

T(P)WMR-5208MGF

EN50155 Multifunction VPN Router w/up to 2x WiFi 11ac + up to 2x LTE 4G + 8 10/100/1000T(PoE) + 2 1G/2.5G Fiber Uplink + 2 WAN/LAN Ethernet Switch; WVI input



OVERVIEW

Lantech T(P)WMR-5208MGF is a next generation EN50155 multi-function VPN router w/up to 2x 802.11ac WiFi + up to 2x LTE modem + 2x 1G/2.5G Fiber Q-ODC Uplink + 2 Gigabit WAN/LAN ports + 8x Gigabit Ethernet that supports advanced function for on-board / onboard-to-ground applications. The dual core CPU with 1.6GHz + 256M flash enables the router to multi-task smoothly.

LTE modem 4G/3G with quad SIM fail-over

Built-in up to two LTE modem with 4 SIM card slots, the router can allow failover between two operators for resilient connection. Both GPS and Russian GLONASS systems are supported (may vary in models)

IEEE 802.11ac radio up to 1.3Gbps bandwidth

With IEEE 802.11ac capability, the router can operate either 5GHz or 2.4GHz bands, offering the maximum speed of 1.3Gbps bandwidth. It is also compatible with 802.11g/n that can work with 2.4GHz for longer range transmission.

The WiFi 11ac supports AP/Bridge/AP Client modes can be diverse for most of wireless application. Client mode supports PMK** Caching and pre-authentication. Working with load-balancing "Priority" mode, the AP client can enable router to transmit on WiFi with first priority.

Optional EMMC flash storage**

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

Optional eSIM**

By replacing physical SIM, optional eSIM chip will allow users to purchase data plans at low prices from local carriers in the world.

MIMO technology with 3T3R and SMA/QMA** type connectors

The router adapts MIMO technology with smart antenna transmission and reception for 3T3R. With up to nine external detachable antenna connectors (SMA/QMA**) and optional antennas, it can have better Wi-Fi & LTE/GPS coverage.

Support AP/Bridge/Client mode, Mesh roaming

The router supports AP/Bridge/Client mode for different applications. It also supports client-base roaming to swap between the APs in a network. To learn more about the Lantech router software features, please refer to [Lantech Router Software Datasheet](#)

DIDO for alarm & email notice

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 router will immediately send email and trap.

Up to 8 PoE at/af ports w/advanced PoE management and PoE galvanic isolation

Compliant with 802.3af/at standard, the PoE model is able to feed each PoE port up to 30 Watt at each PoE port for various IP PD devices. It supports advanced PoE management including PoE detection and scheduling. PoE detection can detect if the connected PD hangs then restart the PD; PoE scheduling is to allow pre-set power feeding schedule upon routine time table. Each PoE ports can be Enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

PoE galvanic isolation up to 1.5KVDC to provide power input to PoE Ethernet ports insulation prevents cabling and grounding incidents from damaging the Ethernet switch itself.

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

The router is able to work from dual 16.8V ~137.5V DC input (WVI model) with Ethernet and PoE galvanic isolation and PoE model can feed 54V output for PoE feeding with 80W budget that is particular good for vehicle, rail train, and depot applications.

Built-in Managed Switch Function

Managed switch function is built-in and provides various L2+ functions for network aggregation deployment. It delivers ports management, VLAN, QoS, multicast, redundant ring, and security functions. To learn more about the Lantech router software features, please refer to [Lantech Router Software Datasheet](#)

