



Quick Installation Guide

IGAR Series

Industrial Wireless LAN Access Point Router

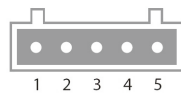
Introduction

IGAR Series is a reliable 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 dial up. In the mode of Modem dial up, it support GPRS/3G/3.5G/LTE modem by internal cellular module. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modems. In addition, IGAR Series also provides P.D. feature on ETH2 which is fully compliant with IEEE802.3af PoE P.D. specification. This feature extends the layout up to 100 meters without extra power cable. Therefore, IGAR Series is one of the best solution for applications of wireless and cellular communication.

Features

- High Speed Air Connectivity: WLAN interface support up to 300Mbps link speed
- Provide 2 port 10/100/1000Base-T(X) port and 1 SIM card slot
- 3.5G HSUPA/ 4G LTE 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
- Support STP(802.1D) for wireless redundancy
- 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, PPTP, IPSEC, VPN)
- Support NAT Setting (Virtual Server, Port Trigger, DMZ, UPnP)
- Cellular Modem signal information display (un-connecting status)
- Wireless connecting status monitoring
- Versatile modes & event alarm by e-mail
- 1KV isolation for PoE P.D. port of IGAR Series
- Event Warning by Syslog, Email, SNMP Trap, Relay output and Beeper
- Rigid IP-30 housing design
- DIN-Rail and Wall-mount enabled

DI/DO Definition



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

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

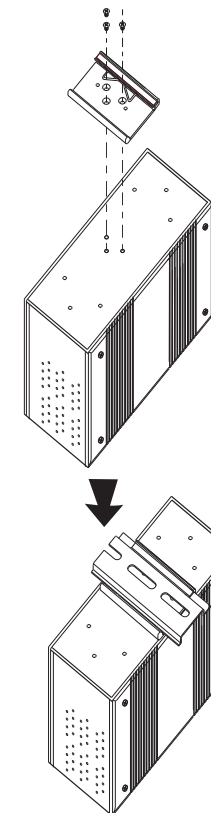
Specifications

ORing AP Router Model	IGAR-1062+-3G	IGAR-2062+-3G	IGAR-1662+-3G	IGAR-1062+-4G	IGAR-2062+-4G	IGAR-1662+-4G
Physical Ports						
10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX	2					
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: 10 ⁹ ohms min					
5-Pin Terminal Block	2 (4xDI and 4xDO)					
Sim Card Slot	1	2	1	1	2	1
Cellular Interface						
Antenna Connector (Reverse SMA Female)	1	2	1	-	-	-
Antenna Connector (SMA Female)	-	-	-	1	2	1
Cellular Standard	GSM / GPRS/ EGPRS/ EDGE/ WCDMA/ HSDPA/ HSUPA		GSM / GPRS/ EGPRS/ EDGE/ WCDMA/ HSDPA/ HSUPA / HSPA+/ LTE			
Band Option	Dual-band : HSUPA 1900/2100 MHz Quad-band : GSM/GPRS/EDGE 850/900/1800/1900 MHz WCDMA/HSUPA 850/900/1900/2100 MHz		America(US) LTE: 700/1700/2100 MHz UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+ : 800/850/1900/2100 MHz GSM/GPRS/EDGE: 850/900/1800/1900 MHz Europe(EU) LTE:800/900/1800/2100/2600 MHz UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+ :900/1200 MHz GSM/GPRS/EDGE:900/1800/1900 MHz			
WLAN Interface						
Antenna Connector (Reverse SMA Female)	2	2	4	2	2	4
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: 11, 5.5, 2, 1 Mbps; 802.11a/g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: 20 MHz BW: 130, 117, 104, 78, 52, 39, 26, 13 40 MHz BW: 270, 243, 216, 162, 108, 81, 54, 27					
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@ MCS 7 802.11gn HT40: 14dBm ± 1.5dBm@ MCS 7 802.11an HT20: 12dBm ± 1.5dBm@ MCS 7 802.11an HT40: 11dBm ± 1.5dBm@ MCS 7					
Receiver Sensitivity	802.11a: -76dBm ± 2dBm@54Mbps 802.11b: -85dBm ± 2dBm@11Mbps 802.11g: -76dBm ± 2dBm@54Mbps 802.11gn HT20: -76dBm ± 2dBm@ MCS 7 802.11gn HT40: -72dBm ± 2dBm@ MCS 7 802.11an HT20: -74dBm ± 2dBm@ MCS 7 802.11an HT40: -71dBm ± 2dBm@ MCS 7					
Encryption Security	WEP: (64-bit ,128-bit key supported) WPA/WPA2 PSK :TKIP and AES encryption (802.11i) 802.1X Authentication supported					
Wireless Security	SSID broadcast disable					
LED Indicators						
Power Indicator	3 x LEDs, PW1(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, Link/Act : Green for port Link/Act Speed : Green for port Link at 100Mbps Amber for port Link at 10Mbps Off for port Link at 10Mbps					
WLAN LEDs	IGAR-1062/ 2062 : Green Solid On: RF on, Blink : data transmitting Green for WLAN Strength: 1<25%, 2<50%, 3<75%, 4<100% IGAR-1662 : 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					
Fault Contact						
Relay	Relay output to carry capacity of 1A at 24VDC					

