

PRODUCT SPECIFICATION
802.11n, 2.4G 2T2R Wireless LAN USB Module

WN4627R

RT5372

Version 1.0

User Manual

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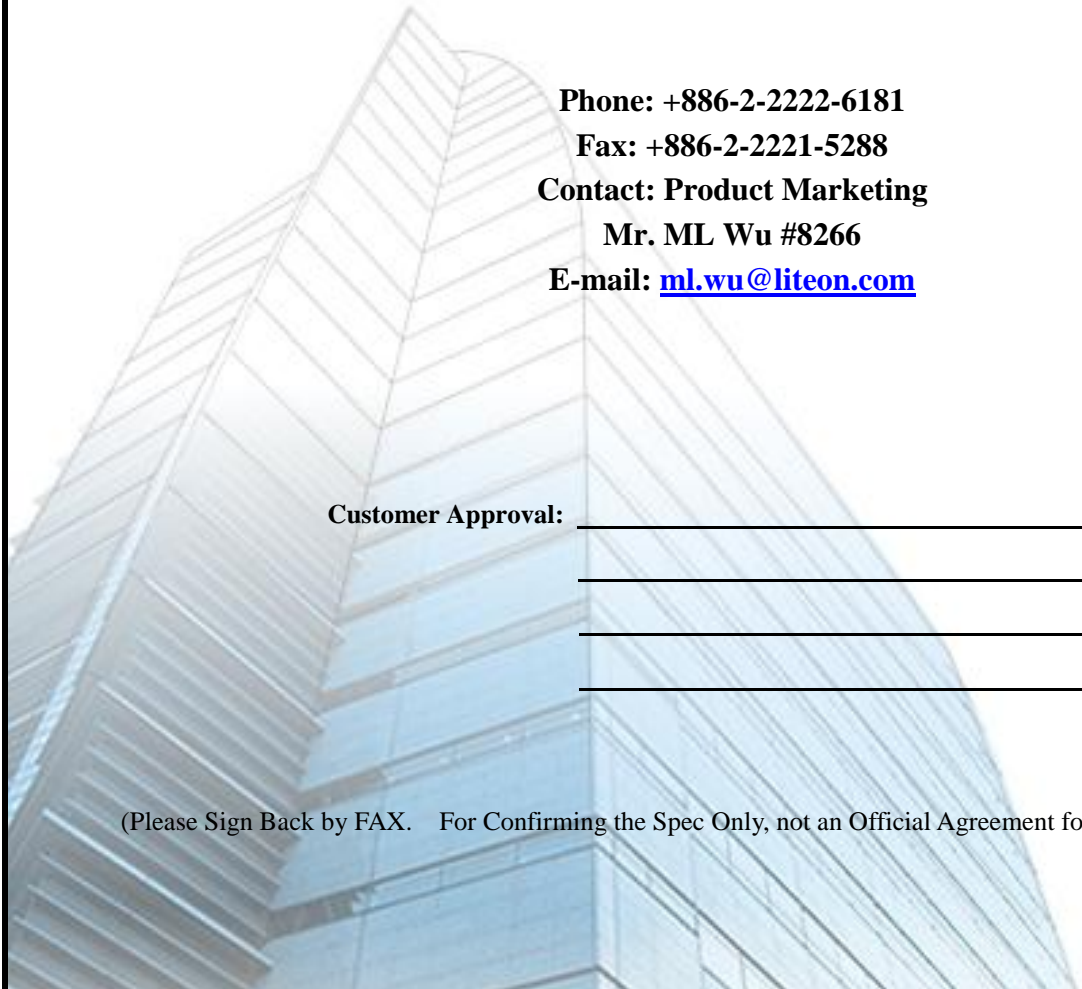
Customer Approval: _____ (Signature)

_____ (Title)

_____ (Company)

_____ (Date)

(Please Sign Back by FAX. For Confirming the Spec Only, not an Official Agreement for OEM/ODM Business)



CONTENT

FCC WARING STATEMENT	4
PRODUCT FEATURES	5
PRODUCT SPECIFICATIONS	6
MAIN CHIPSET	6
FUNCTIONAL SPECIFICATIONS	6
PIN ASSIGMENT	8
USB CONNECTOR SPEC	8
MECHANICAL	9
BLOCK DIAGRAM	9
ANTENNA SPEC	10
MODULE PHOTO	11
EEPROM INFORMATION	11
ENVIRONMENTAL	11
OPERATING	11
STORAGE	11
PACKING DRAWING	12

FCC WARNING STATEMENT

FEDERAL COMMUNICATIONS 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 or more 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.

