# TGAP-6620-M12 Series

***Industrial EN50155 Dual RF in IEEE 802.11 a/b/g/n Wireless AP with 2x10/100/1000Base-T(X), M12 connector***

## Features

- Leading EN50155-compliant wireless access point for rolling stock application
- High Speed Air Connectivity: WLAN interface support up to 300 Mbps link speed
- Highly Security Capability: WEP/WPA/WPA-PSK(TKIP,AES)/ WPA2/WPA2-PSK(TKIP,AES)/802.1X Authentication supported
- **Support X-Roaming < 60ms**
- Support external SMA antenna installation
- Support AP/Client /Bridge /AP-Client Mode
- **Support Multiple-SSID to 4 SSID with VLAN**
- Support MAC Filter
- Dual Gigabit Ethernet ports support Ethernet redundant mode (Recovery time < 10ms) and switch mode in M12 connector (A-coding)
- Wireless connecting status monitoring
- **Supports QoS (Quality of service)**
- 1KV isolation for PoE P.D. port for TGAP-6620+-M12
- Secured Management by HTTPS
- Event Warning by Syslog, Email, SNMP Trap, and Relay output
- Rigid IP-40 housing design
- Wall-mount enabled



## Introduction

TGAP-6620-M12 is a reliable WLAN Access Point with 2 Ethernet Gigabit ports and dual RF in IEEE 802.11 a/b/g/n wireless modules. It can be configured to operate in Dual AP/Dual Client /Bridge /AP-Client Mode. In combination with its IP-40 design and the superb management functionality, TGAP-6620-M12 provides a dust-tight connection and reverse 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 TGAP-6620-M12 by WEB interface via LAN port or WLAN interface. TGAP-6620-M12 can be easily adopted in almost all kinds of applications and provides the most rugged solutions for managing your network in outdoor. In addition, TGAP-6620+-M12 also provides P.D. feature on ETH2 which is fully compliant with IEEE802.3af PoE P.D. specification. Therefore, TGAP-6620-M12 is one of the best communication solutions for wireless applications

## Application

In practical operation of wireless access point, Windows utility (Open-Version) 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.

