

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)
- Detachable antenna connectors with 6 SMA/QMA**
- VPN router for Multi-site VPN, OpenVPN, L2TP, IPsec, PPTP**, L2 over GRE
- Load Balancing** support 8 mechanism
- Optional EMMC Flash storage on-board**
- Support NAT and Firewall
- Support Modbus gateway on serial ports
- Support 2 RS422/485 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 & TX/RX rate display
- 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, Loadbalancing**(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
Standard	Fixed	Manually route by traffic type through fixed WAN link.
Basic Package	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	Sticky Session*	Binding all connections in an application session to particular

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EN50155 Multifunction Router + Managed Switch



(incl. basic package)		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/ 485 in which RS422/485 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, Open VPN, L2TP, IPsec L2 over GRE, NAT, and PPTP** for various VPN applications. The built-in Layer-4 firewall includes DoS**, IP address filter / Mac address filter* / TCP/UDP port number.

DIDO for alarm & email** notice; Event log; Remote Web/SMS** 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/SMS** control* can help to get router status or remotely reboot by Web/SMS**.

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

The TMR-5004 is able to work from dual16.8V ~137.5V DC isolated 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 and TX/RX rate display

The built-in environmental monitoring can detect router ambient temperature, voltage, current where can send the syslog, email** and SMS** alert 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-5004series 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 -20°C to 75°C or -40°C to 75°C(-E)

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FEATURES & BENEFITS

- Built-in 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN ports
- Dual concurrent LTE 4G/3G design (2L model)for autoswap/failover/failback between multiple ISPs for continuous service (four SIM card slots)
- Dual DC input from 16.8V~137.5VDC isolated 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-MD5, EAP-TLS, EAP-TTLS, PEAP
- EMMC-FLASH storage**8/16/32G
- Support Multi-Site VPN for mesh tunneling as well as Open VPN, L2TP, IPsec L2 over GRE, and PPTP** fro secured network connection
- The built-in Layer-4 firewall includes DoS**, IP address filter / Mac address filter* / TCP/UDP port number.
- Support SNMP v1/v2c/v3
- Support NAT/DMZ
- 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

Pack	Algorithm	Description
Standard	Fixed	Manually route by traffic type through fixed WAN link.
Basic Package	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 backage)	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/RS422/485)
- Serial port with 2.5KV isolation on RS422/485
- 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**, SMS** text, Relay ; Permanent local log rotation / Maxi 1K records
- Remote Web/SMS** control to get status or re-boot by Web or SMS**
- Support SNTP to synchronize system clock
- Support LLDP discovery protocol
- Support DHCP Server and Client
- LTE signal strength & TX/RX rate display
- Built-in environmental monitoring for system input voltage, current and ambient temperature; Able to set alert when abnormal
- Firmware upgradeable through TFTP/FTP/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
- Operation temperature -20~75C or -40~75C(-E)



DIMENSIONS (unit=mm) 167,5 · 🕲 0'0 0 0'0 0 · 🕲 • 🕲 0 ۲ ۲ • 🕲 • • 🕲 · 🕲 · 🕀 G *Note: The component in red color only appears on IP65-rated models. 178

