

**R1 Power Extender  
Outdoor Wireless Access Point  
Product Approval Sheet**



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# 1. SUMMARY

## 1.1. Product

R1 Power Extender Outdoor Wireless Access Point

## 1.2. Product Picture



Picture 1 Product

# 2. SPECIFICATION

## 2.1. System Specifications

System	
CPU	IXP435 ,533MHz
System Memory	16MB Flash 64MB DDR2 *2
Power	Power over Ethernet (Power by Pin4 /5/7/8) (POE injector output 19.2Watts)
Radio	
RF Module	XA-623AH-A01 (FCC*) , AG-623C-A01 (CE**)
Operating Frequency	FCC* : 5.725~5.850 GHz CE** : 5.470~5.600 GHz 5.660~5.725 GHz (Programmable for different country regulations)
RF Modulation	802.11a: OFDM (BPSK, QPSK, 16-QAM, 64QAM)
RF output power (Max. of Avg.)	24dBm at Radio for FCC (Band 4) (Controllable for different country regulations)

	30dBm EIRP for ETSI 301 893 (Band3)
Sensitivity	≤-90dBm @6Mbps , ≤-73dBm @54Mbps
Regulation Compliance	FCC Part 15B FCC Part 15C ETSI 301 893 EN301 489-1/17 EN60950
<b>SW and Operational</b>	
Operation Mode	Base Station , CPE Point to Point , Point to Multiple Point
Security	WEP 64/128, WPA-PSK/WPA2-PSK, WPA/WPA-2
Radio Bandwidth Control	5MHz/10MHz/20MHz/40MHz
Super A/G	Fast Frames, Bursting Compression
TDM Coordination	Traffic management
Intel TDMA	Throughput enhancement in long distance (>20km)
Distance in Meters	Auto ACK-Time adjustment
Wireless Isolation	YES
Management Statistics	Wireless and Ethernet
Link Test	Self-Wireless Connection test
Configuration & Management	Web-based Management(Secure SSL), Command Line Interface (SSH or RS-232 (9600)), Windows-based Utility, SNMPv2
Firmware upgrade	Web/Windows management tool
<b>Physical &amp; Interface</b>	
Ethernet	10/100 BaseT x1 Auto sense, negotiate
RS-232 (COM)	RS-232 (UART) in RJ45 Form Factor (Unique) For debug purpose
Buzzer	Signal Indication
Reset Pin	2Pin design in COM port to support reset system to factory default Check Below Detailed View of RS-232 Port
<b>Enclosure &amp; Environment</b>	
Enclosure	IP-67 (Die-Casting) Level "7" Waterproof Level "17" Beaufort Scale Vent design Antenna Flexibility
Mounting	Pole Mount (ADC-12 Aluminum alloy)
Operating Temperature	-30 ~ 70 Deg C
PCBA Dimension	160 *135 mm
Weight	2.4kg
Humidity	10~95% , (Operating)
Warranty	12 Months under normal use
<b>Default Antenna Characteristics</b>	
Gain	23dBi (Default Antenna)
Frequency Range	5400~5850 MHz
HPBW (horizontal)	10 Deg.
HPBW (Vertical)	10 Deg.
Dimension	320x320x27.5mm

## 2.2. System Safety/Country Approval

Item	Country	Description	
Safety	CE	EN60950-1	
EMI	CE	EN301 893(5G)	
	FCC	FCC part 15 Subpart B&C	M4Y-ZC3635-5V02
EMS	CE	EN301 489-1/17	
Approval items could be added based on customer requests.			

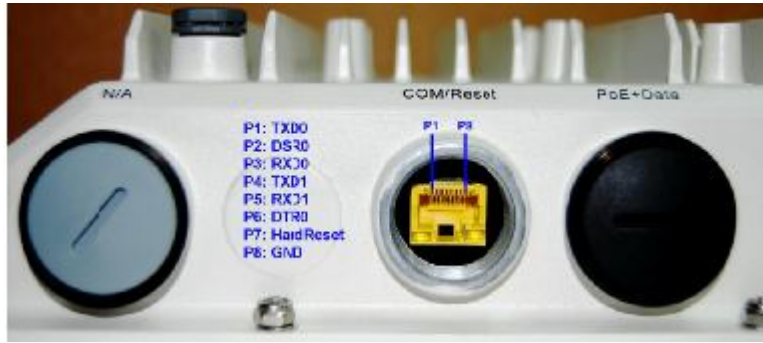
## 2.3. RS-232 PIN Define

RS-232 is used to for debug usage as well as for hard reset of the R2 Extender. Below you may find the pin definition of the RS-232.

Pin Assignment	Name	Description
P1	TXD0	UART0, debugging mode
P2	DSR0	UART0, debugging mode
P3	RXD0	UART0, debugging mode
P4	TXD1	UART1, debugging mode
P5	RXD1	UART1, debugging mode
P6	DTR1	UART0, debugging mode
P7	Hard Reset	Hard reset the unit
P8	GND	Grounding

To reset the device, short P7 (Hard Reset) to P8 (GND) less than 1 second and the system will be reset. If shorting P7 (Hard Reset) to P8 (GND) for over 5 seconds, it will be reset to factory default.





Detailed View of RS-232 Port

Below are the views of RS-232 cover and RJ-45 port respectively, please note the label covered on and DO strictly follow the instructions to avoid damaging your equipment!



Warning Label

#### 2. 4. Packaging Specification

R1 Extender with integrated 23dBi antenna	× 1
Mounting Kit	× 1
PoE Injector & Power cord	× 1
Grounding Wire w/ screw	× 1
Water Proof RJ-45 Connector Kit	× 1
Quick Installation Guide	× 1
Product CD.....	× 1

#### Note

- Product CD contains Management Tool, Quick Installation Guide and User Manual!