

## MOD-WiFi development board

## Users Manual



All boards produced by Olimex are ROHS compliant

Rev. Initial, June 2011

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## **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:**

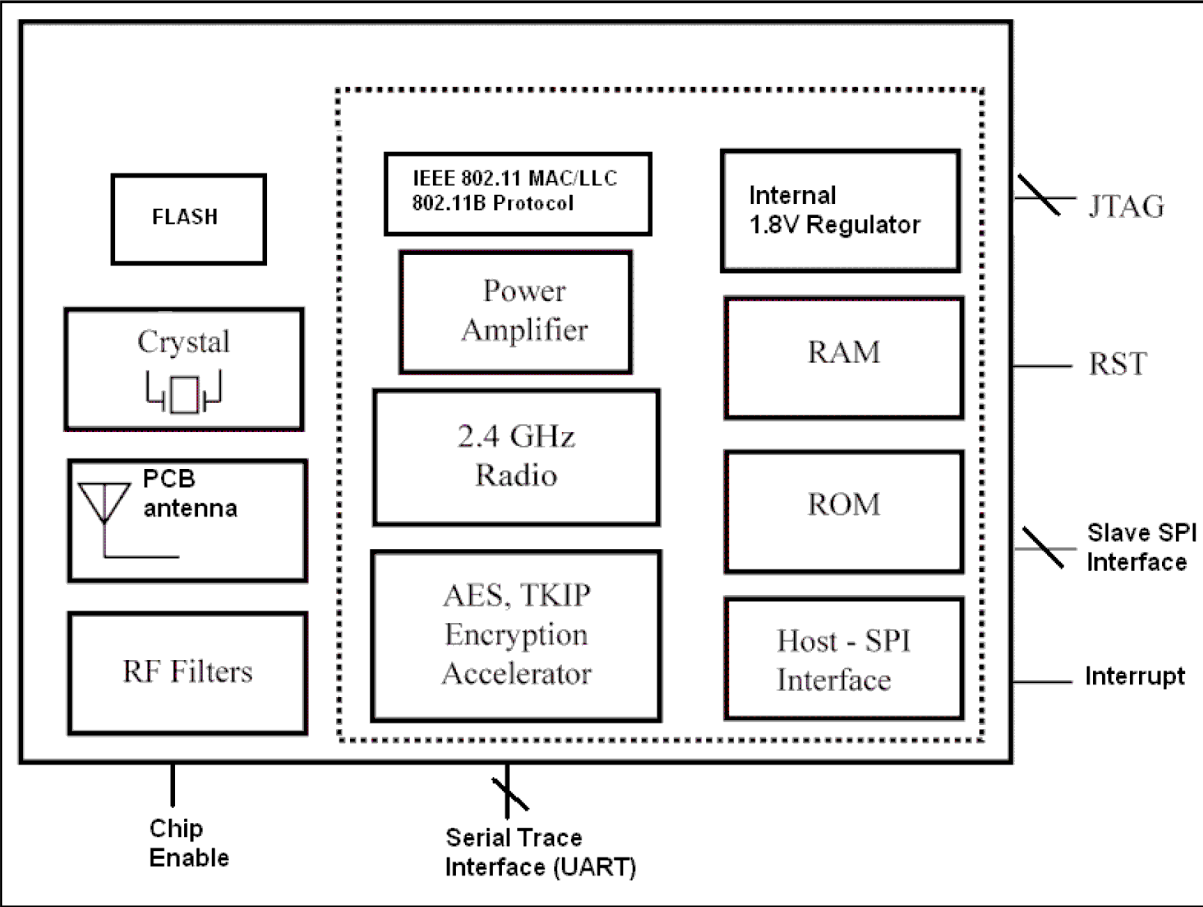
**Hardware:** Some of our development boards with UEXT.

