

# IGAP-610H+

## Industrial IEEE 802.11 a/b/g/n high power wireless AP with 1x10/100/1000Base-T(X), PoE P.D

### Features

- **High Speed Air Connectivity:** Dual Band in IEEE 802.11 a/b/g/n and b/g/n WLAN interface selectable and support up to 300Mbps link speed
- 12~48VDC power input on terminal block
- 1 Gigabit Ethernet ports **with 2KV isolation for PoE P.D.**
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/ WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Support **X-Roaming < 100 ms**
- **Support Multiple-SSID to 4 SSID with VLAN**
- Support MAC Filter
- High transmission power (27 dBm)
- High throughput > **180Mbps** with HT40 2x2 MIMO
- Support Long Distance Air Connectivity
- Support AP/Client/Repeater
- Wireless connecting status monitoring
- Secured Management by HTTPS
- Event Warning by Syslog, Email, SNMP Trap, and Relay output
- Rigid IP-30 housing design
- DIN-Rail and Wall-mount enabled



### Introduction

IGAP-610H+ is a reliable WLAN Access Point with 1 Ethernet Gigabit ports and IEEE 802.11 a/b/g/n wireless module. It can be configured to operate in AP/ Client/Repeater Mode. You are able to configure IGAP-610H+ by WEB interface via LAN port or WLAN interface. In addition, IGAP-610H+ also provides P.D. feature on Ethernet port which is fully compliant with IEEE802.3af PoE P.D. specification. Therefore, IGAP-610H+ is one of the best communication solutions for wireless applications on the industrial network.

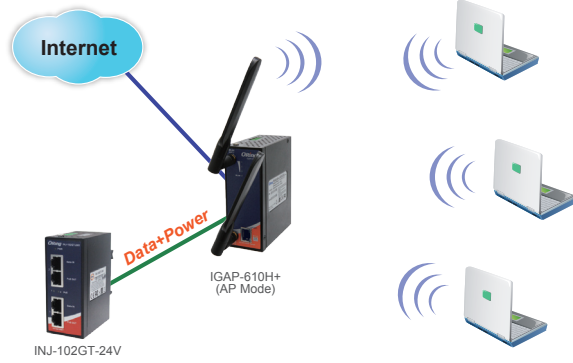
### Application

In practical operation of the wireless access point, Windows utility (Open-Vision) is supported. This utility is very helpful for you to search and configure IP of the access point on the industrial network.

In addition, the wireless access point supports various kinds of operation modes include AP/ Client/Repeater. You can build up the wireless network easily

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## Industrial Wireless Access Point



AP Mode



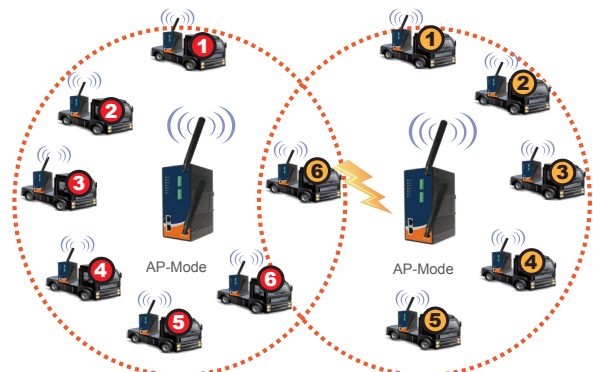
Bridge Mode



Repeater Mode

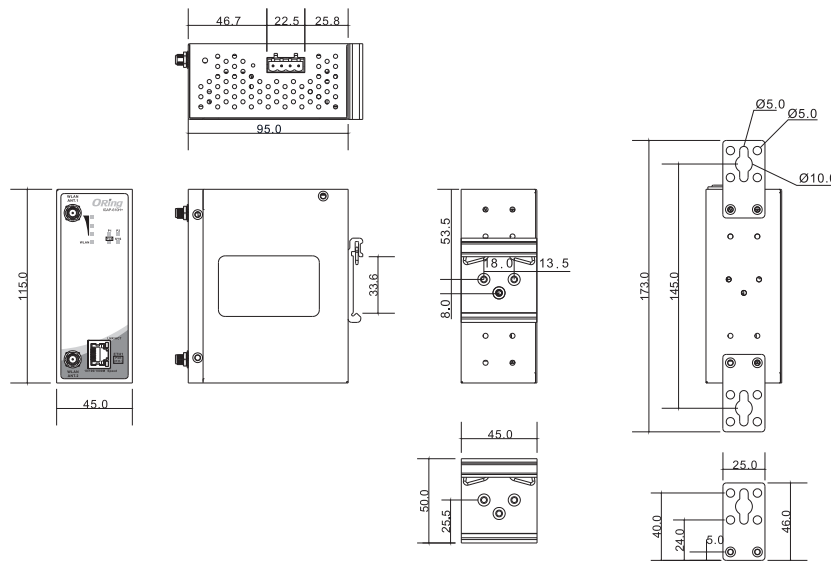


X-Roaming



Wireless Load Balance

## Dimensions



Unit =mm (Tolerance ±0.5mm)

