PoE IP-67 Wireless Access Point

ORing

Quick Installation Guide

IGAP-W612H+

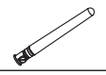
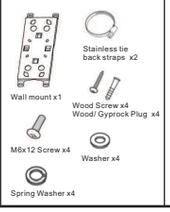
Industrial IP-67 PoE Outdoor Access Point

Introduction

IGAP-W612H+ is a reliable IP-67 outdoor IEEE 802.11 a/b/g/n WLAN Access Point with 1 PoE P.D. Ethernet port. It can be configured to operate in AP/Client/Repeater mode. It is specifically designed for the toughest industrial environments. In combination with its IP-67 design and the superb management functionality, **IGAP-W612H+** provides a waterproof, dust-tight connection. In addition, **IGAP-W612H+** provides a high power output of 27 dBm and high throughput up to 180Mbps to satisfy far distance connection. **IGAP-W612H+** provides two N-type connectors, which can install any N-type antennas to extend communication distance. You are able to configure **IGAP-W612H+** by WEB interface via LAN port or WLAN interface. In addition, IGAP-W612H+ also provides P.D. feature which is fully compliant with the IEEE802.3at PoE P.D. specification to save the layout cost of the power line. **IGAP-W612H+** can be easily adopted in almost all kinds of applications and provides the most rugged solutions for managing your network in outdoor. Therefore, **IGAP-W612H+** is one of the best outdoor communication solutions for wireless applications

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
IGAP-W612+		1
CD		1
2.4GHz/5GHz Antenna		2
RJ-45 Cable Gland		1
QIG		1
Mounting Installation Package		1

Preparation

Before you begin installing the device, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

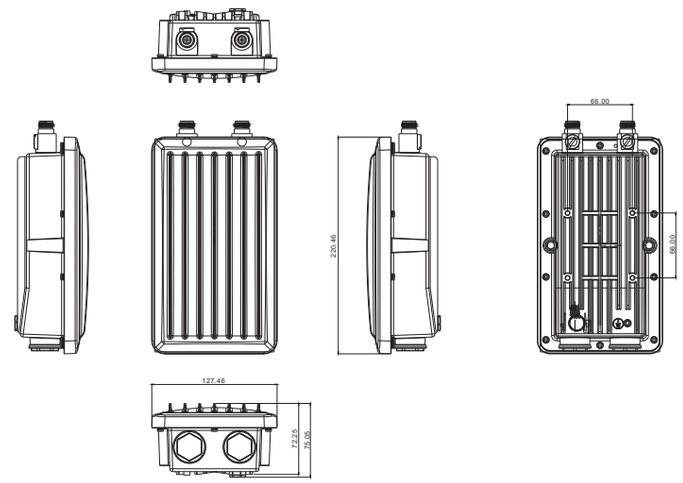
When installed outdoors, make sure the connectors on the panel are facing down to prevent water intrusion.

Do not remove the water-proof casing, and do not touch or move the device when the antennas are transmitting or receiving signals.

When installing the device, make sure to keep the radiating at a minimum distance of 20 cm (7.9 inches) from all persons to minimize the potential for human contact during normal operation.

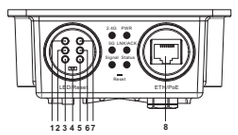
Do not operate the device near unshielded blasting caps or in an otherwise explosive environment unless the device has been modified for such use by qualified personnel.

Dimension



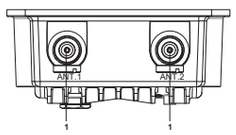
Panel Layouts

Bottom Panel



1. LED for 2.4G WLAN
2. LED for 5G WLAN
3. LED for WLAN signal strength
4. Reset button
5. LED for system status
6. LNK/ACT LED for Giga PoE LAN port
7. Power indicator
8. Giga PoE LAN port

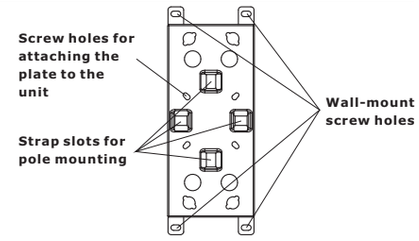
Top Panel



1. WLAN Antenna

Installation

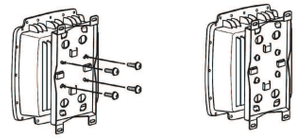
The device can be fixed to a pole or the wall using the supplied mounting plate. Make sure the connectors on the bottom panel are facing down when installing to prevent water intrusion.



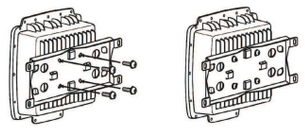
Wall-mount

Follow the steps below to install the device to the wall.
Step 1: Attach the mounting plate to the back of the device using four screws. The plate can be attached vertically or horizontally to the device depending on the space available.

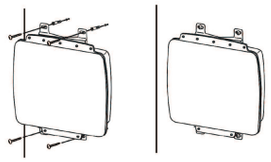
Vertical



Horizontal



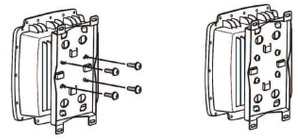
Step 2: Hold the device upright against the wall.
Step 3: Insert four screws through the holes at the top and bottom of the plate and fasten the screws to the wall.



