



# IMG-W6121+-M12

**Industrial Cellular M2M Gateway with IEEE802.11 a/b/g/n,  
1x10/100/1000Base-T(X) PoE P.D. and 2xRS-232**

## Highlights

- Provide 1x10/100 /1000Base-T(X) port with PoE P.D.
- 3.5G HSUDPA or 4G LTE modem included
- Provide 2xRS-232 serial ports
- Support Open VPN, PPTP VPN
- High Speed Air Connectivity: WLAN interface support up to 300 Mbps link speed
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/ WPA2 / WPA2-PSK (TKIP, AES) / 802.1x / Radius supported
- Event warning by Syslog, Email, SNMP Trap.
- Versatile modes with redundant multiple host devices:  
5 host devices: Virtual COM, TCP Server, TCP Client mode;  
4 IP ranges: UDP
- IP-67 grade waterproof casing

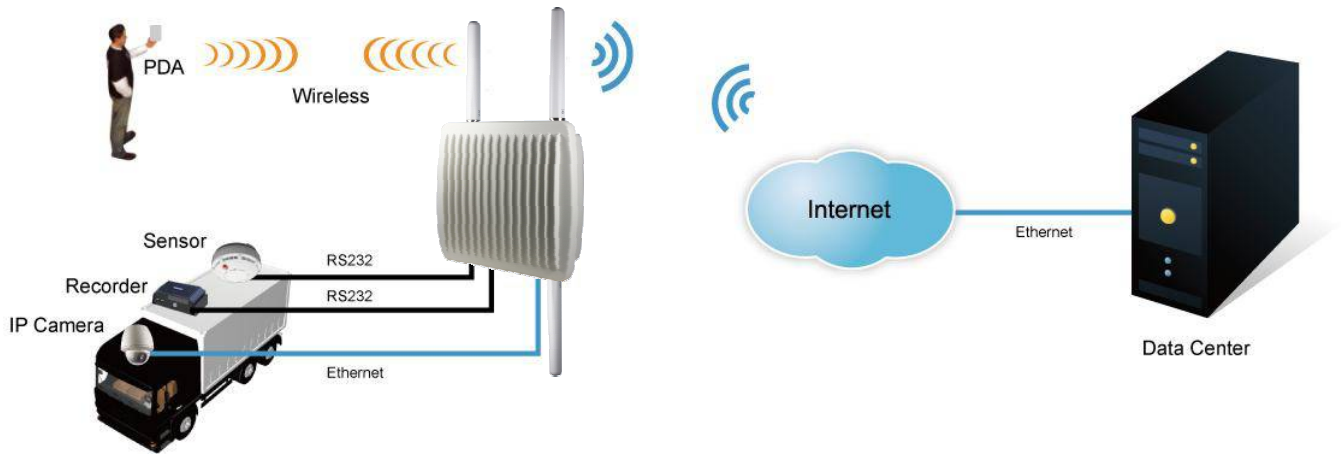


## Introduction

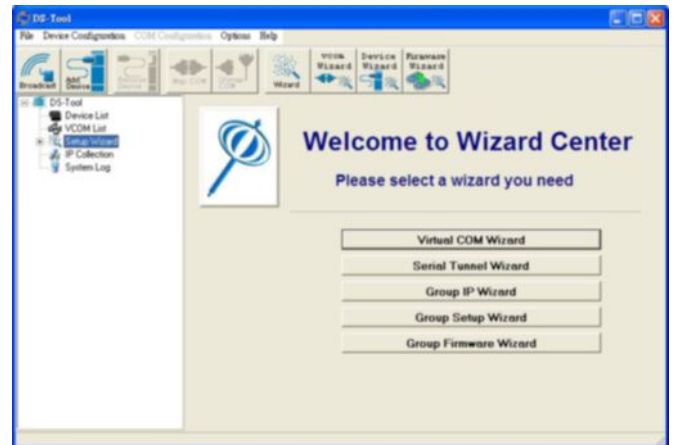
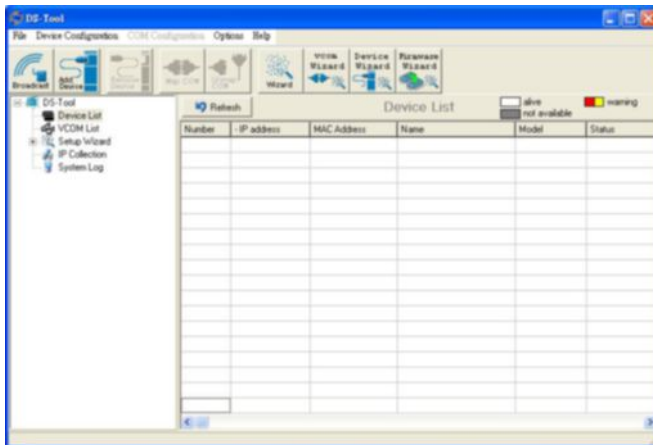
IMG-W6121+-M12 is an innovative 2 port RS-232 and IEEE802.11 a/b/g/n WLAN Access Point VPN gateway with 1 port 10/100/1000Base-T(X) ports. It could be configured to connect to the internet by dialing up 3.5G/4G cellular modem to fulfill demands of various applications rapidly and construct the WLAN environment. IMG-W6121+-M12 has IP-67 grade waterproof casing and PoE power input which enables IMG-W6121+-M12 to be deployed in any outdoor environment to fulfill customer's requirement. In addition, IMG-W6121+-M12 can also transfer SSL encryption data into 5 host PCs simultaneously for backup purposes. Therefore, IMG-W6121+-M12 is one of the best solutions for applications of wireless and serial communication.

## Application

IMG-W6121+-M12, it support 3.5G HSUPA / 4G LTE Modem dial up. The utility-DS-Tool which is used to manage and monitor all of the serial ports on IMG-W6121+-M12. .