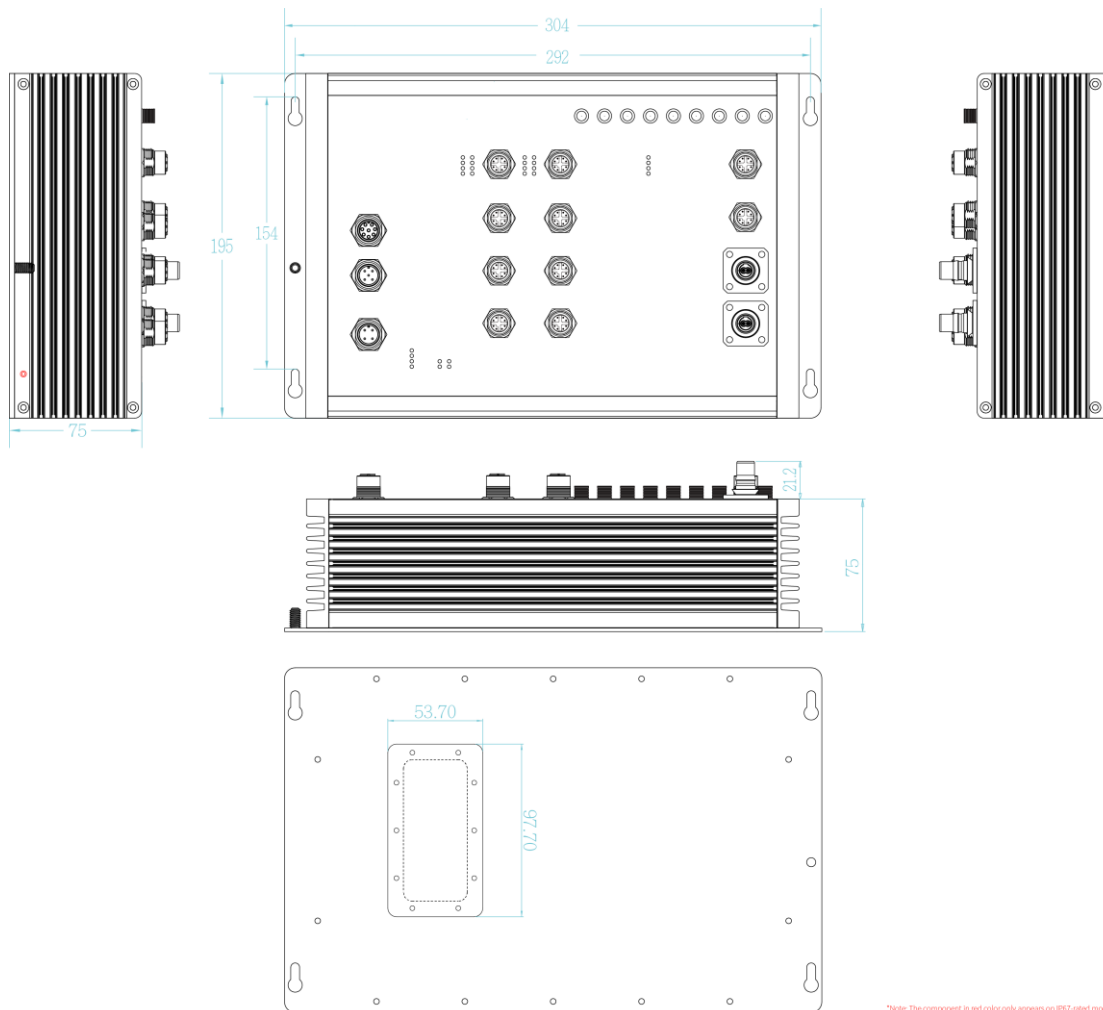
Ruggedized EN50155 design and FCC/CE

The router is verified with EN50155, IEC61373, EN45545 standard with IP67/54 housing. It passed serious tests under extensive Industrial EMI and environmental vibration and shocks standards. With CE & FCC radio certification for WiFi and LTE, it is best for outdoor community, vehicle, power substation, process control automation etc. For more usage flexibilities, it supports operating temperature from -40°C to 65°C

Enhanced cybersecurity features with IEC 62443-4-1 certification

To ensure the safety and reliability of communication networks, Lantech develops our products under strict international security standard and is certified with IEC 62443-4-1 network security standard. To learn more about Lantech cybersecurity software solution, please refer to [Lantech Router Software Datasheet](#)

DIMENSIONS (unit=mm)



*Note: The component in red color only appears on IPET related models.

