

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.

Americas	Asia/Pacific	Europe
Atlanta - 678-957-9614	Australia - Sydney - 61-2-9868-6733	Austria - Weis - 43-7242-2244-39
Boston - 774-760-0087	China - Beijing - 86-10-8528-2100	Denmark - Copenhagen - 45-4450-2828
Chicago - 630-285-0071	China - Chengdu - 86-28-8665-5511	France - Paris - 33-1-69-53-63-20
Cleveland - 216-447-0464	China - Chongqing - 86-23-8980-9588	Germany - Munich - 49-89-627-144-0
Dallas - 972-818-7423	China - Hong Kong SAR - 852-2401-1200	Italy - Milan - 39-0331-742611
Detroit - 248-538-2250	China - Nanjing - 86-25-8473-2460	Netherlands - Drunen - 31-416-690399
Kokomo - 765-864-8360	China - Qingdao - 86-532-8502-7355	Spain - Madrid - 34-91-708-08-90
Los Angeles - 949-462-9523	China - Shanghai - 86-21-5407-5533	UK - Wokingham - 44-118-921-5869
Phoenix - 480-792-7200	China - Shenyang - 86-24-2334-2829	
Santa Clara - 408-961-6444	China - Shenzhen - 86-755-8203-2660	
Toronto - 905-673-0699	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 - 886-7-536-4818	
	Taiwan - Taipei - 886-2-2500-6610	
	Thailand - Bangkok - 66-2-694-1351	

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Microchip Technology Inc. • 2355 West Chandler Blvd. • Chandler, AZ 85224-6199

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Board Schematic

