

# **IMR-3004**

Industrial Multifunction VPN Router w/up to 2 LTE 4G + 2 serial ports + 4 Gigabit Ethernet Switch+ 2WAN ports w/Load Balancing, VPN, Protocol Gateway, Storage\*\*; 24V/HV input

- Up to 2 concurrent mobility for 3G/4G LTE Link & GPS(2L model/4 SIMs)
- Built-in 4 Gigabit Ethernet managed switch + 2WAN ports
- Support LTE Cat 6 (APAC & EUNA models) or Cat 12/9/13 (WW model)
- Managed Switch functions cover port management, QOS, VLAN, multicast, redundant ring and security function
- VPN router for Multi-site VPN, OpenVPN, L2TP over IPsec, IPsec, PPTP\*\*, L2 over GRE, IPGRE
- Optional EMMC Flash storage on-board\*\*
- Load Balancing built-in 5 mechanism
- Support NAT and Firewall
- Support Modbus gateway on serial ports
- Support 2 RS422/RS485 ports with 2.5KV isolation or 2x RS232 ports
- Dual Input voltage 9~56VDC (24V model); Single input power 90~305VAC/120~430VDC (HV model)
- Vehicle E-marking\*\* certificate
- ITxPT compliant w/ ignition function\*\*
- Environmental monitoring for router inside info with voltage, current, temperature; 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\*

























# **OVERVIEW**

Lantech IMR-3004 series is a next generation industrial multifunction VPN router w/up to 2x LTE modem + 4x Gigabit Ethernet managed switch + 2WAN + 2 serial ports that supports advanced function of VPN, Load-Balancing(Basic & Full Package\*\*), EMMC Flash Storage\*\*, Protocol gateway(Modbus), 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, IMR-3004 can allow auto-swap, failover & failback 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 (1L model), 2 SIM card slots, IMR-3004 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.

## Load Balancing with 8 mechanisms for multi-WANs (premium license)

IMR-3004 supports Load Balancing for LTE/WAN 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 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.

#### 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.

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, IMR-3004 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 & e-mail notice; Event log; Remote Web control

2 sets of DIDO functions 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 IMR-3004 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 single 90~305VAC/120~430VDC (HV model)

The IMR-3004 is able to work from 9VDC to 56VDC (24V model). Or with single high power supply at  $90\sim305VAC$  /  $120\sim430VDC$  (HV model).

### Environmental monitoring for inside router info& alerting; Graphic LTE signal strength

The built-in environmental monitoring can detect router ambient temperature, voltage, current where can send the syslog, email\*\* when abnormal.

The graphic LTE signal strength shows connection status at a glance

#### Ignition Sensing\*

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

#### **Built-in Managed Switch Function**

Managed switch function is built-in and provides various L2+ functions for network access deployment. It delivers ports and PoE management, VLAN, QoS, multicast, redundant ring, and security functions.

# 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 support dual-image firmware\* to choose which one to start.

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

The IMR-3004 is designed to meet with industrial network environment with IP 30 housing. It passed serious tests under extensive Industrial EMI and environmental vibration and shocks standards.

With CE & FCC radio certification for LTE and E-marking\*\* certificate, the IMR-3004 is best for outdoor community, vehicle, process control automation etc. For more usage flexibilities, IMR-3004 supports wide operating temperature from -40°C to 65°C.



# **FEATURES & BENEFITS**

Built-in 4 Gigabit Ethernet managed switch + 2WAN
ports

- Dual DC input from 9V~56VDC for 24V model
- 6 SMA type connectors for LTE, GPS
- HTTP/HTTPS/Telnet/SSH & Administration access
- Radius Authentication, EAP-TLS, EAP-TTLS, PEAP
- Support IPv6 & IPv4 protocol
- 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
- NAT/DMZ/Port Forwarding
- Support SNMP\*v1/v2c/v3
- EMMC-FLASH storage\*\*8/16/32G
- Dual concurrent LTE 4G/3G design (2L model)for autoswap/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 (support by LTE module) 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.

