



# TDGAP-830D+-M12X-WV series

**Industrial EN50155 WIFI5 Access Point with  
3x10/100/1000Base-T(X), M12 Connector**



## Features

- Leading **EN50155**-compliant wireless access point for rolling stock application
- High Speed Air Connectivity: WIFI5 interface support up to 867 Mbps link speed and WIFI6 up to 1733Mbps link speed.
- Highly Security Capability: WPA/WPA-PSK(TKIP,AES)/WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- Support external SMA antenna installation
- Support AP/Client Mode
- **Support Multiple-SSID to 4 SSID**
- Support MAC Filter
- Wireless connecting status monitoring
- Secured Management by HTTPS
- 1KV isolation for PoE P.D. port
- Event Warning by Syslog, Email, SNMP Trap, and Relay output
- Rigid IP-40 housing design
- Wall mounting enabled

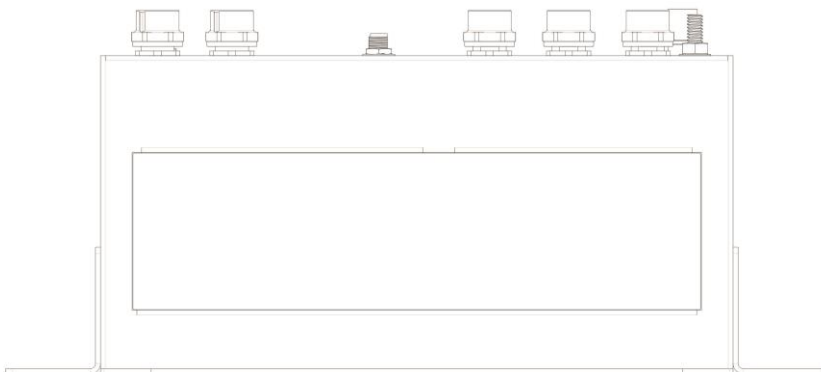
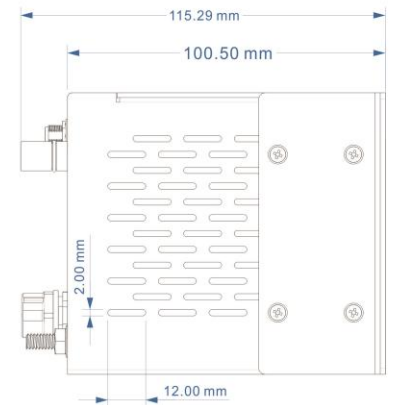
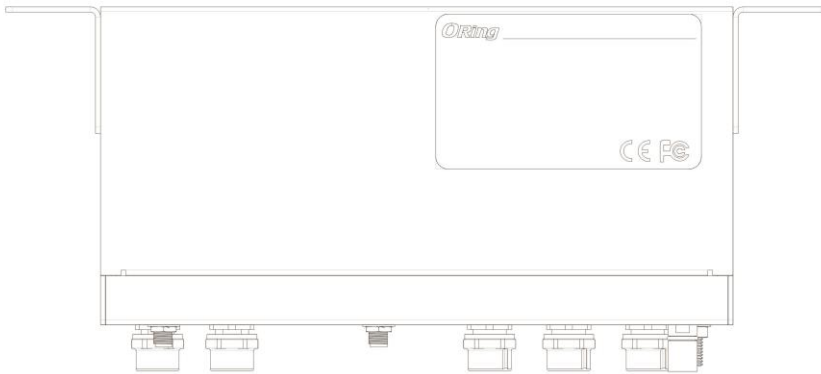
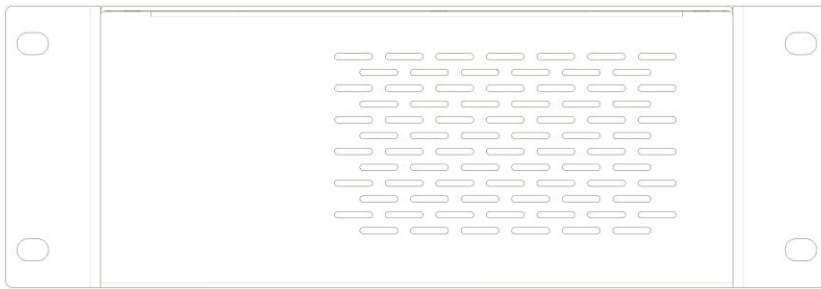


