

## Other Information

To obtain the most recent and complete documentation for this demonstration board, including:

- User's Guide
- Board Description
- Board Schematics
- Source Code
- Application Examples
- Links to Web Seminars

please refer to the web sites: <http://www.microchip.com/tcpip>

<http://www.microchip.com/Ethernet>

### Americas

Atlanta (770) 640-0034  
Boston (774) 760-0087  
Chicago (630) 285-0071  
Dallas (972) 818-7423  
Detroit (248) 538-2250  
Kokomo (765) 864-8360  
Los Angeles (949) 462-9523  
Phoenix (480) 792-7200  
San Jose (650) 215-1444  
Toronto (905) 673-0699

### Asia/Pacific

Australia - Sydney 61-2-9868-6733  
China - Beijing 86-10-8528-2100  
China - Chengdu 86-28-8676-6200  
China - Fuzhou 86-591-8750-3506  
China - Hong Kong SAR 852-2401-1200  
China - Qingdao 86-532-8502-7355  
China - Shanghai 86-21-5407-5533  
China - Shenyang 86-24-2334-2829  
China - Shenzhen 86-755-8203-2660  
China - Shunde 86-757-2839-5507  
China - Wuhan 86-27-5980-5300  
China - Xian 86-29-8833-7250  
India - Bangalore 91-80-4182-8400  
India - New Delhi 91-11-5160-8631  
India - Pune 91-20-2566-1512  
Japan - Yokohama 81-45-471-6166  
Korea - Gumi 82-54-473-4301  
Korea - Seoul 82-2-554-7200

### Asia/Pacific

Malaysia - Penang 60-4-646-8870  
Philippines - Manila 63-2-634-9065  
Singapore 65-6334-8870  
Taiwan - Hsin Chu 886-3-572-9526  
Taiwan - Kaohsiung 886-7-536-4818  
Taiwan - Taipei 886-2-2500-6610  
Thailand - Bangkok 66-2-694-1351

### Europe

Austria - Wels 43-7242-2244-3910  
Denmark - Copenhagen 45-4450-2828  
France - Paris 33-1-69-53-63-20  
Germany - Munich 49-89-627-144-0  
Italy - Milan 39-0331-742611  
Netherlands - Drunen 31-416-690399  
Spain - Madrid 34-91-708-08-90  
UK - Wokingham 44-118-921-5869

As of 06/08/06



**MICROCHIP**

Microchip Technology Inc. • 2355 West Chandler Blvd. • Chandler, AZ 85224-6199  
[www.microchip.com](http://www.microchip.com)

The Microchip name and logo, the Microchip logo, PIC and PICmicro are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. In-Circuit Serial Programming, ICSP, PICDEM and PICtail are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies. © 2006, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 7/06



DS51602B

# Ethernet PICtail™ Plus Daughter Board

## Overview

The Ethernet PICtail™ Plus Daughter Board is an Ethernet demonstration board for evaluating Microchip Technology's ENC28J60 stand-alone 10Base-T Ethernet controller. It is an expansion board compatible with the Explorer 16 development board.

## Features

- ENC28J60 Ethernet Controller with 25 MHz oscillator and integrated, magnetic RJ-45 connector (see device data sheet, DS39662, for additional information)
- PICtail™ Plus Daughter Board connection interface

Please see reverse side for schematic.

## Getting Started

To get started, an Explorer 16 development board is required. All Explorer 16 development boards are shipped with connector J5 installed. The Ethernet PICtail Plus Daughter Board should be inserted into the top most socket of J5. The orientation of the Ethernet PICtail Plus Daughter Board should be such that the RJ-45 socket points toward the prototyping area on the Explorer 16 development board. It is possible to insert the Ethernet PICtail Plus Daughter Board into the second top most socket of J5 and use the second SPI module; however, pin remapping in the example firmware will be required.

## TCP/IP Stack and Firmware

The Microchip TCP/IP stack and other firmware examples can be downloaded from <http://www.microchip.com/Ethernet>, then select "TCP/IP Stack", or go directly to <http://www.microchip.com/tcpip>. Make sure to download the firmware version that has been designated for the Explorer 16 development board.