SPECIF	ICATION		
Cellular Inte	rface	Login Security	Supports IEEE802.1x Authentication/RADIUS
Location Solutions	GPS, Glonass (EU/Americas) GPS, Glonass, Beidou, Galileo (APAC 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)
Band Options	APAC & Australia (APAC model) LTE: 2100/1800/850/2600/900/850/850/1500/750/2600/19 00/2300/2500 MHz (B1/B3/B5/B7/B8/B18/B19/B21/B28/B38/B39/B40/B4 1)	Protocol	PPPoE Client, DHCP server/client, Adjustable MTU, Port forwarding (NAPT), DMZ; NAT, SNTP, Firewall(Firewall(DoS**/IP address filter / Mac address filter* / TCP/UDP port name),VRRP**, DDNS*
	EUNA & USA model	Management Load Balancing**	SNMP v1,v2c,v3/Web/Telnet/CLI 8 schemes for multiple WAN
	LTE:	Fixed	Manually route by traffic type through fixed WAN link.
	2100/1800/2600/900/800 MHz	Basic Package	9 [*] *
	(B1/B2/B3/B4/B5/B7/B12/B13/B20/B25/B26/B29/B30 /B41)	Failover	Routes connections through preferred WAN link while others stand-by. Sequentially activate another
	WorldWide (WW model)		link if preferred link failure occurs.
	LTE: 2100/1900/1800/1750/850/2600/900/1800/750/750/8/ 50/850/800/850/750/2300/1500/2500/3500/3750/520	Priority	Routes connections through preferred WAN link while others stand-by. Sequentially activate other links if overflow occurs.
	0/3600/1750 (B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B18/B19/B20/B	Weighted Round-	Evenly distribute the traffic over all working WAN
	26/B28/B29/B30/B32/B41/B42/B43/B46/B48/B66)	Robin	links in circular order according to the specified
Data Rates – LTE	APAC & Australia (APAC model) Downlink (Cat 6): FDD: 300 Mbps	Custom Route	weights Routing through the selected WAN for each specific traffic ex: TCP/UDP port number and IP address. ncl. basic package**
	TDD: 222 Mbps	Sticky Session*	
Uplink (Cat 6): EDD: 50 Mbps	FDD: 50 Mbps	Slicky Session	Binding all connections in an application session to
	TDD: 26 Mbps		particular WAN link to ensure all connections in the
	Americas (US model) / EMEA (EU model)		session are routed to the same WAN link , that is
	Downlink (Category 3):		suitable for security services like online payment etc. Routes connections through the WAN link with
	100 Mbps (20 MHz bandwidth) 50 Mbps (10 MHz bandwidth)	Smallest Load*	highest free bandwidth ratio.
	Uplink (Category 3):		The ratio = 1 - (traffic load / the capability of a WAN
	50 Mbps (20 MHz bandwidth)		link).
0	25 Mbps (10 MHz bandwidth)		The traffic load could be defined by downstream,
Software			upstream or total traffic
IPv6/4	Present	Fastest*	Routes connections through the WAN link with lowest

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EN50155 Multifunction Router + Managed Switch



