

IWMR-3002

Industrial Multifunction VPN Router w/up to 2x WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 2 Gigabit Ethernet (incl.1 PD) w/Load Balancing, VPN, Protocol Gateway, Storage; 24V / HV input**

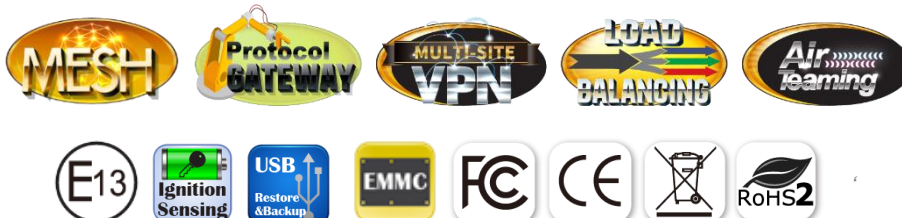
- Up to 2 concurrent WIFI 11ac and redundancy (1L-2AC model)
- Up to 2 concurrent modems for 3G/4G LTE Link & GPS (2L-1AC model/4 SIMs)
- Support LTE Cat 6 (APAC & EUNA models) or Cat 12/9/13 (WW model)
- Built-in 2 Gigabit Ethernet ports (1LAN+1WAN or 2LAN) (incl. 1PD)
- Dual radio for 802.11ac/a/b/g/n with concurrent 5GHz & 5GHz bands up to 2.6Gbps Wi-Fi bandwidth (2AC model)
- MIMO technology 3T3R; SMA type up to 6 external antennas
- Air teaming** for Wi-Fi high-sustainability and aggregated bandwidth
- VPN router for Multi-site VPN, OpenVPN, L2TP over IPsec, IPsec, PPTP**, L2 over GRE, IPGRE
- Load Balancing built-in 5 mechanism
- Optional EMMC Flash storage on-board**
- Support roaming with 802.11k & v
- Supports AP/Bridge/Client/MESH modes
- Support 802.11s Wireless Mesh Network
- Support NAT and Firewall
- Support Modbus gateway
- Support 2 RS422/RS485 ports with 2.5KV isolation or 2/4x RS232 ports (RJ45 model only)
- Dual input range from 9V to 56VDC (24V model) ; Dual Input 24V-30VDC (24V-IGN model) ; Single input power 90~305VAC/120~430VDC (HV model) (RJ45 model)
- Vehicle E-marking* certificate (M12 model)
- Wi-Fi & LTE graphic signal strength
- Editable login page of captive portal for hot-spot application
- USB port to backup, restore the configuration file and upgrade firmware; Dual image firmware*
- ITxPT compliant w/ ignition function*



RJ45 model



M12 model



OVERVIEW

Lantech IWMR-3002 series is a next generation industrial multi-function VPN router w/up to 2x 802.11ac Wi-Fi + up to 2x LTE modem + 2x Gigabit Ethernet (incl.1 PD) + 2 serial ports (RJ45 model only) that supports advanced function of VPN, Load-Balancing (Basic & Full Package) , EMMC Flash Storage**, Protocol gateway(Modbus) , Wi-Fi roaming and LTE quad SIM fail-over for industrial applications. The dual core CPU with 1.6GHz + 256M flash enables the router to multi-task smoothly.

Dual concurrent LTE design 4G/3G for load-balancing

With dual LTE module design (2L model), 4 SIM card slots, IWMR-3002 can allow auto-swap, failover & fallback between multiple service providers for real non-stop connection. With concurrent LTE modules, it can also allocate bandwidth by "Load Balancing with 8 schemes between multiple WANs.

With one mobile LTE module, 2 SIM card slots, IWMR-3002 provides redundant link between two service providers.

Both GPS and Russian GLONASS systems are supported.

Optional EMMC Flash storage**

The optional EMMC flash storage on router can offer 8G/16G/32G capacity.

IEEE 802.11ac dual band radio up to 2.6Gbps bandwidth

With IEEE 802.11ac capability, IWMR-3002 can operate either 5GHz or 2.4GHz bands, offering the maximum speed of 2.6Gbps bandwidth (1.3Gbps per 1AC). It is also compatible with 802.11g/n that can work with 2.4GHz for longer range transmission.

The Wi-Fi 11ac supports AP/Bridge/AP Client modes can be diverse for most of wireless application. Working with load-balancing "Priority" mode, the AP client can enable router to

transmit on Wi-Fi with first priority.

Air teaming for wireless high-sustainability and aggregated bandwidth**

The innovative Air-teaming protection can combine multiple wireless links to achieve both high-sustainability and aggregated bandwidth. High sustainability can keep the network traffic alive even one link is down or severely interfered. Aggregated bandwidth can bind two link channels to provide the maximum throughput.

MIMO technology with 3T3R and SMA type connectors

Lantech IWMR-3002 series adapts MIMO technology with smart antenna transmission and reception for 3T3R. With six external detachable omni connectors and optional antennas, IWMR-3002 can have better Wi-Fi coverage.

Support AP/Bridge/Client mode, Mesh w/802.11k, v roaming

IWMR-3002 supports AP/Bridge/Client mode for different applications. Client mode supports PMK** Caching and pre-authentication.

It also supports 802.11k, v roaming to allow encryption keys to be stored on all APs in a network.

Built-in Wireless Mesh network (WMN)

IWMR-3002 supports Mesh network composed of different nodes. The set of SSIDs allow the wireless client to roam freely without the need for complicated account management. With Mesh protocol, it can provide a reliable, scalable, stable and seamless network topology.

