

PWF0831MR09 user manual

Date: 2008/9/11

WLAN 802.11b/g TMModule

Caution: This user guide information is only provided to OEM or module installer.

Do not supply to end user.

Connect Your Peripherals and Computing Devices without Cables

Model no. PWF0831MR09

(1). Introduction

The PWF0831MR09 with WLAN 802.11b/g TM wireless technology is a radio device that transmits and receives radio signals in accordance with the spectrum regulations for the 2.4GHz unlicensed frequency range. The following table shows a major function.

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Standard: IEEE 802.11b/g

Frequency Band: 2.412GHz~2.472GHz unlicensed ISM band

Spread Spectrum: IEEE802.11b, DSSS (Direct Sequence Spread Spectrum)

IEEE802.11g, OFDM (Orthogonal Frequency Division Multiplexing)

Modulation Method: DBPSK (1Mbps), DQPSK (2Mbps), CCK (5.5, 11Mbps), OFDM (6, 9, 12, 24,36,48,54Mbps)

RF Output Power:

54Mbps (OFDM): 12dBm, EVM<5.6%

11Mbps (CCK): 14dBm, Meeting Spectral Mask

Working Distance: 100 - 300m, depending on different environment

Sensitivity:

54Mbps (OFDM): -70dBm

11Mbps (CCK): -83dBm

Power Consumption:

Transmit: around 320mA.

Receive: around 210mA.

I/O Interface: SPI (Serial Peripheral Interface)

Chip Set: Marvell 8686

Voltage Range: 3.3V+/- 0.3V

Protocol: CSMA/CA

Channel Frequencies (MHZ): 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457, 2462, 2467, 2472

Channels: 1-11 Channels for USA

1-13 Channels for Europe

1-14 Channels for Japan

Spurious Emission: FCC Part 15 Class B/C, 15.247, 15.249 and 15.109 for USA

ETSI 300 328-2, 301 489-1/-17, EN60950, CE Mark for Europe.

Date Rate: IEEE802.11 data rates of 1 and 2Mbps

IEEE802.11b data rates of 5.5 and 11Mbps

IEEE802.11g data rates of 6, 9, 12, 18, 24, 36, 48, 54Mbps

Application: Access Internet, Data transfer/receive

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PC System Requirements:

- 300MHz or faster CPU
- Windows[®] XP operation system
- Card slot which supports SPI_{TM}
- Memory: 64MB or above, 128MB recommended
- One available USB port, USB 1.1 standard
- Windows[®] 98 SE, Me, 2000, and XP

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Product Contents

- WLAN SPI Adapter
- CD-ROM for installation software and documentation
- Quick Installation Guide

(2). Add WLAN 802.11b/g_{TM} Module to Your Device

By embedding the Socket Module, you can incorporate the latest in Wi-Fi[®] hardware and software certifications, take advantage of broad industry accepted standards, and position your products for use in complex corporate infrastructures.

The WLAN 802.11b/g_{TM} Module is IEEE802.11 b/g and CCX 4.0 certified, providing interoperability and security within wireless LAN networks. It has a 36-pin uBGA package and supports multiple interfaces including Serial Peripheral Interface and Secure Digital I/O; it is WLAN-Bluetooth coexistence ready. When paired with powerful configuration software like Enhanced Wi-Fi Companion, the WLAN 802.11b/g_{TM} Module provides the optimal WLAN solution to incorporate into your device.

Step1.: Software Setup

Software Setup for Windows 98 SE, Me, 2000, and XP

To install the software for the SPI Adapter, follow the instructions below:

Note: the installation Process for Windows CE5.0 may look slightly different from windows 98 SE, Me, and 2000

Note: DO not insert the SPI Adapter into the SPI port prior to software installation

1. Insert the software installation CD-ROM into the MT-2000 SD slot
2. The “Software Installshield Wizard” Windows appears. Click on “Next” to begin the Installation Process.

Federal Communications Commission (FCC) Requirements

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INFORMATION:

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

End Product Labeling

This transmitter module is authorized only for use in devices where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in visible area with the following:

“Contains FCC ID: V93PWF0831MR09”

End Product Manual Information

The user manual for end users must include the following information in a prominent location “IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.”

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation

IMPORTANT NOTE:

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

This device is intended only for OEM integrators under the following conditions:

The antenna must be installed such that 20 cm is maintained between the antenna and users. As long as a condition above is met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).