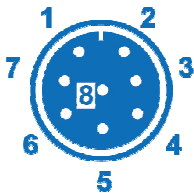
M2M Gateway Connection



Monitoring and Configuration interface

## Pin Definition

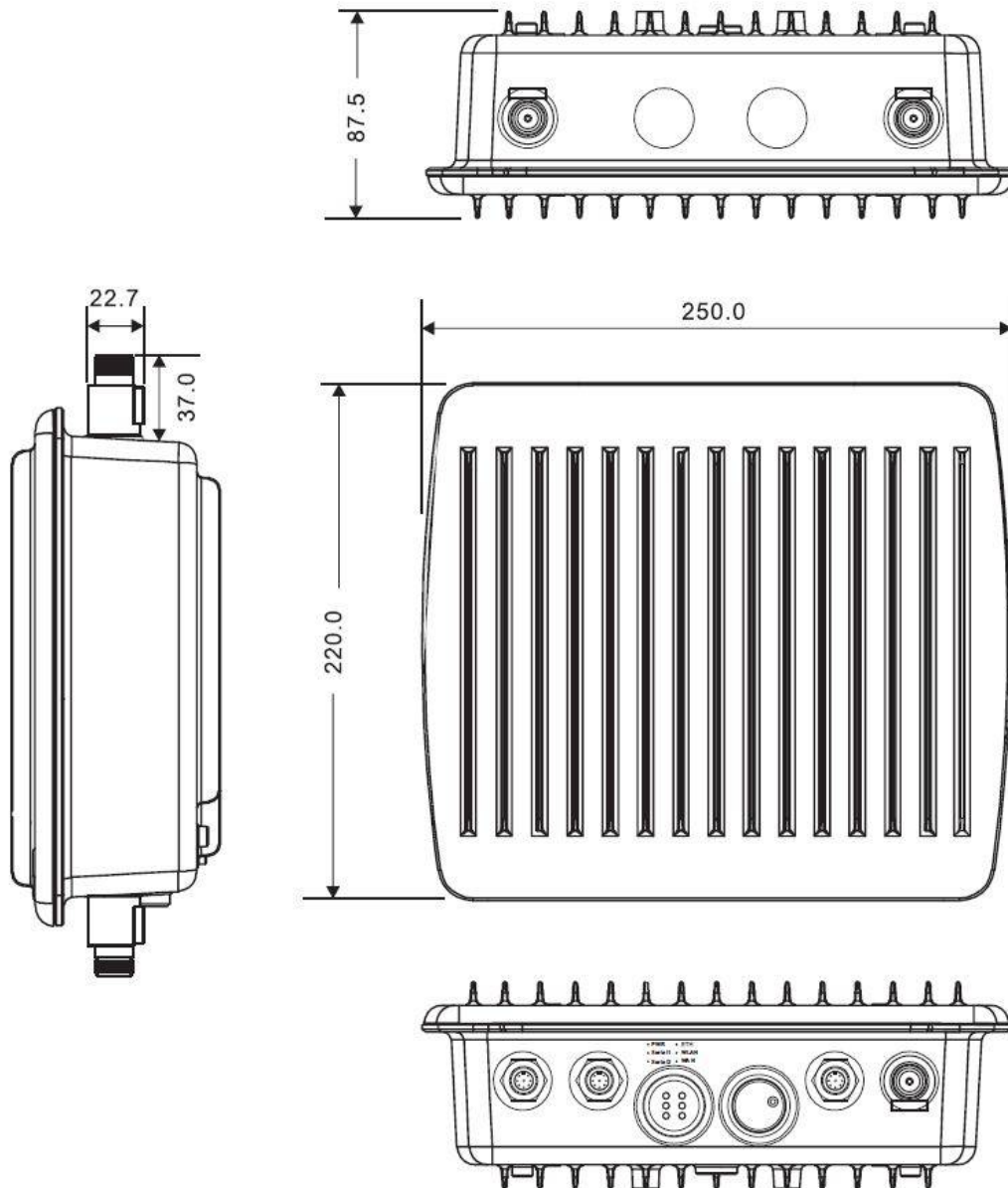
- RS-232 M12 Port



M12 Pin Definition	
Pin No.	Description
#1	RXD
#2	DCD
#3	RTS
#4	DSR
#5	GND
#6	DTR
#7	TXD
#8	CTS

## Dimension

Dimension (Unit =mm)



## Specifications

ORing M2M Model	IMG-W6121+-3G-M12	IMG-W6121+-4G-M12
<b>Physical Ports</b>		
10/100/1000 Base-T(X) Ports in M12 Auto MDI/MDIX with PoE P.D.	<b>1 (8-pin M12 A-coding Female connector)</b>	
SIM card slot	<b>1</b>	
<b>Cellular Interface</b>		
Cellular Standard	GSM / GPRS / EGPRS / EDGE / WCDMA / HSDPA / HSUPA	GSM / GPRS / EGPRS / EDGE / WCDMA / HSDPA / HSUPA/LTE
Band options	<b>America(US)</b> UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 800/850/1900/2100 MHz GSM/GPRS/EDGE: 850/900/1800/1900 MHz <b>Europe(EU)</b> UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 900/2100 MHz GSM/GPRS/EDGE: 900/1800/1900 MHz	<b>America(US)</b> LTE: 700/1700/2100/ MHz UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 800/850/1900/2100 MHz GSM/GPRS/EDGE: 850/900/1800/1900 MHz <b>Europe(EU)</b> LTE: 800/900/1800/2100/2600 MHz UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 900/2100 MHz GSM/GPRS/EDGE: 900/1800/1900 MHz
Antenna Connector	N-type Female	
