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:	供方名称：HK NATER TECH LIMITED
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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.

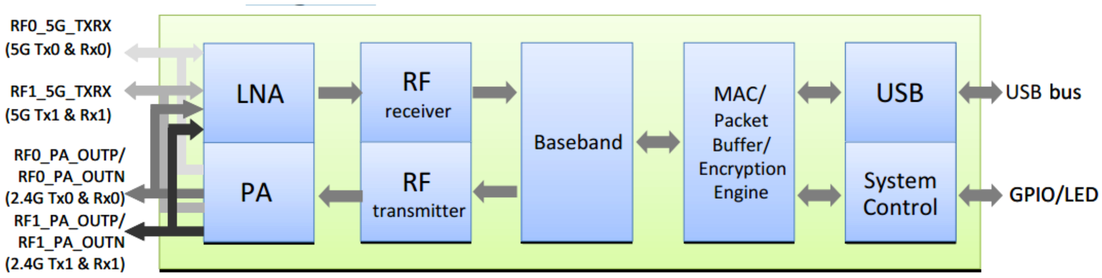
Features

- 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

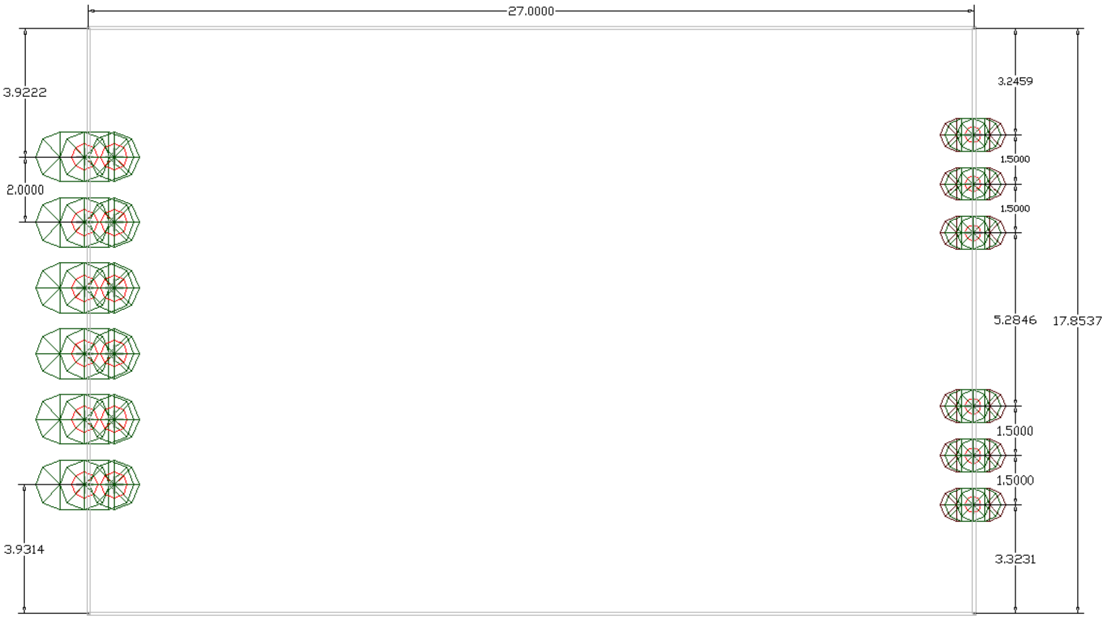
Diagram



Dimensions:

