WIRELESS ACCESS POINT INDUSTRIAL

ORing

Quick Installation Guide

IAP-420 Series

Industrial Wireless LAN Access Point

Introduction

The **IAP-420/IAP-420+ series** is a reliable 802.11b/g/n access point with two LAN ports. The series supports 802.1X and MAC filters for security control and can operate in AP/bridge/repeater/AP-client modes. You can configure the device using a WEB interface via wired or wireless connections. The second Ethernet port of the **IAP-420+** is P.D. enabled, fully compliant with IEEE802.3af PoE standard.

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
IAP-420 or IAP-420+		X 1
CD		X 1
2.4GHz Antenna		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2

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

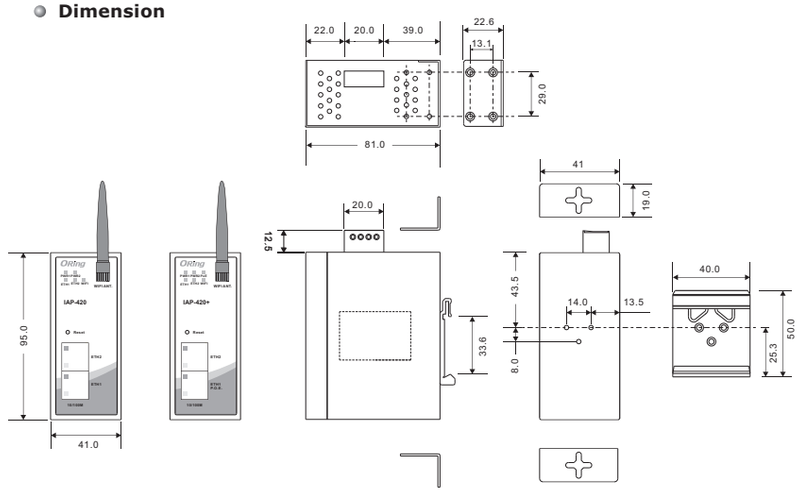
Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

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.

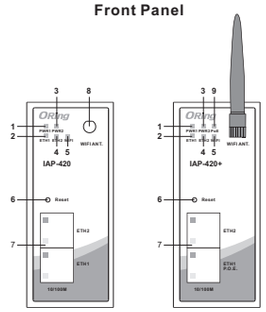
Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension



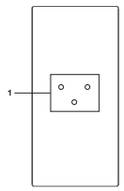
Panel Layouts

Front Panel



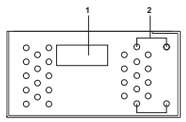
1. LED for Power 1 module
2. LED for 1st LAN port
3. LED for Power 2 module
4. LLED for 2nd LAN port
5. LED for Wi-Fi status
6. Reset button
7. Ethernet ports (ETH2 of IAP-420+ is PoE-enabled)
8. Wi-Fi antenna connector
9. PoE indicator

Rear Panel



1. Din-rail screw holes

Top Panel

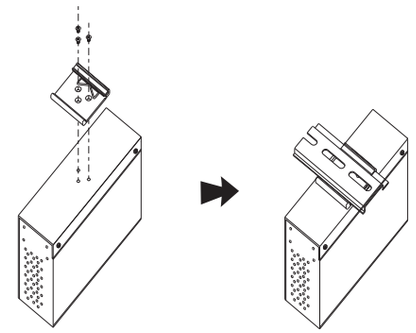


1. Terminal block
2. Wall-mount screw holes

Installation

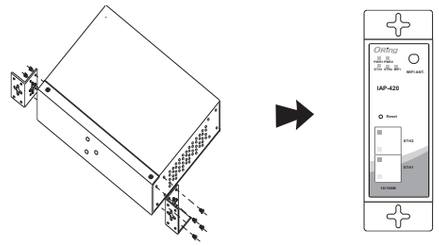
DIN-rail

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 both ends of the rear panel of the device. A total of six 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.