Antenna	GSM/DCS/UMT 3G antenna x1	GSM/DCS/UMT/LTE 4G antenna x1
<b>WLAN Feature</b>		
Antenna Connector	N-type Female	
Antenna	Wi-Fi ANT x2	
Radio Frequency Type	DSSS, OFDM	
Modulation	IEEE802.11a : OFDM with BPSK, QPSK, QAM, 64QAM IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM IEEE802.11n : BPSK, QPSK, 16-QAM, 64-QAM	
Frequency Band	America / FCC : 2.412~2.462 GHz (11 channels) 5.180~5.240 GHz & 5.745~5.825 GHz ( 9 channels ) Europe CE / ETSI : 2.412~2.472 Ghz (13 channels) 5.180~5.240 GHz (4 channels)	
Transmission Rate	IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps IEEE801.11n: up to 300Mbps	
Transmit Power	802.11a: 12dBm ± 1.5dBm 802.11b: 17dBm ± 1.5dBm 802.11g: 15dBm ± 1.5dBm 802.11gn HT20: 13dBm ± 1.5dBm@150Mbps 802.11gn HT40: 12dBm ± 1.5dBm@300Mbps 802.11an HT20: 12dBm ± 1.5dBm@150Mbps 802.11an HT40: 12dBm ± 1.5dBm@300Mbps	
Receiver Sensitivity	802.11a: -68dBm ± 2dBm@54Mbps 802.11b: -85dBm ± 2dBm@11Mbps 802.11g: -68dBm ± 2dBm@54Mbps 802.11gn HT20: -68dBm ± 2dBm@150Mbps 802.11gn HT40: -68dBm ± 2dBm@300Mbps 802.11an HT20: -68dBm ± 2dBm@150Mbps 802.11an HT40: -68dBm ± 2dBm@300Mbps	
Encryption Security	WEP: (64-bit ,128-bit key supported) WPA/WPA2 : 802.11i(WEP and AES encryption) WPAPSK (256-bit key pre-shared key supported) 802.1X and Radius supported	

