

# TAR-3120-M12

➤ **Industrial EN50155 Dual-RF IEEE 802.11 a/b/g and IEEE 802.11 b/g Cellular VPN Router with 2x10/100Base-T(X), M12 connector, Cellular modem included**

## Features

- Leading EN50155-compliant wireless cellular VPN router for rolling stock applications
- Dual high Speed Air Connectivity: each WLAN interface supports up to 54Mbps link speed
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Secured Management by HTTPs
- Various kind of WAN Connection Type supported: Dynamic/Static IP, PPPoE, Modem dial-up
- IP table configurable to prevent access from unauthorized IP address
- Supports VPN for secured network connection (Open VPN, PPTP VPN)
- Supports NAT Setting (Virtual Server, Port Trigger, DMZ, UPnP)
- Supports DHCP forwarding through PPTP function
- Supports **Multi-SSID**
- 3.5G HSDPA Modem dial-up included
- Provides dual RF which support IEEE 802.11 a/b/g and IEEE 802.11 b/g dual band for wireless communication
- Dual redundant Ethernet ports support Ethernet redundant mode (Recovery time < 10ms) and switch mode in M12 connector (D-coding)
- Wireless connecting status monitoring
- Event Warning by Syslog, Email, SNMP Trap and Relay output
- Ultra-rugged enclosure for toughest industrial usages
- Wall mounting enabled

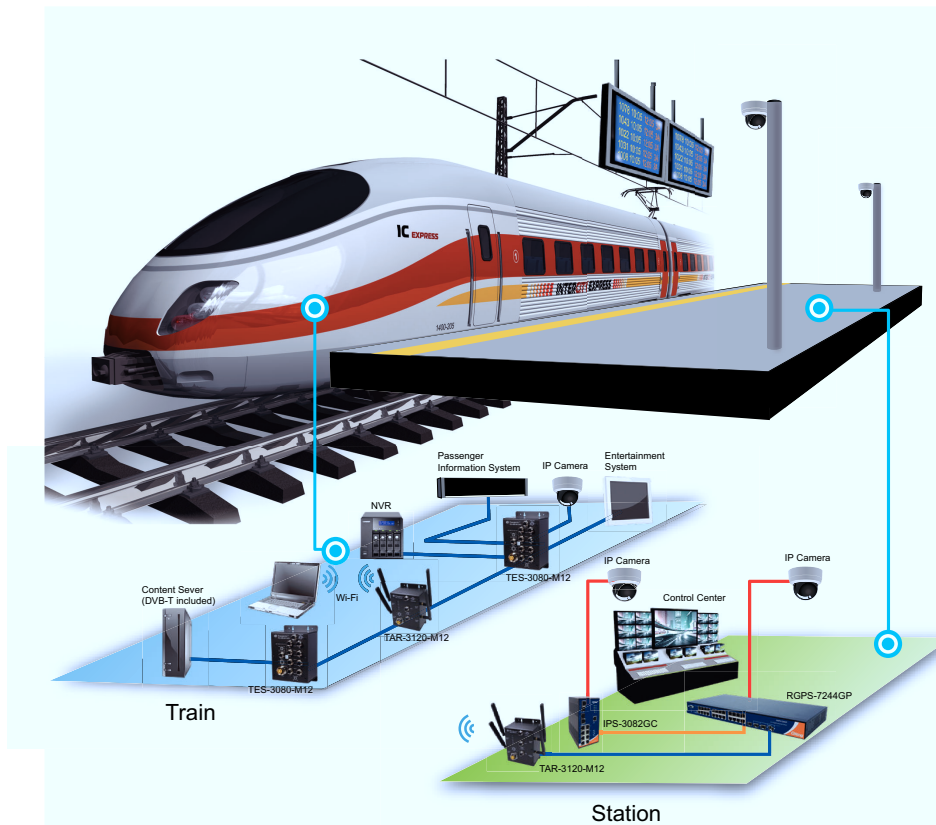
Preliminary



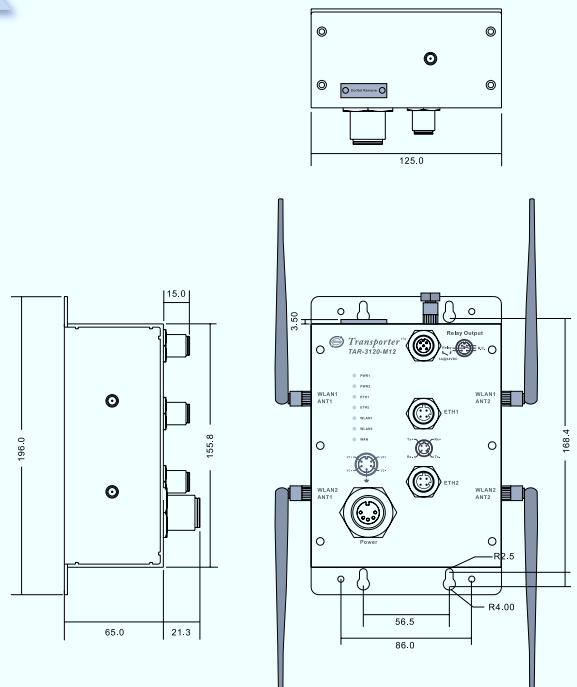
## Introduction

ORing's Transporter series cellular VPN router is designed for industrial and rolling stock wireless applications, such as vehicle, and railway applications. TAR-3120-M12 is a reliable Dual-RF IEEE802.11a/b/g and IEEE 802.11b/g cellular VPN router with 2 ports LAN which is fully compliant with EN50155 certification. It supports 802.1X and MAC filter for security control. It can be configured to operate in 3 modes of routing function: Dynamic/Static IP route, PPPoE authentication, and Cellular Modem dial-up. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modem. TAR-3120-M12 EN50155 cellular VPN router use M-series connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TAR-3120-M12 provides dual RF wireless interfaces, which can provide IEEE 802.11 a/b/g and IEEE 802.11 b/g dual band wireless communication and can be applied to fulfill any demands of wireless applications. TAR-3120-M12 provides dual Ethernet ports in switch mode, so that you can use Daisy Chain to reduce the usage of Ethernet switch ports. Therefore, TAR-3120-M12 is one of the most reliable choices for rolling stock applications on the wireless network.