Network Connection

The device has two 10/100Base-T(X) Ethernet ports. According to the link type, the AP uses CAT 3, 4, 5, 5e, 6 UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs).

Cable	Type	Max. Length	Connector
10Base-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ45
100Base-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ45

10/100Base-T(X) RJ-45 Port Pin Assignments	
Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	N.C.
5	N.C.
6	RD-
7	N.C.
8	N.C.

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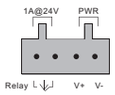
Wiring

Power inputs

This device supports dual redundant power supplies, Power Supply 1 (PWR1) and Power Supply 2 (PWR2). The connectors for PWR1 and PWR2 are located on the terminal block.



STEP 1: Insert the negative/positive DC 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.

Relay contact

The relay contact of the 4-pin terminal block connector are used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured when an event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screws to the grounding surface prior to connecting devices.

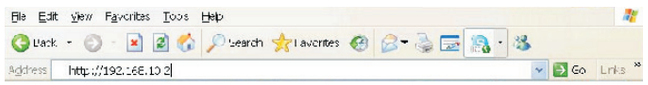
Configurations

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
PWR1	Green	On	DC power 1 is activated
PWR2	Green	On	DC power 2 is activated
PoE	Green	On	Power is supplied over Ethernet cable
ETH1	Green	On	Port is linked and running at 100Mbps
		Blinking	Data being transmitted
ETH2	Green	On	Port is linked and running at 100Mbps
		Blinking	Transmitting data
WLAN	Green	On	WLAN is activated

Follow the steps below to log in and access the system:

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



2. Log in with default user name and password (both are admin). After logging in, you should see the following screen. For more information on configurations, please refer to the user manual. For information on operating the device using Oring's Open-Vision management utility, please go to ORing website.

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	IAP-420	IAP-420+
Physical Ports		
10/100Base-T(X) Ports in Auto MDI/MDIX	2	
PoE P.D. port	-	Present at ETH Fully compliant with IEEE 802.3af Power Device specification Over load & short circuit protection Isolation Voltage: 1000 VDC min. Isolation Resistance: 10^8 ohms min
WLAN Interface		
Operating Mode	AP/Bridge/AP-Client/Repeater	
Antenna and Connector	1 x External reverse SMA type antenna connector	
Radio Frequency Type	DSSS, OFDM	
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g/n: OFDM with BPSK, QPSK, 16QAM, 64QAM	
Frequency Band	America / FCC : 2.412~2.462 GHz (11 channels) Europe CE / ETSI : 2.412~2.472 Ghz (13 channel)	
Transmission Rate	801.11b: 1/ 2/ 5.5/ 11 Mbps 801.11g: 6/ 9/ 12/ 18/ 24/ 36/ 48/ 54 Mbps 802.11n(MHz): UP to 150 Mbps	
Transmit Power	802.11b: 13.5dBm ±1.5 dBm 802.11g: 13.5dBm ±1.5 dBm 802.11n(2.4G@20MHz): 13.5dBm ±1.5dBm 802.11n(2.4G@40MHz): 13.5dBm ±1.5dBm	
Receiver Senstivity	802.11b: -90dBm±2.0dB @ 11Mbps 802.11g: -72dBm±2.0dB @ 54Mbps 802.11n(2.4G@40MHz, MCS7): -68dBm ±2dBm	
Encryption Security	WEP: (64-bit, 128-bit key supported) WPA/WPA2: (WEP and AES encryption) 802.11i WPA-PSK (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, HTTP, IP, ICMP, SNTP, TCP, UDP, 802.1X, SNMP, STP	
Power		
Redundant Input power	Dual DC inputs. 12~48VDC on 4 pin terminal block	
Power Consumption(Typ.)	4 watts	
Overload current protection	Present	
Reverse polarity protection	Present	
Physical Characteristic		
Enclosure	IP-30	
Dimension (W x D x H)	41(W)x81(D)x95(H) mm (1.61 x 3.19 x 3.74 inch.)	
Weight (g)	292g	297g
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), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27, EN61373
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5 years

ORing

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