	TKIP encryption
Wireless Security	SSID broadcast disable
<b>Serial Ports</b>	
Connector	2 (8-pin M12 A-coding Male connector)
Operation Mode	RS-232
Serial Baud Rate	110 bps to 115.2 Kbps
Data Bits	5, 6, 7, 8
Parity	odd, even, none, mark, space
Stop Bits	1, 1.5, 2
Serial signals	RS-232 : TxD, RxD, DCD, RTS, CTS, DSR, DTR, GND
<b>LED Indicators</b>	
Power indicator	Green On: Power is on and functioning Normally.
10/100/1000T M12 port indicator	Green for port Link/Act.
WLAN indicator	WLAN Link /ACT: Green: Link
<b>Power</b>	
Power Input	48VDC on PoE port compliant with IEEE802.3af standard
Power consumption (Typ.)	6.5 Watts
Overload current protection	Present
<b>Physical Characteristic</b>	
Enclosure	IP-67
Dimension (W x D x H)	310 (W) x 310(D) x 87 (H) (12.2 x 12.2 x 3.4 inch)
Weight (g)	2653
<b>Environmental</b>	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-25 to 70°C (-13 to 158°F)
Operating Humidity	5% to 95% Non-condensing
<b>Regulatory Approvals</b>	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
<b>Warranty</b>	3 years

## Ordering Information

IMG-W **A** **B** **C** **D** +- **EE** - **M12**



Code Definition	WLAN Identification	Serial Port Type	Serial Port Number	Ethernet Port Number	PoE Identification	Cellular Interface
Option	- 1: 802.11 b/g - 2: 802.11 a - 3: 802.11 a/b/g - 4: 802.11 b/g/n - 5: 802.11 a/n - 6: 802.11 a/b/g/n	- 1: RS-232 only - 2: RS-422/485 only - 3: RS-232/422/485	- 2: 2 port	- 1: 1 port	- +: PoE P.D. supported	- 3G: HSUPA - 4G: LTE

Available Model	Model Name	Description
	IMG-W6121+-3G-M12_US	Industrial 3.5G M2M Gateway with IEEE802.11a/b/g/n, 1x10/100/1000Base-T(X) PoE P.D. and 2xRS-232, US band
	IMG-W6121+-3G-M12_EU	Industrial 3.5G M2M Gateway with IEEE802.11 a/b/g/n, 1x10/100/1000Base-T(X) PoE P.D. and 2xRS-232, EU band
	IMG-W6121+-4G-M12_US	Industrial 4G M2M Gateway with IEEE802.11a/b/g/n, 1x10/100/1000Base-T(X) PoE P.D. and 2xRS-232, US band
	IMG-W6121+-4G-M12_EU	Industrial 4G M2M Gateway with IEEE802.11 a/b/g/n, 1x10/100/1000Base-T(X) PoE P.D. and 2xRS-232, EU band

## Packing List

- **IMG-W6121+-M12 x 1**
- **CD x 1**
- **Quick Installation Guide x 1**
- **Wall Mount Kit x 1**
- **2.4GHz/5GHz Antenna x 2**
- **Cellular Antenna x 1**

## Packing List

- **WLAN RF Antenna Series**
- **RF Antenna Base Series**
- **DB9 to M12 Cable**