



Quick Installation Guide

IMG-1312-D

Industrial M2M Gateway

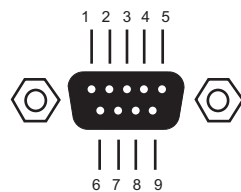
Introduction

IMG-1312-D is an innovative 1 port RS232/422/485 and IEEE802.11 b/g WLAN Access Point VPN gateway with 1 port 10/100Base-T(X) ports. It could be configured to connect to the internet by dialing up 3.5G cellular modem to fulfill demands of various M2M applications rapidly and construct the WLAN environment. **IMG-1312-D** are also equipped with four 5V TTL Digital Inputs and four Digital Outputs. In addition, **IMG-1312-D** can also transfer SSL encryption data into 5 host PCs simultaneously for backup purposes. Therefore, **IMG-1312-D** is one of the best solutions for applications of M2M communication.

Features

- Provide 2 port 10/100Base-T(X) port and 1 SIM card slot
- 3.5G HSUPA Modem included
- Support Open VPN, PPTP VPN
- Support IPsec VPN
- High Speed Air Connectivity: IEEE802.11b/g WLAN interface support up to 54Mbps link speed
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/ WPA2/ WPA2-PSK (TKIP, AES) / 802.1x / Radius supported
- Versatile modes & event alarm by e-mail.
- Event warning by Syslog, Email, SNMP Trap, Relay output
- Redundant multiple host devices:
 - 5 host devices: Virtual COM, TCP Server, TCP Client mode; UDP: 4 IP Ranges
- 4 digital inputs and 4 digital output
- Dual 12~48VDC power inputs on terminal block.
- Rigid IP-30 housing design

Serial Port Pin Assignment



Operation Mode	Serial Port Pin# Description								
	1	2	3	4	5	6	7	8	9
RS232	TXD	RXD	DCD	RTS	CTS	DSR	DTR	RI	GND
RS422	TXD+	TXD-	RXD+	RXD-	GND				
RS485 (4 wire)	TXD+	TXD-	RXD+	RXD-	GND				
RS485 (2 wire)			DATA+	DATA-	GND				

RS-232 mode act as DTE

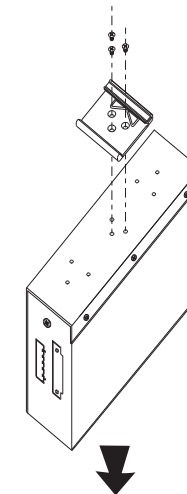
Specifications

ORing M2M Model	IMG-1312-D
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	2
SIM Card Slot	1
Cellular Interface	
Cellular Standard	GSM / GPRS / EGPRS / EDGE / WCDMA / HSDPA / HSUPA
Band Option	Dual-band : HSUPA 1900/2100 MHZ Quad-band : GSM / GPRS / EDGE 850/900/1800/1900 MHZ WCDMA / HSDPA 850/900/1900/2100 MHZ
Antenna Connector	Reverse SMA
Antenna	GSM/DCS/UMT 3G antenna x 1
WLAN Interface	
Antenna Connector	Reverse SMA connector
Antenna	2.4GHz Wi-Fi ANT x1
Radio Frequency Type	DSSS
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM
Frequency Band	America/FCC: 2.412-2.462 GHz (11 channels) Europe CE/ETSI: 2.412-2.472 GHz (13 channels)
Transmission Rate	IEEE802.11b: 1/2/5.5/11Mbps IEEE802.11g/9/12/18/24/36/48/54 Mbps
Transmit Power	IEEE802.11b/g: 18dBm
Receiver Sensitivity	-81dBm @ 11Mbps, PER<8% -64dBm @ 54Mbps, PER<10%
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
Serial Ports	
Connector	DB9 Male x 1
Operation Mode	RS-232/ RS-422/ RS-485(2W/4W). Which can be configured by utility
Serial Baud Rate	110 bps to 460.8 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, RI, GND RS-422: TX+, TX-, RX+, RX-, GND RS-485(2W): D+, D-, GND RS-485 (4W): TX+, TX-, RX+, RX-, GND
Digital Input / Output	
Digital input	4 digital inputs on terminal block. Power input voltage: 5V TTL
Digital output	4 digital outputs on terminal block. Power output voltage: 5V TTL
LED Indicators	
Power Indicator	Green On: Power is on and functioning Normally.
10/100Base-T(X) RJ45 Port Indicator	Green for port Link / Act at 100Mbps. Amber for port Link/Act at 10Mbps
WLAN Indicator	WLAN Link/ACT: Green: Link
Cellular Indicator	Cellular link status indicator
Fault Indicator	Red for Ethernet link down or power down indicator
Power	
Input Power	Dual DC inputs. 12-48VDC on 6-pin terminal block
Power Consumption	6.5 Watts
Overload current protection	Present
Reverse polarity protection	Present

