

MOD-WiFi development board

Users Manual



All boards produced by Olimex are ROHS compliant

Rev. Initial, June 2011

Copyright(c) 2011, OLIMEX Ltd, All rights reserved

INTRODUCTION:

MOD-WiFi module gives you the opportunity to add WIFI to any of our development boards with UEXT connector. There is ready made support in Microchip's TCP-IP stack so you can use MOD-WIFI with any PIC board with UEXT and you have hands on the complete source code.

BOARD FEATURES:

- MOD-WIFI allow every OLIMEX's board with UEXT connector to have Wireless internet access
- uses Microchip ZC2100M module
- works with Microchip TCP-IP stack
- PCB: FR-4, 1.5 mm (0,062"), soldermask, white silkscreen component print
- Dimensions: 29.00 x 22.50 mm (1.14 x 0.86")
- space between the pin rows: 20 mm (0.8")

ELECTROSTATIC WARNING:

The MOD-WiFi board is shipped in protective anti-static packaging. The board must not be subject to high electrostatic potentials. General practice for working with static sensitive devices should be applied when working with this board.

BOARD USE REQUIREMENTS:

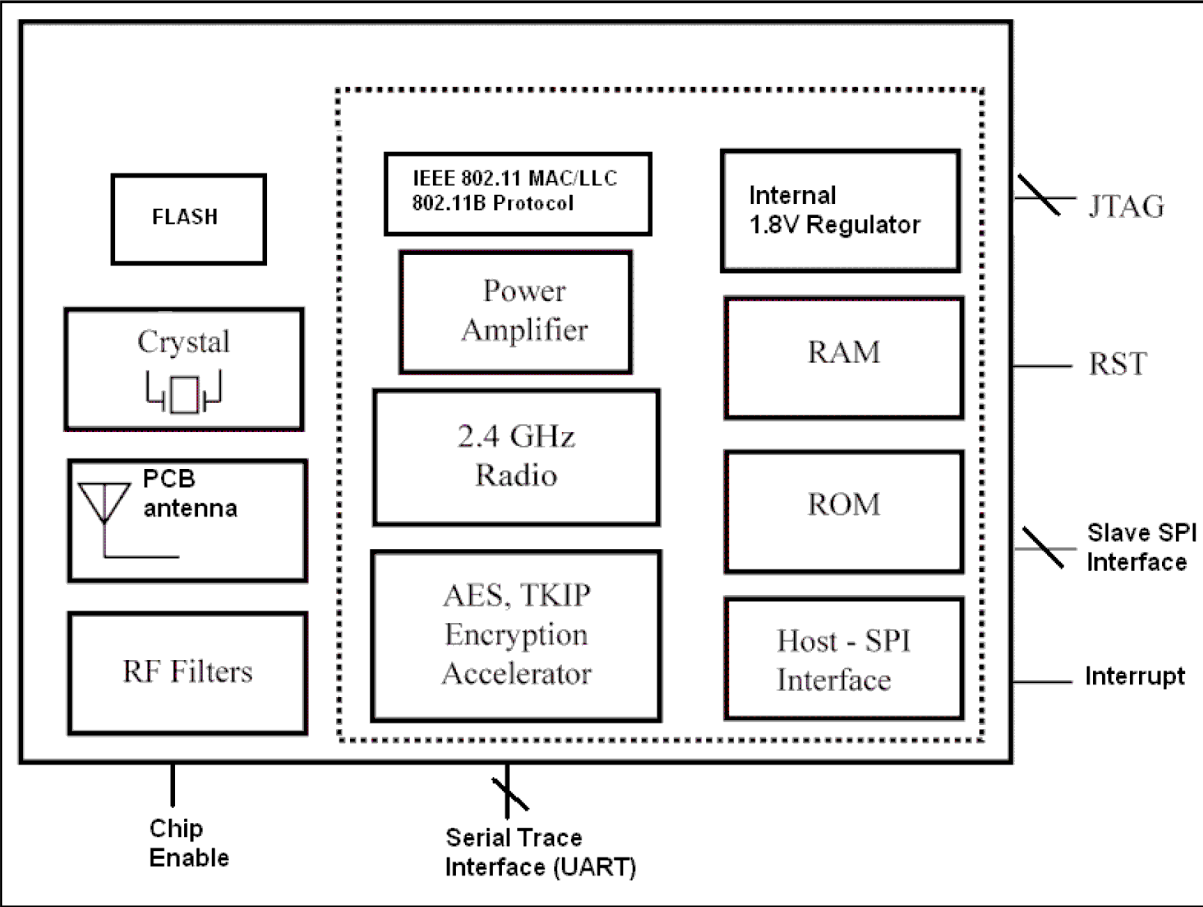
Hardware: Some of our development boards with UEXT.

