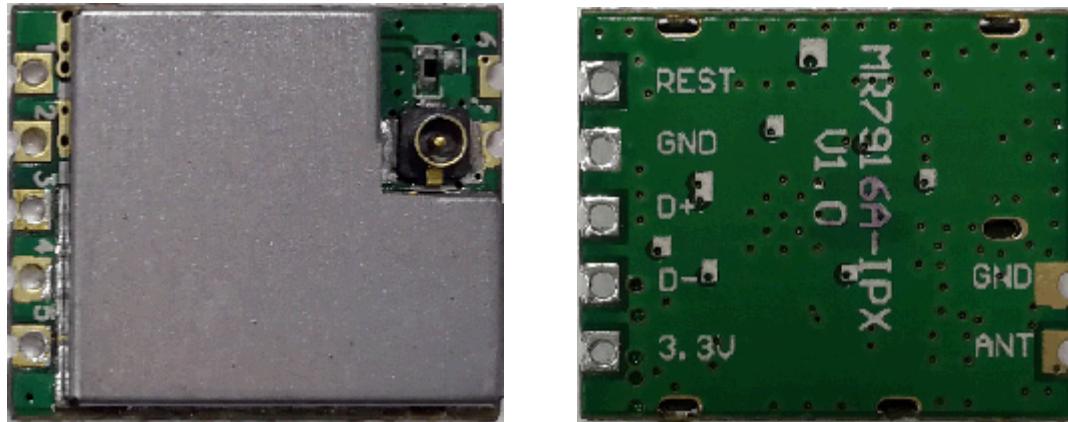


- FORSAFE CO., Ltd

SPECIFICATION FOR APPROVAL

Product: 2.4GHz WiFi Module

Model NO.: YW-0629



Image

Prepared By: _____ Date: _____

Checked By: _____ Date: _____

Approved By: _____ Date: _____

CUSTOMER APPROVAL: _____ DATE: _____

(Please return to us one copy of "Specification for approval" with your Approved signatures.)

1、Overview

YW-0629 is a WLAN 11n USB module, which fully supports the features and Functional compliance of IEEE 802.11n,e and i standards.

It supports up to 150Mbps high-speed wireless network connections.

It is designed to provide excellent performance with low power Consumption and enhance the advantages of robust system and cost-effective.

It is targeted at competitive superior performance, better power Management applications.

2、Features

1) General

- 7 -pin Stamp hole;
- CMOS MAC, Baseband PHY, and RF in a single chip for IEEE 802.11b/g/n compatible WLAN;
- Complete 802.11n solution for 2.4GHz band;
- 72.2Mbps receive PHY rate and 72.2Mbps transmit PHY rate using 20MHz bandwidth;
- 150Mbps receive PHY rate and 150Mbps transmit PHY rate using 40MHz bandwidth;
- Compatible with 802.11n specification;
- Backward compatible with 802.11b/g devices while operating in 802.11n mode

2) Interface

- Complies with USB 1.0/1.1/2.0 for WLAN **Standards Supported**;
- IEEE 802.11b/g/n compatible WLAN;
- IEEE 802.11e QoS Enhancement (WMM);
- 802.11i (WPA, WPA2). Open, shared key, and pair-wise key authentication services

3) WLAN MAC Features

- Frame aggregation for increased MAC efficiency (A-MSDU, A-MPDU);
- Low latency immediate High-Throughput Block Acknowledgement (HT-BA);
- PHY-level spoofing to enhance legacy compatibility;
- Power saving mechanism;
- Channel management and co-existence;
- Transmit Opportunity (TXOP) Short Inter-Frame Space (SIFS) bursting for higher multimedia bandwidth

4) WLAN PHY Features

IEEE 802.11n OFDM

- One Transmit and one Receive path (1T1R);

- 20MHz and 40MHz bandwidth transmission;
- Short Guard Interval (400ns);
- DSSS with DBPSK and DQPSK, CCK modulation with long and short preamble;
- OFDM with BPSK, QPSK, 16QAM, and 64QAM modulation. Convolutional Coding Rate: 1/2, 2/3, 3/4, and 5/6;
- Maximum data rate 54Mbps in 802.11g and 150Mbps in 802.11n;
- Hardware antenna diversity in per packet base;
- Selectable receiver FIR filters;
- Programmable scaling in transmitter and receiver to trade quantization noise against increased probability of clipping;
- Fast receiver Automatic Gain Control(AGC);
- On-chip ADC and DAC;

3、Specification

Product Model	YW-0629
Product Name	WLAN 11n USB 1T1R module
General	
Power Consumption	DC3.3V Maximum power dissipation in 80mA
Size	18.5mm(L)X15.4mm(W)X3.0mm(H)
Weight	Approx.:1.5 g
Operating Temperature	-20~ +70° C ambient temperature
Storing Temperature	-40 ~ 125°C ambient temperature
Operating humidity	5 to 90 % maximum (non-condensing)
Standard	802.11b/g/n, 802.3, 802.3u
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 150Mbps
Modulation Method	BPSK/ QPSK/ 16-QAM/ 64-QAM
Frequency Band	2.412~2.4835 GHz ISM Band
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum); IEEE 802.11g/n:OFDM (Orthogonal Frequency Division Multiplexing)
RF Output Power	< 14dBm@11n, < 15dBm@11g, < 19dBm@11b
Operation Mode	Ad hoc, Infrastructure
Receiver Sensitivity	11Mbps-86dBm@8%,54Mbps-73dBm@10%,130Mbps, -66dBm@10%
Operation Range	Up to 180 meters in open space
LED	NO
OS Support	Windows 2000, XP32-64, Vista 32/64, Win7 32/64, Linux, Mac, Android, WIN CE
Security	WEP, TKIP, AES, WPA, WPA2
Interface	USB 2.0