Wireless WMM QoS

IWMR-3002 supports 802.11e standard which defines a set of Quality of Service for wireless LAN applications as well as WMM (Wi-Fi multimedia)

Advanced security & 16 SSIDs

The security support standards including 64/128bits WEP, WPA/WPA2 PSK (TKIP, AES), 802.1x ensures the best security and active defense against security threats. Lantech IWMR-3002 support up to 16 SSIDs, each SSID has its independent security and encryption.

Load Balancing with 8 mechanism for multi-WANs (premium license pack)

IWMR-3002 supports Load Balancing for LTE/WAN (client mode) connections. There are eight schemes for Load Balancing function:

| Pack | Algorithm | Description |
|----------------------|-----------|---|
| Basic Package | Fixed | Manually route by traffic type through fixed WAN link. |
| | Failover | Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link fail occurs. Once failover will not fallback until link loss. |
| | Priority | Routes connections through preferred WAN link as primary while others follow by. Ex. Wi-Fi client>LTE>others |

| | | |
|---|----------------------|--|
| Full Package** (incl. basic package) | Weighted Round-Robin | Evenly distribute the traffic over all working WAN links in circular order according to the specified weights. |
| | Custom Route | Routing through the selected WAN for each specific traffic, ex: TCP/UDP port number and IP address. |
| | Sticky Session* | Binding all connections in an application session to particular WAN link to ensure all connections in the session are routed to the same WAN link, that is suitable for security services like online payment etc. |
| | Smallest Load* | Routes connections through the WAN link with highest free bandwidth ratio. The ratio = 1 - (traffic load / the capability of a WAN link). The traffic load could be defined by downstream, upstream or total traffic |
| | Fastest* | Routes connections through the WAN link with lowest latency time. |

2 port serial connection, Modbus gateway

It builds in 2 port serial connection for RS232, RS422, RS485 in which RS422/RS485 has 2.5KV isolation protection. (RJ45 model only)

The built-in Modbus gateway can convert Modbus RTU/ASCII to Modbus TCP for device control.

VPN and firewall

Besides traditional VPN peer to peer tunneling, IWMR-3002 support latest Multi-Site VPN function that is an efficient way for Mesh tunneling. The registration is under cloud service and encrypted by SSH makes the connection easy and safe.

It supports Multi-Site VPN, OpenVPN, L2TP over IPsec, IPsec, PPTP**, L2 over GRE, IPGRE, and NAT for various VPN applications.

The built-in Layer-4 firewall includes DDOS, IP address filter / Mac address filter / TCP/UDP port number

DIDO for alarm & email notice; Event log; Remote Web control**

2 sets of optional DIDO function can support additional high/low physical contact for designate applications besides Port / Power events, for example, DIDO function can trigger alarm if the router was moved or stolen. In case of events, the IWMR-3002 will immediately send email and trap.

When the router is at remote area with limited access, Web control can help to get router status or remotely reboot.

24V/HV input voltage selection: dual 9V-56VDC (24V model) or dual 24V-30VDC (24V-IGN model) or single 90~305VAC/120~430VDC (HV model)

The IWMR-3002 is able to work from 9VDC to 56VDC (24V model) or dual 24V-30VDC (24V-IGN model). Or with single high power supply at 90~305VAC / 120~430VDC (HV model)(RJ45 model only)

Built-in 2 port Gigabit Ethernet

2 port Gigabit Ethernet can be supported as 1LAN+1WAN or 2LAN models.

Graphic Wi-Fi & LTE signal strength

The graphic Wi-Fi & LTE signal strength shows connection status at a glance.

USB port for back up, restore configuration and upgrade firmware; Dual image firmware*

The built-in USB port can upload/download the configuration through USB dongle for router replacement.

It supports dual-image firmware* to choose which one to start.

Ignition Sensing*

Ignition sense allows you to delay power off the router with a designated time delay.

Editable login page of captive portal

The IWMR-3002 supports editable captive portal function that allows administrator to force end-users redirect to authentication page.

Ruggedized industrial design and FCC*, CE* & E-marking* certificate

The IWMR-3002 is designed to meet with outdoor network environment with IP30/IP43 housing. It passed serious tests under extensive Industrial EMI and environmental vibration and shocks standards. With CE & FCC radio certification for Wi-Fi and LTE and E-marking* certificate, the IWMR-3002 is best for outdoor community, vehicle, process control automation etc. application. (E-marking* is only available on M12 model)

For more usage flexibilities, IWMR-3002 supports wide operating temperature from -40°C to 65°C

EN50155, 61373 verification*

The IWMR-3002 series is also applicable for railway on-board/track side, vehicle and mining applications for more usage flexibilities.

