

# WIZnet W5200 Ethernet PICtail™ (Plus) Board

## Information sheet

### Overview

The WIZnet W5200 Ethernet PICtail™(Plus) board is an Ethernet demonstration board for evaluating WIZnet's W5200 Hardwired TCP/IP Ethernet controller. It is an expansion board compatible with a number of development tools for 8/16/32bit Microchip MCUs and DSCs.

WIZnet supports driver to give 100% compatibility with the Microchip Application Libraries (Microchip TCPIP Stack). Just put this board and use Microchip Application Libraries as usual.

### Features

- ✓ Hardwired TCP/IP stack + Ethernet MAC & PHY + Fast SPI Ethernet controller
- ✓ Magnetic RJ-45 Connector
- ✓ Microchip 2K SPI Bus Serial EEPROM with EUI-48™ Node Identity
- ✓ Supports Auto-negotiation, Auto-MDIX, 10Base-T/100Base-TX
- ✓ PICtail™ and PICtail™ Plus Daughter Board interface
- ✓ 100% compatible with Microchip Application Library

### Signal Interface

Interface	SMD Pad	MOSI(R25)	MISO(R26)	SCLK(R27)	/SS(R28)	/SS(R29)	/INT	/SS_E
PICtail™	1-2(default)	RC5	RC4	RC3	RC2	-	RB0	RC1
	2-3	RC7	RB5	RB4	RA5	-		
PICtail™ Plus	1-2(default)	RF8	RF7	RF6	-	RD14	RE9	RF0
	2-3				-	RB2		

**Note:** User can change SPI signal lines. The SMD pad and R25~R29 pins are located on the bottom of the PCB. Each SMD pads are connected 1-2 as default. Please refer to the schematic for detailed information.

### Media Access Control (MAC) Address

Each WIZnet W5200 Ethernet PICtail™ (Plus) 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. This MAC address is already saved on EEPROM.

### Getting Started

The W5200 Ethernet PICtail Plus Daughter Board can be plugged into a Microchip Explorer 16, PIC32 I/O Expansion Board (with suitable PIC32 Starter Kit), PICDEM.net 2 or PIC18 Explorer development board which has PICtail™ or PICtail™ Plus interface. The connection to the host motherboard differs based on the

interface mode desired and motherboard type.

The Microchip Application Library can be used with this Board. WIZnet support two operation mode driver; software TCPIP mode and hard wired TCPIP mode.

The software TCPIP mode uses Microchip software TCPIP stack to process internet packets. But the hard wired TCPIP mode uses hardware TCPIP engine of WIZnet technology. User can select one between both modes referring below table.

Operation mode	SW TCPIP mode	HW TCPIP mode
Application	Microchip App. Lib. or User specific App.	
TCPIP	Microchip software TCPIP stack	WIZnet hard wired TCPIP stack
Etc.	<ul style="list-style-type: none"> <li>- Flexible TCPIP operation; user can modify</li> <li>- Unlimited number of sockets; software defined according to the memory size</li> </ul>	<ul style="list-style-type: none"> <li>- Fast and stable operation</li> <li>- Reduced code size</li> <li>- Limited number of sockets; W5200 has 8 sockets</li> <li>- Can save the MCU resource</li> </ul>

### Materials

All documents about W5200 Ethernet PICtail™(Plus) are available on [www.wiznettechnology.com/microchip](http://www.wiznettechnology.com/microchip) website.

The list of documents is,

- ✓ Brief Information Data Sheet
- ✓ Schematic and BOM of W5200 Ethernet PICtail™(Plus)
- ✓ SW TCPIP Library Quick Start Guide
- ✓ HW TCPIP Library Quick Start Guide; **in preparation now**

The list of driver file is,

- ✓ SW TCPIP Library Driver
- ✓ HW TCPIP Library Driver; **in preparation now**

### Related Product Link

- ✓ W5200 datasheet: [www.wiznettechnology.com/W5200](http://www.wiznettechnology.com/W5200)
- ✓ WIZ820io: [www.wiznettechnology.com/wiz820io](http://www.wiznettechnology.com/wiz820io)