

# MRF24WG0MA PICtail™/PICtail Plus Daughter Board Information Sheet

## Overview

The MRF24WG0MA PICtail/PICtail Plus Daughter Board is a development and demonstration board for evaluating Wi-Fi® connectivity using PIC® microcontrollers and the MRF24WG0MA module.

## Features

- MRF24WG0MA Wi-Fi module with 802.11 b/g connectivity
- Daughter board supports PICtail and PICtail Plus connectors (for more information, see [MRF24WG0MA PICtail™/PICtail Plus Daughter Board 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 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/mla>. Support for the MRF24WG0MA PICtail/PICtail Plus Daughter Board is in the TCP/IP Stack version 5.42 and later (Microchip Application Libraries v2012-07-18 or later). After installation, a link to the TCP/IP Stack Help is available in the 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 MRF24WG0MA                   |
| SDI                | I   | RC5/SDO      | RF8/SDO1         | SPI Data In to MRF24WG0MA                      |
| $\overline{INT}$   | O   | RB0INT0      | RE8/INT1         | Open Drain Interrupt Signal to Microcontroller |
| $\overline{RESET}$ | I   | RB1          | RF0              | Reset Signal to MRF24WG0MA                     |
| HIBERNATE          | I   | RB2          | RF1              | Hibernate Signal to MRF24WG0MA                 |

## 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

This configuration can be changed in the WF\_Config.h file.

### Americas

Atlanta - 678-957-9614  
Boston - 774-760-0087  
Chicago - 630-285-0071  
Cleveland - 216-447-0464  
Dallas - 972-818-7423  
Detroit - 248-538-2250  
Indianapolis - 317-773-8323  
Los Angeles - 949-462-9523  
Phoenix - 480-792-7200  
Santa Clara - 408-961-6444  
Toronto - 905-673-0699

### Europe

Austria - Wels - 43-7242-2244-39  
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

### Asia/Pacific

Australia - Sydney - 61-2-9868-6733  
China - Beijing - 86-10-8569-2100  
China - Chengdu - 86-28-8665-5511

### Asia/Pacific (Continued)

China - Chongqing - 86-23-8980-9588  
China - Hangzhou - 86-571-2819-3180  
China - Hong Kong SAR - 852-2401-1200  
China - Nanjing - 86-25-8473-2460  
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 - Wuhan - 86-27-5980-5300  
China - Xiamen - 86-592-2388138  
China - Xian - 86-29-8833-7252  
China - Zhuhai - 86-756-3210040  
India - Bangalore - 91-80-3090-4444  
India - New Delhi - 91-11-4160-8631  
India - Pune - 91-20-2566-1512  
Japan - Yokohama - 81-45-471-6166  
Korea - Daegu - 82-53-744-4301  
Korea - Seoul - 82-2-554-7200  
Malaysia - Kuala Lumpur - 60-3-6201-9857  
Malaysia - Penang - 60-4-227-8870  
Philippines - Manila - 63-2-634-9065  
Singapore - 65-6334-8870  
Taiwan - Hsin Chu - 886-3-6578-300  
Taiwan - Kaohsiung - 886-7-213-7830  
Taiwan - Taipei - 886-2-2500-6610  
Thailand - Bangkok - 66-2-694-1351

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# MRF24WG0MA PICTail™/PICTail Plus Daughter Board Schematic

## Board Schematic

