PmodNIC™ Reference Manual

Overview

The PmodNIC is an interface board for the Microchip® ENC28J60 Stand-Alone Ethernet Controller. The ENC28J60 provides integrated MAC and PHY support, so the PmodNIC can add Ethernet functionality to any Digilent system board.

Features include:

- standard SPI interface
- 10Mb/s data rates
- IEEE 802.3 compatible Ethernet controller
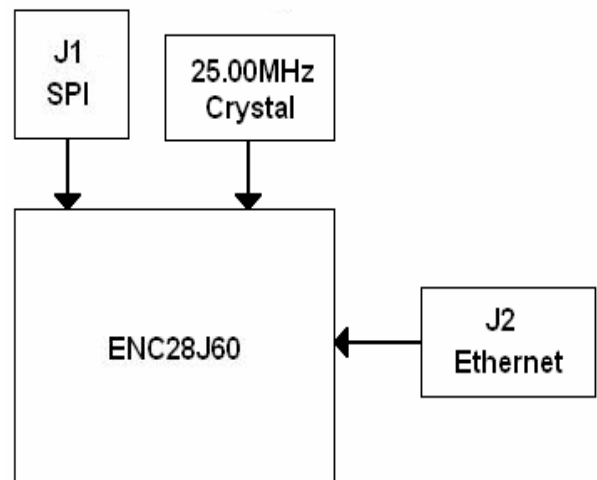- MAC support
- 10BASE-T PHY support
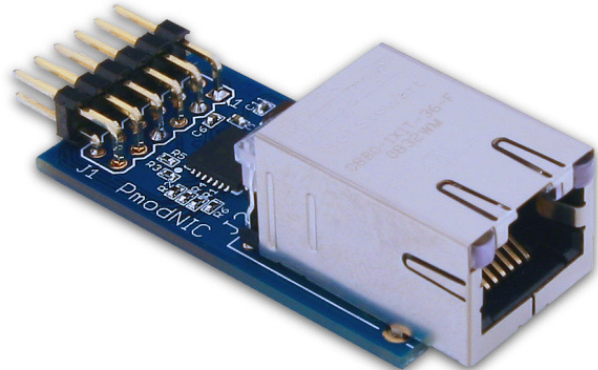
Functional Description

The primary communications interface with the PmodNIC is an SPI bus. The PmodNIC communicates in SPI mode 0 only, MSB first. An RST pin provides the host with an active low, asynchronous hardware reset for the PmodNIC. The PmodNIC also provides an active low interrupt indicator pin (INT), allowing a host to detect multiple interrupt conditions on the PmodNIC.

For more information about the hardware connections, see the PmodNIC schematic at www.digilentinc.com.

PmodNIC Block Diagram

The PmodNIC provides only the hardware for a network interface. Protocol stack software (such as TCP/IP) must be provided by the user.

For more information about the ENC28J60 Ethernet Controller, see the data sheet at www.microchip.com.

Connector J1 – SPI Communications		
Pin	**Signal**	**Description**
1	SS	Slave Select
2	MOSI	Master out/Slave in Data
3	MISO	Master in/Slave out Data
4	SCK	Serial Clock
5	GND	Power Supply Ground
6	VCC	Power Supply (3.3V)
7	NC	Not Connected
8	NC	Not Connected
9	RST	Hardware Reset
10	INT	Interrupt Output
11	GND	Power Supply Ground
12	VCC	Power Supply (3.3V)
Connector J2 - Ethernet Interface		

Interface Connector Signal Description