FEATURES & BENEFITS

- High Speed Air Connectivity: WLAN interface support up to 2.6Gbps link speed(2AC) or 1.3Gbps (1AC)
- Built-in 2 Gigabit ports and 1LAN+1WAN or 2LAN (incl.1 PD)
- Support AP/Bridge/Client/MESH mode
- Support roaming with 802.11k & v
- Support 802.11s Wireless Mesh Network
- EMMC-FLASH storage** 8/16/32G
- Dual band 2.4G and 5GHz with 802.11ac/a/b/g/n
- Support 2.4Ghz operating within the following frequency bands:
 - 2.412~2.472 GHz
- Support 5Ghz operating within the following frequency bands:
 - 5.180~5.825 GHz
- MIMO smart antenna technology with 3T3R with 6 SMA type connectors and optional antennas
 - Optional Air-teaming protection(2AC)
 - **High-sustainability:** if one link member is down or severely interfered, the other link will keep the network traffic alive.
 - **Aggregated bandwidth:** The bandwidth of two link members can be aggregated to provide maximum throughput-
- IEEE 802.11h DFS and automatic TPC
- Output power: <24dBm
- Transmit power adjustment
- VAP (virtual access point) support up to 16 SSIDs
- Operation modes: AP / Bridge / Client
- Traffic control for each SSID**
- Band preference for same SSID services on dual band**
- Rate selection to disable low data rate access**
- Highly Security Capability: WEP64/128bits/ WPA/ WPA-PSK (TKIP, AES)/ WPA2/ WPA2-PSK (TKIP, AES)
- HTTP/HTTPS/Telnet/SSH & Administration access
- Support IPv6 & IPv4 protocol
- Radius Authentication, EAP-TLS, EAP-TTLS, PEAP; SSID broadcast disable supported
- Multiple channel bandwidths of 20MHz and 40MHz for 2.4G.
- Multiple channel bandwidths of 20MHz, 40MHz and 80MHz for 5G only.
- Wi-Fi Multimedia (WMM) and 802.11e traffic prioritization
- Support Multi-Site VPN for Mesh tunneling as well as Open VPN, L2TP over IPsec, IPsec, PPTP**, L2 over GRE, IPGRE and NAT for secured network connection
- The built-in Layer-4 firewall includes DDoS, IP address filter / Mac address filter / TCP/UDP port number
- Support SNMP*v1/v2c/v3
- NAT/DMZ/Port Forwarding
- Dual concurrent LTE 4G/3G design (2L model) for auto-swap/failover/failback between multiple ISPs for continuous service (four SIM card slots)
- One LTE 4G/3G w/ 2 SIM card design (1L model) for mobile redundancy
- GPS & GLONASS connection
- Load Balancing supports 8 mechanism between multiple WANs

| Pack | Algorithm | Description |
|---------------|-----------|---|
| Basic Package | Fixed | Manually route by traffic type through fixed WAN link. |
| | Failover | Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link fail occurs. Once failover will not |

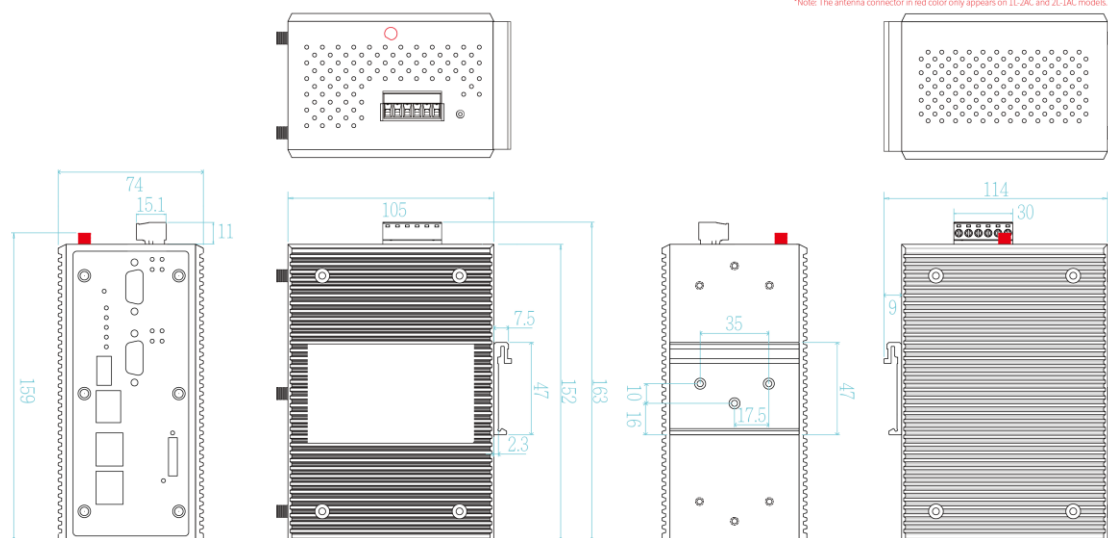
| | | |
|---|----------------------|--|
| | | failback until link loss. |
| | Priority | Routes connections through preferred WAN link as primary while others follow by. Ex. Wi-Fi client>LTE>others |
| | Weighted Round-Robin | Evenly distribute the traffic over all working WAN links in circular order according to the specified weights. |
| | Custom Route | Routing through the selected WAN for each specific traffic, ex: TCP/UDP port number and IP address. |
| Full Package** (incl. basic package) | Sticky Session* | Binding all connections in an application session to particular WAN link to ensure all connections in the session are routed to the same WAN link, that is suitable for security services like online payment etc. |
| | Smallest Load* | Routes connections through the WAN link with highest free bandwidth ratio. The ratio = 1 - (traffic load / the capability of a WAN link). The traffic load could be defined by downstream, upstream or total traffic |
| | Fastest* | Routes connections through the WAN link with lowest latency time. |

- Built-in 2 x serial ports (RS232/RS422/RS485) (RJ45 model only)