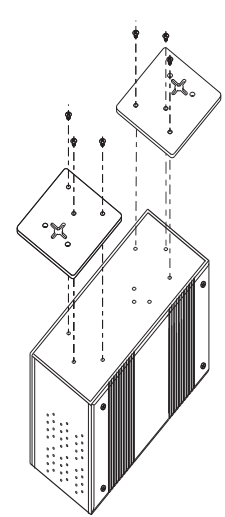
Power						
Redundant Input power	Dual DC inputs. 12-48VDC on 6-pin terminal block					
Power consumption(Typ.)	9 Watts	13 Watts	15 Watts	9.5 Watts	15 Watts	17 Watts
Reverse polarity protection	Present					
Overload current protection	Present on terminal block					
Physical Characteristic						
Enclosure	IP-30					
Dimension (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)	1155g	1186g	1160g	1155g	1186g	1160g
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), EN1000-4-6(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					

Installation

Din-Rail Install Step



Wall-mounted Install Step



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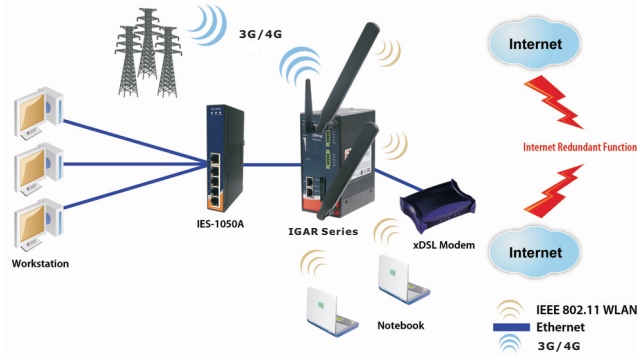
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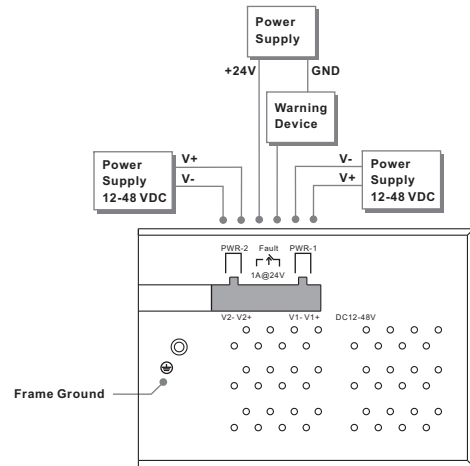
Applications

In IGAR Series, there are 3 modes of routing functions supported: Dynamic/Static IP route, PPPoE dial up, and Modem dial up. IGAR Series 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



Power Connection Guide



ORing Industrial Networking Corp.