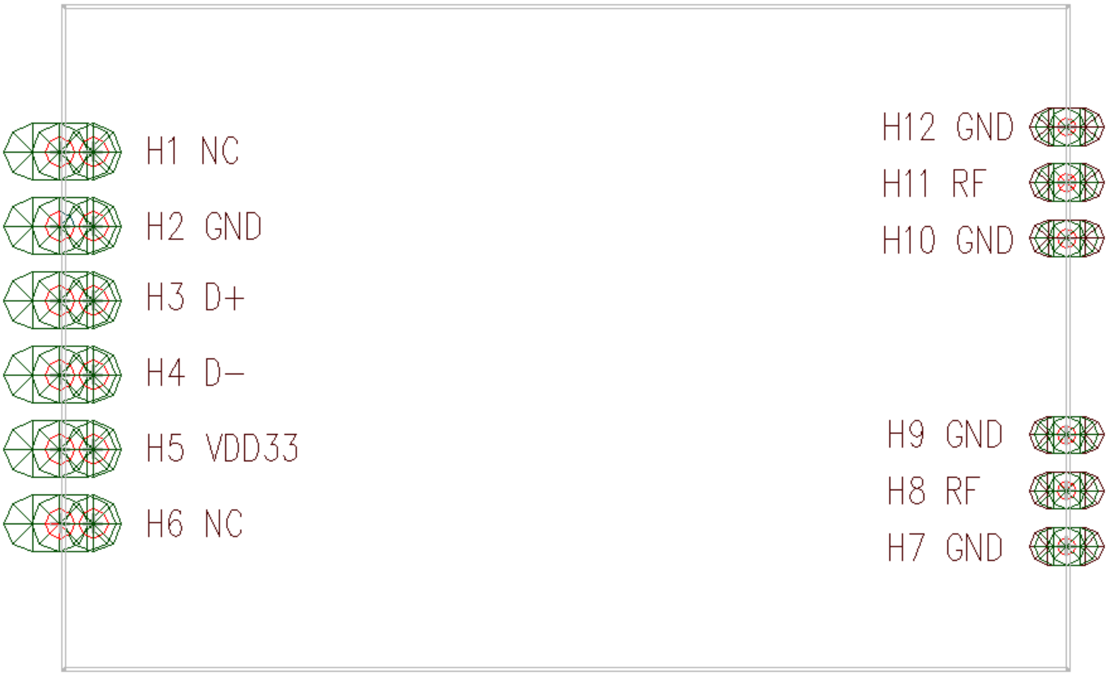
Mechanical

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

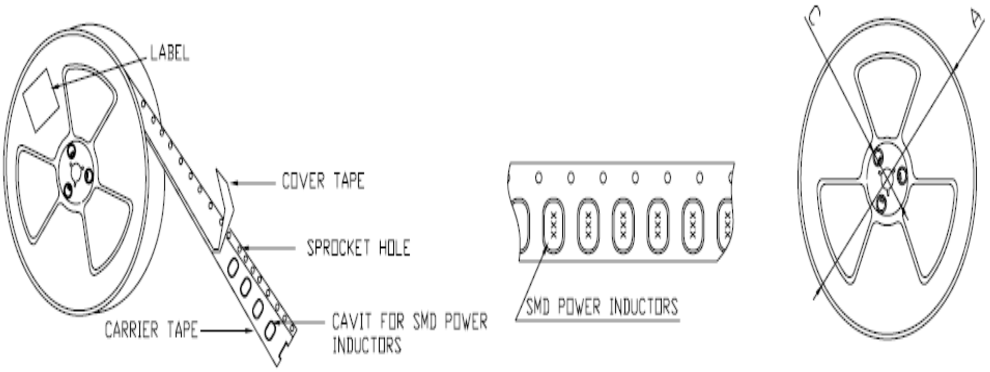


MODULE PIN ASSIGNMENT

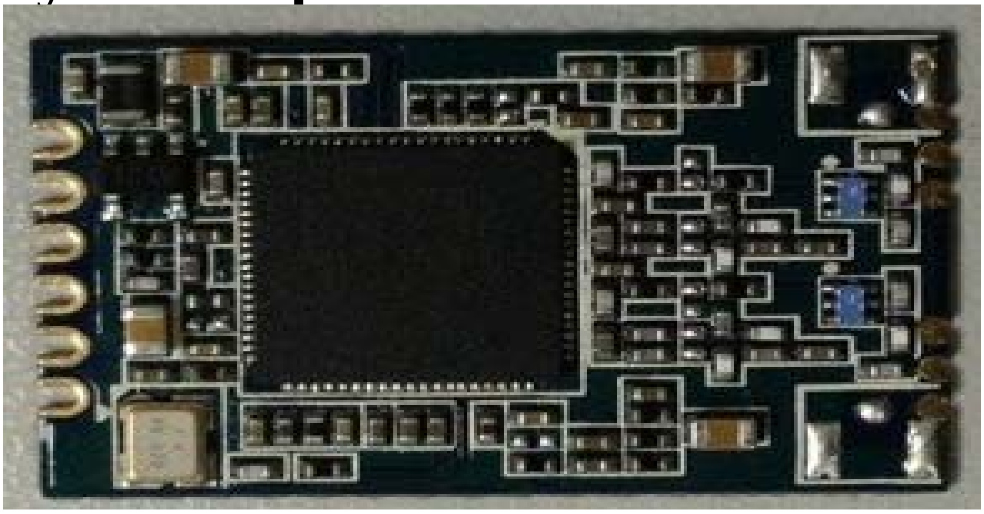
Pin	Function	Pin	Function
H1	NC	**H7**	GND
H2	GND	**H8**	RF
H3	D+	**H9**	GND
H4	D-	**H10**	GND
H5	VDD33	**H11**	RF
H6	NC	**H12**	GND