Wi-Fi Module Features:

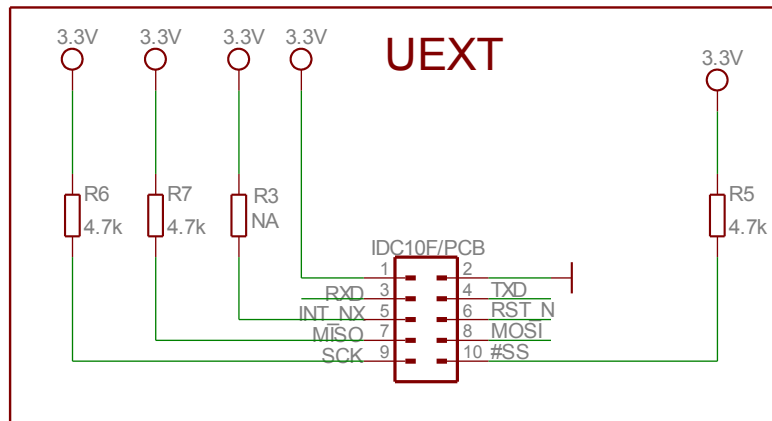
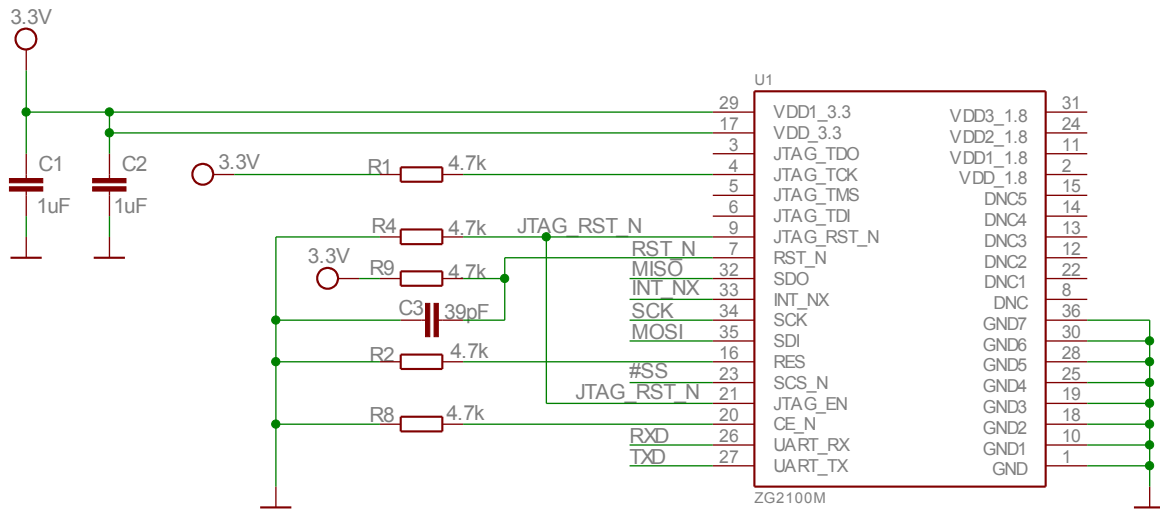
MOD-WiFi board use ZG2100M Wi-Fi module with these features:

- Single-chip 802.11b including MAC, baseband, RF and power amplifier
- Data Rate: 1 & 2 Mbps
- 802.11b/g/n compatible
- Low power operation
- API for embedded markets, no OS required
- PCB antenna
- Hardware support for AES and RC4 based ciphers (WEP, WPA, WPA2 security)
- SPI slave interface with interrupt
- Single 3.3V supply, operates from 2.7V to 3.6V
- 21mm x 31mm 36-pin Dual Flat pack PCB SM Package
- Wi-Fi Certified, RoHS and CE compliant
- FCC Certified (USA, FCC ID: W7O-ZG2100-ZG2101)
- IC Certified (IC: 8248A-G21ZEROG)
- Fully compliant with EU & meets the R&TTE Directive for Radio Spectrum
- Radio Type Approval Certified (Japan, ZG2100M based solution ID: AC164136-2 - 005WWCA0311 005GZCA0149)

BLOCK DIAGRAM:



SCHEMATIC:



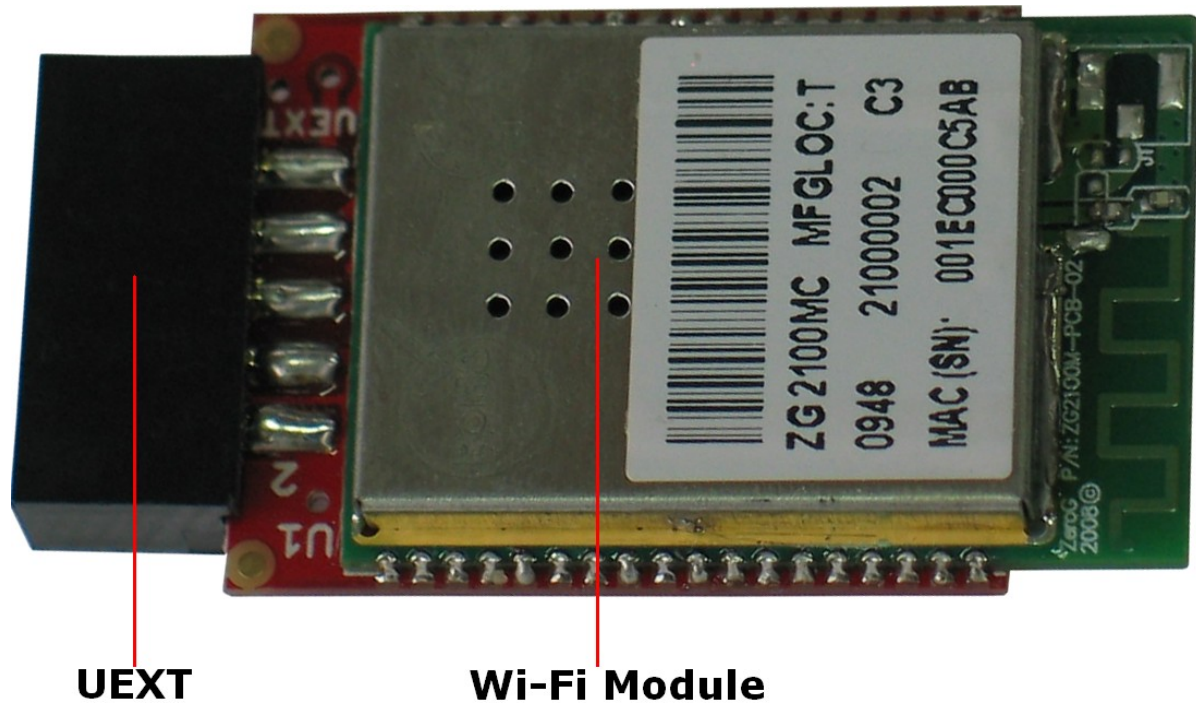
MOD-WiFi

Rev. A

COPYRIGHT(C) 2011, OLIMEX Ltd.

<http://www.olimex.com/dev>

BOARD LAYOUT:



POWER SUPPLY CIRCUIT:

MOD-WiFi is typically power supplied by UEXT pin 1 and pin 2 with 3.3V.

The board power consumption is about 110 mA.

RESET CIRCUIT:

MOD-WiFi reset circuit includes pull down R4 (4.7k) connected to ZG2100M pin 9 (JTAG_RST_N) and pin 21 (JTAG_EN).

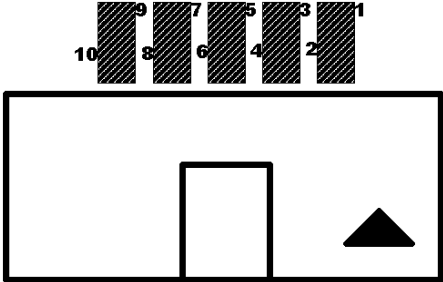
JUMPER DESCRIPTION:

There are no jumpers on this board.

