TAOGLAS

Datasheet

# Barracuda - 915MHz 8dBi Omni Directional Outdoor Antenna

**Part No:**
**OMB.915.B08F21**

**Features:**

- Omni-Directional Radiation
- Collinear
- 8dBi Peak gain
- Robust design for all weather operation
- IP65 waterproof
- 1474mm in length, 870 g in weight
- N type Female connector
- Wall/Pole mount bracket included
- RoHS Compliant

# 1. Introduction

The OMB.915.B08F21 is a fiberglass omni-directional outdoor antenna, operating in 915 MHz ISM bad. The antenna has an 8dBi high peak gain, providing a large coverage area. Typical applications are in ISM, WLAN, RFID, SigFox, Lora and LPWA networks

The OMB.915.B08F21 Operated at 915MHz, with an 8dBi peak gain. The omni-directional antenna collinear dipole design means it radiates uniformly in the azimuth with a high gain, providing coverage over long distances, thus minimizing the number of cells or nodes needed in a network.

The UV resistant fiberglass housing enables the OMB antenna to be utilized in all kinds of harsh environments, making it more robust and safer than traditional whip antennas. It has been designed to withstand high wind load. The integrated mounting bracket is perfect for directly mounting the antenna onto a pole or a wall.

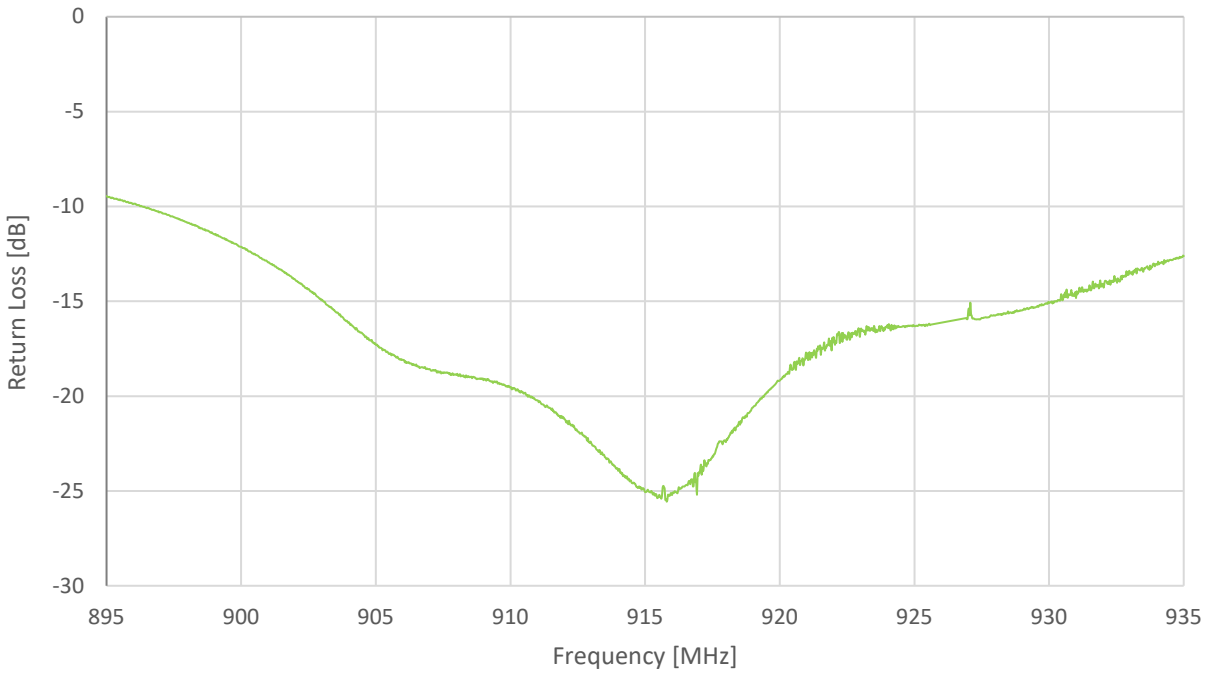
The connector is industry standard N-type female. Connector can be customized subject to MOQ. Other frequencies and gains are available. Contact Taoglas reginal sales office for more details.