CAUTION:

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

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.

RF exposure warning

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: PPQ-WN4629R "

Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

- 1) This device is intended for OEM integrators only.
- 2) Please see the full Grant of Equipment document for other restrictions.

PRODUCT FEATURES

- Operate at ISM frequency Band (2.4GHz)
- IEEE Standards Support, 802.11b, 802.11g and 802.11n
- USB 2.0
- Enterprise level security supporting: WPA, WPA2, WPA3, WAPI
- One-stream IEEE 802.11n support for 20MHz and 40MHz bandwidth channels provides PHY layer rates up to 522Mbps
-
-

PRODUCT SPECIFICATIONS

MAIN CHIPSET

MAC/ Baseband/ RF: Ralink RT5372

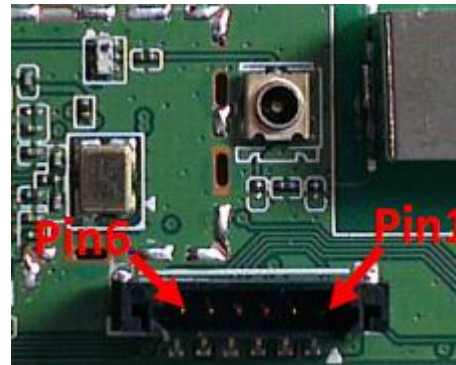
FUNCTIONAL SPECIFICATIONS

Wi-Fi Function	
Standard	IEEE802.11b; IEEE 802.11g; IEEE 802.11n
Bus Interface	USB2.0
Data Rate	<p>802.11b: 11, 5.5, 2, 1 Mbps</p> <p>802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps</p> <p>802.11n: MCS 0 to 15 for HT20MHz MCS 0 to 15 for HT40MHz</p>
Media Access Control	CSMA/CA with ACK
Modulation Techniques	<p>802.11b: CCK, DQPSK, DBPSK</p> <p>802.11g: 64QAM, 16QAM, QPSK, BPSK</p> <p>802.11n: 64QAM, 16QAM, QPSK, BPSK</p>
Network Architecture	Ad-hoc mode (Peer-to-Peer) Infrastructure mode
Operation Channel	<p>2.4GHz</p> <p>11: (Ch. 1-11) – United States 13: (Ch. 1-13) – Europe 14: (Ch. 1-14) – Japan</p>
Frequency Range	<p>802.11bg 2.400 ~ 2.4835 GHz</p> <p>802.11b: 16 dBm@1Mbps 16 dBm@11Mbps</p> <p>802.11g: 15 dBm@6Mbps 14 dBm@54Mbps</p> <p>802.11n:</p>
Transmit Output Power – 2x2 (Tolerance: ±1.5dBm)	<p>20MHz: 16 dBm@MCS0 14 dBm@MCS7 14 dBm@MCS15</p> <p>40MHz: 14 dBm@MCS0 12 dBm@MCS7 12 dBm@MCS15</p>
Receiver Sensitivity	<p>802.11b: -88 dBm@1Mbps -82 dBm@11Mbps</p>

