



# IAR-120 / IAR-120+

## Industrial IEEE 802.11 b/g Cellular VPN router

### Features

- High Speed Air Connectivity: WLAN interface support up to 54Mbps link speed
- Provide HNAT enhance LAN to WAN routing performance
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Secured Management by HTTPS
- Support STP(802.1D) for wireless redundancy
- Various kind of WAN Connection Type supported: Dynamic/Static IP, PPPoE, Modem/Dial Up
- Support client operating mode
- IP table to prevent access from unauthorized IP address
- Support VPN for secured network connection (Open VPN , PPTP VPN)
- Support NAT Setting (Virtual Server , Port Trigger , DMZ , UPnP)
- Support DHCP forwarder through PPTP function
- 3G Modem signal information display (un-connecting status)
- Wireless connecting status monitoring
- Versatile modes & event alarm by e-mail
- USB interface support 3.5G HSDPA USB Modem dial up
- 1KV isolation for PoE P.D. port of IAR-120+
- Event Warning by Syslog, Email, SNMP Trap, Relay and Beeper
- Rigid IP-30 housing design
- DIN-Rail and Wall-mount enabled



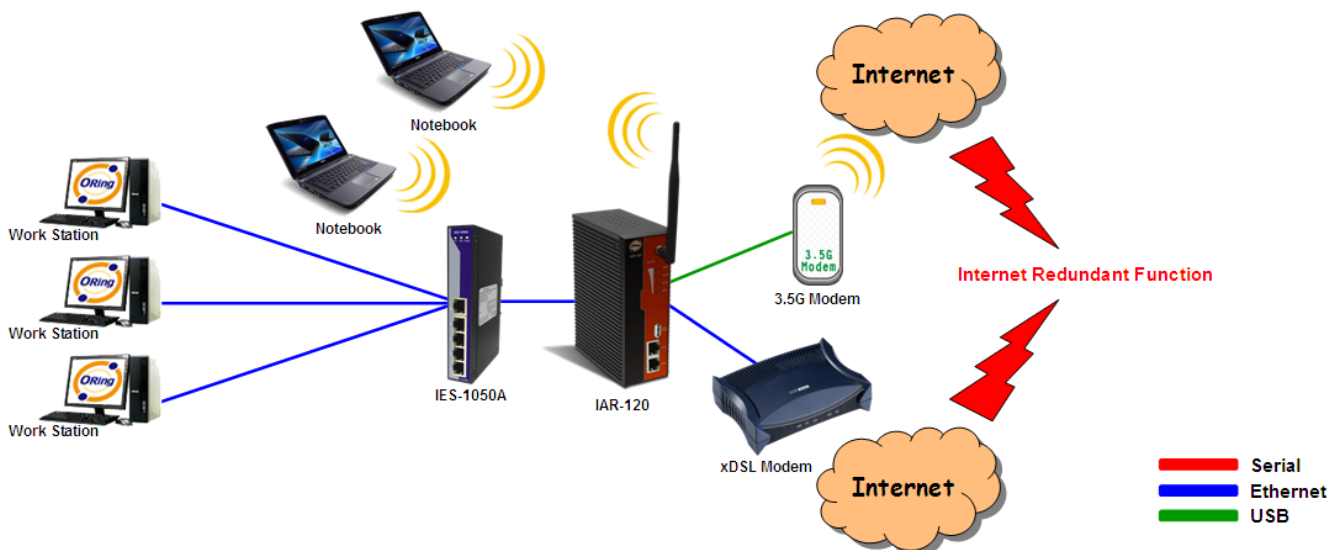
### Introduction

IAR-120/120+ is a reliable IEEE 802.11 b/g WLAN VPN router with 2 ports 10/100Base-T(X) router where ETH1 for LAN and ETH2 for WAN. It supports 802.1X and MAC filter for security control. It could be configured to operate in 3 modes of routing function: Dynamic/Static IP route, PPPoE authentication, and Modem (56K/GPRS/3G/3.5G Modem) dial up. In the mode of Modem dial up, it support both traditional 56K modem and GPRS/3G/3.5G Modem with USB interface. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modems. In addition, IAR-120+ also provides P.D. feature on ETH2 which is fully compliant with IEEE802.3af PoE P.D. specification.

This feature extends the layout up to 100 meters. Therefore, IAR-120/120+ is one of the best solution for applications of wireless communication.

