V1.0 July 2023

IGMG-8224D-D5G

Industrial WIFI5 and 5G Cellular Router Gateway with Serial port and 4x10/100/1000Base-T(X)

Features



- **High Speed Air Connectivity: WLAN interface support up to 867Mbps link speed with concurrent dual band operating**.
- Provide 4 port 10/100/1000Base-T(X) port with RJ45 connector
- 5G/LTE Modem dial up included with 2 sim card slots
- Highly Security Capability: WPA/WPA-PSK(TKIP,AES)/ WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Secured Management by HTTPs
- Various kind of WAN Connection Type supported: Dynamic/Static IP, PPPoE, Modem/Dial Up
- IP table to prevent access from unauthorized IP address
- Support VPN for secured network connection (Open VPN , IPSEC, VPN)
- Support NAT Setting (Virtual Server, Port Forward)
- Support **Modbus TCP/RTU** industrial protocols
- Wireless connecting status monitoring
- Versatile modes & event alarm by e-mail
- 12 ~ 48Vdc dual power input
- Support Multiple-SSID to 4 SSID
- Provide 2 Digital Input and 2 Digital Output
- Provide full function RS232/422/485 with DB9 connector
- Support Micro SD card
- Rigid IP-30 housing design
- DIN-Rail and Wall-mount enabled

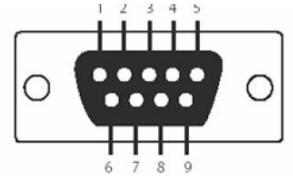


Introduction

IGMG-8224D-D5G is a reliable WIFI5 WLAN VPN router with 4 ports 10/100/1000Base-T(X) router where ETH1 to ETH3 for LAN and ETH4 for WAN. It supports 802.1X and MAC filter for security control. It could be configured to operate in 3 modes of routing function: Dynamic/Static IP route, PPPoE authentication, and Modem dial up. In the mode of Modem dial up, it support 3G/3.5G/LTE/LTE-A/5G modem by internal cellular module. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modems. Therefore, IGMG-8224D-D5G is one of the best solution for applications of gateway communication.

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Pin Definition

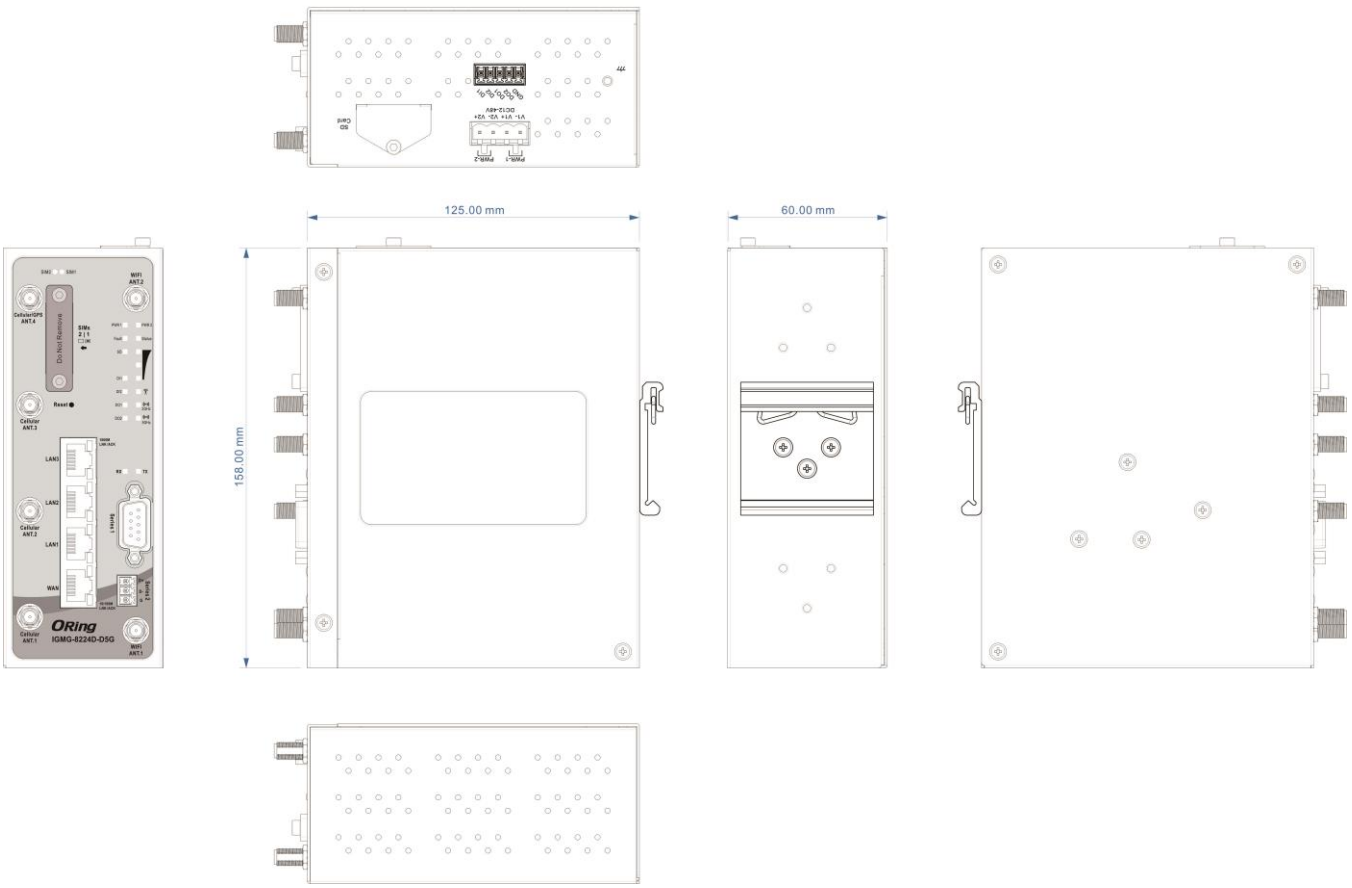


DB9 connector

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	GND
6	DSR			
7	RTS			
8	CTS			
9	RI			