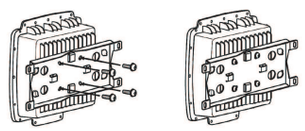
Pole-mount

You can mount the device to a pole using the adjustable steel band straps included in the kit. Follow the steps below:
Step 1: Attach the mounting plate to the back of the device using four screws. The plate can be attached vertically or horizontally to the device based on the space available.

Vertical

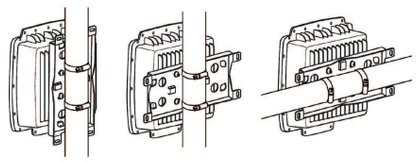


Horizontal



Step 2: Thread the two supplied metal mounting straps through the large slots on the mounting plate and then put the straps around the pole.

Type 1 Type 2 Type 3



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Network Connection

The device has three standard Ethernet ports. According to the link type, the device uses CAT 3,4,5,5e UTP cables to connect to any other network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

RJ-45 Pin Assignment

10/100 Base-T(X) RJ-45 port	
Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

1000Base-T RJ-45 port	
Pin Number	Assignment
1	BI_DA+
2	BI_DA-
3	BI_DB+
4	BI_DC+
5	BI_DC-
6	BI_DB-
7	BI_DD+
8	BI_DD-

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

Configurations

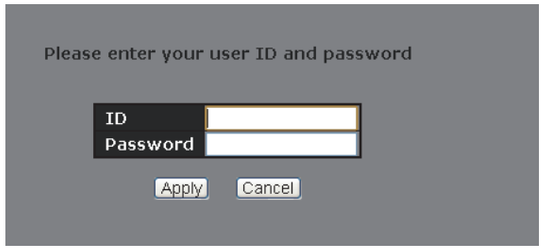
After installing the device and connecting cables, the green power LED should turn on. Please refer to the following tablet for LED indication.

LED	Color	Status	Description
PWR	Green	On	PoE power is supplied over Ethernet cable
Status	Green	On	System is ready
		Blinking	System is booting up
WLAN			
2.4G	Green	On	2.4G WLAN activated
5G	Green	On	5G WLAN activated
Signal	Green	On	WLAN signal strength.> 75%
		Blink 2 sec/time	WLAN signal strength.=> 74% ~ 50%
		Blink 1 sec/time	WLAN signal strength.=> 49% ~ 25%
		Blink 500 msec/time	WLAN signal strength.=< 25%
10/100/1000Base-T(X) Fast Ethernet ports			
LNK/ACT	Green	On	Port is linked
		Blinking	Transmitting Data

Follow the steps to set up the card:

1. Launch the Internet Explorer and type in IP address of the switch. The default static IP address is **192.168.10.2**

2. Log in with default user name and password (both are **admin**).



3.After logging in, you should see the following screen. For more information on configurations, please refer to the user manual.

Resetting

To restore the device configurations back to the factory defaults, press the **Reset** button for a few seconds. Once the power indicator starts to flash, release the button. The device will then reboot and return to factory defaults.

Specifications

ORing WLAN Access Point Model	IGAP-W612H+
Physical Ports	
10/100/1000Base-T(X) Ports in Auto MDI/MDIX	1 (with PoE)
WLAN Feature	
Antenna Connector	2 x External N-type antenna connector
Operating Mode	AP/Client/Repeater
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 802.11g: 54, 48, 36, 24, 18, 12, 9, 6Mbps 802.11n: up to 300Mbps
Transmit Power	802.11a: 23dBm ± 1.5dBm@6Mbps, 21dBm ± 1.5dBm@54Mbps 802.11b: 23dBm ± 1.5dBm@1Mbps, 23dBm ± 1.5dBm@11Mbps 802.11g: 23dBm ± 1.5dBm@6Mbps, 21dBm ± 1.5dBm@54Mbps 802.11gn HT20: 20dBm ± 1.5dBm@MCS7, 802.11gn HT40: 20dBm ± 1.5dBm @MCS7 802.11an HT20: 20dBm ± 1.5dBm@MCS7, 802.11an HT40: 20dBm ± 1.5dBm @MCS7
Receiver Sensitivity	802.11a : -93dBm ± 2dBm@6Mbps, -74dBm ± 2dBm@54Mbps 802.11b : -98dBm ± 2dBm@1Mbps, -90dBm ± 2dBm@11Mbps 802.11g : -90dBm ± 2dBm@6Mbps, -77dBm ± 2dBm@54Mbps 802.11gn HT20:-74dBm ± 2dBm@MCS7, 802.11gn HT40:-71dBm ± 2dBm@MCS7 802.11an HT20:-71dBm ± 2dBm@MCS7, 802.11an HT40:-68dBm ± 2dBm@MCS7
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 Authentication supported TKIP encryption
Wireless Security	SSID broadcast disable
Protocol Support	
Protocol	ARP, BOOTP, DHCP, DNS, HTTPs, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, STP (IEEE 802.1D)
Power	
Redundant Input power	48VDC from P.o.E
Power Consumption(Typ.)	7 Watts
Physical Characteristic	
Enclosure	IP-67
Dimension (W x D x H)	220.42(W)x 127.42(D)x 75(H) mm (8.68x5.02x2.95 inch.)
Weight (g)	1148g
Environmental	
Storage Temperature	-30 to 85°C (-22 to 185°F)
Operating Temperature	-10 to 70°C (14 to 158°F)
Operating Humidity	5% to 95% Non-condensing

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	250109 hours
Warranty	5 years

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