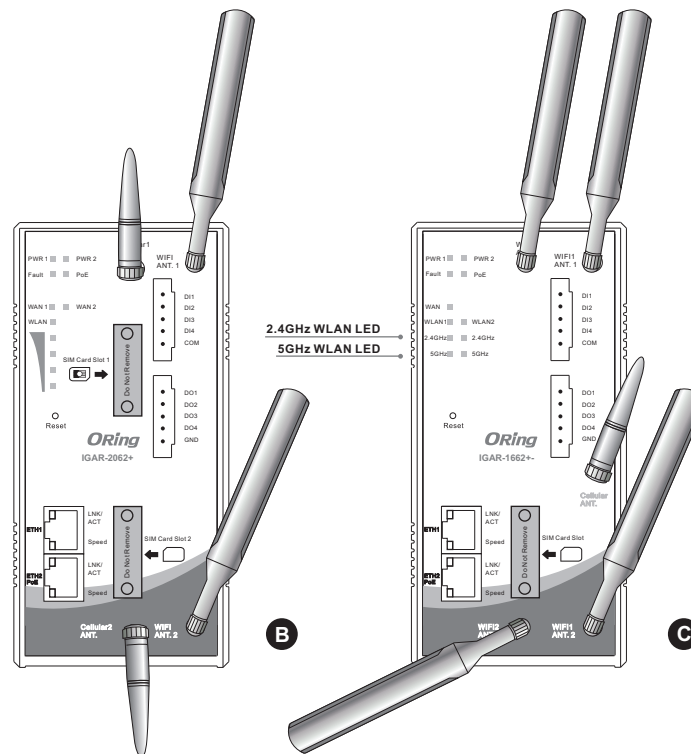
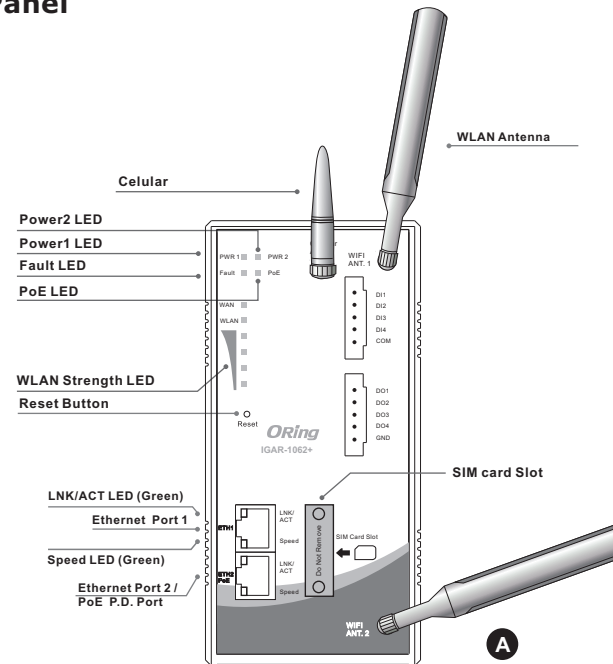
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TEL: +886-2-2218-1066
FAX: +886-2-2218-1014

Website: www.oring-networking.com
E-mail: support@oring-networking.com

ROHS, FC, CE

Front Panel



Accessory

- ① Dust Cover (RJ-45)
- ② 66mm DIN-Rail kit
- ③ 6-Pin Terminal block
- ④ 5-Pin Terminal block
- ⑤ CD
- ⑥ QIG
- ⑦ Wall-mounted kit
- ⑧ WLAN Antenna
- ⑨ Cellular Antenna
- ⑩ Flat Screw (M3 X5)

Packing list

Model name	Front Panel	Model Description	Accessory
IGAR-1062+3G_US	A	Industrial IEEE 802.11 a/b/g/n 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 1, ⊗ X 6
IGAR-1062+3G_EU	A	Industrial IEEE 802.11 a/b/g/n 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 1, ⊗ X 6
IGAR-2062+3G_US	B	Industrial IEEE 802.11 a/b/g/n Dual 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 2, ⊗ X 6
IGAR-2062+3G_EU	B	Industrial IEEE 802.11 a/b/g/n Dual 3G Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 2, ⊗ X 6
IGAR-1662+3G_US	C	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	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 4, ⊗ X 1, ⊗ X 6
IGAR-1662+3G_EU	C	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	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 4, ⊗ X 1, ⊗ X 6
IGAR-1062+4G_US	A	Industrial IEEE 802.11 a/b/g/n 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 1, ⊗ X 6
IGAR-1062+4G_EU	A	Industrial IEEE 802.11 a/b/g/n 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 1, ⊗ X 6
IGAR-2062+4G_US	B	Industrial IEEE 802.11 a/b/g/n Dual 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 2, ⊗ X 6
IGAR-2062+4G_EU	B	Industrial IEEE 802.11 a/b/g/n Dual 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 2, ⊗ X 2, ⊗ X 6
IGAR-1662+4G_US	C	Industrial Dual IEEE 802.11 a/b/g/n 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., US band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 4, ⊗ X 1, ⊗ X 6
IGAR-1662+4G_EU	C	Industrial Dual IEEE 802.11 a/b/g/n 4G LTE Cellular router with 2x10/100/1000Base-T(X), 1-port PoE P.D., EU band	⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 4, ⊗ X 1, ⊗ X 6