## Specifications

ORing AP Model	IGAP-610H+
<b>Physical Ports</b>	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	<b>1</b>
Antenna Connector	<b>2</b>
PoE P.D Port	Present at ETH1 Fully compliant with IEEE 802.3af Power Device specification Over load & short circuit protection Isolation Voltage: 2000 VDC min. Isolation Resistance : 10 <sup>8</sup> ohms min
<b>WLAN interface</b>	
Operating Mode	AP/Client/Repeater
Antenna Connector	Reverse SMA Female
Modulation	IEEE802.11a: OFDM IEEE802.11b: CCK/DQPSK/DBPSK IEEE802.11g: 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: up to 300Mbps
Transmit Power	802.11a: 24dBm ± 1.5dBm@6Mbps, 802.11a: 12dBm ± 1.5dBm@54Mbps 802.11b: 23dBm ± 1.5dBm@1Mbps, 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
Receiver Sensitivity	802.11a: -92dBm ± 2dBm@6Mbps, 802.11a: -76dBm ± 2dBm@54Mbps 802.11b: -98dBm ± 2dBm@1Mbps, 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) WPA/WPA2 PSK :TKIP and AES encryption (802.11i) 802.1X/RADIUS Authentication supported
Wireless Security	SSID broadcast disable and enable

Industrial Ethernet Switch

Industrial Media Converter

Industrial Device Server

Industrial Wireless Access Point

Industrial Cellular VPN Router

Industrial M2M Gateway

Accessories

Network Management Software

Protocol Support	
Protocol	ARP, BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNTp, TCP, UDP, RADIUS, SNMP, STP, RSTP
LED Indicators	
Power Indicator	3 x LEDs, P1, P2, PoE: Green On : Power is on and functioning Normal
10/100/1000Base-T(X) RJ45 Port Indicator	2 x LEDs, LNK/ACT:Green for port Act. Speed: Green for port Link at 1000Mbps Amber for port Link at 100Mbps. Off for port Link at 10Mbps
WLAN LED	3 x LEDs signal quality 75%, 50% 25% 1 x Green for WLAN Link /Act
Fault	1 x LED, Green for Ethernet link down or power down indicator
Power	
Redundant Input Power	Dual DC inputs. 12~48VDC on 4-pin terminal block
Power Consumption (Typ.)	7W
Overload Current Protection	Present
Reverse Polarity Protection	Present on the terminal block
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	45 (W) x 95 (D) x 115 (H) mm
Weight (g)	375g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F) (TBD)
Operating Temperature	-25 to 70°C (-13 to 158°F)
Operating Humidity	5% to 95% Non-condensing (TBD)
Regulatory Approvals	
EMC	CE EMC (EN 55024, EN 55032), FCC Part 15B
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN61000-4-8(PFMF), IEC/EN 61000-4-11(DIP))
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF	211477 hrs
Warranty	5 years

### Ordering Information

IGAP- **A** **B** **0** **H** **C**

Code Definition	Wireless Mode	10/100/1000Base-T(X) Port Number	Antenna Connector Number	PoE Identification
<b>Option</b>	- <b>1</b> : IEEE802.11 b/g - <b>2</b> : IEEE802.11 a - <b>3</b> : IEEE802.11 a/b/g - <b>4</b> : IEEE802.11 b/g/n - <b>5</b> : IEEE802.11 a/n - <b>6</b> : IEEE802.11 a/b/g/n	- <b>"1"</b> : 1ports	- <b>H</b> : high power model	- <b>"+"</b> : PoE P.D. present at ETH1

#### Packing List

- IGAP- 610H+ x 1
- Wall Mount kit x 1
- 2.4GHz/5GHz Antenna x 2
- Quick Installation Guide x 1
- Din-Rail Kit x 1
- CD x 1
- DC power Pigtail Jack
- Terminal Block x 1