## Application



## Dimensions



Unit=mm

## Specifications

ORing EN50155 WLAN Cellular VPN Router Model	TAR-3120-M12
Physical Ports	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	2 (M12 connector – D coding)
WLAN Interface	
WAN Connection Type	Static/Dynamic IP, PPPoE ,3G Modem dial-up
Antenna and Connector	2 x 2 dBi (b/g mode) / 3dBi (a mode) on Reverse SMA connector 2 x 2 dBi (Cellular modem) on Reverse SMA connector
Radio Frequency Type	DSSS, OFDM
Modulation	IEEE 802.11a: OFDM with BPSK, QPSK, 16QAM, 64QAM IEEE 802.11b: CCK, DQPSK, DBPSK IEEE 802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM
Frequency Band	America / FCC: 2.412~2.462 GHz (11 channels) 5.15 to 5.825 GHz (13 channels) Europe CE / ETSI: 2.412~2.472 Ghz (13 channels) 5.15 to 5.724 GHz (19 channels)
Transmission Rate	IEEE 802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE 802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps
Transmit Power	IEEE802.11a/b/g: 20dBm max
Receiver Sensitivity	IEEE 802.11a: -77dBm±2.0dB @ 54Mbps, PER< 10% IEEE 802.11b: -86dBm±1.5dB @ 11Mbps, PER< 8%; IEEE 802.11g: -78dBm±1.5dB @ 54Mbps, PER< 10%
Encryption Security	WEP: (64-bit ,128-bit key supported) WPA/WPA2 :802.11i(WEP and AES encryption) WPA-PSK (256-bit key pre-shared key supported) 802.1X Authentication supported TKIP encryption
Wireless Security	SSID broadcast disable
LED Indicators	
Power Indicator	Green for Power indicator
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/ Act at 100Mbps. Amber for port Link/ Act at 10Mbps.
WLAN LEDs	Green for WLAN Link/ Act
Cellular modem LED	Green for Cellular modem Link/ Act
Fault Contact	
Relay	Relay output to carry capacity of 3A at 24VDC
Power	
Redundant Input Power	Dual DC inputs. 12~48VDC on M23 connector (24VDC typ)
Power Consumption	9.6 W
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Enclosure	IP-40
Dimensions (W x D x H)	125(W) x 65(D) x 196(H) mm (4.92 x 2.56 x 7.72 inch.)
Weight (g)	1050 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-20 to 70°C (-4 to 158°F)
Operating Humidity	5% to 95% Non-condensing

## Regulatory Approvals

EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2)
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27, EN61373
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6, EN61373
Cooling	EN60068-2-1
Dry Heat	EN60068-2-2
Safety	EN60950-1
Warranty	3 years

## Ordering Information

TAR-**A****B****C**O-M12

Code Definition	Wireless-1 Mode	Wireless-2 Mode	10/100Base-T(X) Port Number
<b>Option</b>	- <b>1:</b> IEEE 802.11 b/g - <b>2:</b> IEEE 802.11 a - <b>3:</b> IEEE 802.11 a/b/g - <b>4:</b> IEEE 802.11 b/g/n - <b>5:</b> IEEE 802.11 a/n - <b>6:</b> IEEE 802.11 a/b/g/n	- <b>1:</b> IEEE 802.11 b/g - <b>2:</b> IEEE 802.11 a - <b>3:</b> IEEE 802.11 a/b/g - <b>4:</b> IEEE 802.11 b/g/n - <b>5:</b> IEEE 802.11 a/n - <b>6:</b> IEEE 802.11 a/b/g/n	- <b>"2"</b> : 2 ports

	Model Name	Description
Available Model	TAR-3120-M12_US	Industrial EN50155 Dual-RF IEEE 802.11 a/b/g and IEEE 802.11 b/g cellular VPN router with 2x10/100Base-T(X), M12 connector, Cellular modem included, US band
	TAR-3120-M12_EU	Industrial EN50155 Dual-RF IEEE 802.11 a/b/g and IEEE 802.11 b/g cellular VPN router with 2x10/100Base-T(X), M12 connector, Cellular modem included, EU band
	TAR-3120-M12_JP	Industrial EN50155 Dual-RF IEEE 802.11 a/b/g and IEEE 802.11 b/g cellular VPN router with 2x10/100Base-T(X), M12 connector, Cellular modem included, JP band
<b>Packing List</b> <ul style="list-style-type: none"> <li>TAR-120-M12</li> <li>Antenna</li> <li>ORing Tool CD</li> <li>Quick Installation Guide</li> </ul>		<b>Optional Accessories (Can be purchased separately)</b> <ul style="list-style-type: none"> <li>DR-45 series : 45 Watts power supply</li> <li>DR-75 series : 75 Watts power supply</li> <li>DR-120 series : 120 Watts power supply</li> <li>WLAN RF Antenna series</li> <li>RF Antenna Base series</li> <li>RF Cable series</li> </ul>