SPECIFICATIONS

WLAN Interface		
Radio Frequency Type	DSSS, OFDM	
Wireless Standard	IEEE 802.11ac/n/a 5GHz IEEE 802.11b/g/n 2.4GHz	
Wireless bandwidth	5GHz: Up to 1300Mbps 2.4GHz: Up to 450Mbps	
Bandwidths	20MHz, 40MHz, 80MHz	
Modulation	802.11b: DSSS 802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)	
Operating Frequency	IEEE 802.11 a/b/g/n ISM Band, 2.412GHz~2.472GHz, 5150MHz~5850MHz	
Transmission Rate	IEEE802.11ac: up to 1300Mbps IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps IEEE802.11n: up to 450Mbps	
IEEE 802.11b/g/n(2.4GHz)	Output Power Tx +/- 2dB(per chain) 18dBm @ 1~11Mbps 18dBm @ 6~54Mbps 20/20dBm @ MCS0~MCS7 (HT20/40) Receiver Sensitivity Rx +/- 2dB ≤-95dBm @ 1~11Mbps ≤-92dBm @ 6~18Mbps ≤-88dBm @ 24Mbps ≤-85dBm @ 36Mbps ≤-81dBm @ 48Mbps ≤-80dBm @ 54Mbps ≤-94dBm @ MCS0 (HT20/40) ≤-76dBm @ MCS7 (HT20/40)	
IEEE 802.11b/g/n(2.4GHz)	Output Power Tx +/- 2dB(per chain) 18dBm @ 1~11Mbps 18dBm @ 6~54Mbps 20/20dBm @ MCS0~MCS7 (HT20/40) Receiver Sensitivity Rx +/- 2dB ≤-95dBm @ 1~11Mbps ≤-92dBm @ 6~18Mbps ≤-88dBm @ 24Mbps ≤-85dBm @ 36Mbps ≤-81dBm @ 48Mbps ≤-80dBm @ 54Mbps ≤-94dBm @ MCS0 (HT20/40) ≤-76dBm @ MCS7 (HT20/40)	
IEEE 802.11a/n/ac(5GHz)	Output Power Tx +/- 2dB(per chain) 20dBm @ 6~24Mbps 16dBm @ 36~54Mbps 19/18dBm @ MCS0 (HT20/40) 16/16dBm @ MCS7 (HT20/40) 19/18/18dBm @ MCS0 (VHT20/40/80) 13/13/13dBm @ MCS8 (VHT20/40/80) 13/13dBm @ MCS9 (VHT40/80) Receiver Sensitivity Rx +/- 2dB ≤-92dBm @ 6~18Mbps ≤-86dBm @ 24Mbps ≤-84dBm @ 36Mbps ≤-81dBm @ 48Mbps ≤-80dBm @ 54Mbps ≤-93dBm @ MCS0 (HT20/40) ≤-71dBm/≤-80dBm @ MCS7 (HT20/40) ≤-90dBm @ MCS0 (VHT20/40/80) ≤-69dBm @ MCS8 (VHT20/40/80) ≤-66dBm @ MCS9 (VHT40/80)	
Cellular Interface		
Antenna Connector	Detachable antenna connectors x 6 (2L-1AC) Detachable antenna connectors x 3 (1L-1AC)	Detachable antenna connectors x 3 (1L-2AC) SMA/QMA** type female connector (Main, Aux, GPS)
Location Solutions		GPS, Glonass
Band Options		Europe & North America (EUNA model) LTE = B1, B2, B3, B4, B5, B7, B8, B12, B13, B20, B25, B26, B29, B30, B41 (TDD) DC-HSPA+/ HSPA+/ HSPA/ UMTS = B1, B2, B3, B4, B5, B8
Data Rates – LTE		Europe & North America (EUNA model) Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps
Physical Ports & System		
Connectors	1G/2.5G Speed Fiber: 2 x IP67 LC Q-ODC connector for single-mode or multi-mode type fiber cable 10/100/1000T LAN : 8x ports M12 8-pole X-coded with Auto MDI/MDI-X function (PoE model incl 8 PoE ports) 10/100/1000T WAN/LAN : 2x ports M12 8-pole X-coded with Auto MDI/MDI-X function Console/Reset/USB connector: 1 x M12 8-pole A-coded DIDO : 1 x 5-pole terminal block Power Input connector : 1 x M12 4-pole A-coded 2L-1AC model: SIM card slots : 4 SMA/QMA** connector for LTE: 4 (female) SMA/QMA** connector for GPS: 2 (female) RP-SMA/QMA** connector for Wi-Fi: 3 (female) 1L-1AC model: SIM card slots : 2 SMA/QMA** connector for LTE: 2 (female) SMA/QMA** connector for GPS: 1 (female) RP-SMA/QMA** connector for Wi-Fi: 3 (female) 1L-2AC model: SIM card slots : 2 SMA/QMA** connector for LTE: 2 (female) SMA/QMA** connector for GPS: 1 (female) RP-SMA/QMA** connector for Wi-Fi: 6 (female)	
ESIM	optional	
EMMC Flash	optional 8/16/32G	
Isolation protection	DIDO 2.5KV isolation Input power 1.5KVA isolation	
DI/DO	2 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output(DO): Open collector to 80 VDC, 50mA	
LED Indicators		
Power & system indicator	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) , Ring Master(Green), System Ready(Green) , Ready(Green)	
10/100/1000Base-T(X) port indicator	Link/Act (Green), Speed (Yellow) PoE (Green, PoE model)	
1G/2.5G Fiber indicator	Link/Act (Orange)	
LTE Main & AUX	Link/Act (Green)	
GPS	Link/Act (Green)	
WLAN	Link/Act (Green)	
Fault	Red: Ethernet link down or power down	
Power		

