

# TMR-5004

**EN50155 Multifunction VPN Router + up to 2 LTE 4G + 2 serial ports + 4 Gigabit X-coded Ethernet Switch + 2WAN/2LAN w/Load Balancing, VPN, Protocol Gateway, Storage\*\*; WV input**

- Built-in 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN ports , Up to 2x LTE 4G Module (4SIMS)
- Support LTE Cat 6 (APAC & EUNA models) or Cat 12/9/13 (WW model)
- Detachable antenna connectors with 6 SMA/QMA\*\*
- 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 NAT and Firewall
- Support Modbus gateway on serial ports
- Support 2 RS422/RS485 ports with 2.5KV isolation or 2x RS232 ports
- Optional 2 GT smart bypass protection
- Galvanic isolation on WV model from 16.8V~137.5V input
- 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 for backup, restore the configuration file and upgrade firmware; Dual image firmware\*
- IP 65 /54 Aluminum housing for best heat dissipation and preventing moist ingress
- EN50155/61373/45545 verification for railway applications



## OVERVIEW

Lantech TMR-5004 series is a next generation EN50155 multifunction VPN router up to 2 x LTE module (4SIMS) + 4 Gigabit X-coded Ethernet Switch + 2WAN/2LAN ports + 2 serial ports that supports advanced function of VPN, Load-Balancing(Premium pack), EMMC Flash Storage\*\*, Protocol gateway(Modbus), Storage\*\*, LTE dual 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, TMR-5004 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. 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)

TMR-5004 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.

**Support various VPN applications and firewall**

Besides traditional VPN peer to peer tunneling, TMR-5004 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 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 TMR-5004 will immediately send email and trap.

The event log can be sent via syslog, emails or trigger the alarm relay.

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

**Wide range dual input voltage from 16.8-137.5V (WV model)**

The TMR-5004 is able to work from dual16.8V ~137.5V DC input (WV model) that is particular good for vehicle, rail train, depot etc applications.

**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.

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

**Editable login page of captive portal**

The TMR-5004 supports editable captive portal function that allows administrator to force end-users redirect to authentication page.

**Ruggedized EN50155 design and FCC/CE & E-marking\*\* certificate**

The TMR-5004 series is verified with EN50155, EN61373, EN45545 standard with IP65/54 housing. It passed tests under extensive Industrial EMI and environmental vibration and shocks standards. With CE & FCC radio certification for LTE and E-marking\*\* certificate, the TMR-5004 is best for outdoor community, vehicle, power substation, process control automation etc. For more usage flexibilities, TMR-5004 supports operating temperature from -40°C to 65°C.

**FEATURES & BENEFITS**

- Built-in 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN ports
- Dual concurrent LTE 4G/3G design (2L model)for auto-swap/failover/failback between multiple ISPs for continuous service (four SIM card slots)
- Dual DC input from 16.8V~137.5VDC power input (WV model)
- 6 STANDARD SMA / OPTIONAL QMA type connectors for LTE, GPS
- HTTP/HTTPS/Telnet/SSH & Administration access
- Support IPv6 & IPv4 protocol
- Radius Authentication, EAP-TLS, EAP-TTLS, PEAP
- EMMC-FLASH storage\*\*8/16/32G
- Support Multi-Site VPN for mesh tunneling as well as