	latency time.	DI/DO	2 Digital Input (DI) :
Authentication	Radius Authentication, EAP-MD5, EAP-TLS, EAP-		Level 0: -30~2V / Level 1: 10~30V
000	TTLS, PEAP; SSID broadcast disable supported**		Max. input current:8mA
SSID	16 sets		2 Digital Output(DO): Open collector to 40 VDC,
Timer	Built-in Real Time Clock to keep track of time		200mA
Discovery	always(RTC) IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	EMMC Storage**	8/16/32 GB
SNMP trap	Device cold / warm start	LED Indicat	ors
	Port link up / link down	Power & System	Per unit: Power 1 (Green), Power 2 (Green), P-Fail
	DI / DO high / low	indicator	(Red), Ring Master(Green), System Ready(Green), Serial1/Serial2(Green)
Environmental	System status for input voltage, current, ambient	10/100/1000Base-	Link/Activity (Green), Speed (Yellow)
Monitoring	temperature to be shown in GUI and sent alerting if	T(X) port indicator	
	any abnormal status	SIM	Green for Link/Act
Signal display	LTE signal strength & TX / RX rate display	GPS	Green for Link/Act
Remote	To reboot or get status of router by Web/SMS**	Fault	Red: Ethernet link down or power down
Web/SMS** control		Fault contac	ct
Captive portal	Editable captive portal login page	Relay	Relay output to carry capacity of 1A at 24VDC
Maintenance	Firmware upgradeable through TFTP/FTP/HTTP	Power	
Configuration	Supports text configuration file for quick system	Input power	Dual DC input, isolated 16.8VDC~137.5VDC for (WV
backup & restore	installation	input power	model)
	USB port to upload/download configuration and	Power consumption	20 Watts
	upgrade firmware*by USB dongle	(Тур.)	
	Dual image firmware*	Physical Ch	aracteristic
Physical Po	rts & System	Enclosure	IP 65/54 aluminum case
Connectors	10/100/1000T: 6x ports M12 8pole X-coded incl.	Dimension	178 (W) x 99 (D) x 103 (H) mm
	2WAN/2LAN ports	Weight	1000g
	USB/Console connector: 1 x M12 8-pole A-coded	Environmer	utal
			itai
	STANDARD SMA / OPTIONAL QMA connector : 6	Storage	-40°C ~ 85°C (-40°F ~ 185°F)
	female LTE	Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
	female LTE Power Input connector : 1 x M12 4-pole A-coded	Storage Temperature Operating	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F)
Serial Raud Rate	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded	Storage Temperature Operating Temperature	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model
Serial Baud Rate	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ;	Storage Temperature Operating Temperature Operating Humidity	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing
Serial Baud Rate	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded	Storage Temperature Operating Temperature Operating Humidity Regulatory	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing
	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032
Serial Data Bits	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8	Storage Temperature Operating Temperature Operating Humidity Regulatory	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-
Serial Data Bits Serial Parity	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000- 4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
Serial Data Bits	female LTE Power Input connector : 1 x M12 4-pole A-coded D/DD : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-4°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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
Serial Data Bits Serial Parity Serial Stop Bits	female LTE Power Input connector : 1 x M12 4-pole A-coded D/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration)
Serial Data Bits Serial Parity Serial Stop Bits RS-232	female LTE Power Input connector : 1 x M12 4-pole A-coded D/D0 : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing Railway verification	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration) EN50155*, 50121*,45545
Serial Data Bits Serial Parity Serial Stop Bits RS-232 RS-422 RS-485 (2-wire)	female LTE Power Input connector : 1 x M12 4-pole A-coded D/D0 : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Tx+, Tx-, Rx+, Rx-,GND	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing Railway verification MTBF	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration) EN50155*, 50121*,45545 NA
Serial Data Bits Serial Parity Serial Stop Bits RS-232 RS-422	female LTE Power Input connector : 1 x M12 4-pole A-coded DI/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Tx+,Tx-, Rx+, Rx-,GND Data+, Data-,GND	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing Railway verification	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration) EN50155*, 50121*,45545 NA 5 years
Serial Data Bits Serial Parity Serial Stop Bits RS-232 RS-422 RS-485 (2-wire)	female LTE Power Input connector : 1 x M12 4-pole A-coded D/D0 : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Tx+, Tx-, Rx+, Rx-,GND Data+, Data-,GND RS422/485 2.5KV isolation; 8KV contact & 15KV air	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing Railway verification MTBF	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration) EN50155*, 50121*,45545 NA
Serial Data Bits Serial Parity Serial Stop Bits RS-232 RS-422 RS-485 (2-wire)	female LTE Power Input connector : 1 x M12 4-pole A-coded D/DO : 1 x M12 5-pole A-coded 1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/485 5, 6, 7, 8 odd, even, none, mark, space 1, 1.5, 2 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Tx+, Tx-, Rx+, Rx-,GND Data+, Data-,GND RS422/485 2.5KV isolation; 8KV contact & 15KV air RS232 8KV contact and 15KV air ESD	Storage Temperature Operating Temperature Operating Humidity Regulatory EMC EMS Stability Testing Railway verification MTBF	-40°C ~ 85°C (-40°F ~ 185°F) -20°C ~ 75°C (-40°F ~ 167°F) -40°C ~ 75°C (-40°F ~ 167°F) -E model 5% to 95% Non-condensing approvals FCC Part 15 Class A, EN55032 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 EN61373 (Shock & Vibration) EN50155*, 50121*,45545 NA 5 years

ORDERING INFOMATION

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; -40~75C operational models are with –E model name.

TMR-5004-1L-2S-WV-65-EUNA..... P/N: 8641-021

EN50155 Multifunction VPN Router + 1 LTE 4G SMA connectors + 2 serial ports + 4 Gigabit X-coded Ethernet Managed Switch + 2WAN/2LAN with Load Balancing**, VPN, Protocol Gateway; EU and US band; dual isolated 16.8V~137.5VDC; IP65; -20~75C

Ethernet Managed Switch + 2WAN/2LAN with Load Balancing**, VPN, Protocol Gateway; EU and US band; dual isolated 16.8V~137.5VDC; IP65; -20~75C