Input power	Dual DC input, 16.8VDC~137.5VDC for (WVI model)
Power consumption (Typ.)	TBC
PoE Budget (PoE model)	80W
PoE pin Assignment (PoE model)	M12 port #1~#8 Support IEEE 802.3at/af End-point, Alternative A mode

Physical Characteristic

Enclosure	IP67/ IP54 aluminum case
Dimension	304 (W) x 195 (D) x 96.2 (H) mm
Weight	2.8kg

Environmental

Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Operating Temperature	-40°C ~ 65°C (-40°F ~ 149°F)
Operating Humidity	5% to 95% Non-condensing

Regulatory approvals

EMI & EMS	EN 55035:2017/A11:2020 EN 55032:2015/A11:2020
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	FCC Part 15, Subpart B IEC 61000-6-2:2016 IEC 61000-6-4:2018 EN IEC 61000-6-2:2019 EN 61000-6-4:2019 BS EN 55035:2017+A11:2020 BS EN 55032:2015+A1:2020
Stability Testing	EN61373 (Shock & Vibration)
Verifications & report	EN 50155:2021 EN 50121-4:2016/A1:2019 EN 45545-1, EN 45545-2 Fire & Smoke verification
MTBF	TBC
Warranty	5 years
Software	
Lantech router platform	Download Software Datasheet

*Future Release

**Optional

※Standard test of the following bands are not listed in EN 301 908-1 report:
(EUNA not listed bands) LTE = B2, B4, B5, B12, B13, B25, B26, B29, B30, B41
 WCDMA = B2, B4, B5;

