

HK NATER TECH LIMITED

NT-UM01EBS-5572 模块 承认书

客户名称

Customer: \_\_\_\_\_

样品名称

Description: NT-UM01EBS-5572 模块 V1.0

客户料号

Customer P/N: \_\_\_\_\_

日期

Date: \_\_\_\_\_

客户栏 Customer		
核准Approve	审核Auditing	承认Admit

供应商栏 Provider		
核准Approve	审核Auditing	承认Admit

客户名称:  
公司地址:  
电 话:  
传 真:  
联 系 人:  
E-mail:

供方名称: HK NATER TECH LIMITED  
公司地址: 深圳市宝安区宝民二路贤基大厦2楼  
电 话: 0755-61522172/13510620050  
传 真: 0755-61522171  
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E-mail: hsdgood@163.com

尊敬的客户: 请收到我公司样品承认书三日内传首页, 谢谢!

# **SPECIFICATIONS**

**IEEE 802.11 a/b/g/n 2.4 to 5.8 GHz 2T2R**

**WIFI   Module**

**NT-UM01EBS-5572-V1.0**

**Combo Module**

# Overview

NT-UM01EBS-5572-V1.0 is a integrated MAC/BBP and 2.4/5 GHz RF/PA/LNA single module which supports a 300 Mbps PHY rate. It fully complies with IEEE 802.11n and IEEE 802.11 b/g standards, offering feature-rich wireless connectivity at a high standard, and delivering reliable, cost-effective throughput from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance and low power consumption. Intelligent MAC design deploys a highly efficient DMA engine and hardware data processing accelerators without overloading the host processor. The NT-UM01EBS-5572-V1.0 is designed to support standard-based features in the areas of security, quality of service, and international regulations, giving end users the greatest performance anytime and in any circumstance.

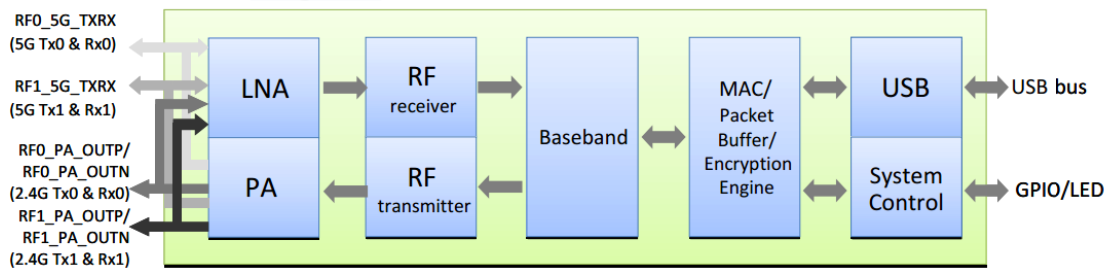
# Features

- CMOS Technology with an integrated PA, LNA, RF, Baseband, and MAC
- 2T2R Mode with support for a 300 Mbps Tx/Rx PHY Rate
- Legacy and High Throughput Modes
- 20 MHz/40 MHz Bandwidth
- Reverse Direction Grant Data Flow and Frame Aggregation
- Multiple BSSID Support
- Bluetooth Co-existence
- Security: WEP 64/128, WPA, WPA2, TKIP, AES, WAPI
- QoS-WMM, WMM-PS
- WPS/ WPS2.0: PIN, PBC
- Cisco CCX Support
- USB 2.0
- Low Power with Advanced Power Management
- Support for Windows XP 32/64, 2000, Vista 32/64, Windows 7 32/64, Linux, Macintosh