## **Wi-Fi Module Features:**

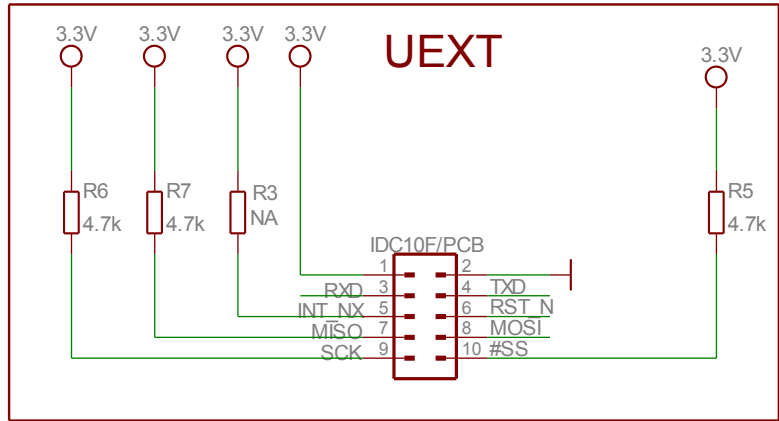
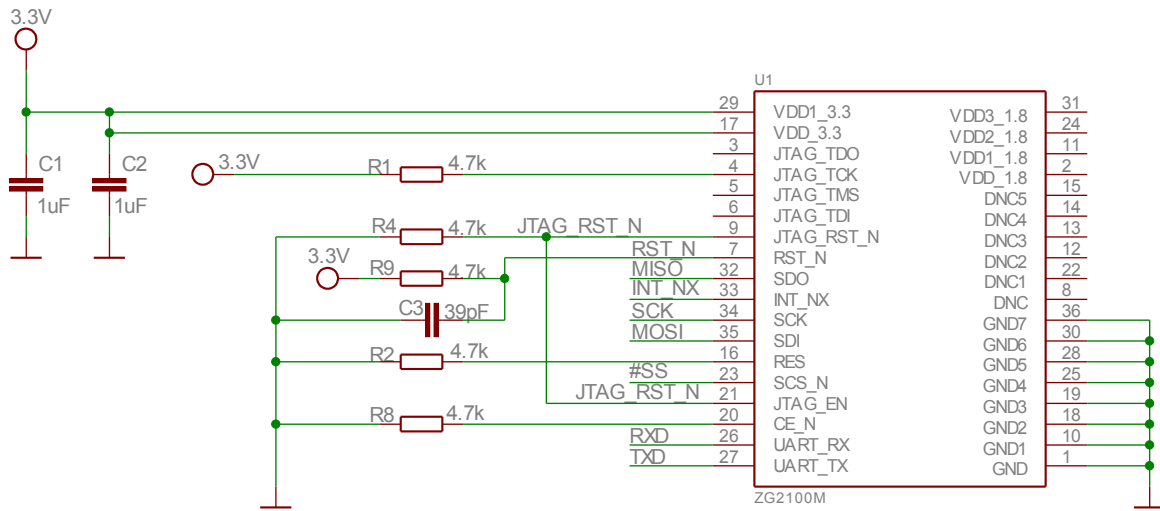
**MOD-WiFi** board use ZG2100M Wi-Fi module with these features:

- 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:



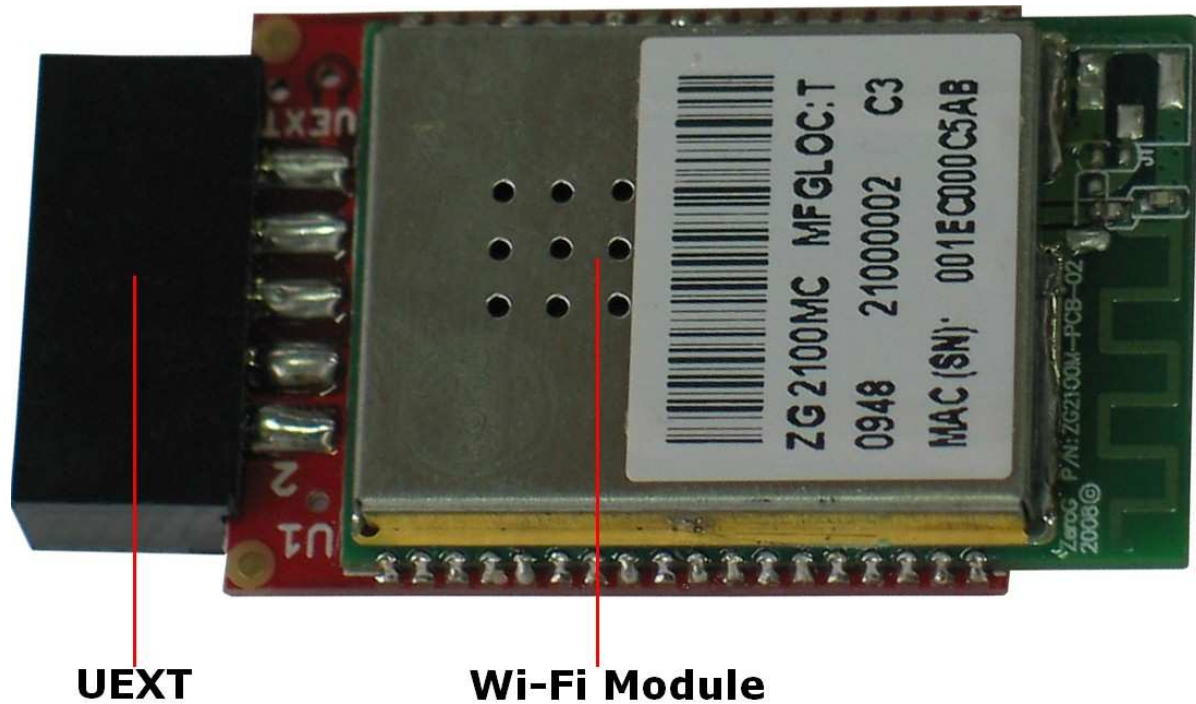
# MOD-WiFi

Rev. A

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## 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).

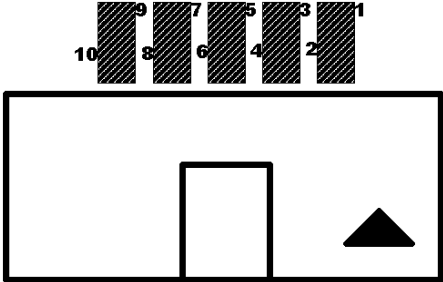
## JUMPER DESCRIPTION:

There are no jumpers on this board.

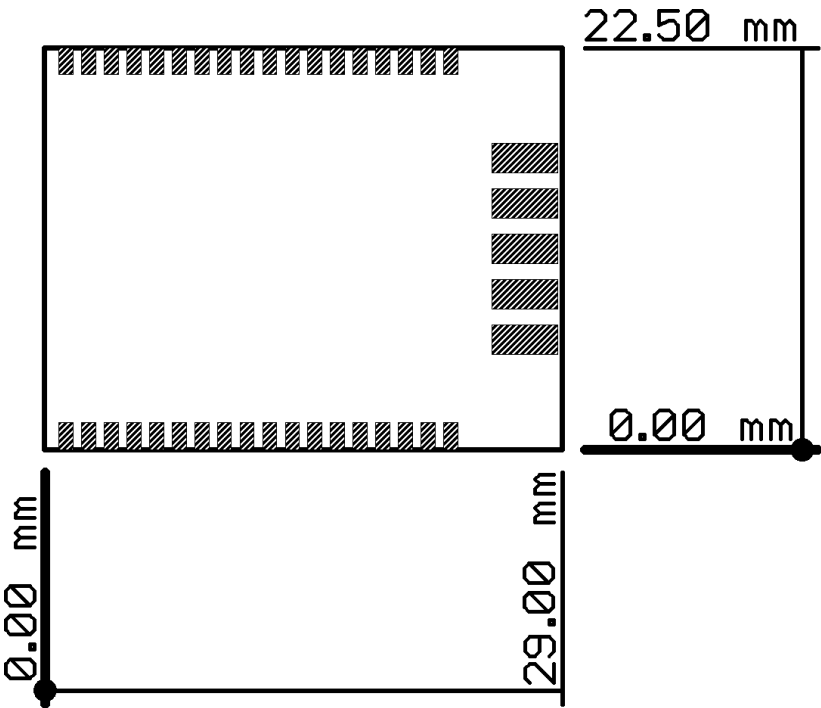
**CONNECTOR DESCRIPTIONS:**

**UEXT:**

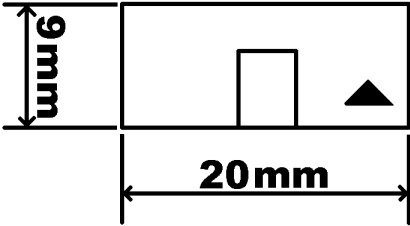
Pin #	Signal Name
1	VCC
2	GND
3	RXD
4	TXD
5	INT_NX
6	RST_N
7	MISO
8	MOSI
9	SCK
10	#SS



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](http://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

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