# 2. Specifications

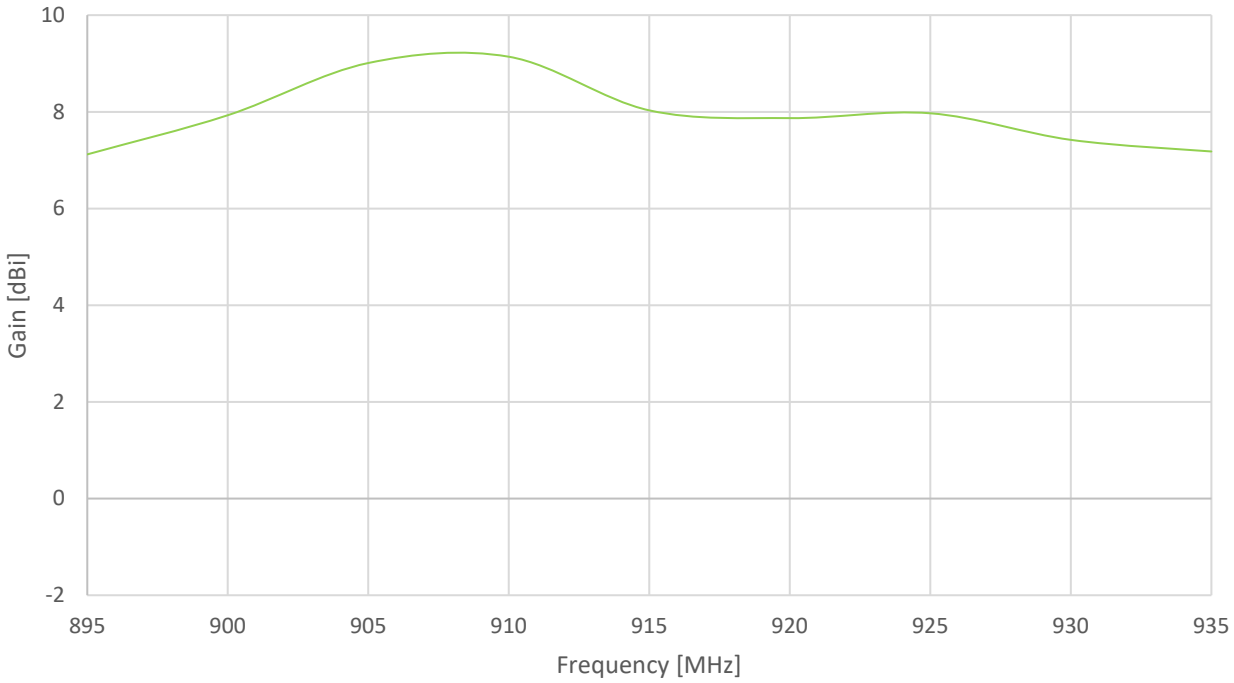
| Electrical | |
|---|---|
| Standard | ISM 868 |
| Band | 902 – 928 MHz |
| Antenna Type | Collinear Dipole Array |
| Peak Gain | 8 dBi |
| Polarization | Vertical |
| Impedance | 50 ohms |
| Max Input Power | 50 watts |
| VSWR | 1.5:1 |
| Radiation | Omni-Directional |
| Vertical Beamwidth | 14 Deg |
| Horizontal Beamwidth | 360 Deg |
| Internal Material | Copper |
| Connector | N Type Female |
| **Mechanical** | |
| Length | 1474 mm(Max) |
| Bracket Dimension | 70 x 73mm(Max) |
| Radome Diameter | 24mm |
| Antenna Weight | 870g |
| Mounting Accessories Weight | 70g |
| Application | Indoor/Outdoor |
| Radome Material | White Fiberglass |
| Mount Style | Pole Mount/Wall Mount |
| Mount Hardware Material | Stainless Steel |
| Wind Resistance | >150mph (>241km/h) |
| Waterproof | IP65 |
| **Environmental** | |
| Storage Temperature | -40°C to +80°C |
| Operating Temperature | -40°C to +60°C |
| Operating Humidity | 10%~90% non-condensing |
| Storage Humidity | 5%~90% non-condensing |