Dimension

Dimension (Unit =mm)



Specifications

ORing Model	IGMG-8224D-D5G
Physical Ports	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	**3 LAN +1 WAN**
5-Pin Terminal Block	**DI x 2** and **DO x 2 :** Dry Contact: On: short to GND, Off: open Wet Contact (DI to COM/GND): On: 0 to 3VDC, Off: 10 to 30VDC
RS-232 Serial port in DB9	**115200, 8 ,N ,1**
RS-485 Serial port in Termianl Block	**D+, D-, GND**
Sim Card Slot	2
SD Slot	Standard SD
Cellular Interface	
Cellualr Standard	HSDPA / HSUPA / LTE/ LTE+/ 5G
Band Option	5G NR : n1,n2,n3,n5,n7,n8,n12,n20,n28,n41,n66,n71,n77,n78,n79 LTE : FDD : B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 TDD : B34/B38/B39/B40/B41/B42/B46/B48 WCDMA : B1/B2/B3/B4/B5/B6/B8/B9/B19
Antenna Connector	4 x SMA Female
WLAN interface	
Antenna Connector	2 x Reverse SMA Female
Modulation	802.11a: OFDM 802.11b: CCK, DQPSK, DBPSK 802.11g: OFDM 802.11n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-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	802.11b: 1/2/5.5/11 Mbps 802.11a/g: 6/9/12/18/24/36/48/54 Mbps 802.11n: UP to 300 Mbps 802.11ac: up to 867Mbps
Transmit Power	IEEE 802.11a: 21dBm ± 2dBm@54Mbps IEEE 802.11b: 23dBm ± 2dBm@11Mbps IEEE 802.11g: 20dBm ± 2dBm@54Mbps IEEE 802.11gn HT20: 18dBm ± 2dBm @MCS7 IEEE 802.11gn HT40: 18dBm ± 2dBm @MCS7 IEEE 802.11an HT20: 20dBm ± 2dBm @MCS7 IEEE 802.11an HT40: 20dBm ± 2dBm @MCS7 IEEE 802.11ac VHT80: 20dBm ± 2dBm @MCS9
Receiver Sensitivity	IEEE 802.11a : -75dBm ± 2dBm@54Mbps IEEE 802.11b : -90dBm ± 2dBm@11Mbps IEEE 802.11g : -75dBm ± 2dBm@54Mbps IEEE 802.11gn HT20:-72dBm ± 2dBm@MCS7 IEEE 802.11gn HT40:-70dBm ± 2dBm@MCS7 IEEE 802.11an HT20:-72dBm ± 2dBm@MCS7 IEEE 802.11an HT40:-69dBm ± 2dBm@MCS7

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	IEEE 802.11ac VHT80:-60dBm ± 2dBm@MCS9
Encryption Security	WEP: (64-bit ,128-bit key supported) WPA/WPA2 :802.11i(WEP and AES encryption) WPA-PSK (256-bit key pre-shared key supported) 802.1X Authentication supported TKIP encryption
Wireless Security	SSID broadcast disable
LED indicators	
Power indicator	2 x LEDs, PWR1(2) / Ready: Green On: Power is on and functioning Normal
Fault	Green On: When fault event occurs
Status	Green Blinking: System Booting, Green Solid On:System Ready
SD	Green On: Working
WWAN signal strength	3 x LEDs Green for Strength: 1<30%, 2 >30% <60%, 3>75%
WWAN status	Green On : Power is on and functioning Normal
DI/O LEDs	4 x LEDs Green Solid On: High, Off:Low
2.4GHz LED	Green On : Working; Off:RF disable
5GHz LED	Green On : Working; Off:RF disable
SIM Indicator	2 x LEDs Green On: in active and dial up
Serial TX/RX LED	Green : Receiving data Green : Transmitting data
Ethernet Port Indicator	8 x LEDs, LNK: Green for port Link/AcT for 1000Base-T(X) LNK: Green for port Link/AcT for 10/100Base-T(X)
Power	
Redundant Input power	Dual DC inputs. 12-48VDC on 4-pin terminal block
Power consumption	13.9w
Overload current protection	Present
Reverse polarity protection	Present
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	60(W) x 125(D) x 158(H) mm
Weight (g)	1100g
Environmental	
Storage Temperature	-40 to 85oC (-40 to 185°F)
Operating Temperature	-30 to 70°C (-22 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	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5 years

Packing List

- **IGMG-8224D-D5G x 1**
- **Wall-Mount Kit x 2**
- **Quick Installation Guide x 1**
- **CD QRcode x 1**
- **WIFI Antenna x 2**
- **Cellular Antenna x 4**
- **3pin Terminal Block x 1**
- **4pin Terminal Block x 1**
- **5pin Terminal Block x 1**

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