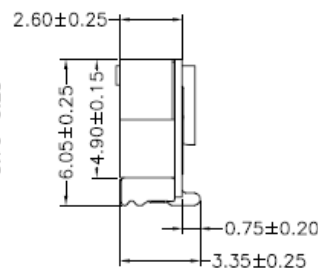
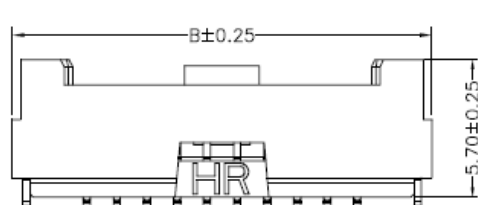
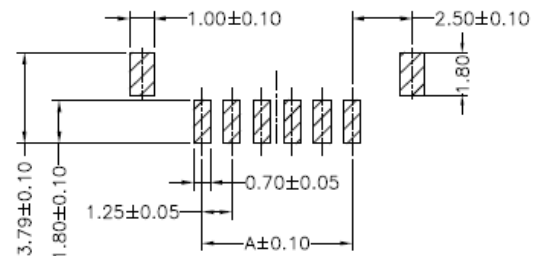
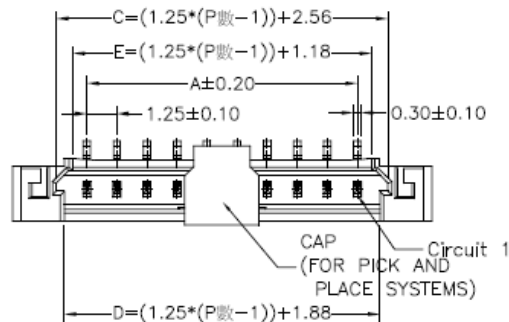
	<p>802.11g: -86 dBm@6Mbps -70 dBm@54Mbps</p> <p>802.11n: 20MHz -86 dBm@MCS0 -68 dBm@MCS7 -68 dBm@MCS15</p> <p>40MHz -83 dBm@MCS0 -65 dBm@MCS7 -65 dBm@MCS15</p>
Security	WPA, WPA2, WPS, WEP 64b&128bit, IEEE 802.1X, IEEE 802.11i
Operating Voltage	3.3V ± 5% I/O supply voltage
OS Supported	Microsoft Windows XP /Win7/Win8; Linux based
Power Consumption	<p><i>TX Mode:</i> TBD mA</p> <p><i>RX Mode:</i> TBD mA</p> <p><i>Standby Mode:</i> TBD mA</p> <p><i>Radio Off:</i> TBD mA</p>
Antenna Type	Metal antenna

PIN ASSIGNMENT

Pin.	Pin Define	Status
1	+3.3V	YES
2	USB_D-	YES
3	USB_D+	YES
4	GND	YES
5	RESET#	YES
6	GND	YES