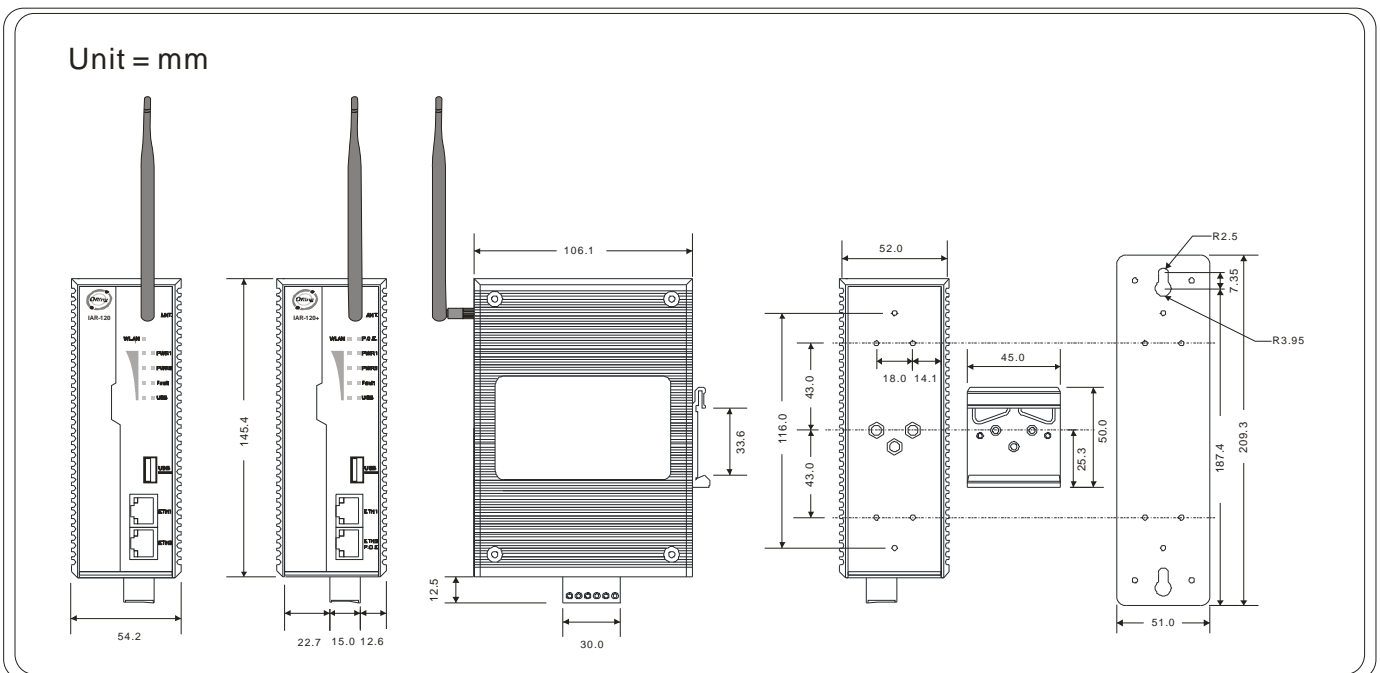
## Practical Operation

In IAR-120 / IAR-120+, there are 3 modes of routing functions supported: Dynamic/Static IP route, PPPoE dial up, and Modem dial up. IAR-120 / IAR-120+ also support NAT, VPN and Back up functions. You can build up the wireless network and connect to the Internet easily.