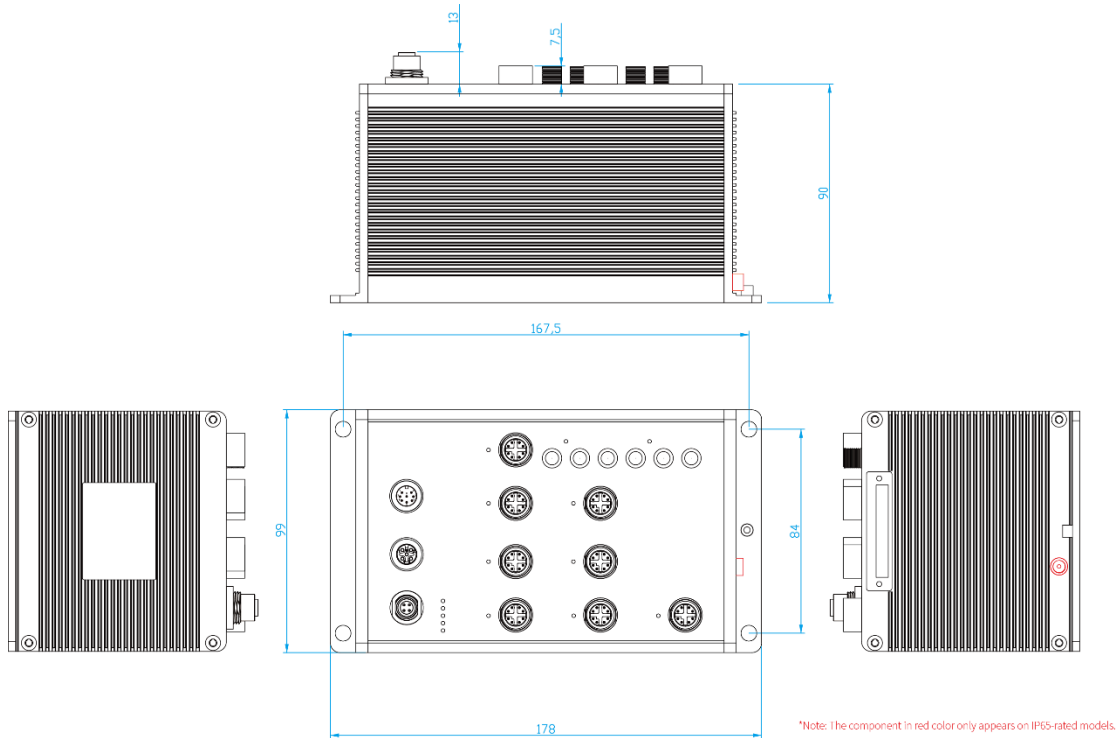
- Open VPN, L2TP over IPsec, IPsec, PPTP\*\*, L2 over GRE , IPGRE and NAT for secured network connection
- The built-in Layer-4 firewall includes DDoS, IP address filter / Mac address filter / TCP/UDP port number
- NAT/DMZ/Port Forwarding
- Support SNMP v1/v2c/v3
- One LTE 4G/3G w/ 2 SIM card design(1L model) for mobile redundancy
- GPS/ GLONASS (built-in LTE module) connection
- Load Balancing supports 8 mechanism between multiple WANs

	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.

Pack	Algorithm	Description
<b>Basic Package</b>	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.
<b>Full Package** (incl. basic package)</b>	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

- 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
- Support SNTP to synchronize system clock
- Support LLDP discovery protocol
- Support DHCP Server and Client
- LTE signal strength
- Built-in environmental monitoring for system input voltage, current and ambient temperature; Able to set alert when abnormal
- 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
- Dual image firmware\*
- IP 65/54 housing for water proof environment
- Support editable captive portal login page
- Wall-mount installation
- Visible LED to show the power & port link and activity
- EN45545-2 Fire & Smoke, EN50155 and EN61373 shock/vibration verification
- Operation temperature -40~65C