# 3. Antenna Characteristics

## 3.1 Return Loss

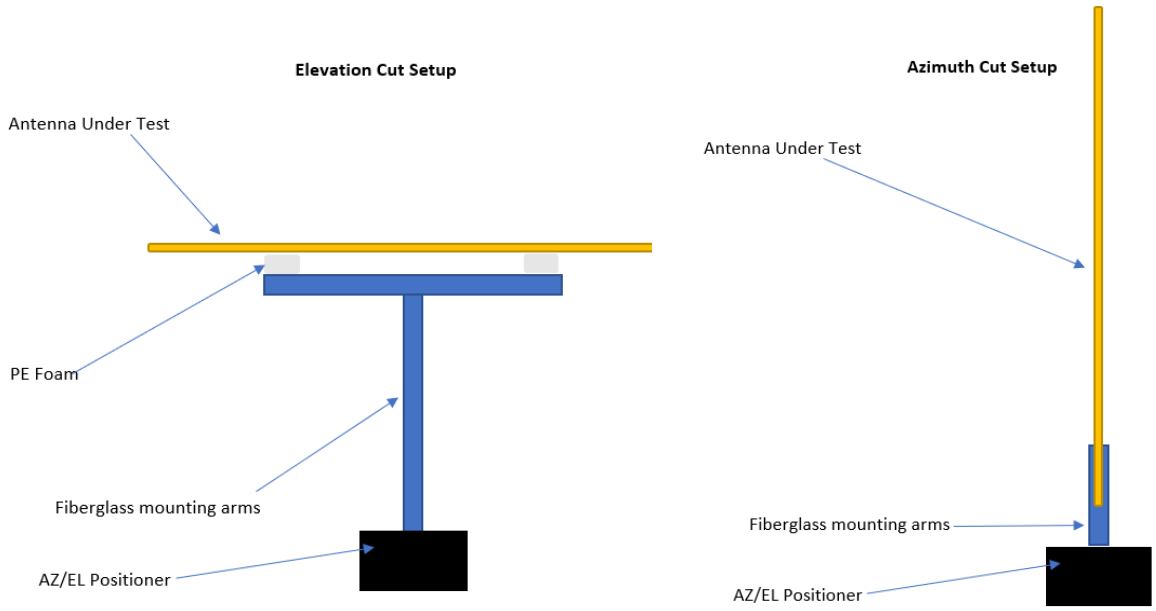


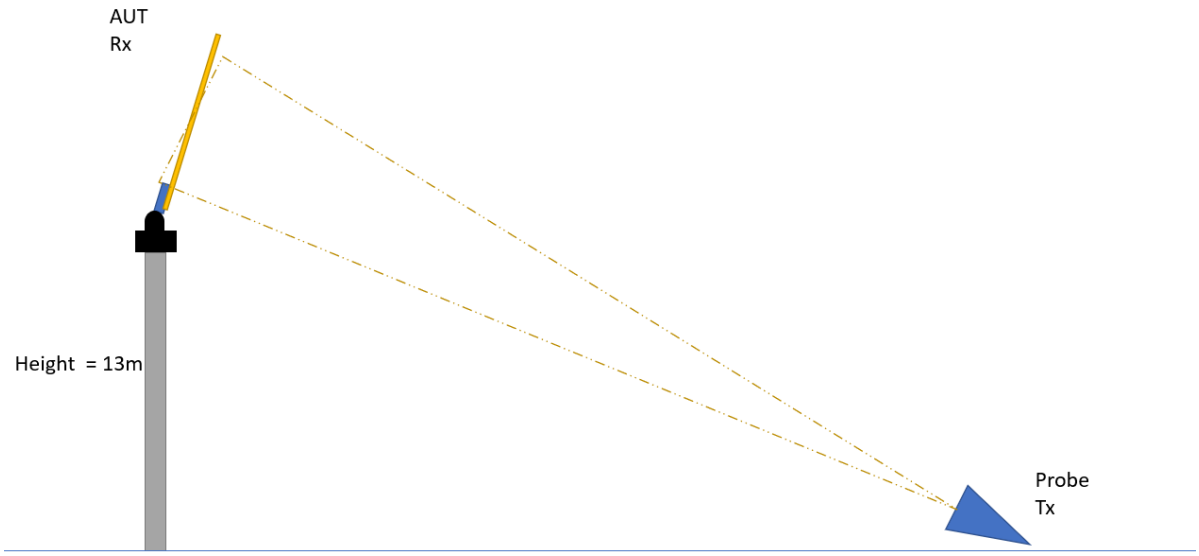

## 3.2 Peak Gain



# 4. Radiation Patterns

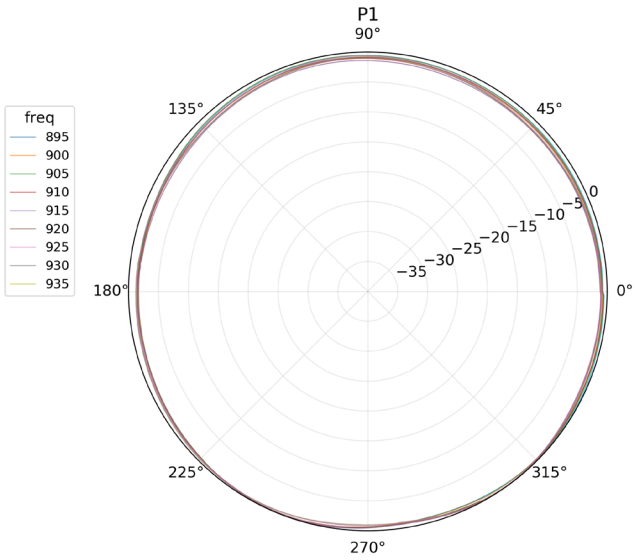
## 4.1 Test Setup

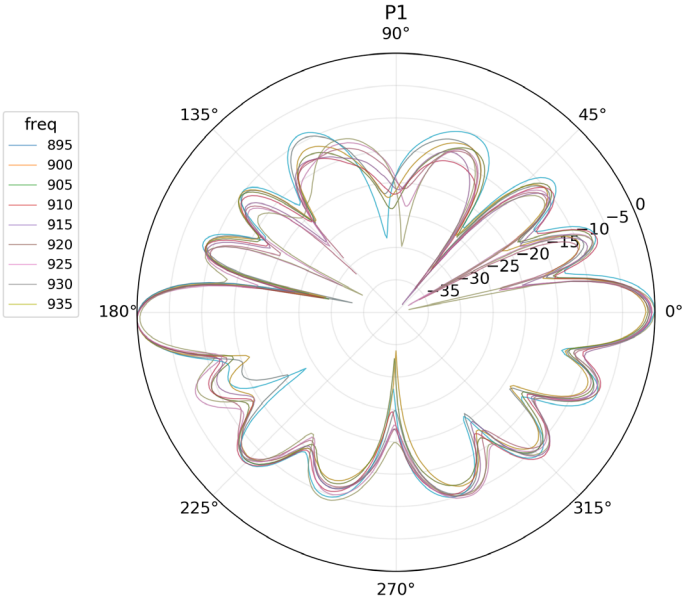


## 4.2 2D Radiation Patterns

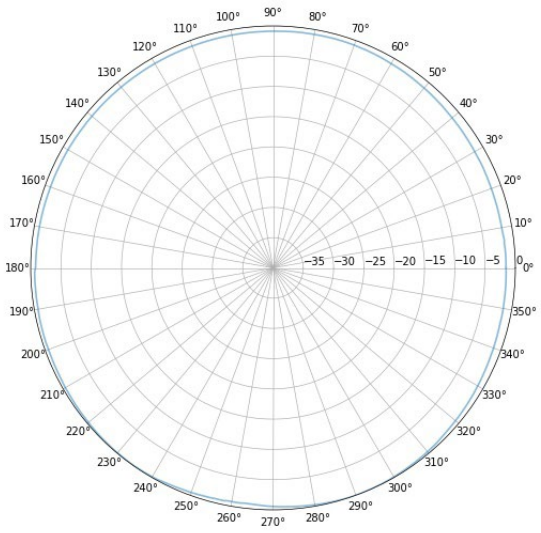
| Azimuth | Elevation |
|---|---|

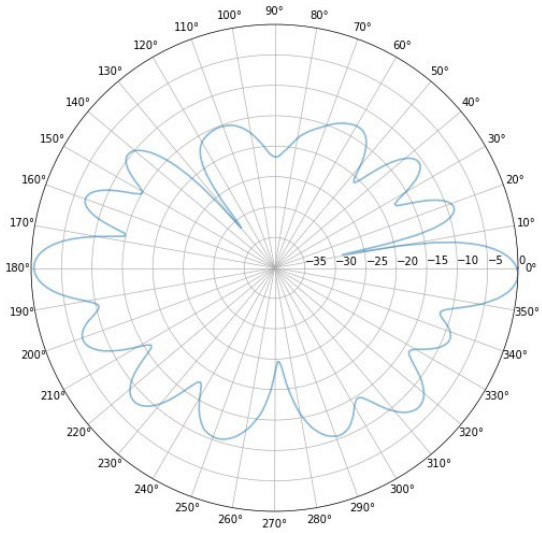


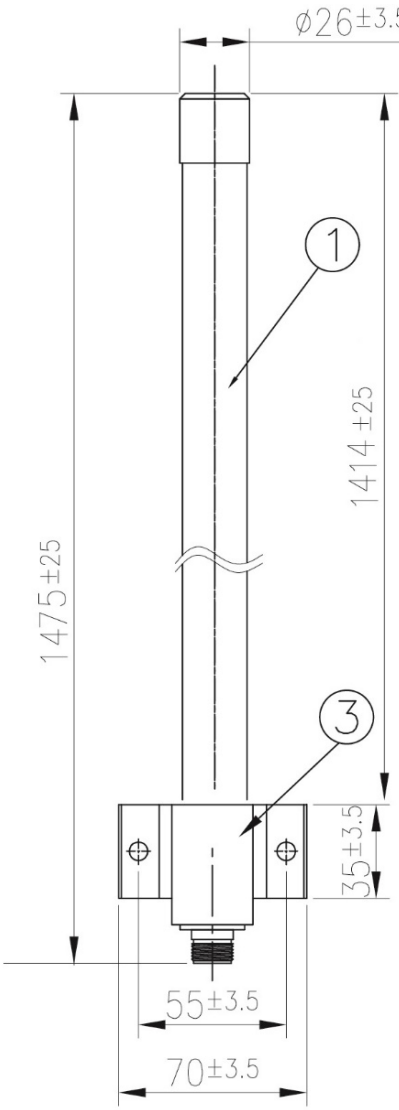

## 915MHz

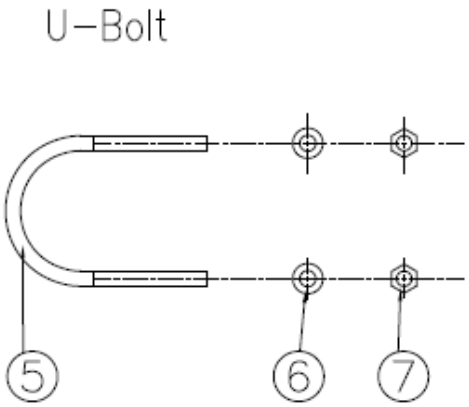