## Signal Interface

Function	I/O	Pin	Description
CS	I	RD14/U1CTS_E	SPI Chip Select
SCK	I	RF6/SCK1	SPI Clock
SO	O	RF7/SDI1_E	SPI Data Out from ENC28J60
SI	I	RF8/SDO1_E	SPI Data In to ENC28J60
INT	O	RE9/INT2	INT Interrupt Signal

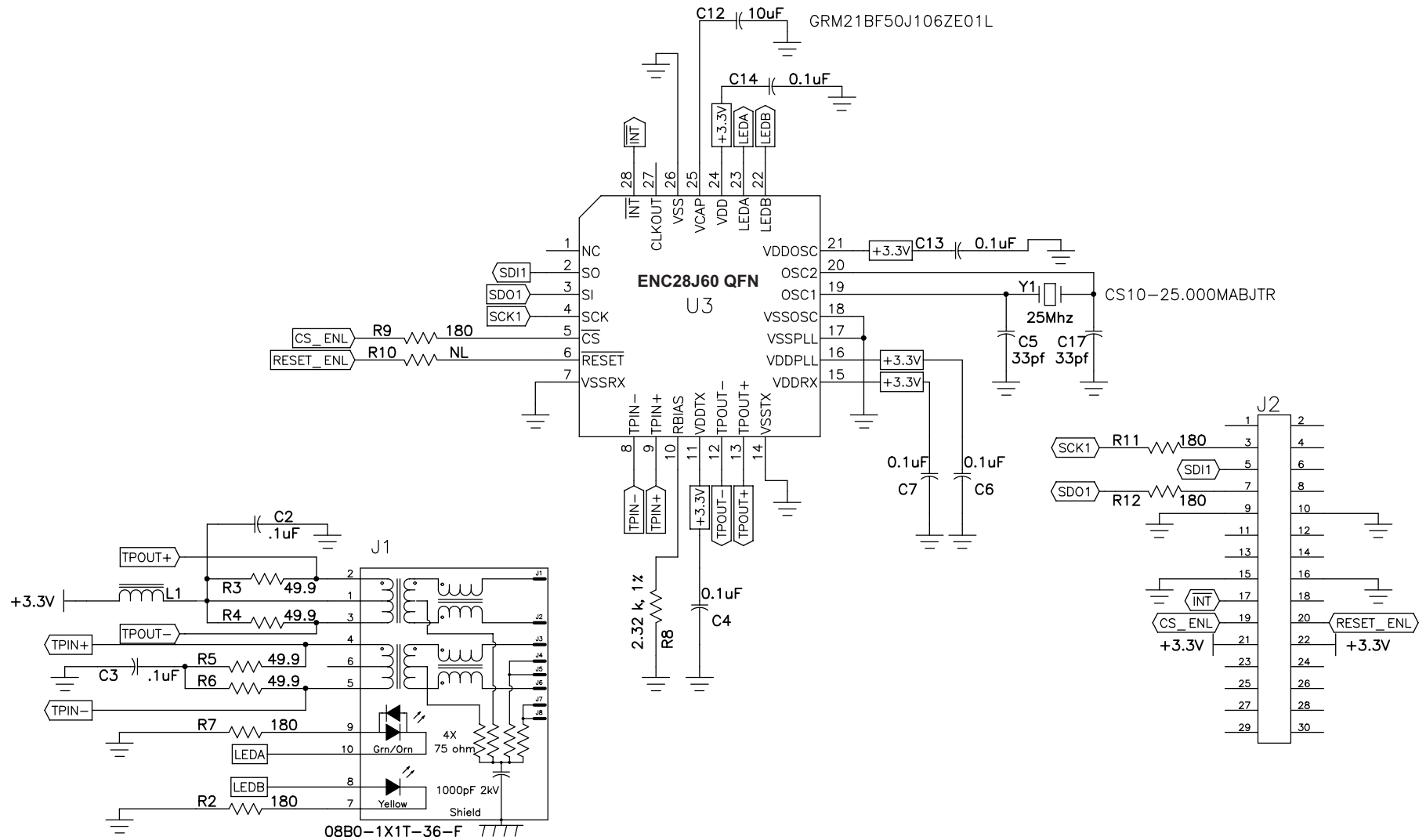
**Note:** Input signal,  $\overline{\text{RESET}}$ , is optional. Install R10 with a 180 ohm resistor to use this signal. The corresponding pin on the Explorer 16 development board is RD15/U1RTS\_E.

## Media Access Control (MAC) Address

For evaluation purposes, each Ethernet PICtail Plus Daughter Board comes with a board number which can be used to form a unique MAC address. This number can be found on the sticker label on each board. To form a MAC address, replace the last 3 bytes of the following MAC address, 00-04-A3-XX-XX-XX, with the number from the sticker. The number on the sticker is in decimal format and conversion to a hex number is required. For example, if the sticker has the value of "12345", then the MAC address would be 00-04-A3-00-30-39.

# Ethernet PICtail™ Plus Daughter Board

## Board Schematic



03-01898 Rev. 4

DS51602B



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.