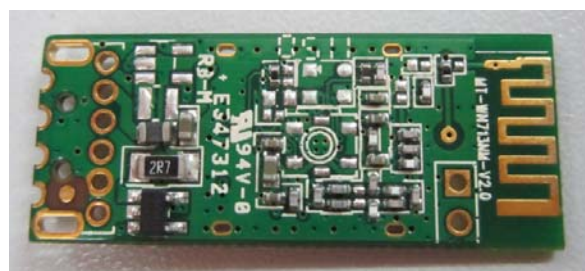
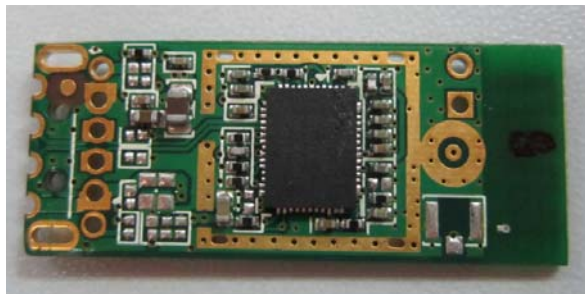
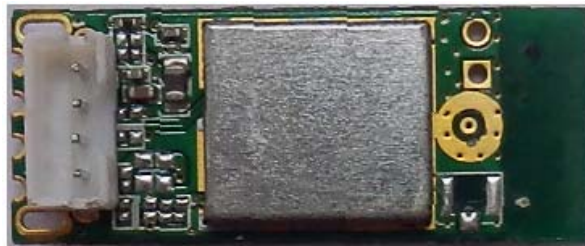


SPECIFICATIONS

802.11 b/g/n Wireless USB Module
(USB Host Power Is 3.3V)



Ver. 2.0

Date: 10/4/2012

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Device Overall Description

The WN713NM is designed to provide wireless LAN function on a small form factor with USB interface. The wireless LAN function is based on Ralink RT5370 MAC/BBP/RF controller and high gain power amplifier, fully comply with current draft IEEE 802.11n and IEEE 802.11 b/g standards.

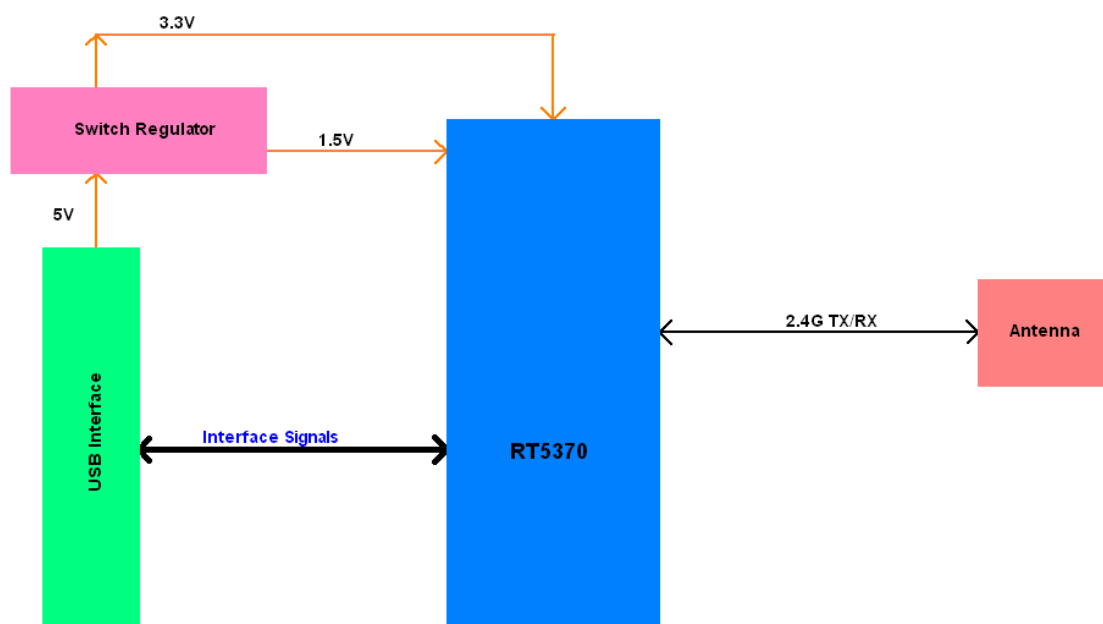
Features

- Ralink RT5370 MAC/BBP/RF Controller
- 1T1R Modes
- 11b: 1,2,5.5,11Mbps
- 11g: 6,9,12,18,24,36,48,54Mbps
- 11n: Legacy and High Throughput Modes, Support 20/40MHz Bandwidth MCS0~7(150Mbps PHY Rate Rate)
- Reverse Direction Data Flow and Frame Aggregation
- WEP 64/128, WPA, WPA2, TKIP, AES
- QoS-WMM, WMM-PS
- WPS, PIN, PBC
- Multiple BSSID Support
- Low Power with Advanced Power Management