**DIMENSIONS (unit=mm)**



**SPECIFICATION**

<b>Cellular Interface</b>		Cat 9: 450 Mbps Uplink: Cat 13: 150 Mbps
Location Solutions	GPS, Glonass (EU/Americas) GPS, Glonass, Beidou, Galileo (APAC model only)	<b>Software</b>
Band Options	<b>Asia-Pacific (APAC model)</b> 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  <b>Europe &amp; North America (EUNA model)</b> 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  <b>World Wide (WW model)</b> 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	
Data Rates – LTE	<b>Asia-Pacific (APAC model)</b> Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps  <b>Europe &amp; North America (EUNA model)</b> Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps  <b>World Wide (WW model)</b> Downlink: Cat 12: 600 Mbps	IPv6/4 Present Login Security Supports IEEE802.1x Authentication/RADIUS Access Security HTTP/HTTPS/Telnet/SSH & Administration; SNMP v1/v2/v3 access for authentication via MD5/SHA(v3) and Encryption via DES/AES(v3) 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* Management SNMP v1,v2c,v3/ Web/Telnet/CLI
		<b>Load Balancing</b> 8 schemes for multiple WAN
		<b>Basic Package</b>
		<b>Fixed</b> Manually route by traffic type through fixed WAN link.
		<b>Failover</b> Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link failure occurs.
		<b>Priority</b> Routes connections through preferred WAN link while others stand-by. Sequentially activate other links if overflow occurs.
		<b>Weighted Round-Robin</b> Evenly distribute the traffic over all working WAN links in circular order according to the specified weights
		<b>Custom Route</b> Routing through the selected WAN for each specific traffic ex: TCP/UDP port number and IP address.
		<b>Full Package** incl. basic package</b>
		<b>Sticky Session*</b> 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.
		<b>Smallest Load*</b> 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	DI/DO	Input power 1.5KVA isolation 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
Fastest*	Routes connections through the WAN link with lowest latency time.	EMMC Storage**	8/16/32 GB
Authentication	Radius Authentication, EAP-TLS, EAP-TTLS, PEAP	<b>LED Indicators</b>	
SSID	16 sets	Power & System indicator	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) , Ring Master(Green), System Ready(Green), Serial1/Serial2(Green)
Timer	Built-in Real Time Clock to keep track of time always(RTC)	10/100/1000Base-T(X) port indicator	Link/Activity (Green), Speed (Yellow)
Discovery	IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	SIM	Green for Link/Act
SNMP trap	Device cold / warm start Port link up / link down DI / DO high / low	GPS	Green for Link/Act
Environmental Monitoring	System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status	Fault	Red: Ethernet link down or power down
Signal display	LTE signal strength & TX / RX rate display	<b>Fault contact</b>	
Remote Web control	To reboot or get status of router by Web	Relay	Relay output to carry capacity of 1A at 24VDC
Captive portal	Editable captive portal login page	<b>Power</b>	
Maintenance	Firmware upgradeable through TFTP/HTTP	Input power	Dual DC input, 16.8VDC~137.5VDC for (WV model)
Configuration backup & restore	Supports text configuration file for quick system installation USB port to upload/download configuration and upgrade firmware by USB dongle Dual image firmware*	Power consumption (Typ.)	20 Watts
<b>Physical Ports &amp; System</b>		<b>Physical Characteristic</b>	
Connectors	10/100/1000T: 6x ports M12 8pole X-coded incl. 2WAN/2LAN ports USB/Console connector: 1 x M12 8-pole A-coded 2L model SMA/QMA** connector for LTE: 4 (female) SMA/QMA** connector for GPS: 2 (female) 1L model SMA/QMA** connector for LTE: 2 (female) SMA/QMA** connector for GPS: 1 (female) Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded	Enclosure	IP 65/54 aluminum case
Serial Baud Rate	1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/RS485	Dimension	178 (W) x 99 (D) x 103 (H) mm
Serial Data Bits	5, 6, 7, 8	Weight	1000g
Serial Parity	odd, even, none, mark, space	<b>Environmental</b>	
Serial Stop Bits	1, 1.5, 2	Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND	Operating Temperature	-40°C ~ 65°C (-40°F ~ 149°F)
RS-422	Tx+, Tx-, Rx+, Rx-,GND	Operating Humidity	5% to 95% Non-condensing
RS-485 (2-wire)	Data+, Data-,GND	<b>Regulatory approvals</b>	
Isolation protection	RS422/RS485 2.5KV isolation; 8KV contact & 15KV air RS232 8KV contact and 15KV air ESD DIDO 3KV isolation	EMC	FCC Part 15 Class A, EN55032 , EN55024
		EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-6-2
		Radio Frequency	EN301 489-1, EN301 489-17, EN301 489-19, EN301 489-52, EN300 440, EN301 893, EN300 328, EN301 908-1, EN303 413, EN62311
		Safety	EN60950 (LVD), AS60950 (LVD)
		Stability Testing	EN61373 (Shock & Vibration)
		Verifications & report	EN50155, EN50121-3-2, EN50121-4 verification EN45545-2 R13/R22/R23/R24/R25 (EN ISO 4589-2, EN ISO 5659-2, NF X70-100-1 & 2) Fire & Smoke verification
		MTBF	NA
		Warranty	5 years

\*Future Release  
\*\*Optional

## ORDERING INFORMATION

All standard models are non-conformal coated, optional conformal coated models are available with -C model name; QMA connector models are with -Q model name.

