

# IMG-4312-4G series

Industrial IEEE 802.11 b/g/n 4G LTE Cellular Router with 2x10/100Base-T(X) 1x RS-232/422/485 Gateway

## Features



#### Introduction

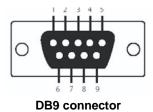
IMG-4312-4G is an innovative 1 port RS-232/422/485 and 4G LTE cellular Gateway with 2 port 10/100Base-T(X) port. IMG-4312-4G also provide IEEE802.11 b/g/n wifi interface which have 150Mbps link speed. It could be configured to connect to the internet by dialing up 2G/3.5G/LTE cellular modem to fulfill demands of various applications rapidly a. In addition, IMG-4312-4G can also transfer data into 5 host PCs simultaneously for backup purposes. In addition, IMG-4312+-4G also provides P.D. feature on ETH1 port which is fully compliant with IEEE802.3af PoE P.D. specification Therefore, IMG-4312-4G is one of the best solutions for applications of wireless and serial communication.

#### Application

IMG-4312-4G support 2G/3.5G/LTE Modem dial up. The utility- M2M-Tool which is used to manage and monitor all of the serial ports on IMG-4312-4G.

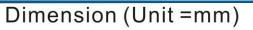


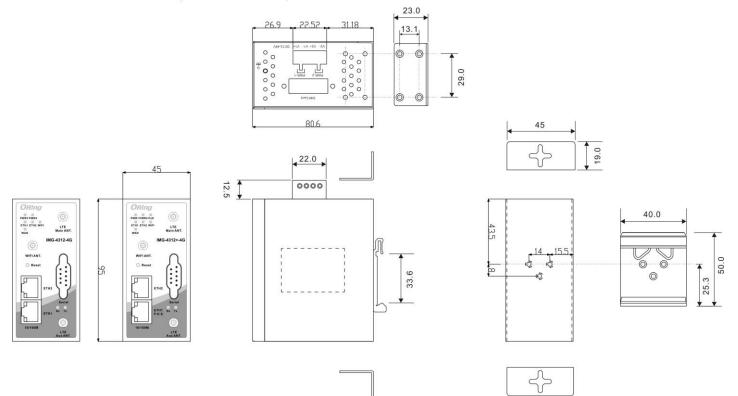
#### Pin Definition



Pin #	RS-232	RS-422	RS-485 ( 4 wire )	RS-485 ( 2 wire )
1	DCD	TX-	TX-	DATA -
2	RXD	TX+	TX+	DATA +
3	TXD	RX+	RX+	
4	DTR	RX-	RX-	
5	GND	GND	GND	
6	DSR			
7	RTS			
8	CTS			
9	RI			

