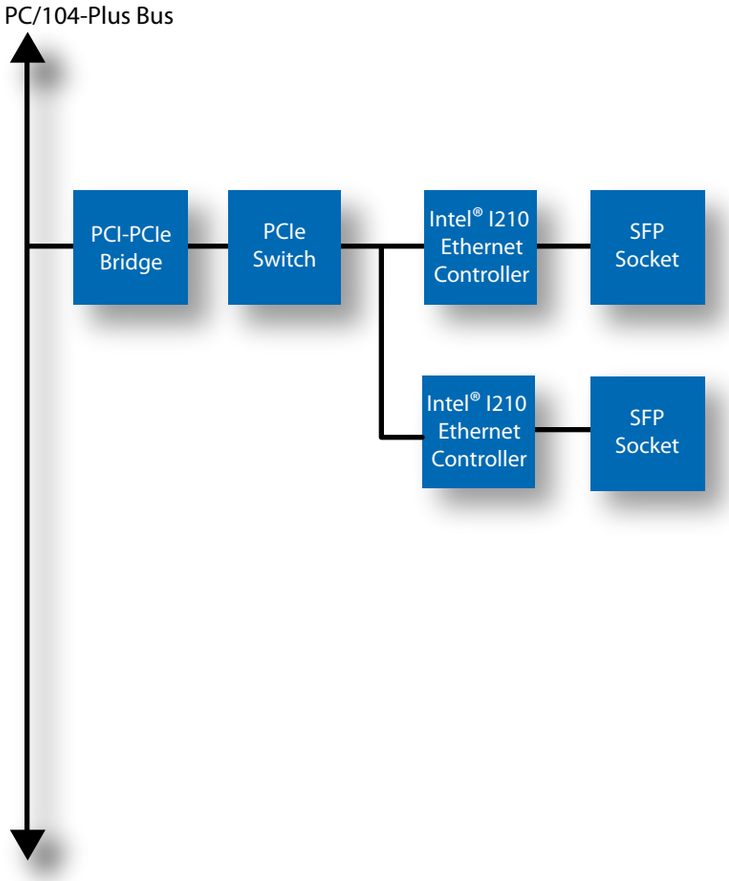
PPM-N409-2

Dual Ethernet PC/104-*Plus* Module with SFP Interfaces

Features

- Small Form Factor Pluggable (SFP) Interface
- Intel® I210 Ethernet Controller
- IEEE 1588 Precision Time Synchronization over Ethernet
- -40°C to +85°C (-40°F to +185°F) Operational Range
- PC/104-*Plus* Form Factor
- Rugged and Vertically Expandable
- Accepts a Wide Range of SFP Ethernet Modules
- Robust Communication over Long Distances
- Two Fully Independent Ethernet Connections
- Optical Modules are Hot-Swappable
- Dedicated +5VDC Power Supplied by PC/104-*Plus* Connector
- No Heat Sink Required
- Supports Linux, Windows, and DOS Operating Systems
- Custom Options Available





Product Description

The PPM-N409-2 PC/104-*Plus* Dual Ethernet module features Small Form Factor Pluggable (SFP) transceivers, controlled by dual Intel® I210 Ethernet Controllers, bringing the latest in technology to your legacy design.

Both module housings are compatible with the large variety of SFP transceivers that range from optical single mode, optical dual mode, and GbE twisted pair copper. The small form factor and negligible heat signature of the PPM-N409-2 makes it ideal for installation in confined spaces. Combined with its exceptional range of operational temperatures, low physical profile, and rugged design, the PPM-N409-2 can be deployed in even the most rugged environments.

Each Ethernet connection is fully independent of the other, so different network configurations can operate through a single board. The PPM-N409-2 supports Linux, DOS, and Windows 7 or later operating systems. LEDs for each channel on the bottom of the unit provide status of link activity, speed, and indication of power to the SFP transceiver module.

Give your system the advantage of compact design, low power consumption, and high precision time synchronization of the PPM-N409-2 Ethernet controller from WinSystems. Custom design options are available upon request.

WinSystems | 715 Stadium Drive, Arlington, Texas 76011 | 817-274-7553 | info@winsystems.com www.winsystems.com

PPM-N409-2

Dual Ethernet PC/104-*Plus* Module with SFP Interfaces

PC/104-*Plus*

PPM-N409-2 Ethernet modules are designed to offer flexible Ethernet networking capability. Chipsets have PCI Bus master interfaces and are compliant with the PCI Bus Specification Revision 2.2.

Designed to support 3.3V PC/104-*Plus* signaling, multiple boards can be installed and supported on a single PC/104-*Plus* stack. An on board jumper block provides for selection of the module slot position, and system resources.

SFP Interface

SFP transceivers are available in a wide variety of configurations, allowing the user to select transceivers that best suit their specific system. WinSystems Application Engineers are available to assist in choosing the best SFP module for your design.

Intel® I210 Ethernet Controller

The Intel® I210S uses hardware-based time stamping of packets that enable high precision time stamping over Ethernet. And its innovative power management features such as Energy Efficient Ethernet and DMA Coalescing mean increased efficiency and reduced power consumption. The Intel® I210 offers an ideal GbE solution for running tightly controlled media stream synchronization and buffering.

Custom Configurations

Our engineering staff can utilize building blocks contained in our standard products to address most requirements that arise. We will work directly with your staff to define an optimum solution to reduce your time-to-market.

Ordering Information

PPM-N409-2-0	Dual Channel SFP Ethernet expansion module
PPM-N409-1-0	Single Channel SFP Ethernet expansion module

Technical Specifications

Network Interface

PPM-N409-2 modules connect to the network through a transceiver that inserts into the onboard Small Form Factor (SFP) connector housing.

Expansion Bus Connectors

PC/104 and PC/104-*Plus* Compliant

Power[1]

+5V from PC/104-*Plus* bus interface

Software

PPM-N409-2 Ethernet modules run on Microsoft Windows 7 and later, Linux, and DOS based operating systems.

Environmental

-40°C to +85°C (-40°F to +185°F)

Mechanical

90 x 97 mm (3.6 x 3.8 inches)

WinSystems reserves the right to make changes to products and/or documentation without further notification.
Product names of other companies may be trademarks of their respective companies

[1] Power consumption estimates are for the PPM-N409-2 only and exclude any external devices