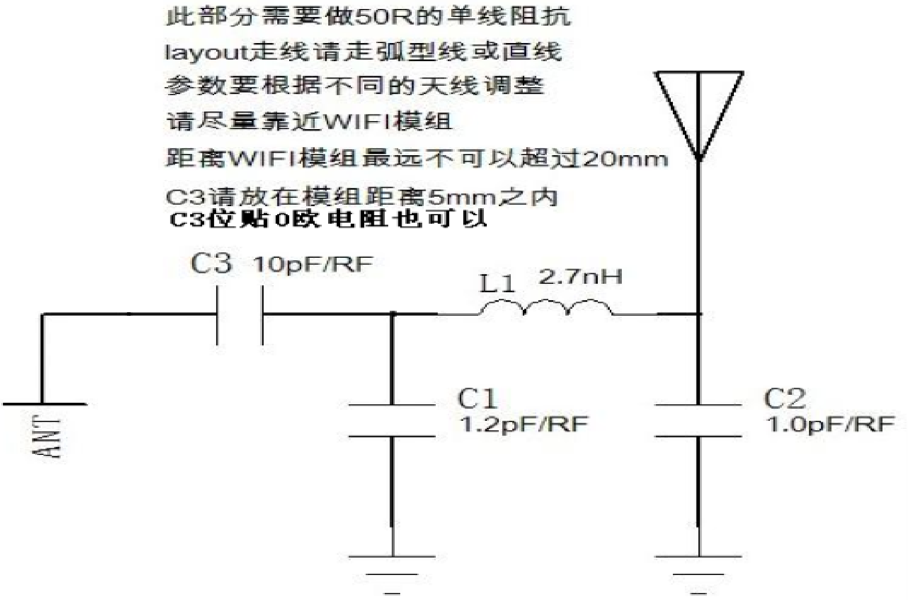
Packaging Appearance Figure



Physical map



External antenna reference design



此部分需要做50R的单线阻抗

layout走线请走弧型线或直线

参数要根据不同的天线调整

请尽量靠近WIFI模组

距离WIFI模组最远不可以超过20mm

C3请放在模组距离5mm之内

C3位贴0欧电阻也可以

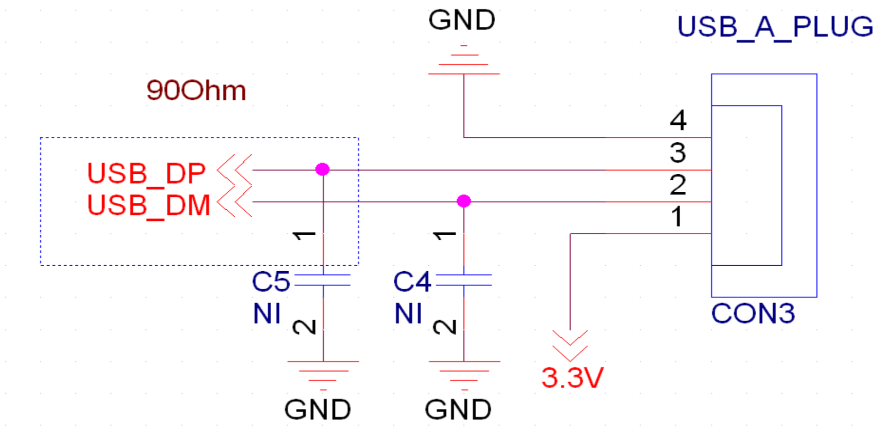
DC Characteristics

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
Receiving Tests the biggest receive						
3.3V Current Consumption	Icc33rx	H40MCS7		65		mA
3.3V Current Consumption	Icc33rx	OFDM 54M		70		mA
Transmission Biggest transmission test						
3.3V Current Consumption	Icc33tx	H40 MCS7		80		mA
3.3V Current Consumption	Icc33tx	OFDM 54M		85		mA
The depth waits for an opportunity	Icc33tx/rx			2		mA
Deep sleep	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.