# General Specification

Model	NT-UM01EBS-5572-V1.0
Product Name	WLAN 11n USB module
MajorChipset	MT5572 (MTK/Ralink)
Standard	802.11a/b/g/n
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 300Mbps
Modulation Method	QoS-WMM, WMM-PS;WPS/ WPS2.0: PIN, PBC
Frequency Band	2.4 ~ 5.8 GHz ISM Band
Spread Spectrum	IEEE 802.11a: ISM(Industrial Scientific Medical) IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g/n:OFDM (Orthogonal Frequency Division Multiplexing)
RF Output Power	< 18dBm@11b,< 14dBm@11g ,< 13dBm@11n, <12dBm@11a
Operation Mode	Ad hoc, Infrastructure
Receiver Sensitivity	11Mbps -86dBm@8%,135Mbps -73dBm@10%,300Mbps -66dBm@10%
OS Support	Windows XP 32/64, 2000, Vista 32/64, Windows 7 32/64, Linux, Macintosh
Security	WEP 64/128, WPA, WPA2, TKIP, AES, WAPI
Interface	USB 2.0
Power Consumption	DC3.3V
Operating Channel	11: (Ch. 1-11) - United States 13: (Ch. 1-13) - Europe 14: (Ch. 1-14) - Japan
Operating Temperature	-20 ~ +60° C ambient temperature
Storage Temperature	-10 ~ 70°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
Dimension	27.0 x 17.8537 x 1.9mm (LxWxH) +-0.2MM