4、DC Characteristics

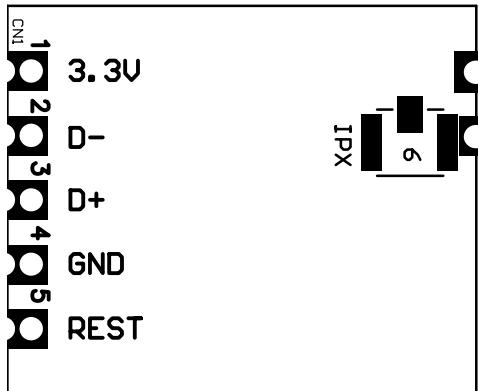
Description	Performance	
	Typ	Unit
Sleep mode	1.1	mA
RX Active, HT40, MCS7	151	mA
RX Power saving, DTIM=1	15	mA
RX Listen	6	mA
TX HT40, MCS7 @ 15dBm	210	mA
TX CCK, 11Mbps @ 19dBm	242	mA

Note: All result is measured at the antenna port and VDD33 is 3.3V.

Power Consumption

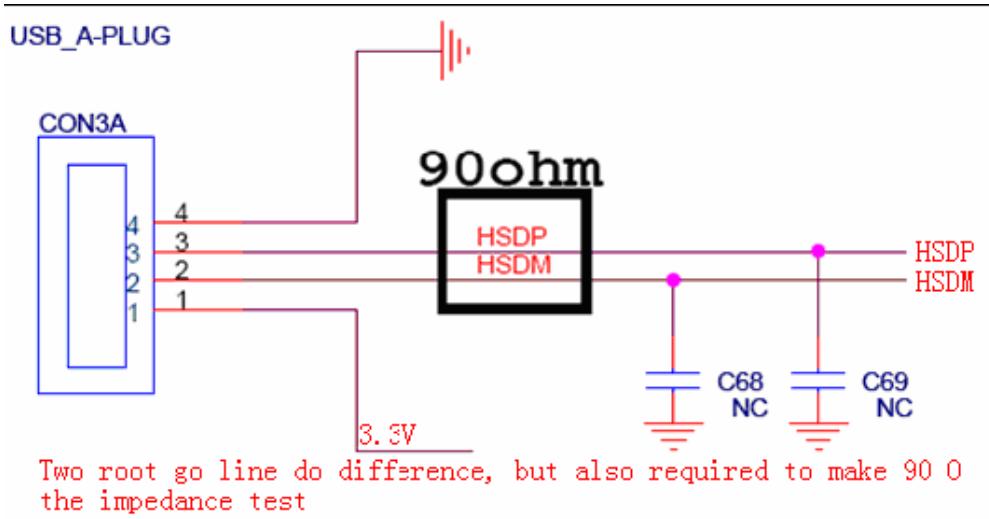
Parameters	Conditions	Typ	Unit
Receiving Tests the biggest receive	11MBPS	90	mA
	54MBPS	90	mA
	65MBPS	90	mA
	135MBPS	90	mA
Transmission Biggest transmission test	11MBPS	120	mA
	54MBPS	110	mA
	65MBPS	110	mA
	135MBPS	105	mA
The depth waits for an opportunity		5	mA
Deep sleep		5	mA
Browse the web current		90	mA
High-definition current		100	mA

5、Pin Description



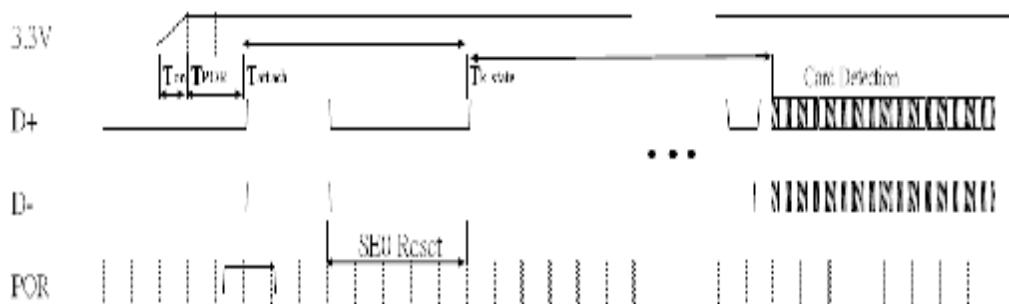
Pin NO.	Function
1	Power: DC 3.3V
2	D-
3	D+
4	GND
5	REST
6	IPX: Antenna Port

6、Application circuit



7、sequence chart

USB Bus during Power On Sequence



8、Dimension

