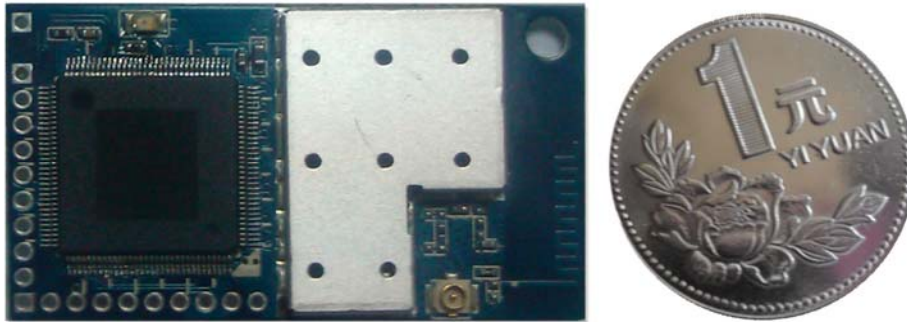


Model Name: XLW-002X

The XLW-002X WiFi module board is a WiFi module board which integrates MCU and 802.11b/g 2.4GHz RF transceiver on board with RF circuit having been calibrated, customers can design main board with desired function and interface circuits and assemble it with the XLW-002X WiFi module board, enable simple, easy, and low cost Wi-Fi connection capability.



€2200

Key Features

- 2.4GHz, IEEE 802.11b/g
- Integrated PCB antenna with external antenna option.
- Supports operation in Infrastructure /Ad-Hoc (IBSS)/virtual AP mode ,and IPHONE/ IPAD/Android device can connect it directly.
- Supports 802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)
- Integrated powerful MCU running TCP/IP protocol
- Supports 2 UART interfaces, max up to 4 UART interface option.
- High speed SPI interface, support 50Mhz clock.
- I2S/PCM interface option
- Supports 6 GPIO interface, max up to 24 GPIOs option (some GPIOs multiplexed with function interfaces above)
- Supports TCP, UDP, ICMP, IGMP, IPv4, DHCP, BOOTP, ARP, DNS, SMTP, SNMP, uPnP, PPPoE and HTTP in software
- Full TCP/IP protocol stack and TCP/IP transmission bandwidth exceed 10Mbps
- Max outdoor range up to 250meter(820ft), line of sight
- Single operating voltage: 3.3V typical
- Board Size: 25 mm x 45 mm

Applications

- Serial to WiFi , SPI to WiFi Bridge

- WiFi Remote Control/Monitor
- WiFi Toy
- TCP/IP and WLAN Offload Co-processor
- WiFi Internet Radio
- WiFi Network Camera
- WiFi RFID