## Pin Definition

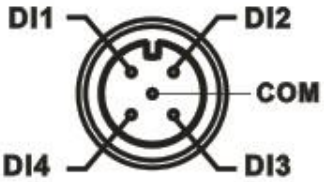
### Relay Output


1A@24VDC

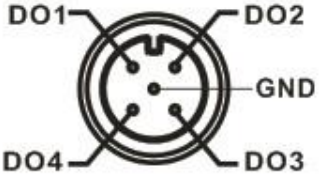
### Console


RS-232, 115200bps, 8, N, 1

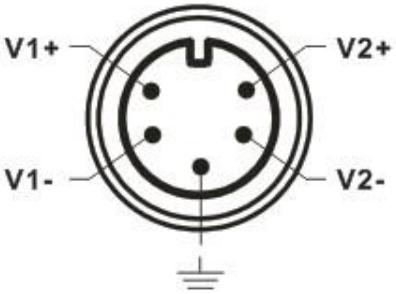
### DI



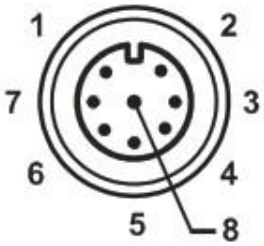

### DO




### Power

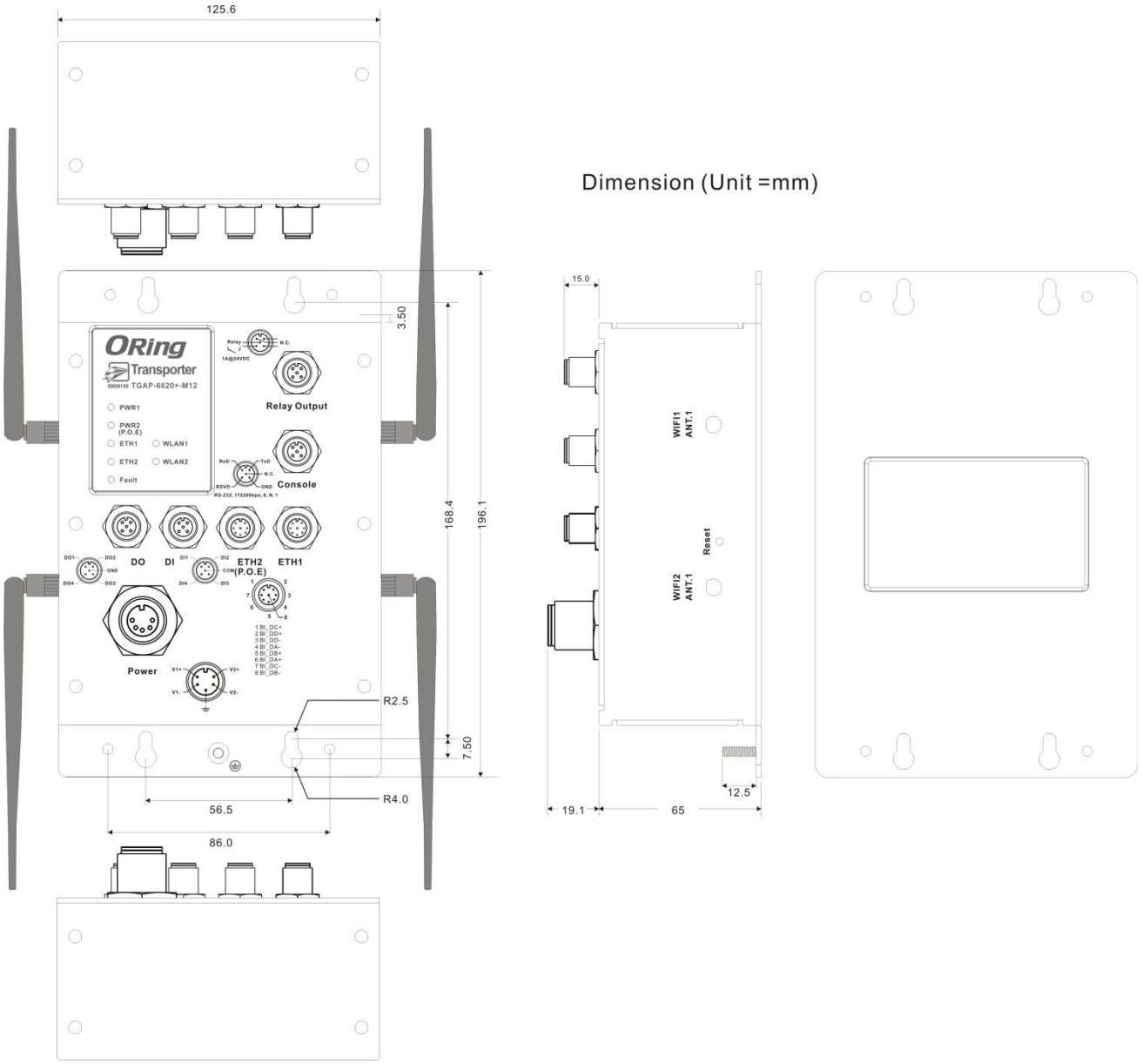



### Ethernet




1 BI_DC+
2 BI_DD+
3 BI_DD-
4 BI_DA-
5 BI_DB+
6 BI_DA+
7 BI_DC-
8 BI_DB-

## Dimension


125.6
Dimension (Unit =mm)
ORing
Transporter
TGAP-6620+-M12
PWR1
PWR2 (P.O.E)
ETH1
WLAN1
ETH2
WLAN2
Fault
Relay Output
Console
DO
DI
ETH2 (P.O.E)
ETH1
Power
3.50
168.4
196.1
7.50
R2.5
R4.0
56.5
86.0
15.0
WIFI1 ANT.1
Reset
WIFI2 ANT.1
19.1
65
12.5