| Azimuth | Elevation |
|---|---|

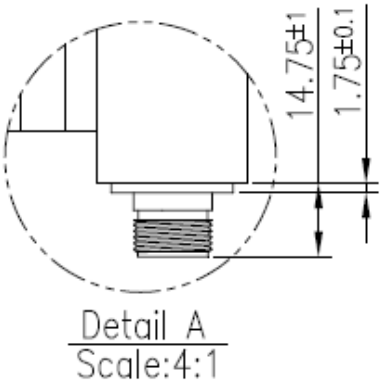


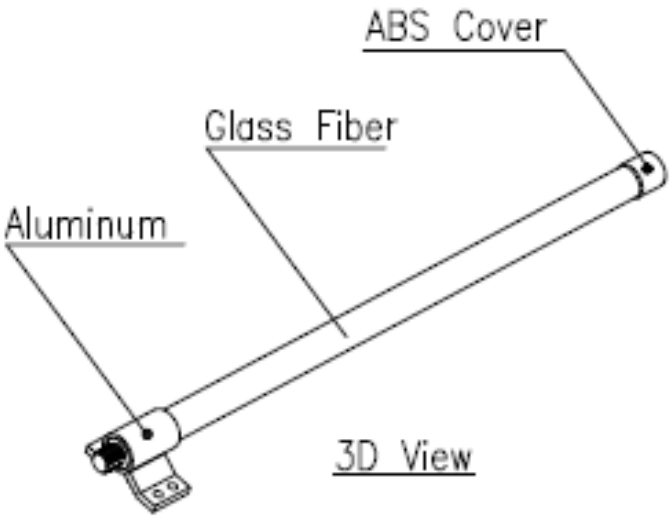


# 5. Mechanical Drawing (Units: mm)



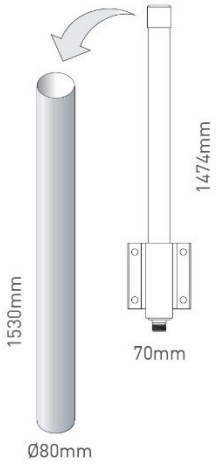



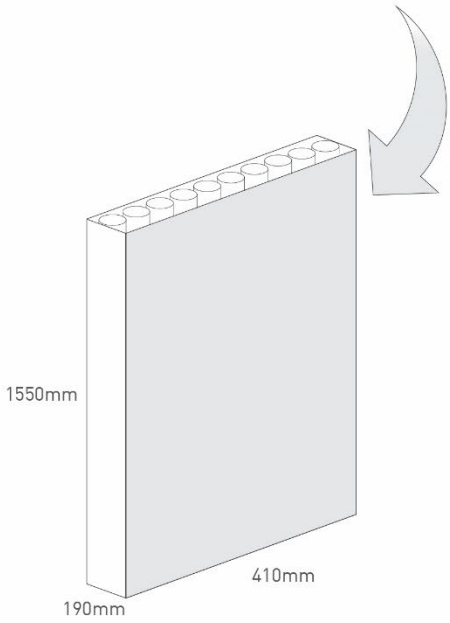

| | Name | Material | Finish | QTY |
|---|---|---|---|---|
| 1 | OMB.915 Antenna | Fiberglass | White | 1 |
| 2 | Cover | ABS | Silver | 1 |
| 3 | Bracket | Aluminum | Silver | 1 |
| 4 | N Type(F) 1 | Brass | Ni Plated | 1 |
| 5 | M6 U Bolt | Stainless Steel | Silver | 1 |
| 6 | M6 Washer 2 | Stainless Steel | Silver | 2 |
| 7 | M6 Nut | Stainless Steel | Silver | 2 |

# 6. Packaging

1 OMB.915.B0821 per tube
Tube Dimensions - Ø80mm*Height 1530mm
Total Weight - 1280g




10 tubes per carton
Carton Dimensions - 1550*410*190mm
Weight - 14.48Kg



# 7. Installation Guide

## Installation Instructions

### Barracuda OMB Series

### Omni-directional Outdoor Antenna

### A Introduction

The Barracuda OMB Antenna is an omnidirectional, fibreglass, outdoor antenna. The UV resistant fibreglass housing enables the OMB antenna to be utilized in all kinds of harsh environments, making it more robust and safer than traditional whip antennas. The omnidirectional antenna's collinear dipole design allows it to radiates uniformly in the azimuth with a high gain, providing coverage over long distances, thus minimizing the number of cells or nodes needed in a network. The antenna has an integrated aluminium bracket to be directly installed on a pole, designed to offer a secure, high wind resistant mount.