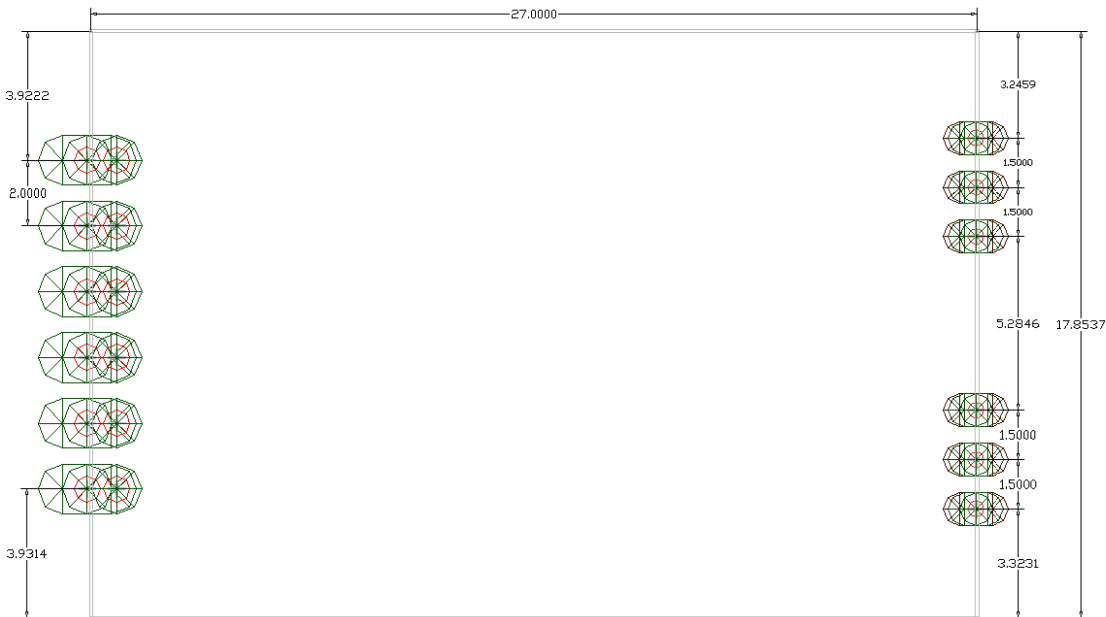
# Diagram



# Dimensions:

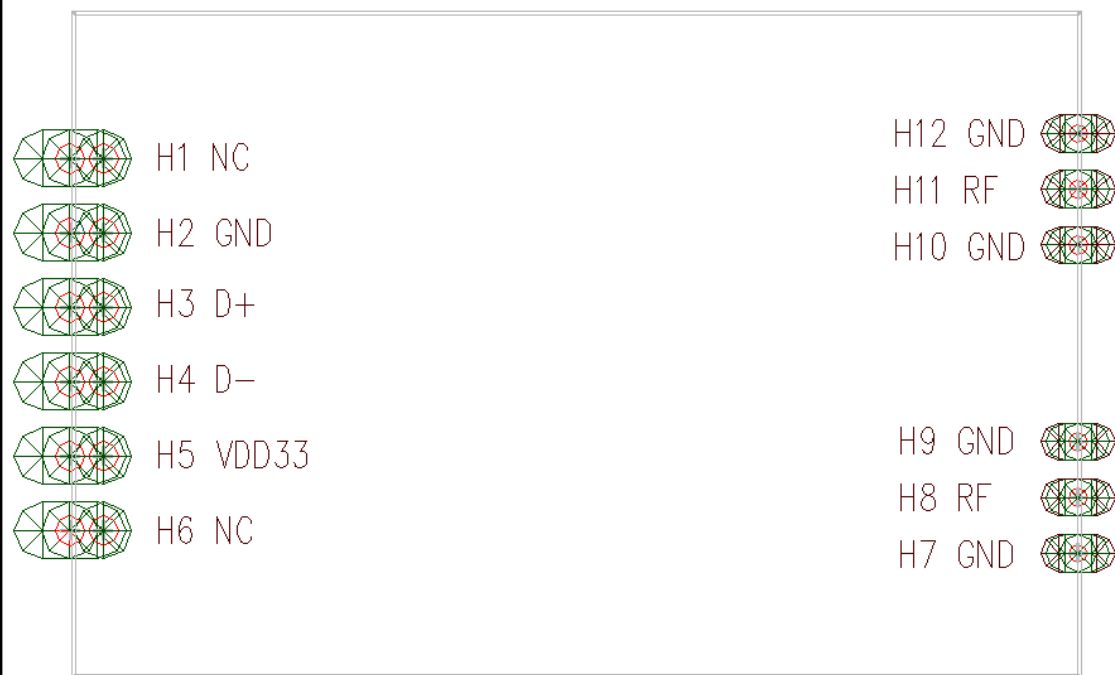
## Mechanical

Dimensions (mm)	Length	Width	Height
	27.000 (Tolerance:±0.2mm)	17.8537 (Tolerance:±0.2mm)	1.9 (Tolerance:±0.2mm)

