

# IGAR-1662+-3G

## Industrial IEEE Dual 802.11 a/b/g/n 3G Cellular Router with 2x10/100/1000Base-T(X)

### Features

- **High Speed Air Connectivity: Dual RF** in IEEE 802.11 a/b/g/n WLAN interface support up to 300Mbps link speed
- Dual RF for redundant wireless communication
- Provide 2 port 10/100/1000Base-T(X) port and 1 sim card slot
- **3.5G HSDPA Modem dial up included**
- Provide HNAT enhance LAN to WAN routing performance
- Highly Security Capability: WEP/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
- Support client operating mode
- IP table to prevent access from unauthorized IP address
- Support VPN for secured network connection (Open VPN , PPTP, IPSEC, VPN)
- Support NAT Setting (Virtual Server , Port Trigger , DMZ , UPnP)
- Wireless connecting status monitoring
- Versatile modes & event alarm by e-mail
- 1KV isolation for PoE P.D.
- Event Warning by Syslog, Email, SNMP Trap, Relay and Beeper
- Rigid IP-30 housing design
- DIN-Rail and Wall-mount enabled

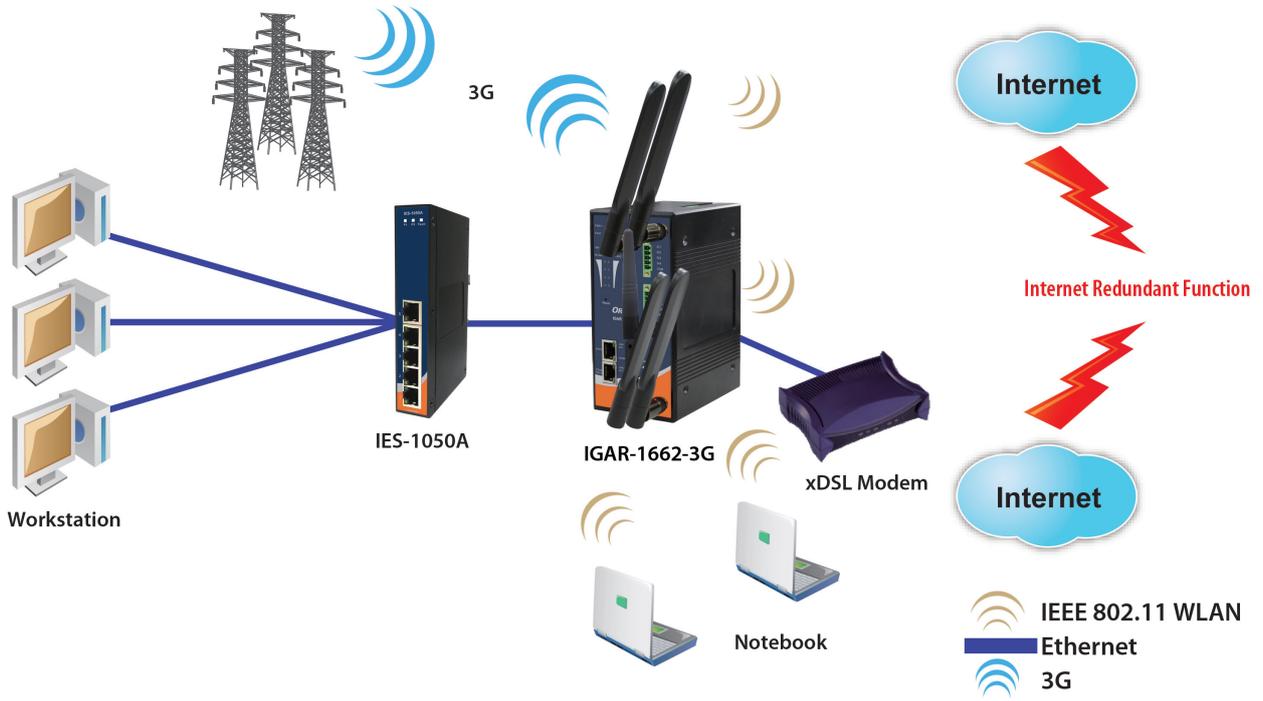


### Introduction

IGAR-1662+-3G is a reliable dual RF in IEEE 802.11 a/b/g/n WLAN VPN router with 2 ports 10/100/1000Base-T(X) router where ETH1 for LAN and ETH2 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 (GPRS/3G/3.5G Modem) dial up. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modems. In addition, IGAR-1662+-3G provides PoE P.D. feature on ETH2 which is fully compliant with IEEE802.3af PoE specification. This feature extends the layout up to 100 meters. Therefore, IGAR-1662+-3G is one of the best solution for applications of wireless communication.

