

Quick Installation Guide

Introduction

The IAR-142-/-142+-4G is a reliable IEEE 802.11 b/g/n WLAN VPN router with two 10/100Base-T(X) ports where one is for LAN and the other one for WAN. It supports 802.1X and MAC filter for security control and can be operate in three routing modes: Dynamic/Static IP Route, PPPoE Authentication, and Modem Dial-up. In the mode of Modem Dial-up, it supports GPRS/3G/3.5G/LTE modem via the internal 4G module. You can set up a WLAN environment that fulfills demands of various applications by dialing up cellular modems. In addition, the LAN port of JAR-142+-4G is P.D.enabled which is fully compliant with IEEE802.3af PoE specification. This feature extends the layout up to 100 meters.

→ 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

Contents	Pictures	Number
IAR-420-4G or IAR-420+-4G		Х1
CD		Х1
LTE Antenna		X 2
Wi-Fi Antenna		X1
QIG		Х1
DIN-rail kit		Х1
Wall-Mount Kit		X 2
4-pin terminal block		Х1
Dust cover	ISO .	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.

IAR-142(+)-4G

Industrial Wireless LAN Access

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.

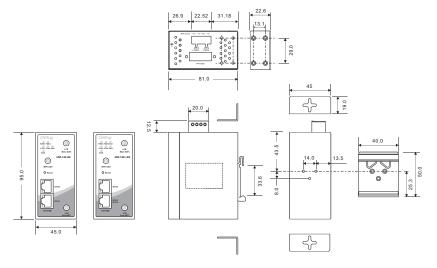


Mechanical Loading: Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.



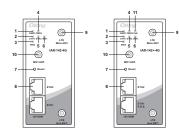
Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this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

Dimension



Panel Lavouts

Front Panel



- 1. LED for Power 1 module
- 2. LED for ETH1 port
- 3. LED for WAN status
- 4. LED for Power 2 module
- 5. LED for ETH2 port 6. LED for Wi-Fi status
- 7. Reset button
- 8. Ethernet ports (ETH1 as LAN port; ETH2 as
- WAN port)
- 9. LTE antenna connector
- 10. Wi-Fi antenna connector
- 11. PoE indicator (IAR-142+-4G only)

Point Router

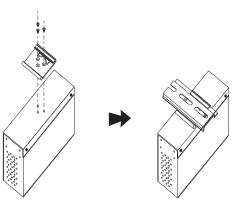
Rear Panel Top Panel 1. Terminal block 2. Wall-mount screw holes 1. Din-rail screw holes 3. SIM card slot

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.

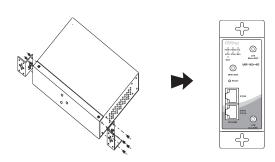


Wall-mount

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.





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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	Туре	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

10/100 Base-T(X) RJ-45 Pin Assignments:

Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	P.O.E. power input +
5	P.O.E. power input +
6	RD-
7	P.O.E. power input -
8	P.O.E. power input -

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 flatblade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

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.

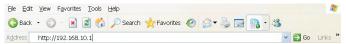
Configurations

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 activated
PWR2	Green	On	DC power 2 activated
PoE	Green	On	Power is supplied over Ethernet cable
ETH1 G	0	On	Port is linked and running at 100Mbps
	Green	Blinking	Data being transmitted
ETH2	Green	On	Port is linked and running at 100Mbps
EIHZ	Green	Blinking	Data being transmitted
WIFI	Green	On	WLAN is activated
WAN	Green	On	Modem ready

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 192.168.10.1



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 Router Model	IAR-142-4G	IAR-142+-4G	
Physical Ports	'		
10/100Base-T(X) Ports in Auto MDI/MDIX	2		
PoE P.D. port	-	Present at ETH1 Fully compliant with IEEE 802.3af Power Device specification Over load & short circuit protection Isolation Vottage: 1000 VDC min. Isolation Nesistance: 10 ⁸ ohms min	
Sim Card Slot		ı	
Cellular Interface			
Antenna Connector	2 x SMA Female		
Cellular Standard	GSM / GPRS/ EGPRS/ EDGE/ WCDMA/ HSDPA/ HSUPA/LTE		
Band Option	America (US grade) LTE: 1900(B2)/1700(B4)/850(B5)/700(B17)/1900(B25) MHZ CDMA/EVDO rev. a/b: 800/1900 UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 850/900/1700/1900/2100 MHZ GSM/GPRS/EDGE: 850/900/1800/1900 MHZ Europe (EU grade) LTE: 2100(B1)/1800(B3)/2600(B7)/900(B8)/800(B20) MHZ UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 800/850/900/1900/2100 MHZ GSM/GPRS/EDGE: 850/900/1800(1900 MHZ		
WLAN Interface			
Antenna and Connector	1 x Reverse SMA Female		
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: GFDM IEEE802.11m: BPSK, QPSK, 16-QAM, 64-QAM		
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		

Point Router

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		
Power			
Redundant Input power	Dual DC inputs. 12~48VDC on 4 pin term	ninal block	
Power Consumption(Typ.)	3 Watts		
Overload current protection	Present		
Reverse polarity protection	Present		
Physical Characteristic			
Enclosure	IP-30		
Dimension (W x D x H)	45(W)x81(D)x95(H) mm (1.77 x 3.19 x 3.74 inch.)		
Weight (g)	400g	400g 410g	
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	3 years		