Specification Compliance

- 802.11n Draft3.0
- 802.11b/g
- 802.11e
- 802.11i
- 802.11j
- USB2.0

Block Diagram



RT5370: Highly integrated MAC/BBP and 2.4GHz RF single chip

Channel Assignment

2.4GHz Channel Support

Channel	Frequency	FCC (US)	IC(CA)	ETSI (EU)	Japan (JP)
1	2412MHz	X	X	X	X
2	2417MHz	X	X	X	X
3	2422MHz	X	X	X	X
4	2427MHz	X	X	X	X
5	2432MHz	X	X	X	X
6	2437MHz	X	X	X	X
7	2442MHz	X	X	X	X
8	2447MHz	X	X	X	X
9	2452MHz	X	X	X	X
10	2457MHz	X	X	X	X
11	2462MHz	X	X	X	X
12	2467MHz			X	X
13	2472MHz			X	X
14	2484MHz				X

KEY:

US = United States, CA = Canada, EU = European Countries (except France and Spain) ,JP = Japan

Many countries and region are currently revising the channel assignment.

X = Supported

Security

- Complete Security Features - WEP 64/128, WPA, WPA2, 802.1x, and 802.11i
- Cisco CCS Compliant

Certification

Cisco CCX

Software & OS support

Operating System	Driver
Windows 2000	Available
Windows XP 32/64	Available
Windows Vista 32/64	Available
Windows 7 32/64	Available
Linux	Available
MAC OS	Available