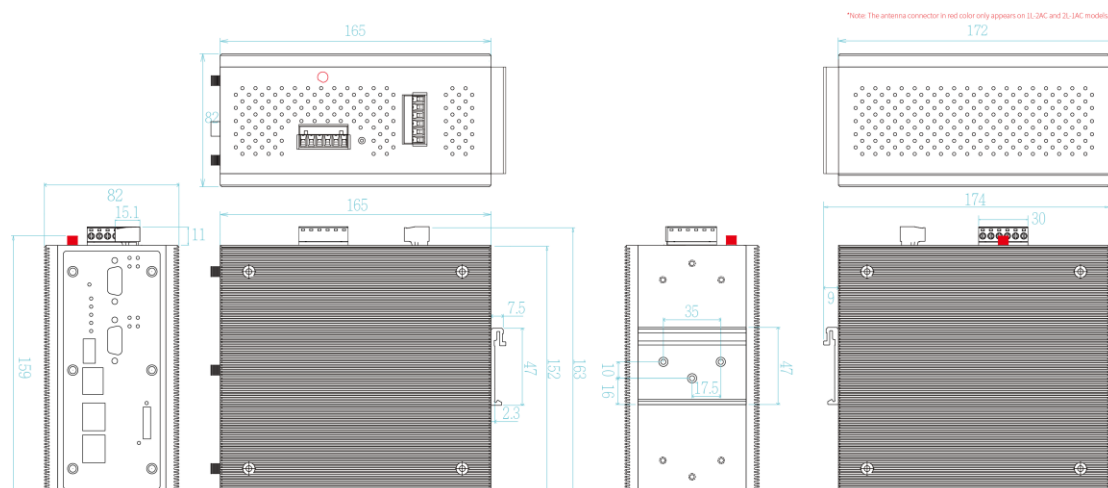
- Serial port with 2.5KV isolation on RS422/RS485 (RJ45 model only)
- Supports optional 2DI / 2DO (Digital Input / Output)
- Built-in Modbus gateway converting Modbus RTU/ASCII to Modbus/TCP
- Event alerting by Syslog, SNMP Trap, Email, Relay; Permanent local log rotation / Maxi 1K records
- Remote Web control to get status or re-boot by Web
- Built-in RTC to keep track of time always
- Support SNTP to synchronize system clock
- Support LLDP discovery protocol
- Support DHCP Server and Client
- Reset button for factory default mode
- Graphic LTE & WIFI signal strength
- Firmware upgradeable through TFTP/HTTP
- Configuration backup and restoration
 - Supports text configuration file for system quick installation
 - USB port to upload/download configuration by USB dongle
- Support editable captive portal login page
- IP30 / IP43 housing for industrial environment
- DIN-Rail and Wall-mount** installation
- Operation temperature -40°C to 65°C
- Wide range input voltage from 9V-56V ; dual input 24V-30VDC (24V-IGN model)
- Single input power 90~305VAC/120~430VDC (HV model) (RJ45 model)
- ITxPT compliant w/ ignition function*

DIMENSIONS (unit=mm)

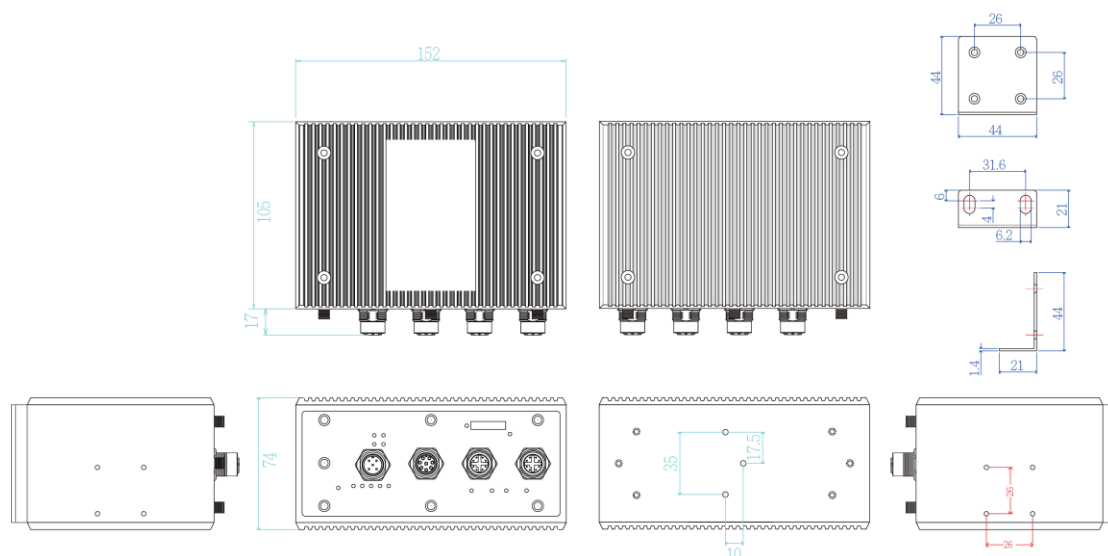
24V model



HV model (RJ45 model)



M12 Model



SPECIFICATION

| WLAN Interface | | s) | 18dBm @ 6–54Mbps 20/20dBm @ MCS0–MCS7 (HT20/40) Receiver Sensitivity Rx +/- 2dB ≤ -95dBm @ 1–11Mbps ≤ -92dBm @ 6–18Mbps ≤ -88dBm @ 24Mbps ≤ -85dBm @ 36Mbps ≤ -81dBm @ 48Mbps ≤ -80dBm @ 54Mbps ≤ -94dBm @ MCS0 (HT20/40) ≤ -76dBm @ MCS7 (HT20/40) |
|-------------------------|--|----|---|
| Radio Frequency Type | DSSS, OFDM | | IEEE 802.11a/n/ac(5Gbps) Output Power Tx +/- 2dB (per chain) 20dBm @ 6–24Mbps 16dBm @ 36–54Mbps 19/18dBm @ MCS0 (HT20/40) 16/16dBm @ MCS7 (HT20/40) 19/18/18dBm @ MCS0 (VHT20/40/80) 13/13/13dBm @ MCS8 (VHT20/40/80) 13/13dBm @ MCS9 (VHT40/80) Receiver Sensitivity Rx +/- 2dB ≤ -92dBm @ 6–18Mbps ≤ -86dBm @ 24Mbps |
| Wireless Standard | IEEE 802.11ac/n/a 5GHz IEEE 802.11b/g/n 2.4GHz | | |
| Wireless bandwidth | 5GHz: Up to 1300Mbps 2.4GHz: Up to 450Mbps | | |
| Modulation | 802.11b: DSSS 802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) | | |
| Operating Frequency | IEEE 802.11 a/b/g/n ISM Band, 2.412GHz–2.472GHz, 5150MHz–5850MHz | | |
| Transmission Rate | IEEE802.11ac: up to 1300Mbps IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps IEEE802.11n: up to 450Mbps | | |
| IEEE 802.11b/g/n(2.4Gbp | Output Power Tx +/- 2dB (per chain) 18dBm @ 1–11Mbps | | |

