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DS51912A

## MRF24WB0MA PICtail™/PICtail Plus Daughter Board

### Overview

The MRF24WB0MA PICtail/PICtail Plus Daughter Board is a development and demonstration board for evaluating Wi-Fi® connectivity using PIC® microcontrollers and the MRF24WB0MA module.

### Features

- MRF24WB0MA Wi-Fi module with 802.11 connectivity
- Daughter board supports PICtail and PICtail Plus connectors  
(See reverse side for schematic).

### Getting Started

To get started, an Explorer 16 or PICDEM.net™ 2 development board is required. Alternatively, a PIC32 Starter Kit with a PIC32 I/O Expansion Board can be used. With the appropriate hardware available, download the Microchip TCP/IP Stack and follow the Getting Started chapter of the TCP/IP Stack Help.

### TCP/IP Stack and Firmware

The Microchip TCP/IP stack and other firmware examples can be downloaded with the Microchip Application Libraries at <http://www.microchip.com/mal>. Support for the MRF24WB0MA PICtail/PICtail Plus Daughter Board is in TCP/IP Stack version 5.25 and later (Microchip Application Libraries v2010-04-28 or later). Once installed, a link to the TCP/IP Stack Help will be placed in your Start Menu.

TABLE 1: SIGNAL INTERFACE

Function	I/O	PICtail™ Pin	PICtail Plus Pin	Description
$\overline{CS}$	I	RC2	RB2	SPI Chip Select
SCK	I	RC3/SCK	RF6/SCK1	SPI Clock
SDO	O	RC4/SDI	RF7/SDI1	SPI Data Out from MRF24WB0MA
SDI	I	RC5/SDO	RF8/SDO1	SPI Data In to MRF24WB0MA
$\overline{INT}$	O	RB0INT0	RE8/INT1	Open Drain Interrupt Signal to Microcontroller
$\overline{RESET}$	I	RB1	RF0	Reset Signal to MRF24WB0MA
HIBERNATE	I	RB2	RF1	Hibernate Signal to MRF24WB0MA

### Wireless Router Configuration

The Microchip TCP/IP stack examples are written to interface to a wireless router with the following configuration:

SSID: MicrochipDemoAP

Channel: 1, 6, or 11

Security: Disabled

These can be changed in the file `WF_Config.h`.

### Media Access Control (MAC) Address

The TCP/IP stack is preconfigured to use the preprogrammed MAC address in the MRF24WB0MA. This address is also printed on the MRF24WB0MA module label.

# MRF24WB0MA PICtail™/PICtail Plus Daughter Board

## Board Schematic