# Specifications

| ORing WLAN Access Point Model | TGAP-6620-M12 | TGAP-6620+-M12 |
|---|---|---|
| **Physical Ports** | | |
| 10/100/1000Base-T(X) Ports in M12 Auto MDI/MDIX (8-pin A-coding) | **2** | **2(**Present at ETH2 Fully compliant with IEEE 802.3af PoE P.D ) |
| DIDO port in M12 (5-pin A-coding) | **2(DI x 4** and **DO x 4) :** Dry Contact: On: short to GND, Off: open Wet Contact (DI to COM/GND): On: 0 to 3VDC, Off: 10 to 30VDC | |
| RS-232 Console port in M12 (5-pin A-coding) | **115200, 8 ,N ,1** | |
| Relay port in M12 (5-pin A-coding) | **1A@24VDC** | |
| **WLAN interface** | | |
| Operating Mode | Dual AP/Dual Client /Bridge /AP-Client Mode | |
| Antenna Connector | 4 x External reverse SMA-type antenna connector | |
| Radio Frequency Type | DSSS, OFDM | |
| Modulation | IEEE802.11a : OFDM with BPSK, QPSK, QAM, 64QAM<br>IEEE802.11b: CCK, DQPSK, DBPSK<br>IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM<br>IEEE802.11n : BPSK, QPSK, 16-QAM, 64-QAM | |
| Frequency Band | America / FCC : 2.412~2.462 GHz (11 channels)<br>5.180~5.240 GHz & 5.745~5.825 GHz ( 9 channels )<br>Europe CE / ETSI : 2.412~2.472 Ghz (13 channels)<br>5.180~5.240 GHz (4 channels) | |
| Transmission Rate | IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps<br>IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps<br>IEEE801.11n: up to 300Mbps | |
| Transmit Power | 802.11a: 12dBm ± 1.5dBm@54Mbps<br>802.11b: 17dBm ± 1.5dBm@11Mbps<br>802.11g: 16dBm ± 1.5dBm@54Mbps<br>802.11gn HT20: 15dBm ± 1.5dBm @MCS7<br>802.11gn HT40: 14dBm ± 1.5dBm @MCS7<br>802.11an HT20: 12dBm ± 1.5dBm @MCS7<br>802.11an HT40: 11dBm ± 1.5dBm @MCS7 | |
| Receiver Sensitivity | 802.11a : -76dBm ± 2dBm@54Mbps<br>802.11b : -85dBm ± 2dBm@11Mbps<br>802.11g : -76dBm ± 2dBm@54Mbps<br>802.11gn HT20:-75dBm ± 2dBm@MCS7<br>802.11gn HT40:-72dBm ± 2dBm@MCS7<br>802.11an HT20:-74dBm ± 2dBm@MCS7<br>802.11an HT40:-71dBm ± 2dBm@MCS7 | |
| Encryption Security | WEP: (64-bit ,128-bit key supported)<br>WPA/WPA2 :802.11i(WEP and AES encryption)<br>WPAPSK (256-bit key pre-shared key supported)<br>802.1X Authentication supported<br>TKIP encryption | |
| Wireless Security | SSID broadcast disable and enable | |
| **Protocol Support** | | |
| Protocol | ARP,BOOTP, DHCP, DNS, HTTP, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, STP, RSTP, | |
| **LED indicators** | | |
| Power indicator | 2 x LEDs,<br>PW1:Green for DC Power on<br>PW2:Green for DC Power on or power by PoE | |
| 10/100/1000Base-T(X) indicator | 2 x LEDs, Green for port Link/Act | |
| WLAN LED | 2 x LEDs, Green for WLAN Link /Act | |
| Fault | 1 x LED, Red for Ethernet link down or power down indicator | |

| | | |
|---|---|---|
| **Fault contact** | | |
| Relay | Relay output to carry capacity of 1A at 24VDC(5-pin M12 A-coding) | |
| **Power** | | |
| Input power | Dual Power Inputs. 12~48 VDC | |
| Power consumption (Typ.) | 11Watts | 11.5Watts |
| **Physical Characteristic** | | |
| Enclosure | IP-40 | |
| Dimension (W x D x H) | 125.6(W) x 65(D) x 196.1(H) mm (4.94 x 2.55 x 7.72 inch.) | |
| Weight (g) | 965g | 970g |
| **Environmental** | | |
| 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 | |
| **Regulatory approvals** | | |
| 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 | |
| Safety | EN60950-1 | |
| **Warranty** | 5 years | |

## Ordering Information

**TGAP-ABC0C–M12**

| Code Definition | Wireless-1 Mode | Wireless-2 Mode | 10/100/1000 Base-T(X) Port Number | PoE Identification |
|---|---|---|---|---|
| Option | **- 1:** 802.11 b/g<br>**- 2:** 802.11 a<br>**- 3:** 802.11 a/b/g<br>**- 4:** 802.11 b/g/n<br>**- 5:** 802.11 a/n<br>**- 6:** 802.11 a/b/g/n | **- 1:** 802.11 b/g<br>**- 2:** 802.11 a<br>**- 3:** 802.11 a/b/g<br>**- 4:** 802.11 b/g/n<br>**- 5:** 802.11 a/n<br>**- 6:** 802.11 a/b/g/n | **-"2":** 2 ports | **-"+":** PoE P.D. present at ETH2 |

| | Model Name | Description |
|---|---|---|
| Available Model | TGAP-6620-M12_US | Industrial EN50155 Dual RF in IEEE 802.11 a/b/g/n wireless access point with 2x10/100/1000Base-T(X), US band |
| | TGAP-6620-M12_EU | Industrial EN50155 Dual RF in IEEE 802.11 a/b/g/n wireless access point with 2x10/100/1000Base-T(X), EU band |
| | TGAP-6620+-M12_US | Industrial EN50155 Dual RF in IEEE 802.11 a/b/g/n wireless access point with 2x10/100/1000Base-T(X), 1-port PoE P.D, US band |
| | TGAP-6620+-M12_EU | Industrial EN50155 Dual RF in IEEE 802.11 a/b/g/n wireless access point with 2x10/100/1000Base-T(X), 1-port PoE P.D, EU band |

## Packing List

- **TGAP- 6620-M12 x 1**
- **CD x 1**
- **Quick Installation Guide x 1**
- **Wall Mount Kit x 1**
- **2.4GHz/5GHz 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**