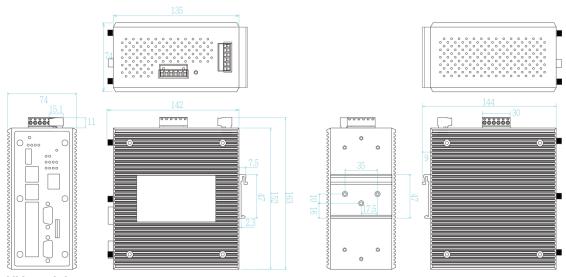
Full Package** (incl. basic package)	Sticky Session*	Binding all connections in an application session to particular WAN link to ensure all connections in the session are routed to the same WAN link , that is suitable for security services like online payment etc.
	Smallest Load*	Routes connections through 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)
- Serial port with 2.5KV isolation on RS422/RS485
- Supports 2DI/2DO (Digital Input / Output)
- Built-in Modbus gateway converting Modbus RTU/ASCII to Modbus/TCP for serial ports
- Event alerting by Syslog, Email, Relay; Permanent local log rotation / Maxi 1K records
- Remote Web control to get status or re-boot by Web
- Graphic LTE signal strength
- Support SNTP to synchronize system clock
- Support LLDP discovery protocol
- Support DHCP Server and Client
- Built-in environmental monitoring for system input voltage, current and ambient temperature; Able to set alert when abnormal
- Dual image firmware\* to choose which to start
- 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
- Reset button for factory default mode
- IP 30 housing for industrial environment
- DIN-Rail and Wall-mount\*\* installation
- ITxPT compliant w/ ignition function\*\*
- Operation temperature -40~65°C

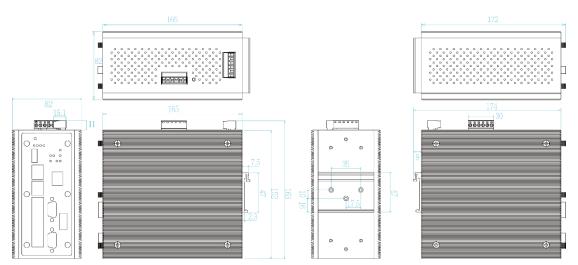


# **DIMENSIONS** (unit=mm)

# 24V model



## **HV** model



# **SPECIFICATION**

Leasting Oakstings	ODG Olaman (FIII/Amaniana)		Described (O-1.6):
Location Solutions	GPS, Glonass (EU/Americas)		Downlink (Cat 6):
	GPS, Glonass, Beidou, Galileo (APAC model only)		FDD: 300 Mbps
Band Options	Asia-Pacific (APAC model)		TDD: 222 Mbps
	<b>LTE</b> = B1, B3, B5%, B7, B8, B18%, B19%, B21%,		Uplink (Cat 6):
	B28, B38 (TDD), B39% (TDD), B40 (TDD), B41%		FDD: 50 Mbps
	(TDD)		TDD: 26 Mbps
	DC-HSPA+/ HSPA+/ HSPA/ UMTS = B1, B5%, B6		
	%, B8, B9%, B19%		Europe & North America (EUNA model)
			Downlink (Cat 6):
	Europe & North America (EUNA model)		FDD: 300 Mbps
	LTE = B1, B2%, B3, B4%, B5%, B7, B8, B12%, B13		TDD: 222 Mbps
	%, B20, B25%, B26%, B29%, B30%, B41% (TDD)		Uplink (Cat 6):
	DC-HSPA+/ HSPA+/ HSPA/ UMTS = B1, B2%, B3,		FDD: 50 Mbps
	B4%, B5%, B8		TDD: 26 Mbps
	51/4, 50/4, 50		
	World Wide (WW model)		World Wide (WW model)
	LTE = B1, B2%, B3, B4%, B5%, B7, B8, B9%, B12		Downlink:
	*, B13*, B18*, B19*, B20, B26*, B28, B29*,		Cat 12: 600 Mbps
			Cat 9: 450 Mbps
	B30%, B32%, B41% (TDD), B42% (TDD), B43%		Uplink:
	(TDD), B46% (TDD), B48% (TDD), B66%		
	<b>WCDMA</b> = B1, B2%, B3%, B4%, B5%, B6%, B8,	0 4	Cat 13: 150 Mbps
	B9%, B19%	Software	
Data Rates – LTE	Asia-Pacific (APAC model)	IPv6/4	Present