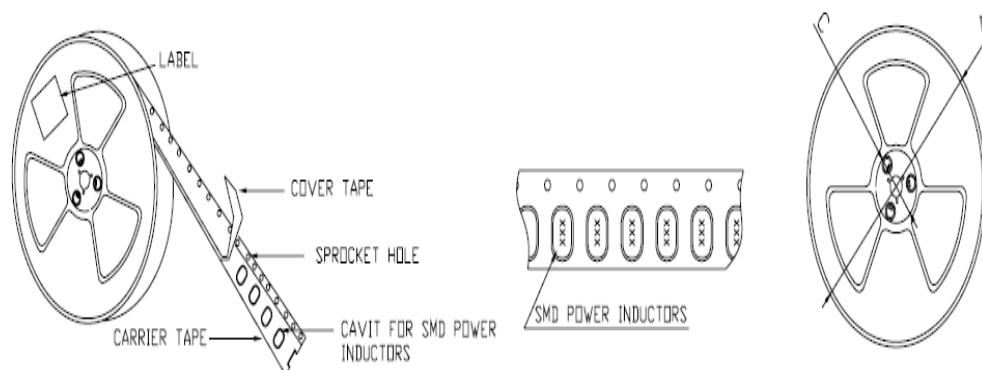


## MODULE PIN ASSIGNMENT

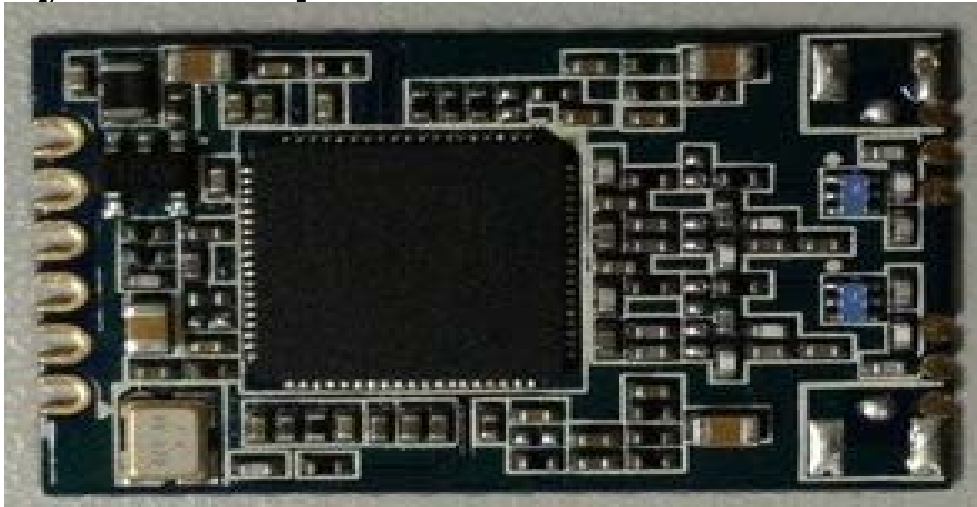
Pin	Function	Pin	Function
H1	NC	H7	GND
H2	GND	H8	RF
H3	D+	H9	GND
H4	D-	H10	GND
H5	VDD33	H11	RF
H6	NC	H12	GND