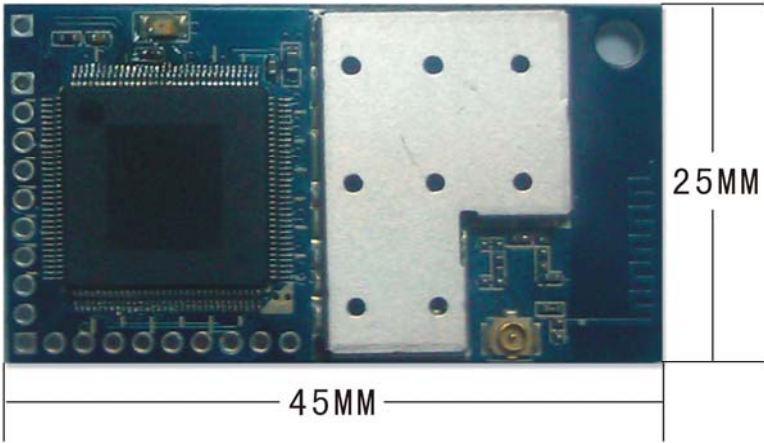
Product Specification

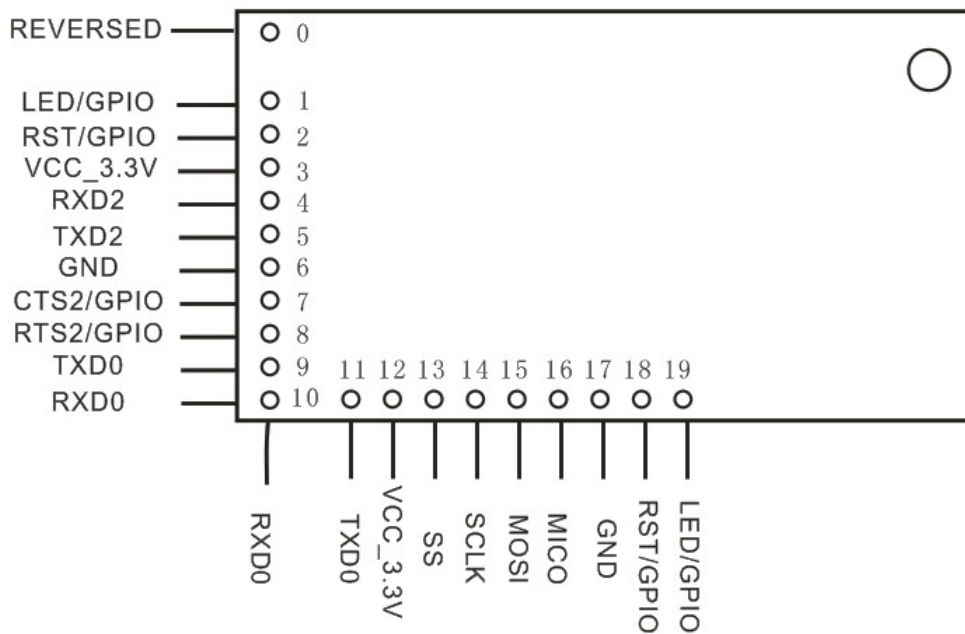
Features		Specifications
Microprocessor		80Mhz CPU
RF Transceiver		802.11b/g, 2.4Ghz
Code Size		1MB Flash
Data Size		64KB SRAM
Data Rate		IEEE 802.11b: 1, 2, 5.5 and 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps Supports TX rate auto fall-back mechanism
Radio	Frequency Range	2.412 ~ 2.472 GHz
	Number of Selectable Sub-channels	Up to 11 channels. Profiles available include USA, 13 in Canada, Europe, Spain, France, Japan, China, Taiwan and "Other" (multiple countries)
	Modulations	802.11b: DSSS with DBPSK, DQPSK and CCK 802.11g: DSSS with DBPSK, DQPSK and CCK OFDM with BPSK, QPSK, 16QAM and 64QAM
	Antenna	Integrated PCB antenna , support external antenna
RF Receiver Max Receive Level		802.11b DSSS: -5 dBm 802.11b CCK: -10 dBm 802.11g OFDM: -15 dBm
RF Receiver Min Receive Sensitivity		802.11b: -92dBm @ 1 Mbps; -90dBm @ 2 Mbps; -89dBm @ 5.5 Mbps; -85dBm @ 11 Mbps 802.11g: -82dBm @ 6 Mbps; -82dBm @ 9 Mbps; -82dBm @ 12 Mbps; -82dBm @ 18 Mbps; -79dBm @ 24 Mbps; -76dBm @ 36 Mbps; -71dBm @ 48 Mbps; -70dBm @ 54 Mbps
RF Max Output Power		802.11b: 16.5 ±1dBm 802.11g: 14 ± 1dBm @ 54 Mbps; 15 ± 1dBm @ 48 Mbps; 16 ± 1dBm @ 6 ~ 36 Mbps
Security		802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)
WiFi Power Saving		Supports 3 WiFi power saving modes in normal operation of Infrastructure mode with auto-wakeup timer for upcoming Beacon frame reception. <ul style="list-style-type: none"> ● Typical Power Saving Mode ● Fast Power Saving Mode ● Maximum Power Saving Mode
I/O Functions	Function interface	2 UART, SPI, I2S/PCM

	General Purpose I/O	6 GPIOs (some GPIOs multiplexed with function interfaces)
Operating Voltage		3.3V typical
Average Power Consumption	WLAN mode, data transfer	250mA or 825 mW typical
	WLAN mode, no data in transfer, and WiFi Typical Power Saving enabled.	121mA or 399 mW typical
	WLAN mode, STOP mode with wake up enabled, WiFi Typical Power Saving Mode enabled.	80mA or 264 mW typical
	WLAN mode, STOP mode with wake up enabled, WiFi Fast Power Saving Mode enabled.	25mA or 82.5 mW typical
	WLAN unlinked, Deep Sleep mode with wake up enabled.	1.18mA or 3.9 mW typical
Peak Current at 3.3V Power Input in Serial to WiFi Application		360 mA
Operating Temperature		0°C to +70°C
Board Size		25 mm x 45 mm

Board Dimension

Below shows the XLW-002X wifi module dimension, the connector is male header connector with pin pitch of 2.0 mm. The XLW-002X wifi module have an integrated PCB antenna which requires the host PCB to maintain that area keep-out for best antenna performance. Also, when mounting on the host PCB of user's system, the module's PCB antenna should be on the edge of host PCB and faced outward.





Pin No.	Pin Name	Pin Description
0	REVERSED	reversed
1	LED/GPIO	Output wifi link status led / multiplexed with programable gpio
2	RESET/GPIO	Input module reset / multiplexed with programable gpio
3	VCC_3.3V	3.3V power input
4	RXD2	RXD of uart2, TTL, uart2 is used for transparent data transfer
5	TXD2	TXD of uart2, TTL, uart2 is used for transparent data transfer
6	GND	Ground
7	CTS	CTS of uart2 / multiplexed with programable gpio
8	RTS	RTS of uart2 / multiplexed with programable gpio
9	TXD0	TXD of uart0, TTL, uart0 is used for console command input
10	RXD0	RXD of uart0, TTL, uart0 is used for console command input
11	TXD0	TXD of uart0, It is linked with pin9
12	VCC_3.3V	3.3V power input
13	SS	SS of SPI interface
14	SCLK	SCLK of SPI interface
15	MOSI	MOSI of SPI interface
16	MISO	MISO of SPI interface
17	GND	Ground
18	RESET/GPIO	Input module reset / multiplexed with programable gpio
19	LED/GPIO	Output wifi link status led / multiplexed with programable gpio

Revision History

Revision	Date	Description
1.00	2012 / 5 / 30	Initial release.

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