RF Performance Table

	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance	RX Specifications Sensitivity	Tolerance
2.4GHz 802.11b	1Mbps	20dBm	25dBm	±2dB	-95dBm	±2dB
	2Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	5.5Mbps	20dBm	25dBm	±2dB	-92dBm	±2dB
	11Mbps	20dBm	25dBm	±2dB	-90dBm	±2dB
2.4GHz 802.11g	6Mbps	21dBm	26dBm	±2dB	-94dBm	±2dB
	9Mbps	21dBm	26dBm	±2dB	-93dBm	±2dB
	12Mbps	21dBm	26dBm	±2dB	-92dBm	±2dB
	18Mbps	21dBm	26dBm	±2dB	-90dBm	±2dB
	24Mbps	21dBm	26dBm	±2dB	-88dBm	±2dB
	36Mbps	20dBm	25dBm	±2dB	-85dBm	±2dB
	48Mbps	19dBm	24dBm	±2dB	-81dBm	±2dB
	54Mbps	18dBm	23dBm	±2dB	-80dBm	±2dB
2.4GHz 802.11n HT20	MCS 0	21dBm	26dBm	±2dB	-94dBm	±2dB
	MCS 1	21dBm	26dBm	±2dB	-91dBm	±2dB
	MCS 2	21dBm	26dBm	±2dB	-89dBm	±2dB
	MCS 3	20dBm	25dBm	±2dB	-84dBm	±2dB
	MCS 4	20dBm	25dBm	±2dB	-83dBm	±2dB
	MCS 5	20dBm	25dBm	±2dB	-78dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB	-78dBm	±2dB
	MCS 7	16dBm	21dBm	±2dB	-76dBm	±2dB
2.4GHz 802.11n HT40	MCS 0	20dBm	25dBm	±2dB	-92dBm	±2dB
	MCS 1	20dBm	25dBm	±2dB	-89dBm	±2dB
	MCS 2	20dBm	25dBm	±2dB	-87dBm	±2dB
	MCS 3	19dBm	24dBm	±2dB	-82dBm	±2dB
	MCS 4	19dBm	24dBm	±2dB	-80dBm	±2dB
	MCS 5	19dBm	24dBm	±2dB	-78dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB	-77dBm	±2dB
	MCS 7	16dBm	21dBm	±2dB	-73dBm	±2dB

	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	9Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	12Mbps	20dBm	25dBm	±2dB	-92dBm	±2dB
	18Mbps	20dBm	25dBm	±2dB	-90dBm	±2dB
	24Mbps	20dBm	25dBm	±2dB	-86dBm	±2dB
	36Mbps	18dBm	23dBm	±2dB	-84dBm	±2dB
	48Mbps	16dBm	21dBm	±2dB	-81dBm	±2dB
	54Mbps	15dBm	20dBm	±2dB	-80dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	19dBm	24dBm	±2dB	-93dBm	±2dB
	MCS 1	19dBm	24dBm	±2dB	-90dBm	±2dB
	MCS 2	19dBm	24dBm	±2dB	-87dBm	±2dB
	MCS 3	18dBm	23dBm	±2dB	-83dBm	±2dB
	MCS 4	18dBm	23dBm	±2dB	-80dBm	±2dB
	MCS 5	17dBm	22dBm	±2dB	-77dBm	±2dB
	MCS 6	16dBm	21dBm	±2dB	-74dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-73dBm	±2dB
5GHz 802.11n/ac VHT40	MCS 8	13dBm	18dBm	±2dB	-71dBm	±2dB
	MCS 0	18dBm	23dBm	±2dB	-90dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB	-88dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB	-85dBm	±2dB
	MCS 3	17dBm	22dBm	±2dB	-82dBm	±2dB
	MCS 4	17dBm	22dBm	±2dB	-80dBm	±2dB
	MCS 5	16dBm	21dBm	±2dB	-75dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB	-73dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-73dBm	±2dB

5GHz 802.11ac VHT80	MCS 8	13dBm	18dBm	±2dB	-70dBm	±2dB
	MCS 9	13dBm	18dBm	±2dB	-68dBm	±2dB
	MCS 0	18dBm	23dBm	±2dB	-89dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB	-87dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB	-85dBm	±2dB
	MCS 3	17dBm	22dBm	±2dB	-83dBm	±2dB
	MCS 4	17dBm	22dBm	±2dB	-80dBm	±2dB
	MCS 5	16dBm	21dBm	±2dB	-78dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB	-75dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-72dBm	±2dB
	MCS 8	13dBm	18dBm	±2dB	-70dBm	±2dB
	MCS 9	13dBm	18dBm	±2dB	-68dBm	±2dB

ORDERING INFORMATION

1. All standard models are non-conformal coating, optional conformal coating are with -C model name.
2. All QMA connector models are with -Q model name.