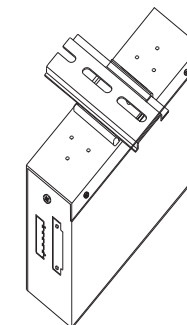
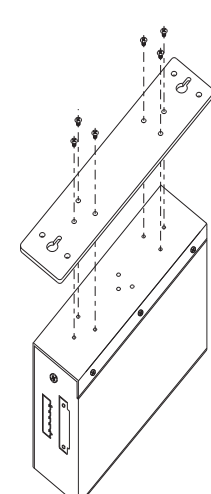
Fault Contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	41(W) x 115(D) x 153(H)mm (1.61x 4.53 x 6.02 inch.)
Weight (g)	680g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-10 to 60°C (14 to 140°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
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
Warranty	3 years

Installation

Din-Rail Install Step



Wall-mounted Install Step





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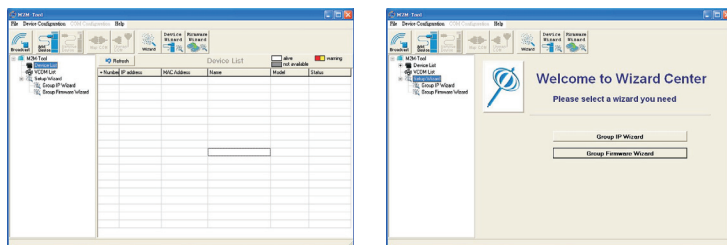
Application

IMG-1312D, it supports 3.5G HSUPA Modem dial up. The utility-M2M-tool which is used to manage and monitor all of the serial ports on IMG-1312D.