VPN	Multi-site VPN, Open VPN, PPTP**, L2TP over		RS232 ; 20Mbps high data rate, 250kbps normal for
Firewall	IPSec, IPSec, L2 over GRE, IPGRE and NAT DDoS. IP address filter / Mac address filter /	Serial Data Bits	RS422/RS485
I IICWali	TCP/UDP port number.	Serial Parity	5, 6, 7, 8 odd, even, none, mark, space
Load Balancing	8 schemes for multiple WAN(client mode)	Serial Stop Bits	1, 1.5, 2
Basic Package		RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
Fixed	Manually route by traffic type through fixed WAN link.	RS-422	Tx+,Tx-, Rx+, Rx-,GND
Failover	Routes connections through preferred WAN link	RS-485 (2-wire)	Data+, Data-, GND
	while others stand-by. Sequentially activate another	Isolation protection	RS422/485 2.5KV isolation; 8KV contact & 15KV air RS232 8KV contact and 15KV air ESD
	link if preferred link failure occurs		DIDO 3KV isolation
Priority	Routes connections through preferred WAN link		Input power 1.5KVA isolation
	while others stand-by. Sequentially activate other	EMMC Storage**	8/16/32 GB
	links if overflow occurs	DI/DO	2 Digital Input (DI):
Weighted Round-	Evenly distribute the traffic over all working WAN		Level 0: -30~2V / Level 1: 10~30V  Max. input current:8mA
Robin	links in circular order according to the specified		2 Digital Output(DO): Open collector to 40 VDC,
	weights		200mA
Custom Route	Routing through the selected WAN for each specific	LED Indicat	ors
	traffic ex: TCP/UDP port number and IP address	Power & System	Per unit: Power 1 (Green), Power 2 (Green), P-Fail
Full Package** incl.	Basic package	indicator	(Red), Ring Master(Green) Storage(Green), Serial1/Serial2(Green), Ready(Green)
Sticky Session*	Binding all connections in an application session to	10/100/1000Base-	Link/Activity (Green), Speed (1000T: Yellow;
	particular WAN link to ensure all connections in the	T(X) port indicator	10/100TX: off)
	session are routed to the same WAN link , that is	SIM	Green for Link/Act
	suitable for security services like online payment etc.	GPS Fault	Green for Link/Act
Smallest load*	Routes connections through the WAN link with	Fault contact	Red: Ethernet link down or power down
	highest free bandwidth ratio.  The ratio = 1 - (traffic load / the capability of a WAN	Relay	Relay output to carry capacity of 1A at 24VDC
	link).	Power	Relay output to carry capacity of TA at 24VDC
	The traffic load could be defined by downstream,	Input power	Dual DC inputs, 9~56VDC (24V model) Single HV
	upstream or total traffic	iiipat power	input, 90~305VAC/120~430VDC (HV model)
Fastest*	Routes connections through the WAN link with lowest	Power consumption	30.5W
	latency time.	(Typ.)	paraeteristia
Security	SSH/SSL/HTTPS	Enclosure	naracteristic  IP 30 Metal case
Login Security	Supports IEEE802.1x Authentication/RADIUS	Enclosure	74 (W) x 142 (D) x 152 (H) mm(24V model)
Access Security	HTTP/HTTPS/Telnet/SSH & Administration; SNMP*v1/v2/v3 access for authentication via	Dimension	82 (W) x 172 (D) x 152 (H) mm (HV model)
	MD5/SHA(v3) and Encryption via DES/AES(v3)	Weight	1000g
Protocol	PPPoE Client, DHCP server/client, Adjustable MTU,	Environmental	
	Port forwarding (NAPT), DMZ; NAT, SNTP,		
		Storage	-40°C ~ 85°C (-40°F ~ 185°F)
	Firewall(Firewall(DDoS; IP address filter / Mac	Temperature	
		Temperature Operating	-40°C ~ 85°C (-40°F ~ 185°F) -40°C ~ 65°C (-40°F ~ 149°F)
Protocol Gateway	Firewall(Firewall(DDoS; IP address filter / Mac	Temperature	-40°C ~ 65°C (-40°F ~ 149°F)
Management	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/ Web/Telnet/CLI	Temperature Operating Temperature	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing
Management Environmental	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/Web/Telnet/CLI System status for input voltage, current, ambient	Temperature Operating Temperature Operating Humidity Regulatory Safety	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*
Management	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/Web/Telnet/CLI System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if	Temperature Operating Temperature Operating Humidity Regulatory	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A,
Management Environmental Monitoring	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/Web/Telnet/CLI System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status	Temperature Operating Temperature Operating Humidity Regulatory Safety	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015,