16.8V~137.5VDC; IP54 ; -20~75C



	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet
0	g**, VPN, Protocol Gateway; EU and US band; dual isolated
16.8V~137.5VDC; IP54; -20~75C	
TMR-5004-1L-2S-WV-54-WW	
	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet ig**, VPN, Protocol Gateway; Worldwide band; dual isolated
16.8V~137.5VDC; IP54; -20~75C	ig , vrn, rholocol Galeway, wondwide band, duai isolaled
TMR-5004-1L-2S-WV-54-APAC	
	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet
Managed Switch + 2WAN/2LAN with Load Balancin IP54: -20~75C	ng**, VPN, Protocol Gateway; APAC band; dual isolated 16.8V~137.5
TMR-5004-1L-2SA-WV-54-EUNA	
EN50155 Multifunction VPN Router + 1 LTE 4G S	MA connectors + 2 isolated serial RS422/485 ports + 4 Gigabit X-co
Ethernet Managed Switch + 2WAN/2LAN with Load 16.8V~137.5VDC; IP54; -20~75C	Balancing**, VPN, Protocol Gateway; EU and US band; dual isolate
TMR-5004-1L-2SA-WV-54-WW	P/N: 8641-0421
	MA connectors+ 2 isolated serial RS422/485 ports + 4 Gigabit X-cod
Ethernet Managed Switch + 2WAN/2LAN with Load 16.8V~137.5VDC; IP54 ; -20~75C	Balancing**, VPN, Protocol Gateway; Worldwide band; dual isolated
TMR-5004-1L-2SA-WV-54-APAC	P/N: 8641-0431
	MA connectors+ 2 isolated serial RS422/485 ports + 4 Gigabit X-cod
	Balancing**, VPN, Protocol Gateway; APAC band; dual isolated
16.8V~137.5VDC; IP54 ; -20~75C TMR-5004-2L-2S-WV-65-EUNA	P/N- 86/1-0215
	MA connectors + 2 serial ports + 4 Gigabit X-coded Ethernet Manag
	Protocol Gateway; EU and US band; dual isolated 16.8V~137.5VDC
TMR-5004-2L-2S-WV-65-WW	P/N: 8641-0221
	MA connectors + 2 serial RS-232 ports + 4 Gigabit X-coded Etherne
Managed Switch + 2WAN/2LAN with Load Balancin 16.8V~137.5VDC; IP65; -20~75C	g**, VPN, Protocol Gateway; Worldwide band; dual isolated
TMR-5004-2L-2S-WV-65-APAC	P/N: 8641-0232
	MA connectors + 2 serial RS-232 ports + 4 Gigabit X-coded Etherne
Managed Switch + 2WAN/2LAN with Load Balancin IP65; -20~75C	ig**, VPN, Protocol Gateway; APAC band; dual isolated 16.8V~137.5
TMR-5004-2L-2SA-WV-65-EUNA	
Ethernet Managed Switch + 2WAN/2LAN with Load	MA connectors + 2 isolated serial RS422/485 ports + 4 Gigabit X-con Balancing**, VPN, Protocol Gateway; EU and US band; dual isolate
16.8V~137.5VDC; IP65; -20~75C	B/N 0044 0000
TMR-5004-2L-2SA-WV-65-WW	
Ethernet Managed Switch + 2WAN/2LAN with Load	MA connectors + 2 isolated serial RS422/485 ports + 4 Gigabit X-con Balancing**, VPN, Protocol Gateway; Worldwide band; dual isolated
16.8V~137.5VDC; IP65; -20~75C	B /NL 00// 0000
TMR-5004-2L-2SA-WV-65-APAC	
	MA connectors + 2 isolated serial RS422/485 ports + 4 Gigabit X-con Balancing**, VPN, Protocol Gateway; APAC band; dual isolated
16.8V~137.5VDC; IP65; -20~75C	
TMR-5004-2L-2S-WV-54-EUNA	
Managed Switch + 2WAN/2LAN with Load Balancin	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet Ig**, VPN, Protocol Gateway; EU and US band; dual isolated
16.8V~137.5VDC; IP54; -20~75C	
TMR-5004-2L-2S-WV-54-WW	
	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet ig**, VPN, Protocol Gateway; Worldwide band; dual isolated
16.8V~137.5VDC; IP54; -20~75C	y, vi N, FIOLOCOI Galeway, WOHOWIGE Dahla, QUAHISOIALEO
TMR-5004-2L-2S-WV-54-APAC	
	MA connectors + 2 serial RS232 ports + 4 Gigabit X-coded Ethernet
	ig**, VPN, Protocol Gateway; APAC band; dual isolated 16.8V~137.5
TMR-5004-2L-2SA-WV-54-EUNA	P/N: 8641-0413
	MA connectors + 2 isolated serial RS422/485 ports + 4 Gigabit X-co
	Balancing**, VPN, Protocol Gateway; EU and US band; dual isolate
16.8V~137.5VDC; IP54; -20~75C	
TMR-5004-2L-2SA-WV-54-WW	
	MA connectors+ 2 isolated serial RS422/485 ports + 4 Gigabit X-cod Balancing**, VPN, Protocol Gateway; Worldwide band; dual isolated



LTE Antenna

ANT11000041

791-960/1710~2175/2500~2750MHZ, SMA plug, EU 754-960/1710~2175MHZ, SMA plug, US

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