### B Mounting & Location

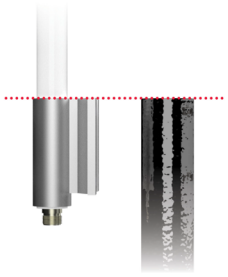
To ensure prime performance, the Barracuda OMB series should be mounted in a clean location that is clear from all obstruction so that there is no impact on radiation performance. Also, before installing there must be at least 15mm clearance of all metallic objects around the location. When mounting the bracket on the pole, make sure to keep the bracket level with the top of the pole. The bracket should be mounted on the pole using the following list that are all supplied by Taoglas.

2 M6 U-Bolt 4 Washers 4 M6 Nuts 1 Barracuda Antenna

### C Mount Alignment

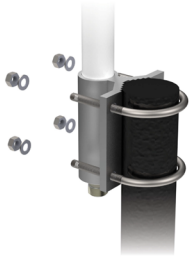
When mounting the antenna it is important that the top of the aluminium bracket is aligned with the top of the pole. The top of the pole should not exceed the top of the mounting bracket as it will interfere with the with the antennas performance.

See image for reference of correct mount alignment.



### D Installation of the Antenna

Put the two U-Bolts around the pole and through the holes in the aluminium bracket. Making sure that the bracket is correctly positioned level to the top of the pole, place one of the four washers provided, over each of the threaded ends of the U-bolts. Then screw on of the four M6s nuts provide on to each threaded end of the U-bolts and tighten in place.



Barracuda/ IG-22-8-002 www.taoglas.com

## E Securing the Mount

In order to make sure that the antenna is firmly secured in place on the top of the pole, ensure that the four M6 nuts have been fully tightened. The bracket should not move or shake at all once properly installed.

## G Notices

**Caution**
To comply with FCC RF Exposure requirements in section 1.1310 of the FCC Rules, antennas used with this device must be installed to provide a separation distance of at least 20 cm from all persons to satisfy RF exposure compliance.

**Warning**
**Do not** Operate the transmitter when someone is within 20 cm of the antenna.
**Do not** operate the equipment in an explosive atmosphere.

**European Waste Electronic Equipment Directive 2002/96/EC**
Please ensure that your old Waste Electricals and Electronics are recycled do not throw them away into standard waste.

**Directive 2014/53/EU Radio Equipment Directive (RED)**

**Harmonised Standards and References:**
**EN 301 489-1 (V2.2.1):** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements. Referencing CENELEC EN 55032 Class B.

## Changelog for the datasheet

**SPE-17-8-041 - OMB.915.B08F21**

| **Revision: E (Current Version)** | |
|---|---|
| Date: | 2022-09-20 |
| Changes: | Full Data sheet update |
| Changes Made by: | Evan Murphy |

**Previous Revisions**

| **Revision: D** | |
|---|---|
| Date: | 2018-03-27 |
| Changes: | Amended Installation |
| Changes Made by: | Jack Conroy |

| **Revision: C** | |
|---|---|
| Date: | 2018-12-03 |
| Changes: | Added Installation Guide |
| Changes Made by: | Jack Conroy |

| **Revision: B** | |
|---|---|
| Date: | 2017-08-17 |
| Changes: | Updated with revised packaging details |
| Changes Made by: | Andy Mahoney |

| **Revision: A (Original First Release)** | |
|---|---|
| Date: | 2017-08-10 |
| Notes: | |
| Author: | Technical Writer |

**Previous Revisions (Continued)**

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