| | | |
|---------------------------|--|--|
| | ≤-84dBm @ 36Mbps ≤-81dBm @ 48Mbps ≤-80dBm @ 54Mbps ≤-93dBm @ MCS0 (HT20/40) ≤-71dBm/≤-80dBm @ MCS7 (HT20/40) ≤-90dBm @ MCS0 (VHT20/40/80) ≤-69dBm @ MCS8 (VHT20/40/80) ≤-66dBm @ MCS9 (VHT40/80) | Weighted Round-Robin Evenly distribute the traffic over all working WAN links in circular order according to the specified weights |
| Encryption Security | WEP: (64-bit, 128-bit key supported) WPA/WPA2: IEEE802.11i (WEP and AES encryption) WPA-PSK (256-bit key pre-shared key supported) OKC** and 802.11r** EAP, MD5, EAP, TLS, EAP, TTLS, EAP, PEAP | Custom Route Routing through the selected WAN for each specific traffic ex: TCP/UDP port number and IP address. |
| Wireless Security | SSID broadcast disable | Full Package** incl. basic package |
| Cellular Interface | | Sticky Session* Binding all connections in an application session to particular WAN link to ensure all connections in the session are routed to the same WAN link, that is suitable for security services like online payment etc. |
| Location Solutions | GPS, Glonass (EU/Americas) GPS, Glonass, Beidou, Galileo (APAC model only) | Smallest Load* Routes connections through the WAN link with highest free bandwidth ratio. The ratio = 1 - (traffic load / the capability of a WAN link). The traffic load could be defined by downstream, upstream or total traffic |
| Band Options | Asia-Pacific (APAC model) LTE = B1, B3, B5, B7, B8, B18, B19, B21, B28, B38 (TDD), B39 (TDD), B40 (TDD), B41 (TDD) DC-HSPA+/HSPA+/HSPA/UMTS = B1, B5, B6, B8, B9, B19 Europe & North America (EUNA model) LTE = B1, B2, B3, B4, B5, B7, B8, B12, B13, B20, B25, B26, B29, B30, B41 (TDD) DC-HSPA+/HSPA+/HSPA/UMTS = B1, B2, B3, B4, B5, B8 World Wide (WW model) LTE = B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B18, B19, B20, B26, B28, B29, B30, B32, B41 (TDD), B42 (TDD), B43 (TDD), B46 (TDD), B48 (TDD), B66 WCDMA = B1, B2, B3, B4, B5, B6, B8, B9, B19 | Fastest* Routes connections through the WAN link with lowest latency time. |
| Data Rates – LTE | Asia-Pacific (APAC model) Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps Europe & North America (EUNA model) Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps World Wide (WW model) Downlink: Cat 12: 600 Mbps Cat 9: 450 Mbps Uplink: Cat 13: 150 Mbps | Air-teaming protection(2AC)** ● High sustainability with fail over link ● Aggregated bandwidth Roaming 802.11k & v MESH Support 802.11s Wireless Mesh Network WMM Wi-Fi multimedia and 802.11e traffic prioritization Security WEP64/128bits/ WPA/ WPA-PSK (TKIP, AES)/ WPA2/ WPA2-PSK (TKIP, AES)/SSH/SSL/HTTPS Authentication Radius Authentication, EAP-TLS, EAP-TTLS, PEAP; SSID broadcast disable supported SSID 16 sets Client mode PMK** Caching and pre-authentication. Timer Built-in Real Time Clock to keep track of time always (RTC) Discovery IEEE 802.1ab Link Layer Discovery Protocol (LLDP) SNMP trap Device cold / warm start Port link up / link down DI / DO high / low** |
| Software | | Graphic signal display Remote Web control Captive portal Editable captive portal login page Maintenance Firmware upgradeable through TFTP/HTTP Configuration backup & restore Supports text configuration file for quick system installation USB port to upload/download configuration by USB dongle |
| IPv6/4 | Present | Physical Ports & System |
| Operating Mode | AP/Bridge/Client/MESH modes | Connectors 10/100/1000T: 2x ports RJ 45 with Auto MDI/MDI-X function (2 x10/100/1000T; 8 pin X coded-M12 model) (one port PD) USB x 1 RS-232 connector: 1 x RJ 45 (RJ45 model only) Serial connector: 2 DB9 (RJ45 model only) SIM card slots: 4(2L) or 2(1L) SMA connector: 6 (Wi-Fi male, LTE female) Power & P-Fail connector: 1 x 6-pole terminal block (M12, 5-pole A-coded, Male – M12 model) Reset/Console/USB: 1 x M12 8-pole A-coded – M12 model DIDO **: 1 x 5-pole terminal block |
| Login Security | Supports IEEE802.1x Authentication/RADIUS | Serial Band Rate 1000Kbps high data rate, 250Kbps normal for RS232 ; 20Mbps high data rate, 250Kbps normal for RS422/RS485 (RJ45 model only) |
| Access Security | HTTP/HTTPS/Telnet/SSH & Administration; SNMP*v1/v2/v3 access for authentication via MD5/SHA(v3) and Encryption via DES/AES(v3) | Serial Data Bits 5, 6, 7, 8 Serial Parity odd, even, none, mark, space Serial Stop Bits 1, 1.5, 2 |
| Protocol | PPPoE Client, DHCP server/client, Adjustable MTU, Port forwarding (NAPT), DMZ; NAT, SNTP, Firewall (Firewall (DDoS; IP address filter / Mac address filter* /TCP/UDP port name), VRRP**, DDNS* | RS-232 Tx, Rx, RTS, CTS, DTR, DSR, DCD, GND RS-422 Tx+, Tx-, Rx+, Rx-, GND RS-485 (2-wire) Data+, Data-, GND EMMC Storage** 8/16/32 GB |
| Management | SNMP*v1, v2c, v3/ Web/Telnet/CLI | Isolation protection RS422/RS485 2.5KV isolation; 8KV contact & 15KV air RS232 8KV contact and 15KV air ESD DIDO** 3KV isolation Input power 1.5KVA isolation |
| Load Balancing | 8 schemes for multiple WAN | LED Indicators |
| Basic Package | | Power & System indicator Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red), Storage (Green), Serial1/Serial2 (Green) (RJ45 model only), Ready (Green) |
| Fixed | Manually route by traffic type through fixed WAN link. | |
| Failover | Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link failure occurs. | |
| Priority | Routes connections through preferred WAN link while others stand-by. Sequentially activate other links if overflow occurs. | |

