



TAR-3120-M12

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

Features

- Leading **EN50155**-compliant wireless access point for rolling stock application
- Dual high Speed Air Connectivity: each WLAN interface support 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
- Support VPN for secured network connection (Open VPN , PPTP VPN)
- Support NAT Setting (Virtual Server , Port Trigger , DMZ , UPnP)
- Support DHCP forwarding through PPTP function
- **3.5G HSDPA Modem dial up included**
- Provide **dual-RF** which support **IEEE 802.11 a/b/g and 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



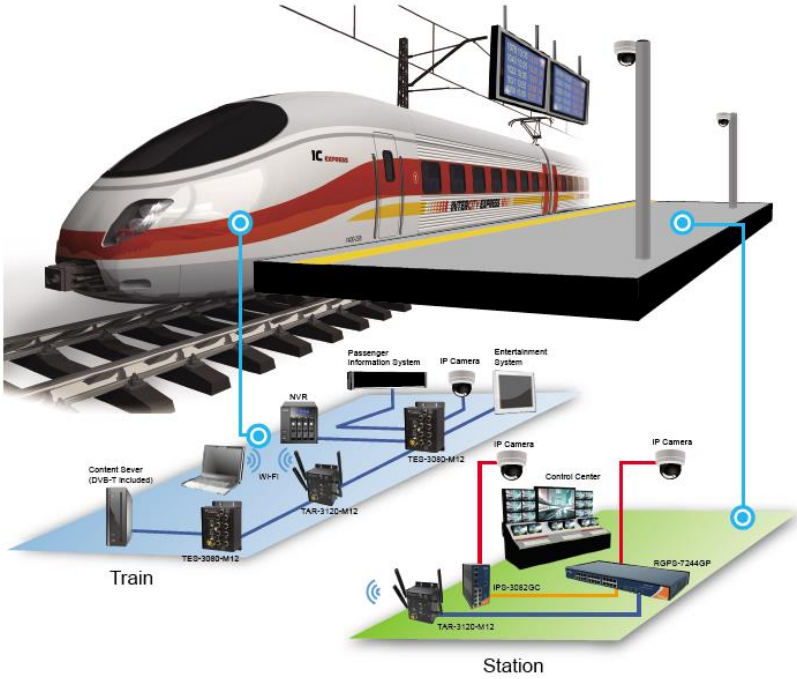
Introduction

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 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 could 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 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.

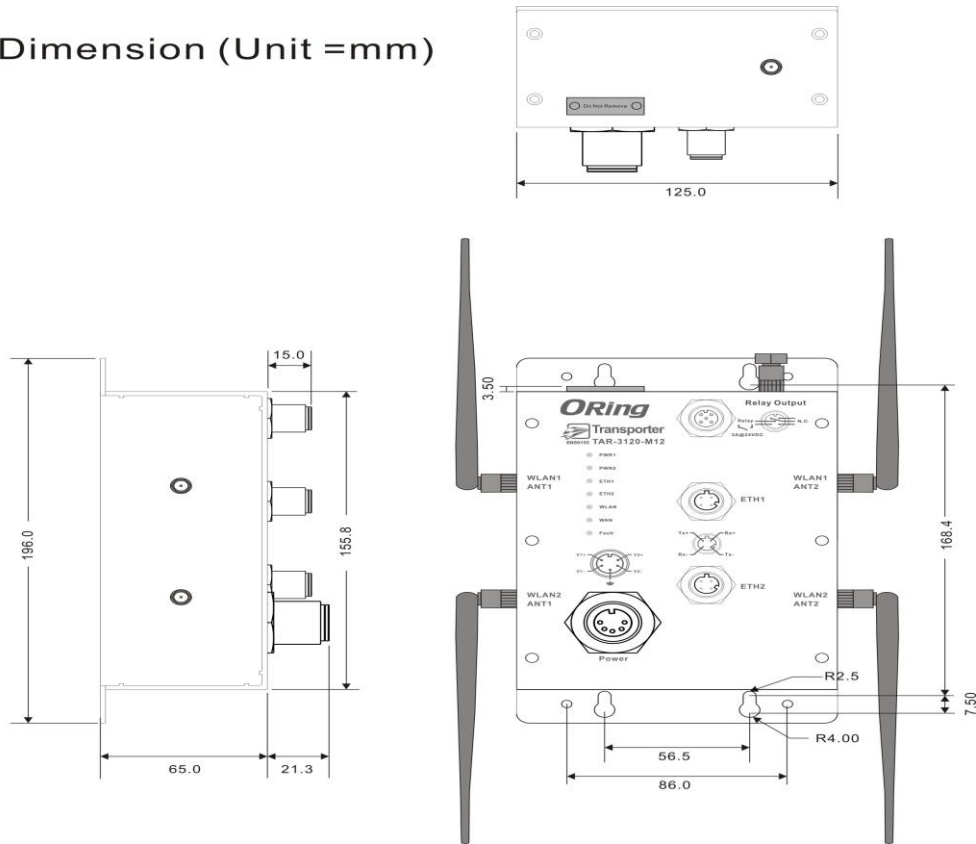
Application



Networking connections

Dimensions

Dimension (Unit =mm)