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Management Environmental Monitoring Graphic signal	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/Web/Telnet/CLI System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status	Temperature Operating Temperature Operating Humidity Regulatory Safety	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010
Management Environmental Monitoring  Graphic signal display Timer	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports SNMP*v1,v2c,v3/Web/Telnet/CLI System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)	Temperature Operating Temperature Operating Humidity Regulatory Safety	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD),
Management Environmental Monitoring  Graphic signal display Timer  Discovery	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS),
Management Environmental Monitoring  Graphic signal display Timer	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT),
Management Environmental Monitoring  Graphic signal display Timer  Discovery	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS),
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4  IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF)
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down  DI/DO high / low  To reboot or get status of router by Web UI	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-1,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4  IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF)
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-1, EN 301 489-17,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4  IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF)  EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 499-52 EN 301 908-1**,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation  USB port to upload/download configuration by USB	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-1-*, EN 303 413,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down Dl/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4  IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF)  EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 499-52 EN 301 908-1**,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,V2c,V3/Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System	Temperature Operating Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 98-1½, EN 303 413, EN 62311
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down Dl/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000/T: 6x ports RJ 45(4 Giga + 2WAN ports)	Temperature Operating Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-1; EN 303 413, EN 62311 E13*** ITXPT compliant** NA
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1	Temperature Operating Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-1-*, EN 303 413, EN 62311 E13*** ITXPT compliant** NA 5 years
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down Dl/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000/T: 6x ports RJ 45(4 Giga + 2WAN ports)	Temperature Operating Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-11%, EN 303 413, EN 62311 E13*** ITXPT compliant**  NA 5 years
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,V2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45 Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-19, EN 301 489-52 EN 301 908-1; EN 303 413, EN 62311 E13*** ITXPT compliant** NA 5 years  *Future Release **Optional rd test of the following bands are not listed in EN 301 908-1 report:
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down Dl/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45  Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-52 EN 301 908-1%, EN 303 413, EN 62311 E13** ITXPT compliant**  NA 5 years  *Future Release **Optional rd test of the following bands are not listed in EN 301 90-1 report. (APAC not listed bands) LTE = B5, B18, B19, B21, B39, B41
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45 Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model SMA connector for LTE: 4 (female)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368*  FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-19, EN 301 489-52 EN 301 908-1; EN 303 413, EN 62311 E13*** ITXPT compliant** NA 5 years  *Future Release **Optional rd test of the following bands are not listed in EN 301 908-1 report:
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down Dl/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45  Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar*	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-11%, EN 303 413, EN 62311 E13*** ITXPT compliant**  NA  5 years  *Future Release