- **TPWMR-5208MGF-2WAN-QMM-2L-1AC-WVI-54-EUNA.....P/N: 8698-311**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TPWMR-5208MGF-2WAN-QSM-2L-1AC-WVI-54-EUNA.....P/N: 8698-3111**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QMM-2L-1AC-WVI-54-EUNA.....P/N: 8698-312**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QSM-2L-1AC-WVI-54-EUNA.....P/N: 8698-3121**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TPWMR-5208MGF-2WAN-QMM-1L-1AC-WVI-54-EUNA.....P/N: 8698-313**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TPWMR-5208MGF-2WAN-QSM-1L-1AC-WVI-54-EUNA.....P/N: 8698-3131**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QMM-1L-1AC-WVI-54-EUNA.....P/N: 8698-314**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QSM-1L-1AC-WVI-54-EUNA.....P/N: 8698-3141**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TPWMR-5208MGF-2WAN-QMM-1L-2AC-WVI-54-EUNA.....P/N: 8698-315**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TPWMR-5208MGF-2WAN-QSM-1L-2AC-WVI-54-EUNA.....P/N: 8698-3151**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QMM-1L-2AC-WVI-54-EUNA.....P/N: 8698-316**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing
- **TWMR-5208MGF-2WAN-QSM-1L-2AC-WVI-54-EUNA.....P/N: 8698-3161**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-

mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP54 housing

- **TPWMR-5208MGF-2WAN-QMM-2L-1AC-WVI-67-EUNA.....P/N: 8698-317**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TPWMR-5208MGF-2WAN-QSM-2L-1AC-WVI-67-EUNA.....P/N: 8698-3171**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QMM-2L-1AC-WVI-67-EUNA.....P/N: 8698-318**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QSM-2L-1AC-WVI-67-EUNA.....P/N: 8698-3181**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 2 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TPWMR-5208MGF-2WAN-QMM-1L-1AC-WVI-67-EUNA.....P/N: 8698-319**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TPWMR-5208MGF-2WAN-QSM-1L-1AC-WVI-67-EUNA.....P/N: 8698-3191**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QMM-1L-1AC-WVI-67-EUNA.....P/N: 8698-320**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QSM-1L-1AC-WVI-67-EUNA.....P/N: 8698-3201**
 EN50155 Multifunction VPN Router w/1 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TPWMR-5208MGF-2WAN-QMM-1L-2AC-WVI-67-EUNA.....P/N: 8698-321**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TPWMR-5208MGF-2WAN-QSM-1L-2AC-WVI-67-EUNA.....P/N: 8698-3211**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet w/ PoE at/af; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QMM-1L-2AC-WVI-67-EUNA.....P/N: 8698-322**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (multi-mode 300M) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing
- **TWMR-5208MGF-2WAN-QSM-1L-2AC-WVI-67-EUNA.....P/N: 8698-3221**
 EN50155 Multifunction VPN Router w/2 WIFI 11ac + 1 LTE 4G SMA connectors + 2 1G/2.5G Q-ODC Fiber Uplink (single-mode 2KM) + 2 Gigabit X-coded WAN/LAN ports + 8 Gigabit X-coded Ethernet; EU and US band; dual input 16.8-137.5VDC; -40~65C; IP67 housing

EMMC Flash Storage

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

OPTIONAL ACCESSORIES

Management System

- **InstaAir.....P/N: 9000-121**
 Cloud Based Fleet Management System for Routers

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



■ ANT11000046

LTE hinge rotatable antenna, 698-960MHz, 1710-2690MHz, Diameter 10mm, Length 108mm, SMA Connector



Wi-Fi Antenna

■ ANT11000051

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



■ ANT11000056

Wi-Fi hinge rotatable antenna, WiFi Dual Bands 2.4/5.8GHz, SMA Connector



Antenna Base

■ ADA11000052

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



■ ADA11000053

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



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In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

Revision Record

Date	Contents of Revision	Rev.#	Revised By
2025/1/15	Add revision record; Remove APAC and WW models	V1.02	Greg Tsai
2025/2/20	Update the PN & spec of antenna	V1.02	Greg Tsai
20260302	改 2.4GHz / 5GHz	V1.1	RITA WU