ORing

IMG-6322GT-MN

Industrial IEEE 802.11 a/b/g/n with 1 Port RS-422/485, 1 port RS-232/422/485 & 2x10/100/1000Base-T(X) IoT LPWAN Gateway

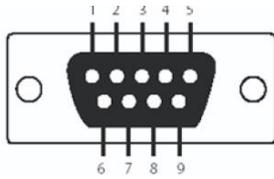### ▪ Highlights

> ➢ Provide 2 x 10 / 100/1000 Base –T(X) port and SIM card slot
> ➢ LTE Cat-M1/Cat-NB1 modem dial up included
> ➢ 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 Authentication supported
> ➢ Versatile modes & event alarm by e-mail.
> ➢ Event warning by Syslog, Email, SNMP Trap, Relay output
> ➢ Redundant multiple host devices:
> 5 host devices: TCP Server, TCP Client mode;
> 4 IP ranges: UDP
> ➢ Modbus Protocol conversion between Modbus TCP and Modbus RTU
> ➢ Support MQTT
> ➢ Dual Power inputs 12~48VDC
> ➢ Rugged IP-30 casing design

Preliminary

IMG-6322GT LPWAN series is an innovative 1 port RS-422/485, 1 port RS-232/422/485 and IEEE802.11 a/b/g/n VPN gateway with 2 ports 10/100/1000Base-T(X) ports. It could be configured to connect to the internet by dialing up LTE Cat-M1/Cat-NB1 modem to fulfill demands of various applications rapidly and construct the WLAN environment. IMG-6322GT is also able to act as Modbus Gateway to convert in between different Modbus protocol such as Modbus TCP and Modbus RTU via wired or wireless interface. In TCP Server mode, IMG-6322GT can also transfer SSL encryption data into 5 host PCs simultaneously for backup purposes. Therefore, IMG-6322GT is one of the best solutions for applications of wireless and serial communication.
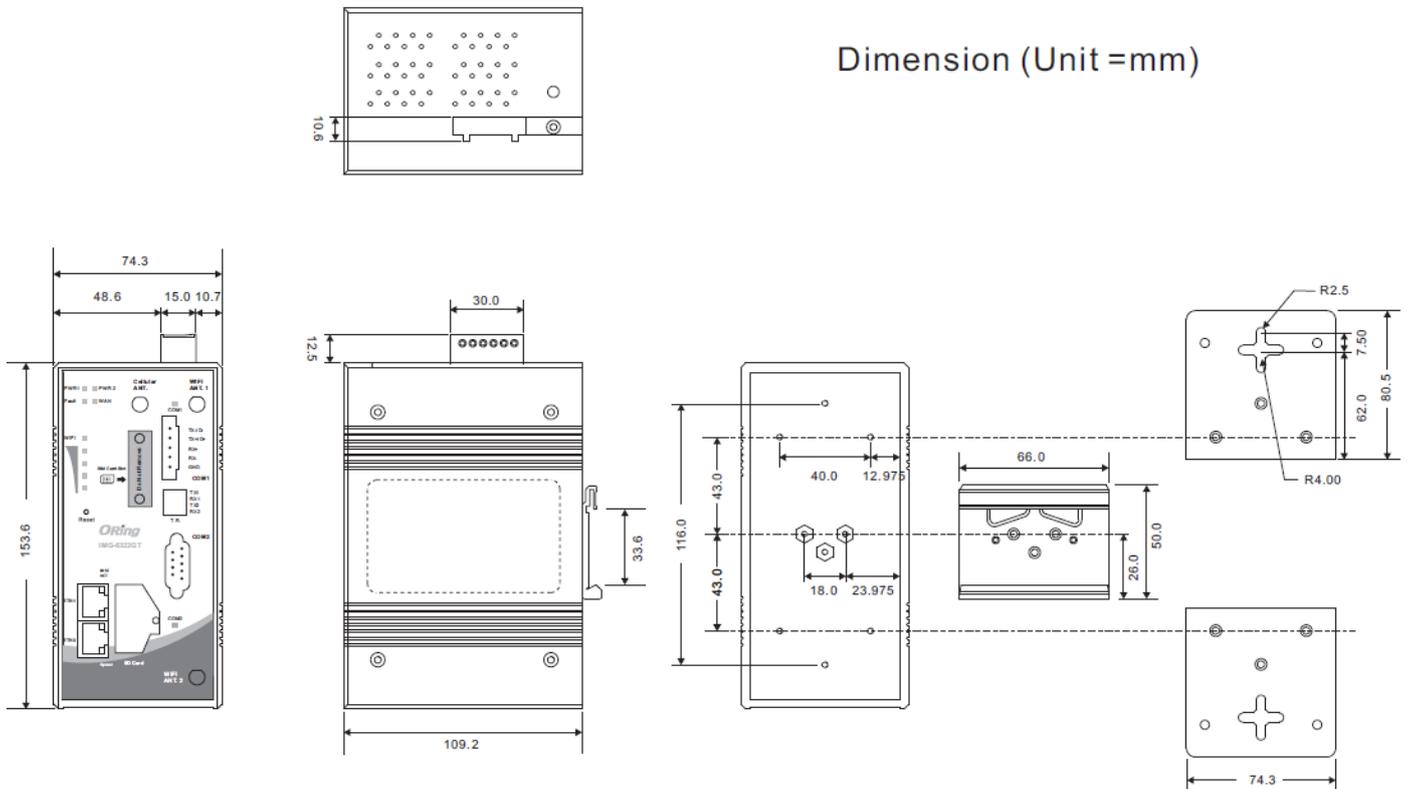
Application