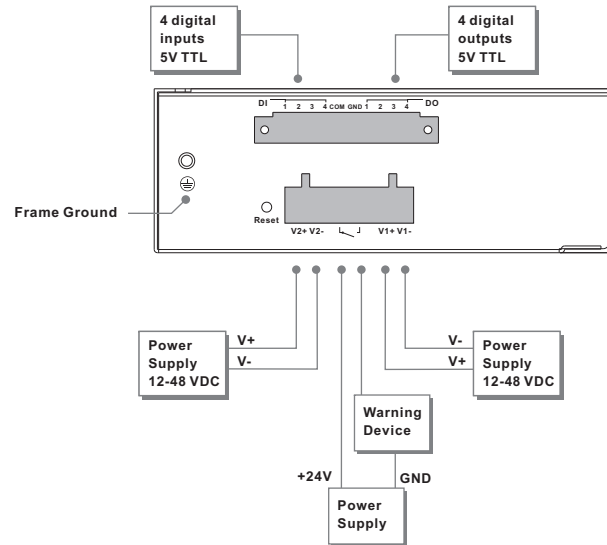
M2M Gateway Connection



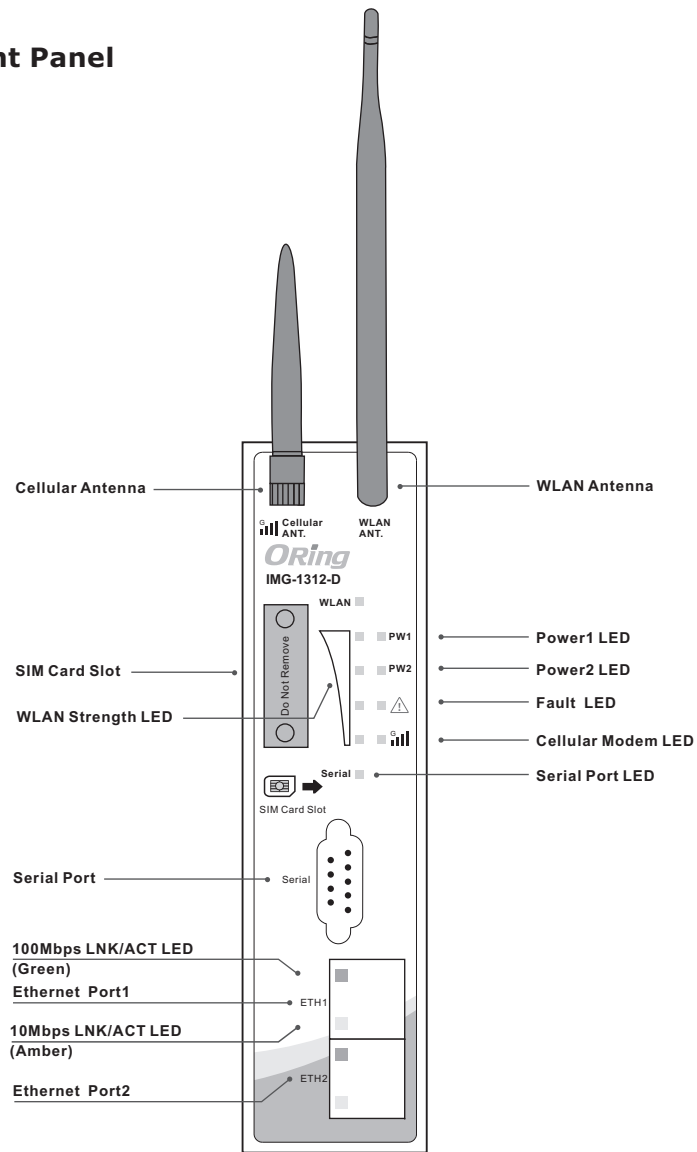
Monitoring and Configuration



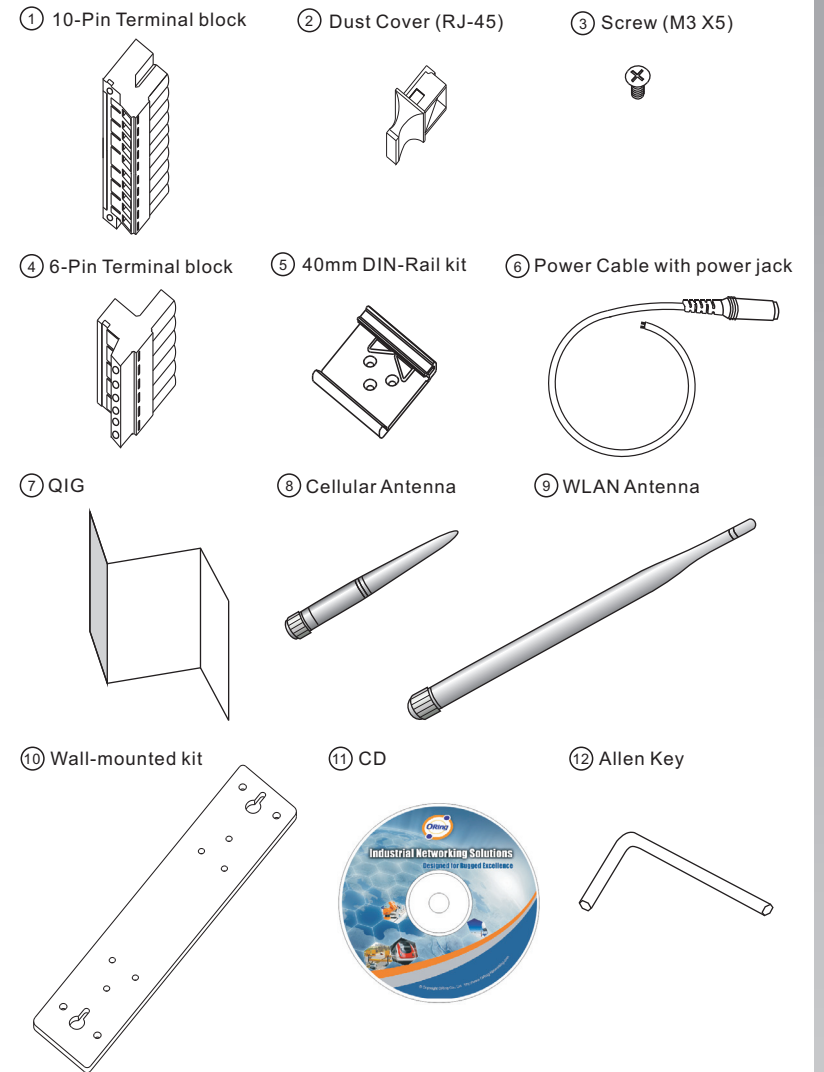
Power Connection Guide



Front Panel



Accessory



Packing list

Model name	Model Description	Accessory
IMG-1312-D	Industrial IEEE 802.11 b/g 3.5G VPN Router with 1 x RS-232/422/485 and 4 x DI/DO M2M Gateway	① X 1, ② X 2, ③ X 6, ④ X 1, ⑤ X 1, ⑥ X 1, ⑦ X 1, ⑧ X 1, ⑨ X 1, ⑩ X 1, ⑪ X 1, ⑫ X 1