USB CONNECTOR SPEC



P.C.B. LAYOUT

02P~20P

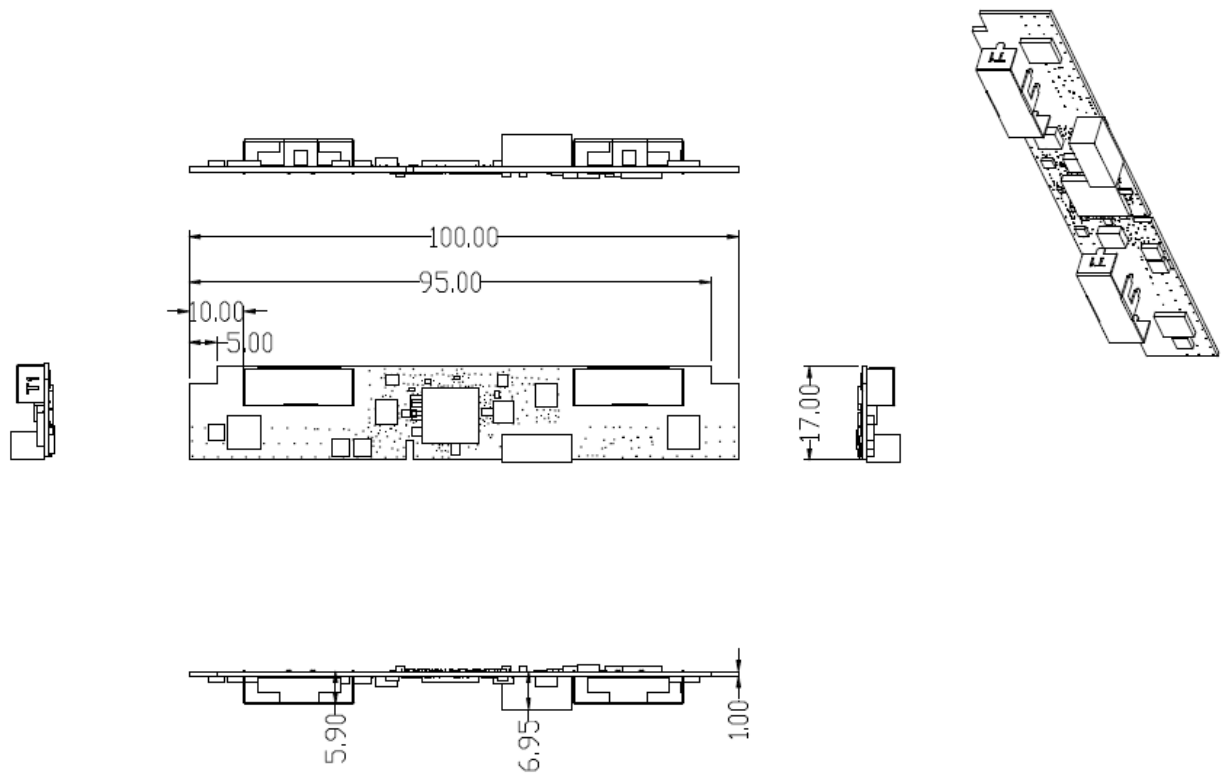
Ordering Information & Dimensions

PART NO.	Dimensions	
	A	B
A1253WVA-S-02P	1.25	7.45
A1253WVA-S-03P	2.50	8.70
A1253WVA-S-04P	3.75	9.95
A1253WVA-S-05P	5.00	11.20
A1253WVA-S-06P	6.25	12.45
A1253WVA-S-07P	7.50	13.70
A1253WVA-S-08P	8.75	14.95
A1253WVA-S-09P	10.00	16.20
A1253WVA-S-10P	11.25	17.45
A1253WVA-S-11P	12.50	18.70
A1253WVA-S-12P	13.75	19.95
A1253WVA-S-13P	15.00	21.20
A1253WVA-S-14P	16.25	22.45
A1253WVA-S-15P	17.50	23.70
A1253WVA-S-20P	23.75	29.95
A1253WVA-S-25P	30.00	36.20
A1253WVA-S-30P	36.25	42.45

SPECIFICATIONS

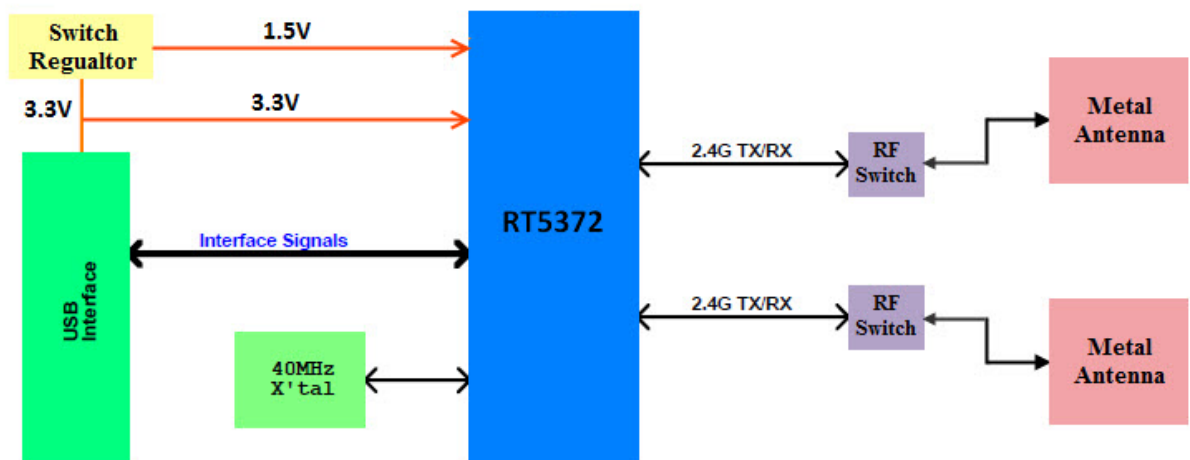
Current Rating: 1A AC,DC
 Voltage Rating: 150V AC,DC
 Temperature Range: -25°C ~ +85°C
 Contact Resistance: 30mΩ Max.
 Insulation Resistance: 500MΩ Min.
 Withstanding Voltage: 500V AC/minute
 Pin Material: Brass/Tin-plated
 Solder Tabs: Brass/Tin-plated
 Material: Nylon 6T,UL94V-0
 Color: Natural(Beige)