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,V2c,V3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45 Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model SMA connector for LTE: 4 (female) SMA connector for LTE: 2 (female) IL model SMA connector for LTE: 2 (female)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar*	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-2 IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-19, EN 301 489-19, EN 301 489-19, EN 301 489-52 EN 301 908-11%, EN 303 413, EN 62311 E13** ITAPT compliant**  NA 5 years  *Future Release **Optional rd test of the following bands are not listed in EN 301 908-1 report: (APAC not listed bands) LTE = B5, B18, B19, B21, B39, B41 WCDMA = B5, B6, B9, B19; red bands) LTE = B2, B4, B5, B12, B13, B25, B26, B29, B30, B41 WCDMA = B5, B6, B9, B19; red bands) LTE = B2, B4, B5, B19, B19, B18, B19, B28, B39, B31, b) LTE = B2, B4, B5, B9, B19, B18, B19, B26, B29, B30, B32,
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45 Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model SMA connector for LTE: 4 (female) SMA connector for LTE: 2 (female) SMA connector for GPS: 1 (female) SMA connector for GPS: 1 (female)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar*	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55024: 2010 IEC 61000-6-2, IEC 61000-6-4 IEC 61000-4-3 (RS), IEC 61000-4-3 (RS), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-52 EN 301 908-11%, EN 303 413, EN 62311 E13*** ITXPT compliant**  NA  5 years  *Future Release
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*V1,V2c, V3/ Web/Telnet/CLI  System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down D/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  **TS & System**  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45  Serial connector: 2 DB9  SIM card slots : 4(2L) or 2(1L) 2L model SMA connector for LTE: 4 (female) SMA connector for GPS: 2 (female) 1L model SMA connector for GPS: 1 (female) SMA connector for GPS: 1 (female) Power & P-Fail connector: 1 x 6-pole terminal block	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar*	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55032: 2010 IEC 61000-6-2, IEC 61000-6-2, IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-19, EN 301 489-19, EN 301 489-19, EN 301 489-17 EN 301 489-18 EN 62311 E13** ITxPT compliant**  NA 5 years  *Future Release "Optional of test of the following bands are not listed in EN 301 908-1 report: (APAC not listed bands) LTE = B5, B18, B19, B21, B39, B41 WCDMA = B5, E6, B9, B19; ted bands) LTE = B2, B4, B5, B12, B13, B18, B26, B29, B30, B31, B15, B15, B26, B39, B30, B32, B41, B42, B43, B46, B48, B66
Management Environmental Monitoring  Graphic signal display Timer  Discovery SNMP trap  Remote Web control Captive portal Maintenance Configuration backup & restore	Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port name),VRRP**, DDNS*  Modbus on serial ports  SNMP*v1,v2c,v3/Web/Telnet/CLI  System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status  Graphic LTE signal strength  Built-in Real Time Clock to keep track of time always(RTC)  IEEE 802.1ab Link Layer Discovery Protocol (LLDP)  Device cold / warm start Port link up / link down DI/DO high / low  To reboot or get status of router by Web UI  Editable captive portal login page Firmware upgradeable through TFTP/HTTP  Supports text configuration file for system quick installation USB port to upload/download configuration by USB dongle  rts & System  10/100/1000T: 6x ports RJ 45(4 Giga + 2WAN ports) USB x 1  RS-232 connector: 1 x RJ 45 Serial connector: 2 DB9 SIM card slots: 4(2L) or 2(1L) 2L model SMA connector for LTE: 4 (female) SMA connector for LTE: 2 (female) SMA connector for GPS: 1 (female) SMA connector for GPS: 1 (female)	Temperature Operating Temperature Operating Humidity Regulatory Safety EMC  EMS  Radio Frequency  Vehicle certificate  MTBF Warranty  **Standar*	-40°C ~ 65°C (-40°F ~ 149°F)  5% to 95% Non-condensing  approvals  EN 62368* FCC Part 15B Class A, EN 55032: 2015, EN 55032: 2010 IEC 61000-6-2, IEC 61000-6-2, IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-8 (PFMF) EN 301 489-17, EN 301 489-17, EN 301 489-19, EN 301 489-19, EN 301 489-19, EN 301 489-19, EN 301 489-17 EN 301 489-18 EN 62311 E13** ITxPT compliant**  NA 5 years  *Future Release "Optional of test of the following bands are not listed in EN 301 908-1 report: (APAC not listed bands) LTE = B5, B18, B19, B21, B39, B41 WCDMA = B5, E6, B9, B19; ted bands) LTE = B2, B4, B5, B12, B13, B18, B26, B29, B30, B31, B15, B15, B26, B39, B30, B32, B41, B42, B43, B46, B48, B66



