

Quick Installation Guide

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.

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 Max.)
- > High data throughput 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

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-610H+		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2
4-pin terminal block		X 1
Power cable with power jack		X 1
CD		X 1

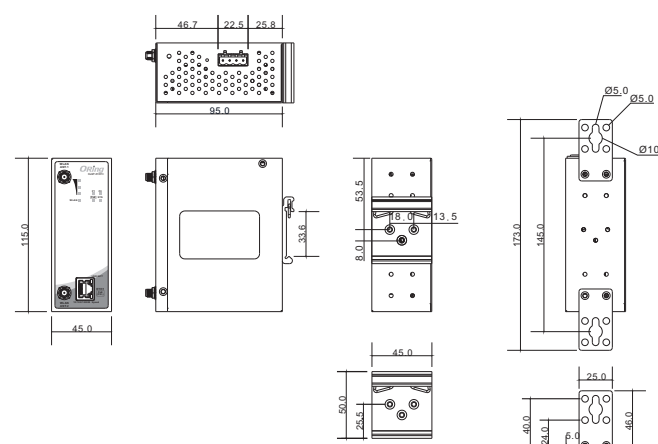
Preparation

Before installation, 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.

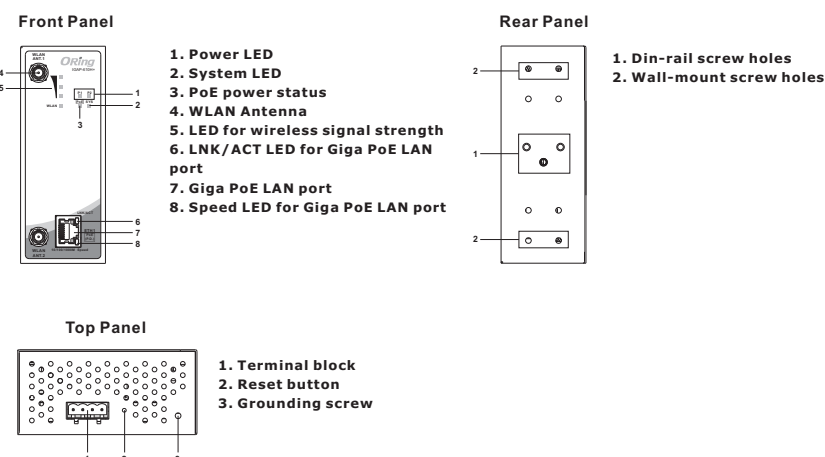
Safety & Warnings

- Elevated Operating Ambient:** If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
- Reduced Air Flow:** Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation.
- Mechanical Loading:** Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.
- Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension Unit =mm (Tolerance ±0.5mm)



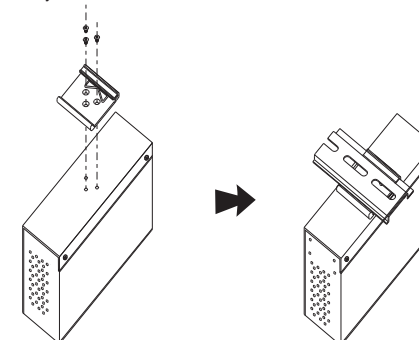
Panel Layouts



Installation

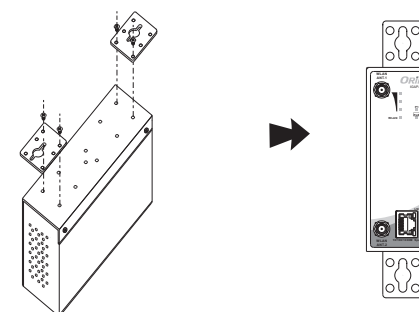
DIN-rail

- Step 1:** Slant the device and screw the Din-rail kit onto the back of the device, right in the middle of the back panel.
Step 2: Slide the device onto a DIN-rail from the Din-rail kit and make sure the device clicks into the rail firmly.



Wall-mount

- Step 1:** Screw the two pieces of wall-mount kits to the top and bottom panels of the device. A total of eight screws are required, as shown below.
Step 2: Use the device, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
Step 3: Insert a screw head through middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.



Wiring

Power inputs

The device supports dual redundant power supplies, Power Supply1 (PWR1) and Power Supply 2 (PWR2). The connections for PWR1, PWR2 are located on the terminal block.

- STEP 1:** Insert the negative/positive wires into the V-/V+ terminals, respectively.
STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.



Network Connection

The device has three standard Ethernet ports. According to the link type, the device uses CAT 3,4,5,6 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

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IGAP-610H+

Industrial Wireless LAN Access Point

RJ-45 Pin Assignment

10/100 Base-T(X) RJ-45 port		1000Base-T RJ-45 port	
Pin Number	Assignment	Pin Number	Assignment
1	TD+	1	BI_DA+
2	TD-	2	BI_DA-
3	RD+	3	BI_DB+
4	Not used	4	BI_DC+
5	Not used	5	BI_DC-
6	RD-	6	BI_DB-
7	Not used	7	BI_DD+
8	Not used	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
P.O.E	Green	On	PoE power on
P1/ P2	Green	On	DC power 1/2 is activated.
SYS	Green	On	System is ready
		Blinking	System is booting up
WLAN	Green	On	WLAN activated
		Blinking	Transmitting wireless data
WLAN Strength	Green	On	WLAN signal strength.
			1<25%, 2<50%, 3<75%, 4<100%
10/100/1000Base-T(X) Fast Ethernet ports			
LNK/ACT	Green	On	Port is activated
Speed	Green	On	Port is linked and running at 1000Mbps.
	Amber	On	Port is linked and running at 100Mbps.
		Off	Port is linked and running at 10Mbps.

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).

Please enter your user ID and password

ID
Password

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-610H+
Physical Ports	
10/100/1000Base-T(X) Ports in Auto MDI/MDIX	1
Antenna Connector	2
PoE P.D Port	Present at ETH1 Fully compliant with IEEE 802.3af Power Device specification Over load & short circuit protection Isolation Voltage: 2000VDC min. Isolation Resistance: 10 ⁹ ohms min
WLAN Feature	
Antenna Connector	Reverse SMA Female
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 : -90dBm ± 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 PSK: TKIP and AES encryption (802.11i) 802.1X Authentication supported
Wireless Security	SSID broadcast disable and enable
Protocol Support	
Protocol	ARP,BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, STP, RSTP
Power	
Redundant Input power	Dual DC inputs. 12~48VDC on 4 pin terminal block
Power Consumption(Typ.)	7 Watts
Overload current protection	Present
Reverse polarity protection	Present on terminal block
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	45 (W) x 95 (D) x 115(H)mm (1.77x3.74x4.53 inch.)
Weight (g)	375g
Environmental	
Storage Temperature	-40 to 85°C (-40 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/EN 61000-4-8 (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



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