TAP-3120-M12

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

Features

- Leading **EN50155**-compliant wireless access point for rolling stock application
- Dual high Speed Air Connectivity: WLAN interface support up to 54Mbps link speed
- High Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/ WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Support **X-Roaming < 100 ms**
- Support **wireless load balance**
- Support **Dual AP/Dual Client/Bridge/AP-Client** Mode
- Provide **dual-RF** which support **IEEE 802.11 a/b/g and 802.11 b/g** dual band for wireless communication
- Dual Ethernet ports support Ethernet redundant mode (Recovery time < 10ms) and switch mode in M12 connector (D-coding)
- Wireless connecting status monitoring
- Secured Management by HTTPS
- Event Warning by Syslog, Email, SNMP Trap and Relay output
- Ultra rugged enclosure for toughest industrial usages
- Wall mounting enabled

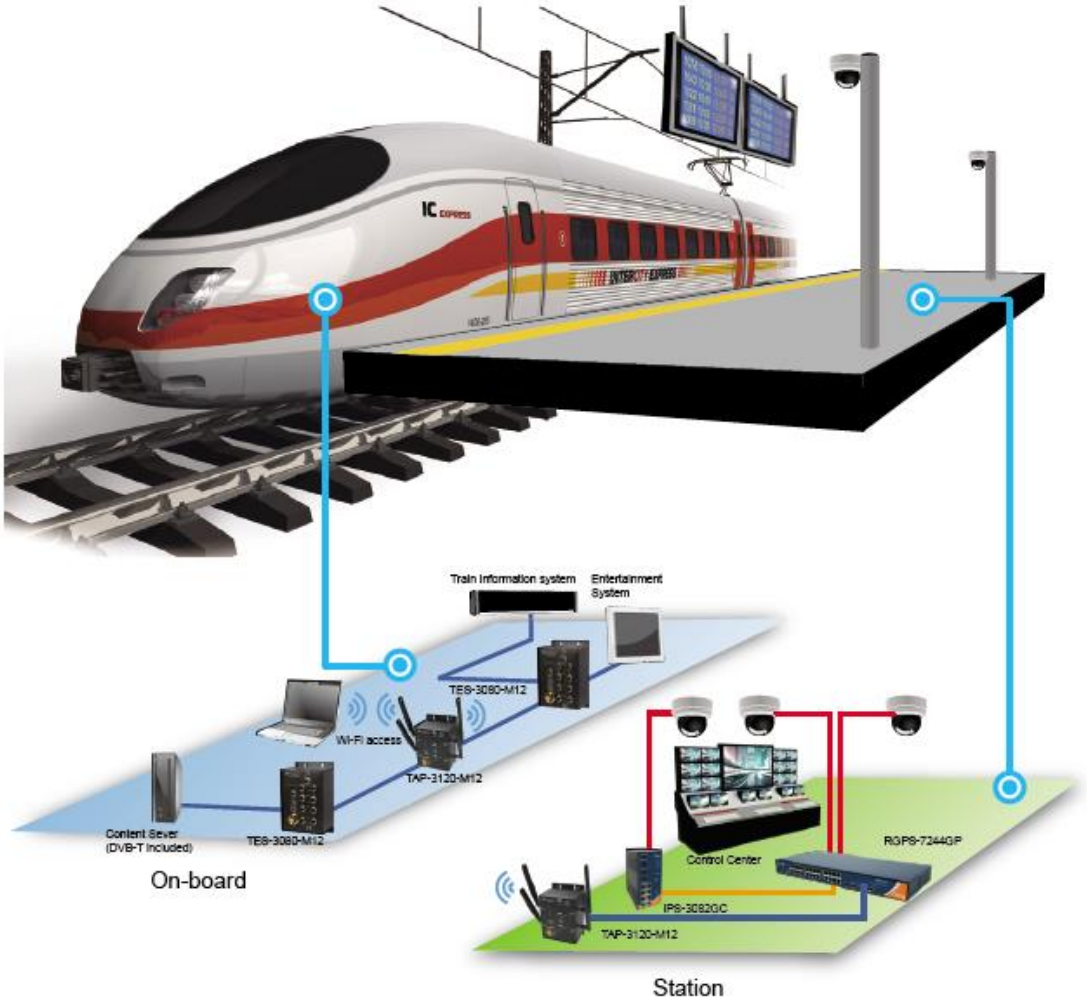
Introduction

ORing's Transporter™ series access point is designed for industrial and rolling stock wireless applications, such as vehicle, and railway applications. TAP-3120-M12 is a reliable IEEE802.11 a/b/g and 802.11b/g WLAN Access Point with 2 ports LAN which is fully compliant with EN50155 certification. TAP-3120-M12 access point use M-series connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TAP-3120-M12 provides dual-RF wireless interfaces, which can provide IEEE 802.11 a/b/g and 802.11b/g dual band wireless communication and can be applied to fulfill any demands of wireless applications. TAP-3120-M12 can be configured to operate in Dual AP/Dual Client/Bridge/AP-Client mode. TAP-3120-M12 provides dual Ethernet ports in switch mode, so that you can use Daisy Chain to reduce the usage of Ethernet switch ports. You are able to configure TAP-3120-M12 by WEB interface via LAN port or WLAN interface. Therefore, TAP-3120-M12 is one of the most reliable choices for rolling stock applications on the wireless network.