#### Dimension





# Specifications

ORing Device Server Model	IMG-4312-4G	IMG-4312+-4G	
Physical Ports			
10/100 Base-T(X) Ports in RJ45			
Auto MDI/MDIX		2	
		P.O.E.Present at ETH1	
		Power Device (IEEE 802.3af):	
PoE P.D Port		IEEE 802.3af compliant input interface	
		Over load & short circuit protection	
		Isolation Voltage: 1000 VDC min. Isolation Resistance : 10 <sup>8</sup> ohms min	
Sim card slot		1	
		1	
Cellular Interface			
Antenna Connector	2 x SMA Female		
Cellular Standard	GSM / GPRS/ EGPRS/ EDGE / WCDMA / HSDPA / HSUPA /LTE		
	America(US grade)		
	LTE:		
	1900(B2)/1700(B4)/850(B5)/700(B13)/700(B17)/1900(B25) MHz		
	CDMA/EVDO rev. a/b:		
	800/1900 UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+:		
	0MTS/HSDPA/HSDPA/HSPA+/DC-HSPA+: 850/900/1700/1900/2100 MHz		
	GSM/GPRS/EDGE:		
	850/900/1800/1900 MHz		
	Europe(EU grade)		
	LTE:		
Band Option	2100(B1)/1800(B3)/2600(B7)/900(B8)/800(B20) MHz		
	UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+:		
	800/850/900/1900/2100 MHz		
	GSM/GPRS/EDGE: 850/900/1800/1900 MHz		
	Taiwan (TW grade)		
	LTE:		
	2100(B1)/1800(B3)/850(B5)/2600(B7)/900(B8)/750(B28) MHZ		
	UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+:		
	850/900/1900/2100 MHZ		
	GSM/GPRS/EDGE:		
	850/900/1800/1900 MHZ		
Wifi Interface			
Antenna Connector	1 x RP-SMA Female		
	IEEE802.11b: CCK/DQPSK/DBPSK		
Modulation	IEEE802.11g: OFDM IEEE802.11n: BPSK, QPSK, 16-QAM, 64-QAM		
	America / FCC:	ויות	
	2.412~2.462 GHz (11 channels )		
Frequency Band	Europe CE / ETSI:		
	2.412~2.472 GHz ( 13 channels )		
	802.11b: 1/2/5.5/11 Mbps		
Transmission Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps		
	802.11n(40MHz): UP to 150 Mbps		
	802.11b: 19dBm ±1.5dBm		
Transmit Power	802.11g: 17dBm ±1.5dBm 802.11n(2.4G@20MHz): 16dBm ±1.5dBm		
	802.11n(2.4G@20MHz): 16dBm ±1.5dBm 802.11n(2.4G@40MHz): 14dBm ±1.5dBm		
	802.11h(2.40@400h2): 14dBm ±1.3dBm 802.11b: -90dBm ±2dBm@1Mbps		
Receiver Sensitivity	802.11g: -72dBm ±2dBm@54Mbps		
	802.11n(2.4G@40MHz,MCS7): -68dBm ±2dBm		
Encryption Society	WEP: (64-bit ,128-bit key supported)		
Encryption Security	WPA/WPA2 :802.11i(WEP and AES encryp	tion)	

	WPA-PSK (256-bit key pre-shared key supported)		
	802.1X Authentication supported		
	TKIP encryption		
Serial Ports			
Connector	DB9 x 1		
Operation Mode	RS-232/422/485		
Serial Baud Rate	110 bps to 115.2 Kbps		
Data Bits	7, 8		
Parity	odd, even, none, mark, space		
Stop Bits	1, 1.5, 2		
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND		
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR		
Network Protocol			
Protocol	ICMP, IP, TCP, UDP, DHCP, BOOTP, SSH, DNS, SNMP V1/V2c, HTTPS, SMTP, DDNS, PPPoE		
LED indicators			
Power indicator	3 x LEDs, PWR 1(2)(PoE) / Ready:		
	Green On: Power is on		
10/100TX RJ45 port indicator	2 x LEDs, Green for port Link/Act at 100Mbps. Red: Serial port is receiving data		
Serial TX / RX LEDs:	Green: Serial port is receiving data Green: Serial port is transmitting data		
WIFI LED	1 x LED, Green: WIFI Link /ACT		
WAN LED	1 x LED, Green On : Power is on and functioning Normal		
Power			
Redundant Input power	Dual DC inputs. 12-48VDC on 6-pin terminal block		
Power consumption (Typ.)	3W 3.5W		
Overload current protection	Present		
Reverse polarity protection	Present on terminal block		
Physical Characteristic			
Enclosure	IP-30		
Dimension (W x D x H)	45(W)x80.6(D)x95(H) mm		
Weight (g)	368	372	
Environmental			
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Operating Temperature	-10 to 60°C (14 to 140°F)		
Operating Humidity	5% to 95% Non-condensing		
Regulatory approvals	· · · · · · · · · · · · · · · · · · ·		
EMI	FCC Part 15 CISPR (EN55022) class A		
	FCC Part 15, CISPR (EN55022) class A EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),		
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		
Warranty	5 years		

### Packing List

- IMG-4312-4G x 1
  - Wall-Mount Kit x 1
- 2.4G wifi antenna x 1
- CD x 1

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- Din-Rail Kit x 1
- LTE antenna x 2

• Quick Installation Guide x 1

**Optional Accessories** 

- DR-45 series : 45 Watts power supply
- DR-120 series : 120 Watts power supply
- DR-75 series : 75 Watts power supply