MECHANICAL



Unit:mm

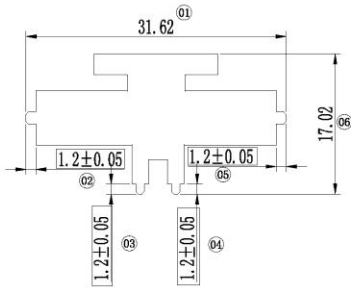
BLOCK DIAGRAM



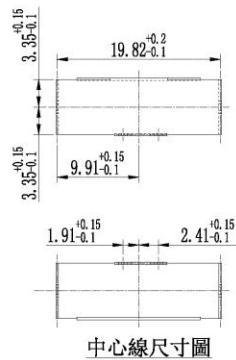
ANTENNA SPEC

工程变更单号	版次	AREA 区域	DATE 日期	CONTENT OF CHANGE 变更项目
	A		2013/04/15	新圖繪製
	B		2013/05/22	Pattern修改繪製
	C		2013/05/30	定位角增加倒角

試作部品圖



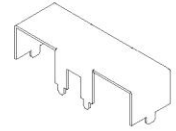
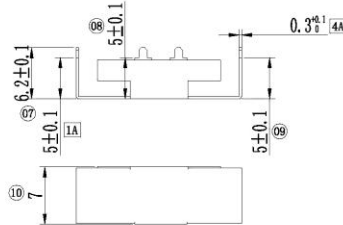
展開圖



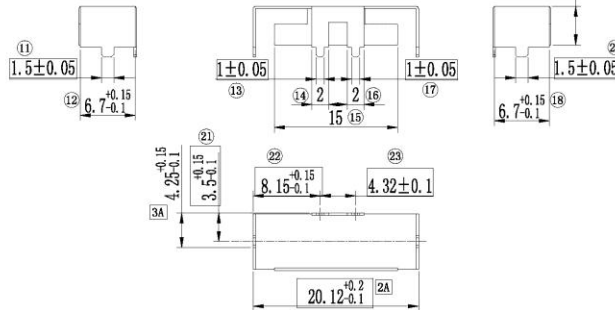
中心線尺寸圖

技术要求:

- 1、未注尺寸见3D;
- 2、未注公差见公差列表;
- 3、鐵件材质:SUS301鍍鎳 厚度:T=0.3MM公差+0.1/-0mm;
- 4、外观需符合耀登检验规范;
- 5、产品正面不可有毛刺,反面毛刺不大于0.05mm;
- 6、弹片展平要求:
 - 1)厚度在0.2MM以下时,依中心线计算展平
 - 2)展平后尺寸公差在±0.15MM以内;
- 7、带“A”尺寸为进料必检尺寸;
- 8、尺寸框选起来为重点尺寸(共12個),开模需特别注意



成品圖



- 环境物质要求:
1. 镉及其化合物 < 5PPM
 2. 铅及其化合物 < 100PPM
 3. 汞及其化合物 < 5PPM
 4. 六价铬及其化合物 < 2PPM
 5. 多溴联苯及多溴二苯醚 总溴和总氯 ≤ 1500ppm 总溴和总氯 ≤ 900ppm PBB And PBDE: N/D

附:产品需符合耀登外观检验标准及可稼度测试要求

DIMENSION	TOLERANCE
6以下	±0.05
6以上—30	±0.1
30以上—120	±0.15
120以上—315	±0.20
315以上—1000	±0.3
1000以上—2000	±0.5