Multiple WAN Devices supported

## Dimension



## Specifications

| ORing AP Router Model                            | IAR-120  | IAR-120+   |
|--|--|--|
| <b>Physical Ports</b>                            |  |  |
| 10/100 Base-T(X) Ports in RJ45<br>Auto MDI/MDIX  | 2  |  |
| PoE PD port                                      |  | Present at ETH2<br>Fully compliant with IEEE 802.3af Power Device specification<br>Over load & short circuit protection<br>Isolation Voltage: 1000 VDC min.<br>Isolation Resistance : 10 <sup>8</sup> ohms min |
| USB Host port                                    | 1x USB 2.0 Host port   |  |
| <b>WLAN interface</b>                            |  |  |
| WAN Connection Type                              | Static/Dynamic IP · PPPoE · Modem/(56K/GPRS/3G/3.5G Modem) dial up   |  |
| Antenna Connector                                | Reverse SMA  |  |
| Radio Frequency Type                             | DSSS   |  |
| Modulation                                       | IEEE802.11b: CCK, DQPSK, DBPSK<br>IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM  |  |
| Frequency Band                                   | America/FCC: 2.412~2.462 GHz (11 channels)<br>Europe CE/ETSI: 2.412~2.472 Ghz (13 channels)  |  |
| Transmission Rate                                | IEEE802.11b: 1/ 2/ 5.5/ 11 Mbps<br>IEEE802.11g: 6/ 9/ 12/ 18/ 24/ 36/ 48/ 54 Mbps  |  |
| Transmit Power                                   | IEEE802.11b/g: 18dBm   |  |
| Receiver Sensitivity                             | -81dBm @ 11Mbps, PER< 8%;<br>-64dBm @ 54Mbps, PER< 10%   |  |
| Encryption Security                              | WEP: (64-bit ,128-bit key supported)<br>WPA:<br>WPA2 :802.11i(WEP and AES encryption)<br>WPAPSK (256-bit key pre-shared key supported)<br>802.1X and Radius supported<br>TKIP encryption   |  |
| Wireless Security                                | SSID broadcast disable   |  |
| <b>Modem Support</b>                             |  |  |
| List   | <ol style="list-style-type: none"> <li>1. USB modems and ISDN adapters which support the Communication Device Class Abstract Control Model interface, such as Hummingbird huc56s (Conexant)</li> <li>2. Huawei E220/E230</li> <li>3. Simense HSDPA-180C</li> <li>4. Prolific 2303 + serial modem</li> <li>5. Quanta MUQ101</li> <li>6. Sony Ericsson MD400/MD400g</li> <li>7. Sierra C885</li> </ol> |  |
| <b>LED indicators</b>                            |  |  |
| Power indicator                                  | PWR 1(2)(PoE) / Ready:<br>Red On: Power is on and booting up.<br>Green On: Power is on and functioning Normally.   |  |
| 10/100TX RJ45 port indicator                     | Green for port Link/Act at 100Mbps. Amber for port Link/Act at 10Mbps.   |  |
| WLAN LEDs:                                       | WLAN Link /ACT: Green: Link, Orange: Poor signal<br>Green for WLAN Strength: 1<25%, 2<50%, 3<75%, 4<100%   |  |
| Fault  | Red: Ethernet link down or power down  |  |
| <b>Fault contact</b>                             |  |  |
| Relay  | Relay output to carry capacity of 1A at 24VDC  |  |
| <b>Power</b>                                     |  |  |
| Redundant Input power                            | Dual DC inputs. 12-48VDC on 6-pin terminal block   |  |
| Power consumption (Typ., USB Modem not included) | 6 Watts  |  |

|                                |  |       |
|--------------------------------|--|-------|
| Overload current protection    | Present  |       |
| Reverse polarity protection    | Present  |       |
| <b>Physical Characteristic</b> |  |       |
| Enclosure                      | IP-30  |       |
| Dimension (W x D x H)          | 52(W)x106.1(D)x144.3(H) mm (2.05x4.18x5.68 inch.)  |       |
| Weight (g)                     | 803 g  | 807 g |
| <b>Environmental</b>           |  |       |
| Storage Temperature            | -40 to 85°C (-40 to 185°F)   |       |
| Operating Temperature          | -10 to 55°C (14 to 131°F)  |       |
| Operating Humidity             | 5% to 95% Non-condensing   |       |
| <b>Regulatory approvals</b>    |  |       |
| 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  |       |
| Free Fall                      | IEC60068-2-32  |       |
| Vibration                      | IEC60068-2-6   |       |
| Safety                         | EN60950  |       |
| Warranty                       | 3 years  |       |

## Ordering Information

**IAR-ABOC**

| Code Definition | Wireless Mode   | 10/100Base-T(X) Port Number | PoE Identification              |
|-----------------|---|-----------------------------|---------------------------------|
| <b>Option</b>   | - 1: 802.11 b/g<br>- 2: 802.11 a<br>- 3: 802.11 a/b/g<br>- 4: 802.11 b/g/n<br>- 5: 802.11 a/b/g/n | - "2": 2 ports              | - "+": PoE P.D. present at ETH2 |

| Model Name         | Description   |
|--------------------|---|
| <b>IAR-120_US</b>  | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), US band                  |
| <b>IAR-120_EU</b>  | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), EU band                  |
| <b>IAR-120_JP</b>  | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), JP band                  |
| <b>IAR-120+_US</b> | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), 1-port PoE P.D., US band |
| <b>IAR-120+_EU</b> | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), 1-port PoE P.D., EU band |
| <b>IAR-120+_JP</b> | Industrial IEEE 802.11 b/g Cellular VPN router with 2x10/100Base-T(X), 1-port PoE P.D., JP band |

## Packing List

- IAR-120/120+ x 1
- Antenna x 1
- CD x 1
- Din-Rail Kit x 1
- Quick Installation Guide x 1
- Wall-Mount Kit x 1

## Optional Accessories

- DR-45 series : 45 Watts power supply
- DR-120 series : 120 Watts power supply
- RF Antenna Base (Magnetic) series
- DR-75 series : 75 Watts power supply
- WLAN RF Antenna (Omni-directional) series
- RF Cable series