## Introduction


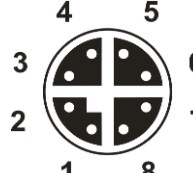
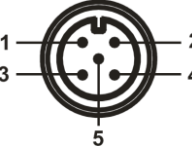
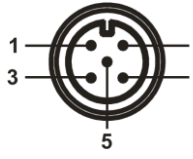
ORing's Transporter™ series access point is designed for industrial and rolling stock wireless applications, such as vehicle, and railway applications. TDGAP-820D+-M12X-WV is a reliable WIFI5 WLAN Access Point with 3 Ethernet 10/100/1000 ports. It can be configured to operate in AP/Client Mode. TDGAP-820D+-M12X-WV provide a dust-tight connection and reverses SMA-type connectors that can install any reverse SMA-type antennas to extend communication distance. It is specifically designed for the toughest industrial environments. You are able to configure TDGAP-820D+-M12X-WV by WEB interface via LAN port or WLAN interface. TDGAP-820D+-M12X-WV can be easily adopted in almost all kinds of applications and provides the most rugged solutions for managing your network in outdoor. In addition, TDGAP-820D+-M12X-WV also provides P.D. feature on ETH2 which is fully compliant with IEEE802.3at PoE P.D. specification. Therefore, TDGAP-820D+-M12X-WV is one of the best communication solutions for wireless applications.

**Dimension**

Dimension (Unit =mm)



## Pin Definition

 <p>A-coding Male</p>	PWR M12 port		 <p>X-coding Female</p>	10/100/1000Base-T(X) M12 port	
	Pin No.	Description		Pin No.	Description
	#1	V+		#1	BI_DA+
	#2	V+		#2	BI_DA-
	#3	V-		#3	BI_DB+
#4	V-	#4	BI_DB-		
#5	N.C.	#5	BI_DD+		
 <p>A-coding Female</p>	Console M12 port		 <p>A-coding Female</p>	DI/DO M12 port	
	Pin No.	Description		Pin No.	Description
	#1	RXD		#1	Digital Input
	#2	TXD		#2	Digital Output
	#3	RSVD		#3	N.C.
#4	GND	#4	N.C.		
#5	N.C.	#5	GND		