- **TMR-5004-1L-2S-WV-65-EUNA..... P/N: 8641-001**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-1L-2S-WV-65-WW..... P/N: 8641-002**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-1L-2S-WV-65-APAC..... P/N: 8641-003**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-1L-2SA-WV-65-EUNA..... P/N: 8641-0011**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-1L-2SA-WV-65-WW..... P/N: 8641-0021**



- EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-1L-2SA-WV-65-APAC..... P/N: 8641-0031**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-1L-2SB-WV-65-EUNA..... P/N: 8641-0012**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-1L-2SB-WV-65-WW..... P/N: 8641-0022**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-1L-2SB-WV-65-APAC..... P/N: 8641-0032**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-1L-2S-WV-54-EUNA..... P/N: 8641-004**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
  - **TMR-5004-1L-2S-WV-54-WW..... P/N: 8641-005**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54; -40~65C
  - **TMR-5004-1L-2S-WV-54-APAC..... P/N: 8641-006**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54; -40~65C
  - **TMR-5004-1L-2SA-WV-54-EUNA..... P/N: 8641-0041**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
  - **TMR-5004-1L-2SA-WV-54-WW..... P/N: 8641-0051**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors+ 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54 ; -40~65C
  - **TMR-5004-1L-2SA-WV-54-APAC..... P/N: 8641-0061**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors+ 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54 ; -40~65C
  - **TMR-5004-1L-2SB-WV-54-EUNA..... P/N: 8641-0042**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
  - **TMR-5004-1L-2SB-WV-54-WW..... P/N: 8641-0052**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors+ 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54 ; -40~65C
  - **TMR-5004-1L-2SB-WV-54-APAC..... P/N: 8641-0062**  
EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors+ 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54 ; -40~65C
  - **TMR-5004-2L-2S-WV-65-EUNA..... P/N: 8641-007**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-2L-2S-WV-65-WW..... P/N: 8641-008**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-2L-2S-WV-65-APAC..... P/N: 8641-009**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
  - **TMR-5004-2L-2SA-WV-65-EUNA..... P/N: 8641-0071**

- EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2SA-WV-65-WW..... P/N: 8641-0081**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2SA-WV-65-APAC..... P/N: 8641-0091**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2SB-WV-65-EUNA..... P/N: 8641-0072**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2SB-WV-65-WW..... P/N: 8641-0082**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2SB-WV-65-APAC..... P/N: 8641-0092**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP65; -40~65C
- **TMR-5004-2L-2S-WV-54-EUNA..... P/N: 8641-010**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
- **TMR-5004-2L-2S-WV-54-WW..... P/N: 8641-011**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54; -40~65C
- **TMR-5004-2L-2S-WV-54-APAC..... P/N: 8641-012**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54; -40~65C
- **TMR-5004-2L-2SA-WV-54-EUNA..... P/N: 8641-0101**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
- **TMR-5004-2L-2SA-WV-54-WW..... P/N: 8641-0111**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors+ 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54 ; -40~65C
- **TMR-5004-2L-2SA-WV-54-APAC..... P/N: 8641-0121**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors+ 2 serial RS422 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54 ; -40~65C
- **TMR-5004-2L-2SB-WV-54-EUNA..... P/N: 8641-0102**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors + 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; EU and US band; dual 16.8V~137.5VDC; IP54; -40~65C
- **TMR-5004-2L-2SB-WV-54-WW..... P/N: 8641-0112**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors+ 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; Worldwide band; dual 16.8V~137.5VDC; IP54 ; -40~65C
- **TMR-5004-2L-2SB-WV-54-APAC..... P/N: 8641-0122**  
EN50155 Multifunction VPN Router + 2 LTE 4G SMA connectors+ 2 serial RS485 ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing, VPN, Protocol Gateway; APAC band; dual 16.8V~137.5VDC; IP54 ; -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**

**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**

- **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.**

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