注:标注1A, 2A, 3A—等为重点尺寸, 总计4A, 全尺寸共计23 (不含重点尺寸)				表面加工	
图名	图号	料号	表面处理	适用机种	开发单号
鐵件	TPV-WIFI-1+2 20130503 (李耀登)	151727-20		TPV-Star One	
材质	SUS301鍍鎳	投影			
单位	MM	比例	1:1		
文件编号/版本					
耀登电通科技(昆山)有限公司 AUDEN TECHNO (KUNSHAN) CO. LTD			作成	检图	确认

MODULE PHOTO

TOP SIDE



Bottom Side



EEPROM INFORMATION

Reg Domain	World Wide Read from registry; Control by driver
	Offset 0x38 for 5G: 0xFF Offset 0x39 for 2.4G: 0xFF
Vendor ID	0x0471
Product ID	0x2126

ENVIRONMENTAL

Operating

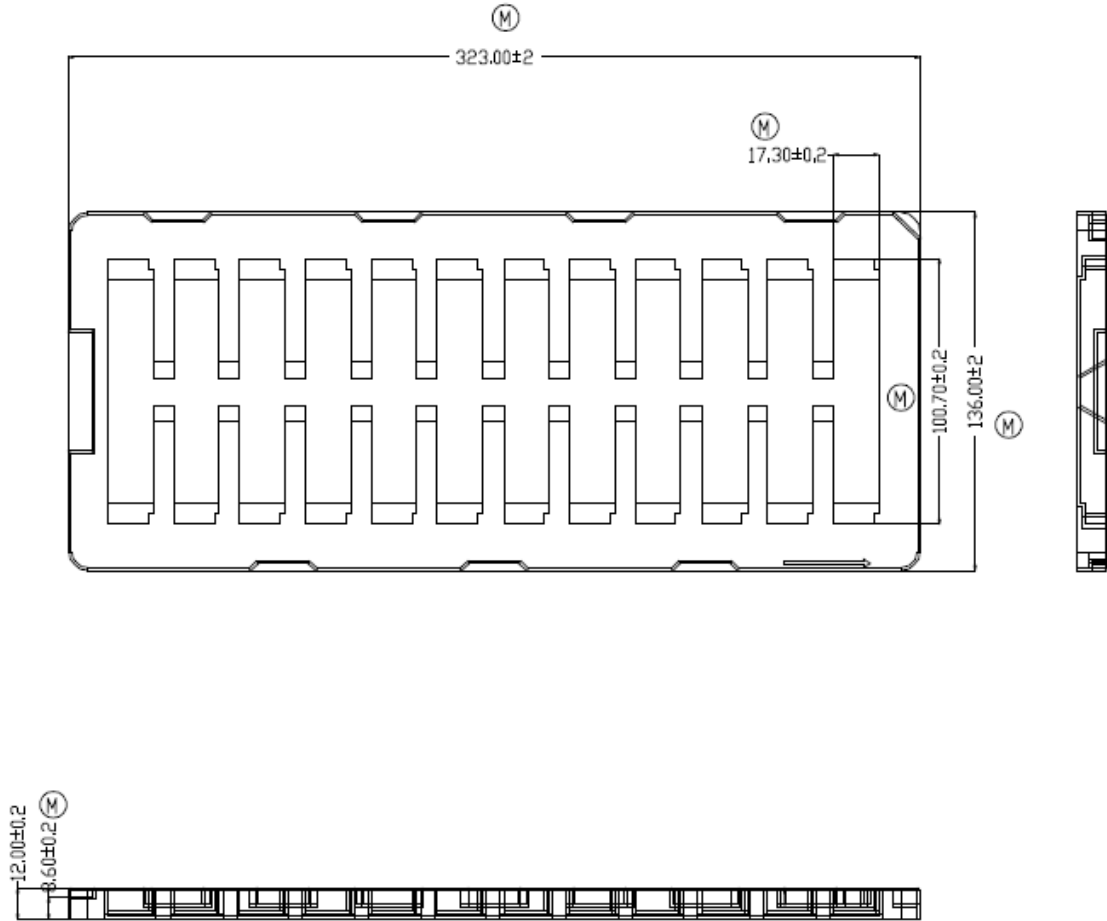
Operating Temperature: 0 to 70 °C (32 to 158 °F)
Relative Humidity: 5-90% (non-condensing)