## Specifications

<b>ORing EN50155 Access Point Model</b>	<b>TDGAP-830D+-M12X-WV</b>
<b>Physical Ports</b>	
10/100/1000Base-T(X) Ports in M12 (8-pin X-coding female)	<b>3(LAN)</b>
Console Port in M12 (5-pin A-coding female)	<b>1</b>
DI/DO Port in M12 (5-pin A-coding female)	<b>DI x 1, DO x 1</b> <b>(DI :Logic level 1: 5V~30V, Logic level 0: 0V~2V</b> <b>DO :Maximum Voltage is 30V, Maximum Current is 20mA)</b>
Input Power Port in M12 (5-pin A-coding male)	<b>1</b>
<b>Antenna connector</b>	
WIFI (for expansion)	2 x RP-SMA female
<b>WLAN Interface</b>	
Modulation	IEEE 802.11a: OFDM IEEE 802.11b: CCK, DQPSK, DBPSK IEEE 802.11g: OFDM IEEE 802.11n: BPSK, QPSK, 16-QAM, 64-QAM IEEE 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Frequency Band	America / FCC: 2.412~2.462 GHz 5.180~5.240 GHz & 5.745~5.825 GHz Europe CE / ETSI: 2.412~2.472 GHz 5.180~5.240 GHz
Transmission Rate	IEEE 802.11b: 1/2/5.5/11 Mbps IEEE 802.11a/g: 6/9/12/18/24/36/48/54 Mbps IEEE 802.11n: UP to 300 Mbps IEEE 802.11ac: up to 867Mbps
Transmit Power	IEEE 802.11a: 12dBm ± 2dBm@54Mbps IEEE 802.11b: 18dBm ± 2dBm@11Mbps IEEE 802.11g: 15dBm ± 2dBm@54Mbps IEEE 802.11gn HT20: 14dBm ± 2dBm @MCS7 IEEE 802.11gn HT40: 14dBm ± 2dBm @MCS7 IEEE 802.11an HT20: 11dBm ± 2dBm @MCS7 IEEE 802.11an HT40: 10dBm ± 2dBm @MCS7 IEEE 802.11ac VHT80: 7dBm ± 2dBm @MCS9
Receiver Sensitivity	IEEE 802.11a : -71dBm ± 2dBm@54Mbps IEEE 802.11b : -86dBm ± 2dBm@11Mbps IEEE 802.11g : -72dBm ± 2dBm@54Mbps IEEE 802.11gn HT20:-68dBm ± 2dBm@MCS7 IEEE 802.11gn HT40:-66dBm ± 2dBm@MCS7 IEEE 802.11an HT20:-68dBm ± 2dBm@MCS7 IEEE 802.11an HT40:-67dBm ± 2dBm@MCS7 IEEE 802.11ac VHT80:-57dBm ± 2dBm@MCS9
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
<b>Protocol Support</b>	
Protocol	ARP,BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, STP, RSTP
<b>LED Indicators</b>	
PWR	1 x LED, Green for DC Power in
POE	1 x LED, Green for POE Power in
Ethernet Port Indicator	6 x LEDs, LNK: Green for port Link/Act.

	SPD: Green On for 1000/100Base-T(X) link; Green Off for 10Base link
WLAN(Wifi) LED	3 x LEDs, 1 x LED, Green On: RF on, Blink: data transmitting 1 x LED, Green for WLAN work on 2.4GHz 1 x LED, Green for WLAN work on 5GHz
Status Indicator	1 x LED, Green slow blink for normal, off for system halt
<b>Power</b>	
Input Power	<b>24 ~ 110Vdc</b>
Isolation	DC 2KV/ AC 1.5KV
Power Consumption (Typ.)	25 watts Max.
Overload Current Protection	Present
Reverse Polarity Protection	Present
<b>Physical Characteristic</b>	
Enclosure	IP-30. (IP-40 for front face)
Dimension (W x D x H)	200(W) x 100(D) x 89(H) mm
Weight (g)	1170g
<b>Environmental</b>	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-25 to 70°C (-13 to 158°F)
Operating Humidity	5% to 95% Non-condensing
<b>Regulatory Approvals</b>	
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
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	IEC60068-2-31
Vibration	IEC60068-2-6, EN61373
Rail Traffic	EN50155
Cooling	EN60068-2-1
Dry Heat	EN60068-2-2
Safety	EN60950-1
<b>Warranty</b>	5 years

## Ordering Information

	Model Name	Description
Available Model	<b>TDGAP-830D+-M12X-WV</b>	Industrial EN50155 WIFI5 Access Point with 3x10/100/1000Base-T(X), M12 Connector, US/EU band
	<b>TDGAP-8830D+-M12X-WV</b>	Industrial EN50155 Dual WIFI5 Access Point with 3x10/100/1000Base-T(X), M12 Connector, US/EU band

## Packing List

- **TDGAP-830D+-M12X-WV x 1**
- **CD QRcode x 1**
- **Quick Installation Guide x 1**
- **Wall-Mount Kit x 2**