IMG-6322GT, it supports LTE Cat-M1 Modem dial up.   The utility M2M-Tool which is used to manage and monitor all of the serial ports on IMG-6322GT.

Pin Definition

DB9 connector

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

Dimension (Unit =mm)

Specifications

ORing M2M Model	IMG-6322GT-M1	IMG-6322GT-MN
Physical Ports		
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	2	
SIM card slot	1	
Cellular interface		
Cellular Standard	LTE Cat-M1	LTE Cat-M1/Cat-NB1
Download/Upload Rate	300 / 375 Kbps	LTE Cat-M1:300 / 375 Kbps LTE Cat-NB1: 32 / 70 Kbps

Band options	**LTE Cat-M1**:
	    1900(B2)/1700(B4)/700(B12) MHz
		LTE Cat-M1/Cat-NB1 :
		  LTE FDD:
		B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28
		LTE Cat-M1 :
		  LTE TDD :B39

Antenna Connector (SMA Female)	1	
WLAN Feature		
Antenna Connector	Reverse SMA Female connector x2	
Radio Frequency Type	DSSS, OFDM	
Modulation	IEEE802.11a/g: OFDM with BPSK, QPSK, 16QAM, 64QAM IEEE802.11b: CCK, DQPSK, DBPSK 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: 16dBm ± 1.5dBm 802.11gn HT20: 15dBm ± 1.5dBm@150Mbps 802.11gn HT40: 14dBm ± 1.5dBm@300Mbps 802.11an HT20: 12dBm ± 1.5dBm@150Mbps 802.11an HT40: 11dBm ± 1.5dBm@300Mbps	
Receiver Sensitivity	802.11a: -76dBm ± 2dBm@54Mbps 802.11b: -85dBm ± 2dBm@11Mbps 802.11g: -76dBm ± 2dBm@54Mbps 802.11gn HT20: -75dBm ± 2dBm@150Mbps 802.11gn HT40: -72dBm ± 2dBm@300Mbps 802.11an HT20: -74dBm ± 2dBm@150Mbps 802.11an HT40: -71dBm ± 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 Authentication supported TKIP encryption	
Wireless Security	SSID broadcast disable and enable	
Serial Ports		
Connector	Terminal Block x 1 (Port 1), DB9 male x 1 (Port 2)	
Operation Mode	Port 1 : RS-422/RS-485(2W/4W), Which can be configured by utility Port 2 : RS-232/RS-422/RS-485(2W/4W). Which can be configured by utility	

Serial Baud Rate	110 bps to 921.6 Kbps
Data Bits	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, RI, GND RS-422 : TX+, TX-, RX+, RX-, GND RS-485 (2W): D+, D- RS-485 (4W): TX+, TX-, RX+, RX-, GND
LED Indicators	
Power indicator	PWR 1(2) / Ready: Green On: Power is on
10/100/1000Base-T(X) RJ45 port indicator	2 x LEDs, LNK/ACT: Green for port LNK/ACT Speed: Green for port Link at 1000Mbps Amber for port Link at 100Mbps. Off for port Link at 10Mbps
WLAN indicator	Green Solid On: RF on, Blink: data transmitting Green for WLAN Strength: 1<25%, 2<50%, 3<75%, 4<100%
Fault	Power failure or port disconnected
WAN	Green on : Modem module detected Green blinking : Modem module being activated
Serial TX/RX LED	Red : Receiving data Green : Transmitting data
Power	
Power Input	Dual DC inputs. 12-48VDC on 6-pin terminal block
Power consumption (Typ.)	TBD
Overload current protection	Present
Reverse polarity protection	Present
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	74.3 (W) x 109.2 (D) x 153.6 (H) mm (2.93x4.30x6.05 inch)
Weight (g)	1050 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-13 to 158°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
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
MTBF	283297.3193 hours US : 261406.4413 hours EU : 266562.8536 hours
Warranty	5 years

Packing List

- **IMG-6322GT x 1**
- **Wall Mount Kit x 1**
- **Din-Rail Kit x 1**
- **CD x 1**
- **2.4GHz/5GHz Antenna x 2**
- **Quick Installation Guide x 1**
- **Cellular Antenna x 1**

Optional Accessories

- **DR-45 series : 45 Watts power supply**
- **WLAN RF Antenna Series**
- **DR-75 series : 75 Watts power supply**
- **RF Antenna Base Series**
- **DR-120 series : 120 Watts power supply**
- **RF Cable series**