Specifications

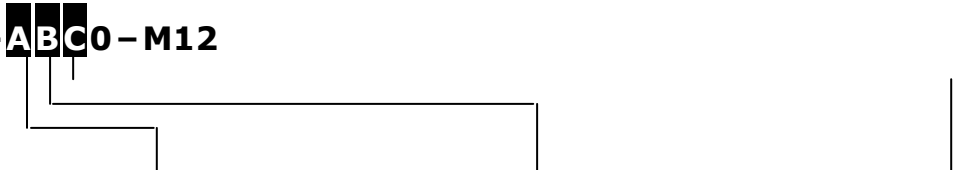
ORing EN50155 WLAN Access Point Router Model	TAR-3120-M12
Physical Ports	
10/100Base-T(X) Ports in M12 (4-pin D-coding) Auto MDI/MDIX	2
Sim Card Slot	1
Relay Output on M12 (D-coding) Connector	1
WLAN interface	
WAN Connection Type	Static/Dynamic IP · PPPoE · 3G Modem dial up
Antenna Connector	4 x 2 dBi (b/g mode) / 3dBi (a mode) on Reverse SMA connector 1 x 2 dBi (Cellular modem) on Reverse SMA connector
Radio Frequency Type	DSSS, OFDM
Modulation	IEEE802.11a: OFDM with BPSK, QPSK, 16QAM, 64QAM IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: 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	IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps
Transmit Power	IEEE802.11a/b/g: 20dBm max
Receiver Sensitivity	802.11a: -77dBm±2.0dB @ 54Mbps, PER< 10% 802.11b: -86dBm±1.5dB @ 11Mbps, PER< 8%;

	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
Cellular Interface	
Cellular Standard	GSM / GPRS/ EGPRS/ EDGE / WCDMA / HSDPA / HSUPA
Band Option	Dual-band : HSUPA 1900/2100 MHz Quad-band : GSM/GPRS/EDGE 850/900/1800/1900 MHz WCDMA/HSDPA 850/900/1900/2100 MHz
Protocol Support	
Protocol	ARP,BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNMP, TCP, UDP, RADIUS, SNMP, PPPoE, STP (IEEE 802.1D)
LED Indicators	
Power Indicator	2 x LEDs, Green for Power indicator
10/100Base-T(X) Port Indicator	2 x LEDs, Green for port Link/ Act at 100Mbps. Amber for port Link/ Act at 10Mbps.
WLAN LED	1 x LEDs, Green for WLAN 1 Link/ Act. Red for WLAN 2 Link/ Act
WAN LED	1 x LED, Green for Cellular modem Link/ Act
Fault Indicator	1 x LED, Red for Ethernet link down or power down indicator
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 (Typ.)	9.6W
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristic	
Enclosure	IP-40
Dimension (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)	1050g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-10 to 60°C (-14 to 140°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
Rail Traffic	EN50155
Cooling	EN60068-2-1
Dry Heat	EN60068-2-2
Safety	EN60950-1
Warranty	3 years



Ordering Information

TAR-ABC0-M12



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

Available Model	Model Name	Description
	TAR-3120-M12_US	EN50155 Dual-RF in IEEE 802.11 a/b/g and 802.11 b/g cellular VPN router with 2x10/100Base-T(X), M12 connector, US band
	TAR-3120-M12_EU	EN50155 Dual-RF in IEEE 802.11 a/b/g and 802.11 b/g cellular VPN router with 2x10/100Base-T(X), M12 connector, EU band

Packing List

- TAR-3120-M12 x 1
- Antenna x 5
- CD x 1
- Quick Installation Guide x 1

Optional Accessories

- DR-45 series : 45 Watts power supply
- DR-120 series : 120 Watts power supply
- RF Antenna Base series
- DR-75 series : 75 Watts power supply
- WLAN RF Antenna series
- RF Cable series