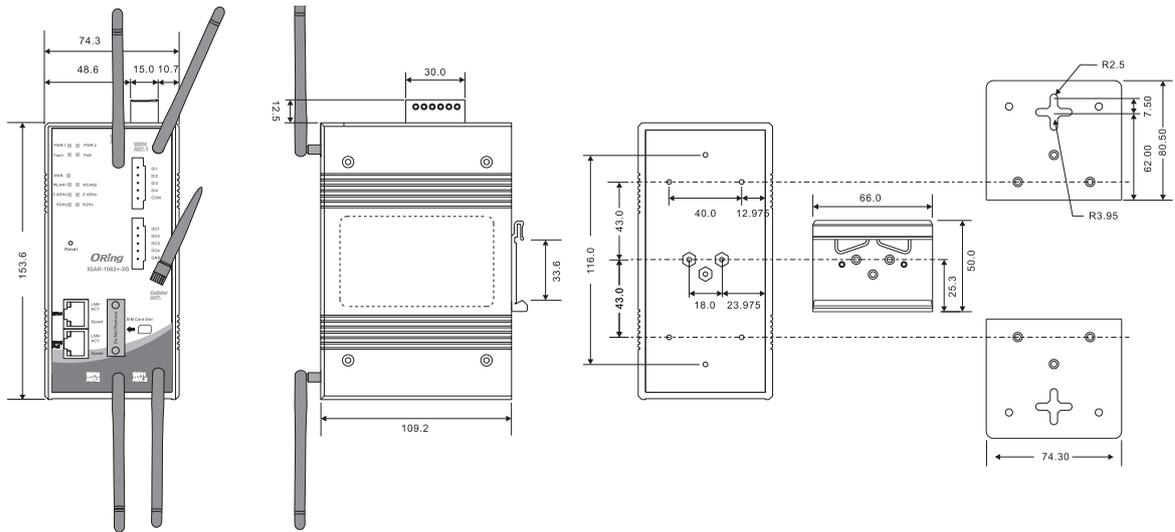
### Application

In IGAR-1662+-3G, there are 3 modes of routing functions supported: Dynamic/Static IP route, PPPoE dial up, and Modem dial up. IGAR-1662+-3G also support NAT, VPN and Back up functions. You can build up the wireless network and connect to the Internet easily.



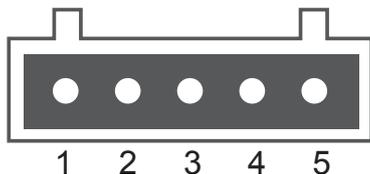
Multiple WAN Devices supported

Dimensions



Unit=mm

## DI/DO Definition



### Digital Input Pin Definition

PIN	1	2	3	4	5
Function	DI1	DI2	DI3	DI4	COM

### Digital Output Pin Definition

PIN	1	2	3	4	5
Function	DO1	DO2	DO3	DO4	GND

## Specifications

ORing AP Model	IGAR-1662+-3G
<b>Physical Ports</b>	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	2
5-Pin Terminal Block	4(DI and DO)
PoE P.D. Port	Present at ETH2 Fully compliant with IEEE 802.3af Power Device specification Over load & short circuit protection Isolation Voltage: 1000 VDC min. Isolation Resistance : 108 ohms min
Sim Card Slot	1
<b>Cellular Interface</b>	
Antenna Connector	1x Reverse SMA Female
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
<b>WLAN Interface</b>	
Antenna Connector	4 x Reverse SMA Female
Modulation	IEEE802.11b: CCK/DQPSK/DBPSK IEEE802.11a/g: OFDM 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	802.11b: 1/2/5.5/11 Mbps 802.11a/g: 6/9/12/18/24/36/48/54 Mbps 802.11n(40MHz): UP to 300 Mbps
Transmit Power	802.11a: 12dBm ± 1.5dBm@54Mbps 802.11b: 17dBm ± 1.5dBm@11Mbps 802.11g: 16dBm ± 1.5dBm@54Mbps 802.11gn HT20: 15dBm ± 1.5dBm @MCS7 802.11gn HT40: 14dBm ± 1.5dBm @MCS7 802.11an HT20: 12dBm ± 1.5dBm @MCS7 802.11an HT40: 11dBm ± 1.5dBm @MCS7