Application

In practical operation of wireless access point, Windows utility(Open-Vision) is supported. This utility is very helpful for you to search and configure IP of access point on the industrial network.

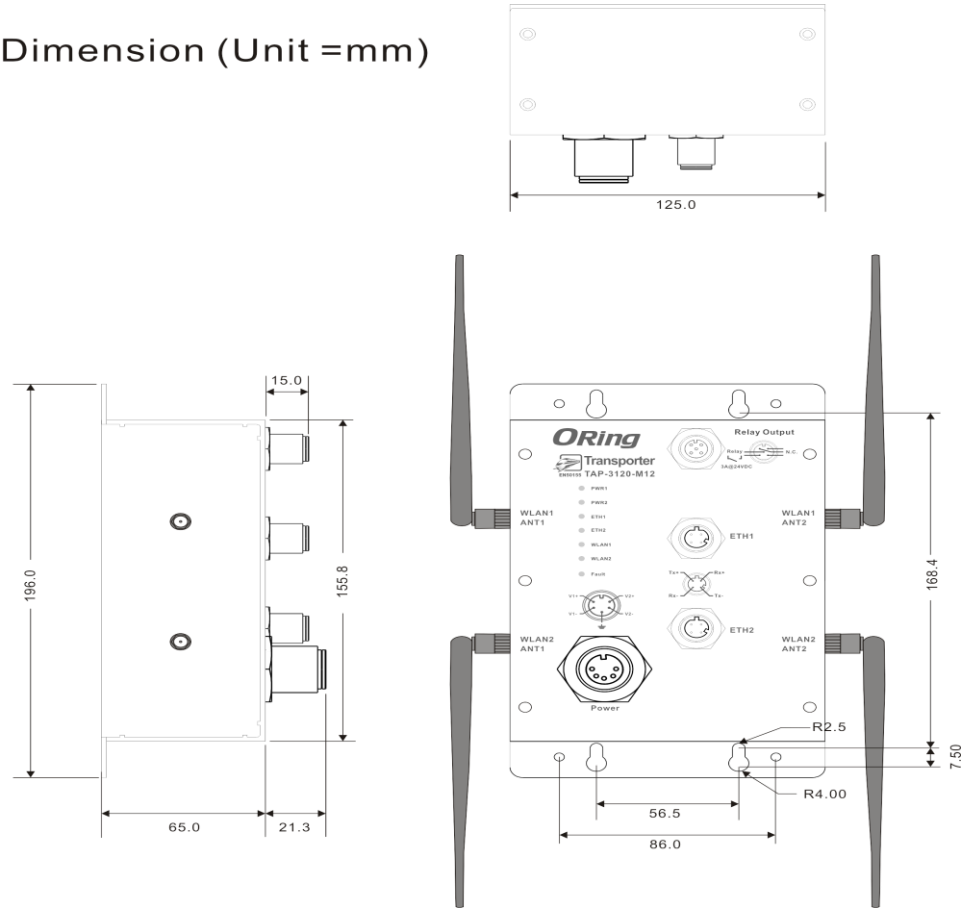
In addition, the wireless access point support various kinds of operation modes include Dual AP/Dual Client/Bridge/AP-Client mode. You can build up the wireless network easily.



Networking connections

Dimensions

Dimension (Unit =mm)



Specifications

ORing EN50155 WLAN Access Point Model	TAP-3120-M12
Physical Ports	
10/100Base-T(X) Ports in M12 Auto MDI/MDIX	**2(4-pin M12 D-coding)**
WLAN Interface	
Operating Mode	Dual AP/Dual Client/Bridge/AP-Client
Antenna and Connector	4 x 2 dBi (b/g mode) / 3dBi (a mode) 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
Protocol Support	
Protocol	ARP,BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNTP, 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	2 x LEDs, Green for WLAN 1 and WLAN 2 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(5-pin M12 A-coding)
Power	
Redundant Input Power	Dual Power Inputs. 12~48 VDC on 5-pin M23 connector (24 VDC Typ.)
Power Consumption (Typ.)	8.3W
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)	1015g
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
Rail Traffic	EN50155
Cooling	EN60068-2-1
Dry Heat	En60068-2-2
Safety	EN60950-1
Warranty	3 years

Ordering Information

TAP-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

	Model Name	Description
Available Model	**TAP-3120-M12_US**	EN50155 Dual-RF in IEEE 802.11 a/b/g and 802.11 b/g wireless access point with 2x10/100Base-T(X), M12 connector, US band
	TAP-3120-M12_EU	EN50155 Dual-RF in IEEE 802.11 a/b/g and 802.11 b/g wireless access point with 2x10/100Base-T(X), M12 connector, EU band

Packing List

- **TAP-3120-M12 x 1**
- **CD x 1**
- **Quick Installation Guide x 1**
- **Antenna x 4**

Optional Accessories

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