| | | | |
|-------------------------------------|---|-----------------------------|---|
| 10/100/1000Base-T(X) port indicator | Link/Activity (Green), Speed (1000T: Yellow; 10/100TX: off) | | model) 74(W) x 114(D) X 152 (H)mm (M12 model) 82 (W) x 172 (D) x 152 (H) mm (HV, 1L-1AC model) 82 (W) x 172 (D) x 159 (H) mm (HV, 1L-2AC / 2L-1AC model) |
| SIM | Green for Link/Act | | |
| GPS | Green for Link/Act | | |
| WLAN LEDs | WLAN 1, WLAN2 Link /ACT: Green | | |
| DI/DO** | 2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC, 200mA | Weight | 900g |
| Fault | Red: Ethernet link down or power down | Environmental | |
| Fault contact | | Storage Temperature | -40°C ~ 85°C (-40°F ~ 185°F) |
| Relay | Relay output to carry capacity of 1A at 24VDC | Operating Temperature | -40°C ~65°C (-40°F ~ 149°F) |
| Power | | Operating Humidity | 5% to 95% Non-condensing |
| Input power | Dual DC input, 9V~56VDC (24V model) Dual DC input, 24~30VDC (24V-IGN model) Single HV input, 90~305VAC/120~430VDC (HV model) (RJ45 model) | Regulatory approvals | |
| Power consumption (Typ.) | 20 Watts | EMC | FCC Part 15 Class A, EN55032, EN55024 |
| Physical Characteristic | | 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 |
| Enclosure | IP30 Metal case (24V & HV models) IP43 Metal case (M12 model) | Vehicle certificate | E13* (M12 model) ITxPT compliant* |
| Dimension | 74 (W) x 114 (D) x 152 (H) mm (24V, 1L-1AC model) 74 (W) x 114 (D) x 159 (H) mm (24V, 1L-2AC / 2L-1AC) | Railway | EN50155* EN61373* |
| | | MTBF | NA |
| | | Warranty | 5 years |

*Future Release

**Optional

RF Performance Table

| | Data Rate | TX Power (per chain) | TX Power (3 chains) | Tolerance | RX Specifications Sensitivity | Tolerance |
|---------------------------|-----------|----------------------|---------------------|-----------|-------------------------------|-----------|
| 2.4GHz 802.11b | 1Mbps | 20dBm | 25dBm | ±2dB | -95dBm | ±2dB |
| | 2Mbps | 20dBm | 25dBm | ±2dB | -94dBm | ±2dB |
| | 5.5Mbps | 20dBm | 25dBm | ±2dB | -92dBm | ±2dB |
| | 11Mbps | 20dBm | 25dBm | ±2dB | -90dBm | ±2dB |
| 2.4GHz 802.11g | 6Mbps | 21dBm | 26dBm | ±2dB | -94dBm | ±2dB |
| | 9Mbps | 21dBm | 26dBm | ±2dB | -93dBm | ±2dB |
| | 12Mbps | 21dBm | 26dBm | ±2dB | -93dBm | ±2dB |
| | 18Mbps | 21dBm | 26dBm | ±2dB | -90dBm | ±2dB |
| | 24Mbps | 21dBm | 26dBm | ±2dB | -90dBm | ±2dB |
| | 36Mbps | 20dBm | 25dBm | ±2dB | -85dBm | ±2dB |
| | 48Mbps | 19dBm | 24dBm | ±2dB | -82dBm | ±2dB |
| | 54Mbps | 18dBm | 23dBm | ±2dB | -80dBm | ±2dB |
| 2.4GHz 802.11n HT20 | MCS 0 | 21dBm | 26dBm | ±2dB | -94dBm | ±2dB |
| | MCS 1 | 21dBm | 26dBm | ±2dB | -92dBm | ±2dB |
| | MCS 2 | 21dBm | 26dBm | ±2dB | -89dBm | ±2dB |
| | MCS 3 | 20dBm | 25dBm | ±2dB | -84dBm | ±2dB |
| | MCS 4 | 20dBm | 25dBm | ±2dB | -83dBm | ±2dB |
| | MCS 5 | 20dBm | 25dBm | ±2dB | -80dBm | ±2dB |
| | MCS 6 | 18dBm | 23dBm | ±2dB | -79dBm | ±2dB |
| | MCS 7 | 16dBm | 21dBm | ±2dB | -77dBm | ±2dB |
| 2.4GHz 802.11n HT40 | MCS 0 | 20dBm | 25dBm | ±2dB | -93dBm | ±2dB |
| | MCS 1 | 20dBm | 25dBm | ±2dB | -91dBm | ±2dB |
| | MCS 2 | 20dBm | 25dBm | ±2dB | -89dBm | ±2dB |
| | MCS 3 | 19dBm | 24dBm | ±2dB | -84dBm | ±2dB |
| | MCS 4 | 19dBm | 24dBm | ±2dB | -82dBm | ±2dB |
| | MCS 5 | 19dBm | 24dBm | ±2dB | -80dBm | ±2dB |
| | MCS 6 | 18dBm | 23dBm | ±2dB | -79dBm | ±2dB |
| | MCS 7 | 16dBm | 21dBm | ±2dB | -75dBm | ±2dB |