Industrial Ethernet Switch

Industrial Media Converter

Industrial Device Server

Industrial Wireless Access Point

Industrial Cellular VPN Router

Industrial M2M Gateway

Accessories

Network Management Software

Receiver Sensitivity	802.11a : -76dBm ± 2dBm@54Mbps 802.11b : -85dBm ± 2dBm@11Mbps 802.11g : -76dBm ± 2dBm@54Mbps 802.11gn HT20:-75dBm ± 2dBm@MCS7 802.11gn HT40:-72dBm ± 2dBm@MCS7 802.11an HT20:-74dBm ± 2dBm@MCS7 802.11an HT40:-71dBm ± 2dBm@MCS7
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
<b>LED Indicators</b>	
Power Indicator	3 x LEDs, PWR1(2)(PoE) / Ready: Red On : Power is on and booting up Green On : Power is on and functioning Normal
10/100/1000Base-T(X) RJ45 Port Indicator	2 x LEDs, Green for port Link/ Act at 1000Mbps Amber for port Link/ Act at 100Mbps.
WLAN LEDs	2 x LEDs, Green Solid On: RF on, Blink: data transmitting 2 x LEDs, Green for WLAN work on 2.4GHz 2 x LEDs, Green for WLAN work on 5GHz
WAN LEDs:	Green On : Power is on and functioning Normal
Fault	1 x LED, Red for Ethernet link down or power down indicator
<b>Fault Contact</b>	
Relay	Relay output to carry capacity of 1A at 24VDC
<b>Power</b>	
Redundant Input Power	Dual DC inputs. 12-48VDC on 6-pin terminal block
Power Consumption (Typ.)	15Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
<b>Physical Characteristics</b>	
Enclosure	IP-30
Dimensions (W x D x H)	74.3(W) x 109.2(D) x 153.6(H) mm (2.93 x 4.3 x 6.05 inch.)
Weight (g)	1190 g
<b>Environmental</b>	
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
<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
Warranty	3 years

## Ordering Information

IGAR-**A****B****C****D****E**-**FF**

Code Definition	Cellular Module Number	2nd Wireless Mode	1st Wireless Mode	Giga Ethernet Port Number	PoE Identification	Cellular Generation
<b>Option</b>	- <b>1</b> : One SIM - <b>2</b> : Dual SIM	- <b>1</b> : 802.11 b/g - <b>2</b> : 802.11 a - <b>3</b> : 802.11 a/b/g - <b>4</b> : 802.11 b/g/n - <b>5</b> : 802.11 a/n - <b>6</b> : 802.11 a/b/g/n	- <b>1</b> : 802.11 b/g - <b>2</b> : 802.11 a - <b>3</b> : 802.11 a/b/g - <b>4</b> : 802.11 b/g/n - <b>5</b> : 802.11 a/n - <b>6</b> : 802.11 a/b/g/n	- <b>2</b> : 2 ports	+ : PoE P.D. present at ETH2	<b>3G</b> :UMTS

Available Model	Model Name	Description
	IGAR-1662+-3G_US	Industrial dual IEEE 802.11 a/b/g/n 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band
	IGAR-1662+-3G_EU	Industrial dual IEEE 802.11 a/b/g/n 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band

### Packing List

- IGAR-1662+-3G
- DIN-Rail Kit
- Wall-mount Kit
- ORing Tool CD
- Quick Installation Guide
- 2.4GHz/5GHz Antenna
- Cellular Antenna
- 5-Pin Terminal Block
- Dust Cover
- 6-Pin Terminal Block

### Optional Accessories (Can be purchased separately)

- DR-45 series : 45 Watts power supply
- DR-75 series : 75 Watts power supply
- DR-120 series : 120 Watts power supply
- WLAN RF Antenna (Omni-directional) series
- RF Antenna Base (Magnetic) series
- RF Cable series