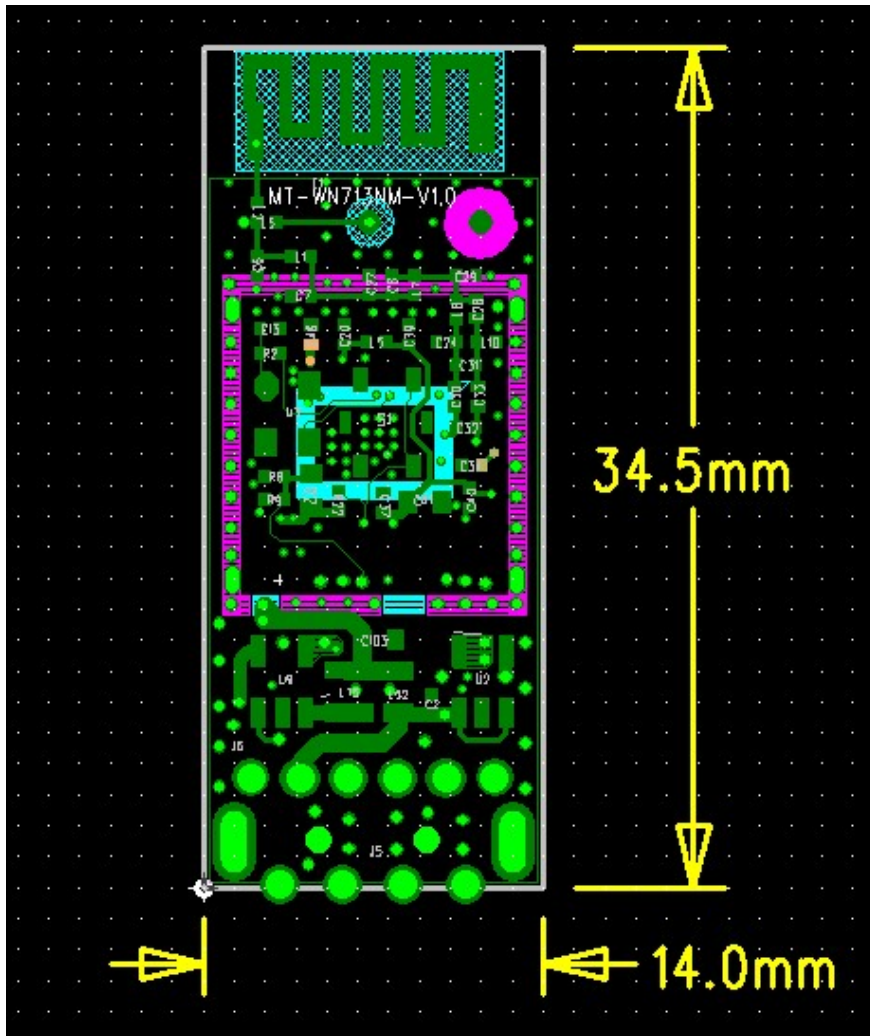
Operating Conditions

Voltage Range	5 +/-0.3V
Operating Temperature Range	-10°C - 65°C
Storage Temperature Range	-10°C - 85°C
Relative Humidity during Operating	Max. 95% (Non-Condensing)
Relative Humidity during Storage	Max. 95% (Non-Condensing)

RF Characteristics

RF Characteristics	Minimum	Typical	Maximum	Units
PC Interface		USB 2.0		
Internal Antenna Impedance		50 ohms		
Operating Temperature Range	0		+65	°C
Storage Temperature Range	-20		+85	°C
Supply Voltage	4.7	5.0	5.3	V
RX Supply Current (11b 11Mbps)		140		mA
Power Consumption		462		mWatts
RX Supply Current (11g 54Mbps)		150		mA
Power Consumption		495		mWatts
RX Supply Current (11n 150Mbps)		190		mA
Power Consumption		627		mWatts
TX Supply Current (11b 1Mbps)		265		mA
Power Consumption		875		mWatts
TX Supply Current(11g 6Mbps)		255		mA
Power Consumption		842		mWatts
TX Supply Current (11n 15Mbps)		245		mA
Power Consumption		809		mWatts
Radio off Current		40		mA
Power Consumption		132		mWatts
RX Sensitivity(11b,11Mbps)		-86		dBm
RX Sensitivity(11g,54Mbps)		-71		dBm
RX Sensitivity (11n,150Mbps)		-63		dBm
TX Output Power(11b,11M)		17		dBm
TX Output Power(11g,54Mbps)		15		dBm
TX Output Power(11n,MCS0)		14		dBm
TX Output Power(11n,MCS7)		14		dBm
TX Spectral Mask (CCK)		PASS		
TX Spectral Mask (OFDM)		PASS		
TX Spectral Mask (11n,20M)		PASS		
TX Spectral Mask (11n,40M)		PASS		
Preamble Length		Long/Short		

Mechanical Drawing

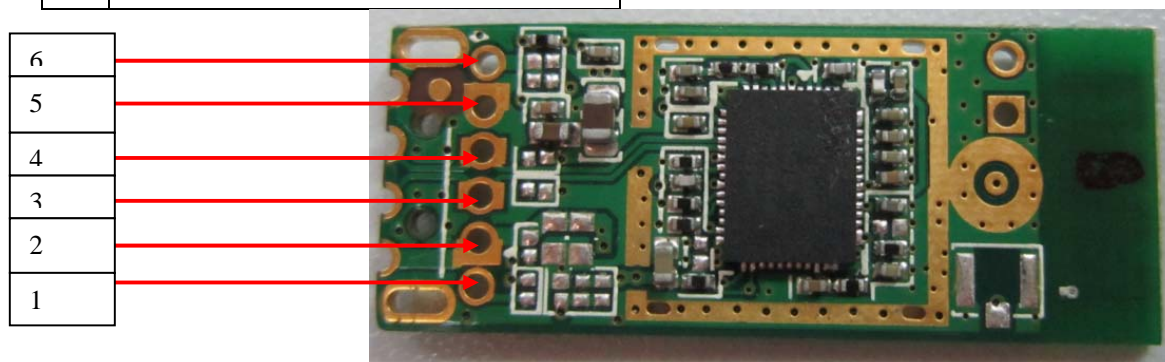


Antenna Connector

Connector	Vendor	Part#
Antenna*1	Hirose	On Board PCB Antenna

Host Interface Pin Definition

1	FAA pin: WLAN RF Disable/Enable
2	Vcc
3	USB Data-
4	USB Data +
5	GND
6	WLAN LED LINK



Note:

Pin 6 is Low active for WLAN LED Link.

Pin 1 is Low voltage to disable RF function

LED Indication

LED status	WLAN card activity
LED on	Associated, and authenticated but not transmitting or receiving
LED Slow Blink	Scanning for AP
LED Intermittent Blink	Activity proportional to transmitting/receiving speed
LED off	Radio off

COMPLIANCES

Federal Communication Commission Interference Statement

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 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.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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

The end host device use this module should marked "Contain FCC ID:ZVA01" in the label of the host device.