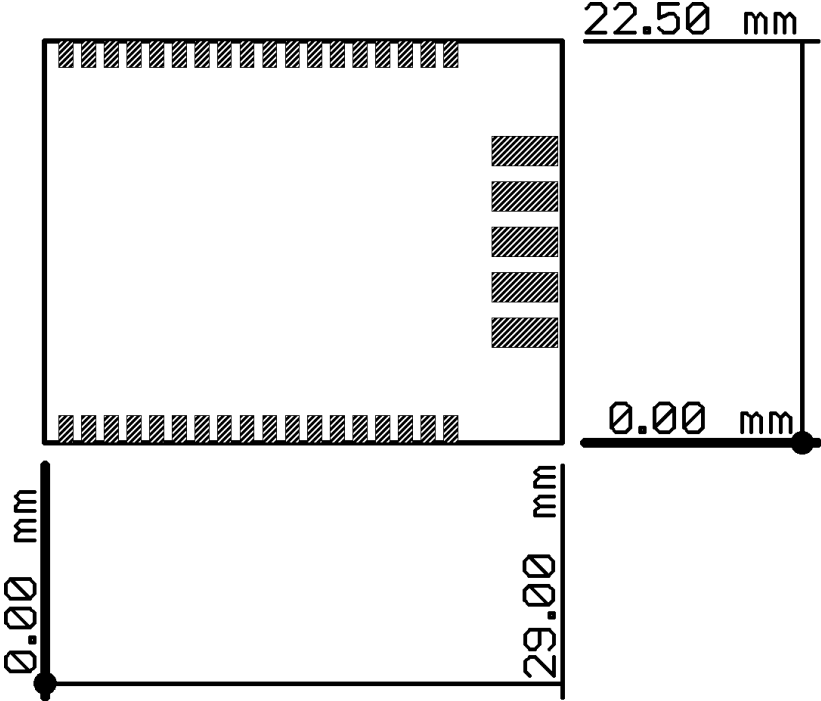
CONNECTOR DESCRIPTIONS:

UEXT:

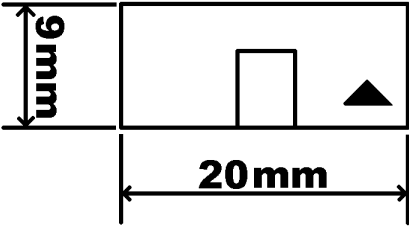
Pin #	Signal Name
1	VCC
2	GND
3	RXD
4	TXD
5	INT_NX
6	RST_N
7	MISO
8	MOSI
9	SCK
10	#SS



MECHANICAL DIMENSIONS:



UEXT measures



AVAILABLE DEMO SOFTWARE:

-[Microchip's TCP-IP stack](#) full featured TCP-IP stack, very easy to configure and use with PIC microcontrollers.

-[Demo code with Olimex's PIC32-MX460 board](#)

ORDER CODE:

MOD-WiFi – completely assembled and tested

How to order?

You can order to us directly or by any of our distributors.

Check our web www.olimex.com/dev for more info.

Revision history:

Board's Revision: Rev. A - created February 2010

Manual's Revision: Rev. Initial – created June 2011

Disclaimer:

© 2011 Olimex Ltd. All rights reserved. Olimex®, logo and combinations thereof, are registered trademarks of Olimex Ltd. Other terms and product names may be trademarks of others.

The information in this document is provided in connection with Olimex products. No license, express or implied or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Olimex products.

Neither the whole nor any part of the information contained in or the product described in this document may be adapted or reproduced in any material from except with the prior written permission of the copyright holder.

The product described in this document is subject to continuous development and improvements. All particulars of the product and its use contained in this document are given by OLIMEX in good faith. However all warranties implied or expressed including but not limited to implied warranties of merchantability or fitness for purpose are excluded.

This document is intended only to assist the reader in the use of the product. OLIMEX Ltd. shall not be liable for any loss or damage arising from the use of any information in this document or any error or omission in such information or any incorrect use of the product.