# **ORDERING INFORMATION**

IMR-3004-2L-2S-24V-EUNAP/N: 8666-001
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2S-24V-WWP/N: 8666-002
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2S-24V-APAC
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet manager
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2SA-24V-EUNAP/N: 8666-0011
Industrial Dual LTE(Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2SB-24V-EUNAP/N: 8666-0012
Industrial Dual LTE(Quad SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2SA-24V-WWP/N: 8666-0021
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C  IMR-3004-2L-2SB-24V-WWP/N: 8666-0022
IMR-3004-2L-23b-24V-WW
switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2SA-24V-APACP/N: 8666-0031
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2SB-24V-APACP/N: 8666-0032
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2S-24V-EUNAP/N: 8666-004
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2S-24V-WW
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2S-24V-APAC
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2SA-24V-EUNAP/N: 8666-0041
Industrial One LTE(Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2SB-24V-EUNAP/N: 8666-0042
Industrial One LTE(Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2SA-24V-WWP/N: 8666-0051
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C  IMR-3004-1L-2SB-24V-WWP/N: 8666-0052
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; Worldwide band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2SA-24V-APACP/N: 8666-0061
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-1L-2SB-24V-APACP/N: 8666-0062
Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; APAC band; dual input 9V~56VDC; -40~65C
IMR-3004-2L-2S-HV-EUNAP/N: 8666-007
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C
IMR-3004-2L-2S-HV-WWP/N: 8666-008
Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet managed
switch + 2WAN ports; Worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C  IMR-3004-2L-2S-HV-APACP/N: 8666-009
INIK-3004-2L-23-FIV-APAC

Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/ 2 RS232 serial ports and 4 Giga Ethernet managed

Industrial Dual LTE(Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed

switch + 2WAN ports; APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

IMR-3004-2L-2SA-HV-EUNA......P/N: 8666-0071

Datasheet Version 6.26



switch + 2WAN ports; EU and US band ; single high power 90~305VAC / 120~430VDC; -40~65C

#### IMR-3004-2L-2SB-HV-EUNA......P/N: 8666-0072

Industrial Dual LTE(Quad SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C

#### IMR-3004-2L-2SA-HV-WW......P/N: 8666-0081

Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

### ■ IMR-3004-2L-2SB-HV-WW.......P/N: 8666-0082

Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; single high power  $90\sim305$ VAC /  $120\sim430$ VDC;  $-40\sim65$ C

#### ■ IMR-3004-2L-2SA-HV-APAC......P/N: 8666-0091

Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-2L-2SB-HV-APAC......P/N: 8666-0092

Industrial Dual LTE (Quad SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2S-HV-EUNA......P/N: 8666-010

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C

#### IMR-3004-1L-2S-HV-WW......P/N: 8666-011

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2S-HV-APAC......P/N: 8666-012

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS232 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; APAC band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2SA-HV-EUNA......P/N: 8666-0101

Industrial One LTE(Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; EU and US band; single high power  $90\sim305VAC$  /  $120\sim430VDC$ ;  $-40\sim65C$ 

#### ■ IMR-3004-1L-2SB-HV-EUNA......P/N: 8666-0102

Industrial One LTE(Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; EU and US band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2SA-HV-WW......P/N: 8666-0111

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2SB-HV-WW.......P/N: 8666-0112

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; Worldwide band; single high power 90~305VAC / 120~430VDC; -40~65C

#### ■ IMR-3004-1L-2SA-HV-APAC......P/N: 8666-0121

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS422 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; APAC band; single high power  $90\sim305VAC / 120\sim430VDC$ ;  $-40\sim65C$ 

#### ■ IMR-3004-1L-2SB-HV-APAC......P/N: 8666-0122

Industrial One LTE (Dual SIM) Load Balancing Multifunction Router w/2 RS485 serial ports and 4 Giga Ethernet managed switch + 2WAN ports; APAC band; single high power  $90\sim305VAC / 120\sim430VDC$ ;  $-40\sim65C$ 

#### **EMMC Flash Storage**

- 32G......P/N: 8850-115

Software License

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

## **OPTIONAL ACCESSORIES**

#### **Management System**

■ InstaAir.....P/N: 9000-121

Cloud Based Fleet Management System for Routers

#### **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, cable length: 3M





#### ■ ANT11000092

 $6-in-1 \ omnidirectional \ antenna - 2G/3G/4G \ (698-960/1710~2170/2300~2700MHz) \ MIMO \ x2 + Wi-Fi \ 2.4/5GHz \ MIMO \ x1 + GPS/GLONASS/GALILEO/BeiDou \ (1561/1575.42/1602MHz) \ x1 + AM/FM \ x1 + DSRC \ x1, 6dBi, IP67, cable length: 30cm$ 



#### **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



### Antenna Base

ADA11000053

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



## Lantech Communications Global Inc.

www.lantechcom.tw info@lantechcom.tw

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