| | Data Rate | TX Power (per chain) | TX Power (3 chains) | Tolerance | RX Specifications Sensitivity | Tolerance |
|-----------------------------|-----------|----------------------|---------------------|-----------|-------------------------------|-----------|
| 5GHz 802.11a | 6Mbps | 20dBm | 25dBm | ±2dB | -94dBm | ±2dB |
| | 9Mbps | 20dBm | 25dBm | ±2dB | -94dBm | ±2dB |
| | 12Mbps | 20dBm | 25dBm | ±2dB | -92dBm | ±2dB |
| | 18Mbps | 20dBm | 25dBm | ±2dB | -91dBm | ±2dB |
| | 24Mbps | 20dBm | 25dBm | ±2dB | -90dBm | ±2dB |
| | 36Mbps | 18dBm | 23dBm | ±2dB | -86dBm | ±2dB |
| | 48Mbps | 16dBm | 21dBm | ±2dB | -83dBm | ±2dB |
| | 54Mbps | 15dBm | 20dBm | ±2dB | -80dBm | ±2dB |
| 5GHz 802.11n/ac VHT20 | MCS 0 | 19dBm | 24dBm | ±2dB | -93dBm | ±2dB |
| | MCS 1 | 19dBm | 24dBm | ±2dB | -90dBm | ±2dB |
| | MCS 2 | 19dBm | 24dBm | ±2dB | -87dBm | ±2dB |
| | MCS 3 | 18dBm | 23dBm | ±2dB | -83dBm | ±2dB |
| | MCS 4 | 18dBm | 23dBm | ±2dB | -80dBm | ±2dB |
| | MCS 5 | 17dBm | 22dBm | ±2dB | -77dBm | ±2dB |
| | MCS 6 | 16dBm | 21dBm | ±2dB | -74dBm | ±2dB |
| | MCS 7 | 14dBm | 19dBm | ±2dB | -73dBm | ±2dB |
| 5GHz 802.11n/ac VHT40 | MCS 8 | 13dBm | 18dBm | ±2dB | -71dBm | ±2dB |
| | MCS 0 | 18dBm | 23dBm | ±2dB | -90dBm | ±2dB |
| | MCS 1 | 18dBm | 23dBm | ±2dB | -88dBm | ±2dB |
| | MCS 2 | 18dBm | 23dBm | ±2dB | -85dBm | ±2dB |
| | MCS 3 | 17dBm | 22dBm | ±2dB | -82dBm | ±2dB |
| | MCS 4 | 17dBm | 22dBm | ±2dB | -80dBm | ±2dB |
| | MCS 5 | 16dBm | 21dBm | ±2dB | -75dBm | ±2dB |
| | MCS 6 | 15dBm | 20dBm | ±2dB | -73dBm | ±2dB |
| | MCS 7 | 14dBm | 19dBm | ±2dB | -73dBm | ±2dB |
| | MCS 8 | 13dBm | 18dBm | ±2dB | -70dBm | ±2dB |
| 5GHz 802.11ac VHT80 | MCS 9 | 13dBm | 18dBm | ±2dB | -68dBm | ±2dB |
| | MCS 0 | 18dBm | 23dBm | ±2dB | -89dBm | ±2dB |
| | MCS 1 | 18dBm | 23dBm | ±2dB | -87dBm | ±2dB |
| | MCS 2 | 18dBm | 23dBm | ±2dB | -85dBm | ±2dB |
| | MCS 3 | 17dBm | 22dBm | ±2dB | -83dBm | ±2dB |
| | MCS 4 | 17dBm | 22dBm | ±2dB | -80dBm | ±2dB |
| | MCS 5 | 16dBm | 21dBm | ±2dB | -78dBm | ±2dB |
| | MCS 6 | 15dBm | 20dBm | ±2dB | -75dBm | ±2dB |
| | MCS 7 | 14dBm | 19dBm | ±2dB | -72dBm | ±2dB |
| | MCS 8 | 13dBm | 18dBm | ±2dB | -70dBm | ±2dB |

ORDERING INFORMATION

For -40~65C operational temperature model

M12 models are available with –M12 model names (-2S/-4S/-2SA/-2SB/-2S2SA/-2S2SB for RJ45 models only)

2 RS422 models are available with -2SA; 2 RS485 models are available with -2SB

2 RS232+ 2 RS422 models are available with -2S2SA; 2 RS232+ 2 RS485 models are available with -2S2SB

For 24V model are all available with –IGN model name (w/ ignition)

- **IWMR-3002-2L-1AC-2S-24V-EUNA.....P/N: 8610-101**
Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC; -40~65C
- **IWMR-3002-2L-1AC-2S-24V-WW.....P/N: 8610-102**
Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
- **IWMR-3002-2L-1AC-2S-24V-APAC.....P/N: 8610-103**
Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
- **IWMR-3002-2L-1AC-4S-24V-EUNA.....P/N: 8610-120**
Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC; -40~65C
- **IWMR-3002-2L-1AC-4S-24V-WW.....P/N: 8610-121**
Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2