Storage

Temperature: -20 to 70 °C (-4 to 158 °F)
Relative Humidity: 5-95% (non-condensing)

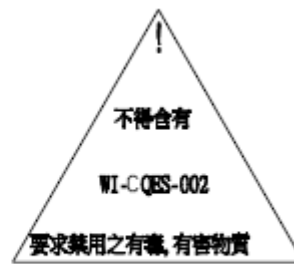
PACKING DRAWING

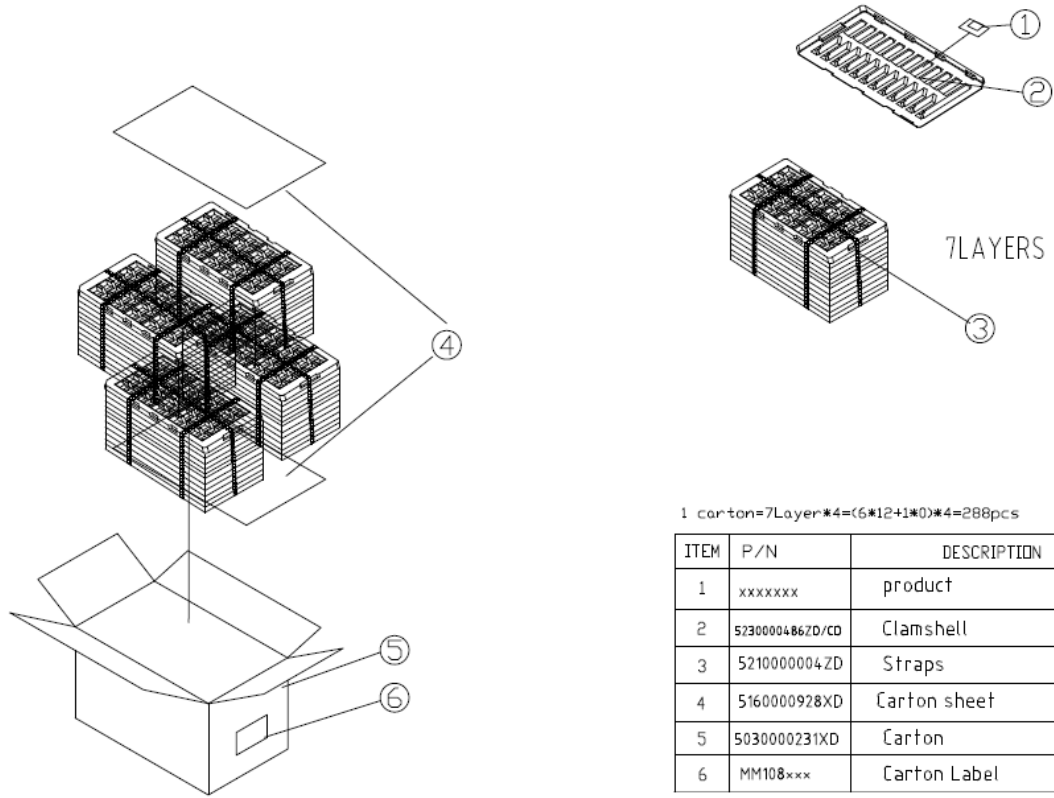
Tray



Note:

1. 材質：黑色 PS 1.2mm
2. 未注拔模角度為3度
3. 產品放進去不可以左右移動
4. 靜電阻值 $1 \times 10^4 \sim 1 \times 10^9 \Omega$
5. 鍍面摩擦電壓100V 以下
6. Marked (M) IS THE CRITICAL DIMENSION





1 carton=7Layer*4=(6*12+1*0)*4=288pcs

ITEM	P/N	DESCRIPTION	QTY
1	xxxxxxx	product	1
2	5230000486ZD/CO	Clamshell	7/72
3	5210000004ZD	Straps	1.73m/72
4	5160000928XD	Carton sheet	2/288
5	5030000231XD	Carton	1/288
6	MM108xxx	Carton Label	1/288