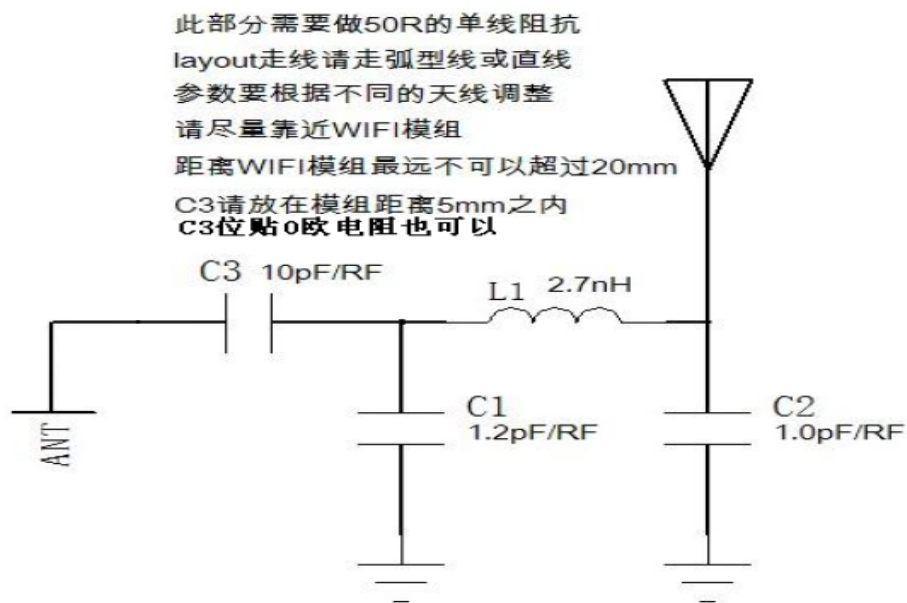
## Packaging Appearance Figure



## Physical map



## External antenna reference design



## DC Characteristics

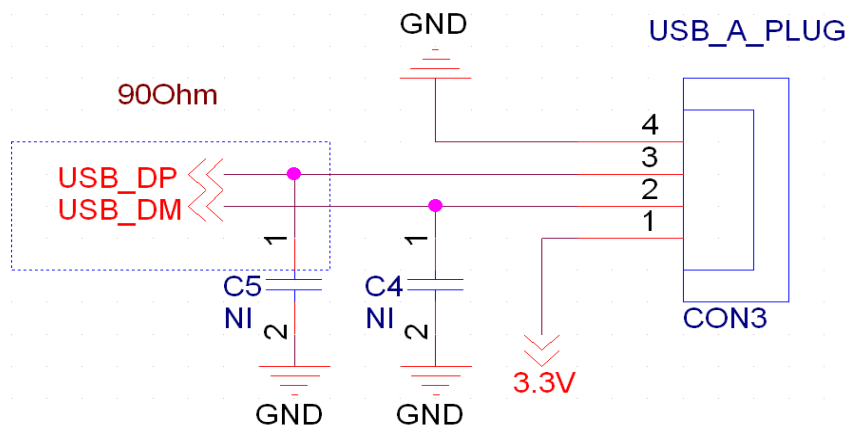
Symbol	Parameter	Minimum	Typical	Maximum	Units
VD33A, VD33D	3.3V I/O Supply Voltage	3.1	3.3	3.5	V
VD15A, VD15D	1.5V Supply Voltage	1.4	1.5	1.6	V
IDD33	3.3V Rating Current	-	-	400	mA



## Power Consumption

Parameters	Sym	Conditions	Min	Typ	Max	Unit
3.3V Supply Voltage	Vc33		3.1	3.3	3.5	V
1.5V Supply Voltage	Vc15		1.4	1.5	1.6	V
<b>Receiving Tests the biggest receive</b>						
3.3V Current Consumption	Icc33rx	H40MCS7		65		mA
3.3V Current Consumption	Icc33rx	OFDM 54M		70		mA
<b>Transmission Biggest transmission test</b>						
3.3V Current Consumption	Icc33tx	H40 MCS7		80		mA
3.3V Current Consumption	Icc33tx	OFDM 54M		85		mA
<b>The depth waits for an opportunity</b>	Icc33tx/rx			2		mA
<b>Deep sleep</b>	Ic33tx/rx			2		mA

## USB interface electrical characteristics



注：1.USB 数据线需要做 90Ohm 的阻抗。

2.建议电源输入端留一个电源开关，每次开关卡时可以做一个上电断电的作用  
可以使用 wifi 复位，就不会有打不开 wifi 的错误现象出现。

Note:1.Two root go line do difference , but also required to make 90Ohm the impedance test.e get lock can do

2.Suggested that leave a power switch power supply input terminal ,every tim a electric power is on

### **Patch WIFI module installed before the Note:**

1. customers must open stencil WIFI module pad holes open, press 1 to 1 0.7mm proportion to open outward expansion, thickness 0.12MM.
2. there is need to take a WIFI mode must not bare hands to pick up the WIFI module, be sure to wear gloves and a wrist strap.
3. the furnace temperature according to the size of the customer's motherboard, usually like stickers on a tablet 250 + -5 degrees.

### **4. Module vacuum packaging, storage and use of controls should note the following:**

- module reel plus vacuum packaging storage period:  
Shelf life: 12 months Storage Conditions: Temperature in: <40 ° C, Relative Humidity: <90% R.H
- The module vacuum packaging unpacking, assembly time frame:
  - Check the humidity indicator card: display value should be less than 30% (blue), such as: 30% ~ 40% (pink) or greater than 40% (red) indicates that the module has the absorbent gas.
  - the factory environment temperature and humidity control: <30% ° C, <60% RH.
  - After unpacking, the the workshop shelf life of 168 hours.
- Module vacuum packing once opened , if not used within 168 hours End:
  - module to be re-baking, remove the module moisture problems.
  - Baking temperature: 125 ° C, 8 hours.
  - After baking, put the right amount of desiccant resealable packaging.

### **5. Module vacuum packaging for 2000 PCS per disk.**

- The reel module packaging items as below
- Reel packing 2000 PCS per disk
- Reel packing after opening, If not used up within 48 hours, module to be re-baking, remove the module moisture problems. Baking temperature: 125 ° C, 8 hours.

### **6. Module pallet packaging considerations are as follows.**

- Pallet packaging each plate is 100 pcs
- If not used up within 48 hours, module to be re-baking, remove the module moisture problems. Baking temperature: 125 ° C, 8 hours.

Note: the above packaging according to customer requirements, the packaging will be subject to actual material.