Datasheet Version 6.8

www.lantechcom.tw | info@lantechcom.tw

- port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
- **IWMR-3002-2L-1AC-4S-24V-APAC.....P/N: 8610-122**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-24V-EUNA.....P/N: 8610-1073**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-24V-WW.....P/N: 8610-1083**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-24V-APAC.....P/N: 8610-1093**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-4S-24V-EUNA.....P/N: 8610-123**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-4S-24V-WW.....P/N: 8610-124**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-1AC-4S-24V-APAC.....P/N: 8610-125**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-2AC-2S-24V-EUNA.....P/N: 8610-104**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC -40~65C
 - **IWMR-3002-1L-2AC-2S-24V-WWP/N: 8610-105**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-2AC-2S-24V-APACP/N: 8610-106**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-2AC-4S-24V-EUNA.....P/N: 8610-126**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; dual input 9V~56VDC -40~65C
 - **IWMR-3002-1L-2AC-4S-24V-WWP/N: 8610-127**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-1L-2AC-4S-24V-APACP/N: 8610-128**
 Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; dual input 9V~56VDC; -40~65C
 - **IWMR-3002-2L-1AC-2S-HV-EUNA.....P/N: 8610-110**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-2L-1AC-2S-HV-WW.....P/N: 8610-111**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-2L-1AC-2S-HV-APAC.....P/N: 8610-112**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-2L-1AC-4S-HV-EUNA.....P/N: 8610-129**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-2L-1AC-4S-HV-WW.....P/N: 8610-130**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-2L-1AC-4S-HV-APAC.....P/N: 8610-138**
 Industrial Dual LTE (Quad SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-HV-EUNA.....P/N: 8610-114**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-HV-WW.....P/N: 8610-115**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-1L-1AC-2S-HV-APAC.....P/N: 8610-116**
 Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C
 - **IWMR-3002-1L-1AC-4S-HV-EUNA.....P/N: 8610-132**

- Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C
- **IWMR-3002-1L-1AC-4S-HV-WW.....P/N: 8610-133**

Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-1AC-4S-HV-APAC.....P/N: 8610-134**

Industrial One LTE (Dual SIM) One Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/ 4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-2S-HV-EUNA.....P/N: 8610-117**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-2S-HV-WWP/N: 8610-118**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-2S-HV-APACP/N: 8610-119**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/2 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-4S-HV-EUNA.....P/N: 8610-135**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-4S-HV-WWP/N: 8610-136**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

 - **IWMR-3002-1L-2AC-4S-HV-APACP/N: 8610-137**

Industrial One LTE (Dual SIM) Two Wi-Fi 11ac/a/b/g/n Load Balancing Multifunction Router w/4 RS232 serial ports and 2 port Gigabit Ethernet (incl. 1PD); APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

EMMC Flash Storage

- **8G.....P/N: 8850-113**
- **16G.....P/N: 8850-114**
- **32G.....P/N: 8850-115**

Software License

- **LOAD BALANCING Full Package.....P/N: 9000-102**

OPTIONAL ACCESSORIES

Multifunction Antenna

- **ANT11000091** 5-in-1 omnidirectional antenna – 2G/3G/4G (698-960/1710~2170/2300~2700MHz) MIMO x2 + Wi-Fi 2.4/5GHz MIMO x2 + GPS/GLONASS/GALILEO (1575.42/1602MHz) x1, 3dBi, IP67



- **ANT11000092** 6-in-1 omnidirectional antenna – 2G/3G/4G (698-960/1710~2170/2300~2700MHz) MIMO x2 + Wi-Fi 2.4/5GHz MIMO x1 + GPS/GLONASS/GALILEO/BeiDou (1561/1575.42/1602MHz) x1 + AM/FM x1 + DSRC x1, 6dBi, IP67



GPS Antenna

- **ANT12000001** SMA GPS antenna, 28dB, 300m



Cellular Antenna

- **ANT11000041** 2G/3G/4G dipole antenna, 791-960/1710~2170/2500~2700MHz, 3dBi, SMA plug, EU

**■ ANT11000042**

2G/3G/4G dipole antenna, 704-960/1710~2170MHz, 3dBi, SMA plug, US

**■ ANT11000044**

2G/3G/4G dipole antenna, 704-960/1710~2690MHz, 1.6dBi, SMA plug, EU

**■ ANT11000045**

2G/3G/4G dipole antenna, 698-960/1710~2690MHz, 3dBi, SMA plug, US

**Wi-Fi Antenna****■ ANT11000051**

2.4/5GHz SMA dipole Wi-Fi antenna, 3dBi (2.4GHz), 4dBi (5GHz)

**■ ANT11000055**

2.4/5GHz SMA dipole Wi-Fi antenna, 6dBi (2.4GHz), 4dBi (5GHz)

**■ ANT11000090**

2.4/5GHz omnidirectional Wi-Fi antenna, 802.11ac 3x3 MIMO, 5dBi, IP67, cable length: 3M

**Antenna Base****■ ADA11000052**

Magnetic antenna base for Wi-Fi, RP SMA Jack Base, Length : 1M

**■ ADA11000053**

Magnetic antenna base for 3G/4G, RP SMA Jack Base, Length : 1M

**Lantech Communications Global Inc.**www.lantechcom.tw
info@lantechcom.tw

© 2020 Copyright Lantech Communications Global Inc. all rights reserved.
The revise authority rights of product specifications belong to Lantech Communications Global Inc.
Lantech may make changes to specification and product descriptions at anytime, without notice.