TAOGLAS

Datasheet

Barracuda - 868MHz 8dBi Omni Directional Outdoor Antenna

Part No:
OMB.868.B08F21

Features:

- Omni-Directional Radiation
- Collinear
- ISM 868 MHz Band
- 8dBi Peak gain
- Robust design for all weather operation
- IP65 waterproof
- 1474mm in length, 720 g in weight
- N type Female connector
- Wall/Pole mount bracket included
- RoHS Compliant

1. Introduction

The OMB.868.B08F21 is a fiberglass omni-directional outdoor antenna, operating in 868 MHz ISM band. The antenna has an 8dBi high peak gain, providing the largest coverage area for Low Power Radio (UNB Sigfox, LPRN, LoRA) and mesh networks. Typical applications are in IoT, metering, industrial/environmental monitoring and remote asset monitoring.

The OMB.868 operates at 868MHz, one of the most widely used license free ISM bands, with a 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 amount of cells or nodes needed in a network.

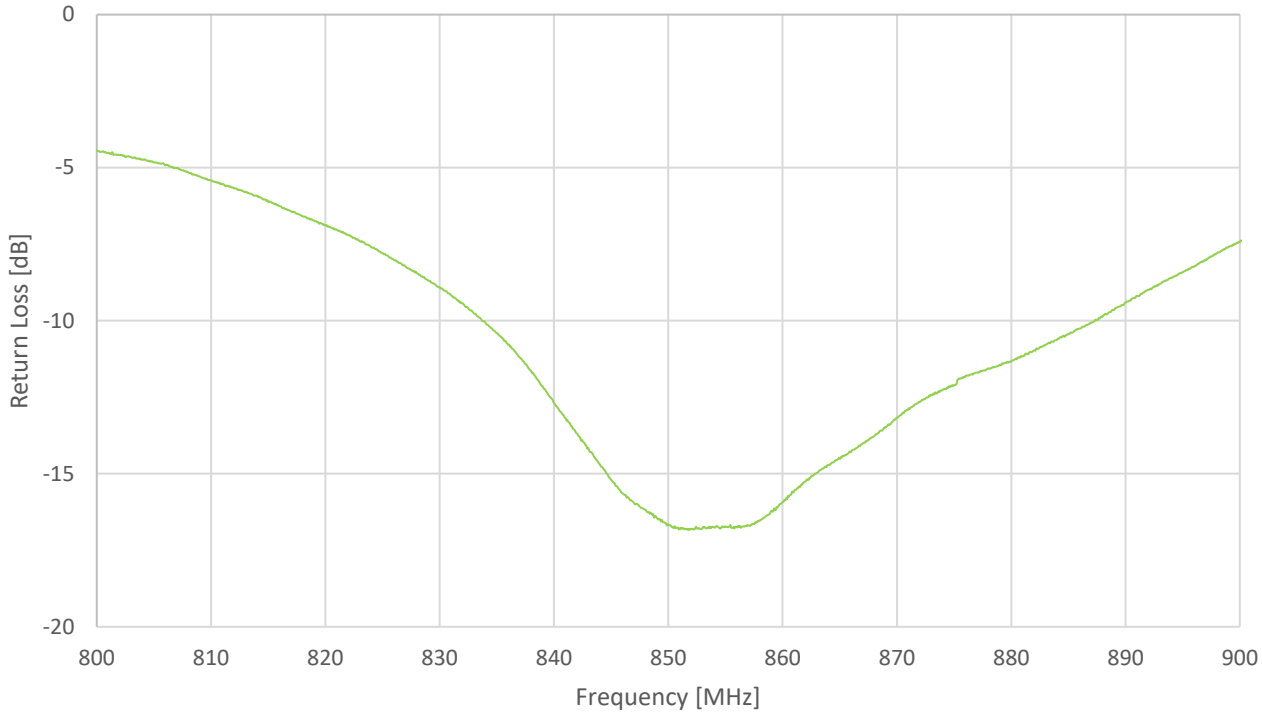
The UV resistant fiberglass housing enables the OMB antenna to be weathered in all kinds of harsh environments, making it more robust and safer than traditional whip antennas. It has been designed to withstand high wind load. The integrated aluminum mounting bracket is perfect for directly mounting the 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 regional sales office for more details.

2. Specifications

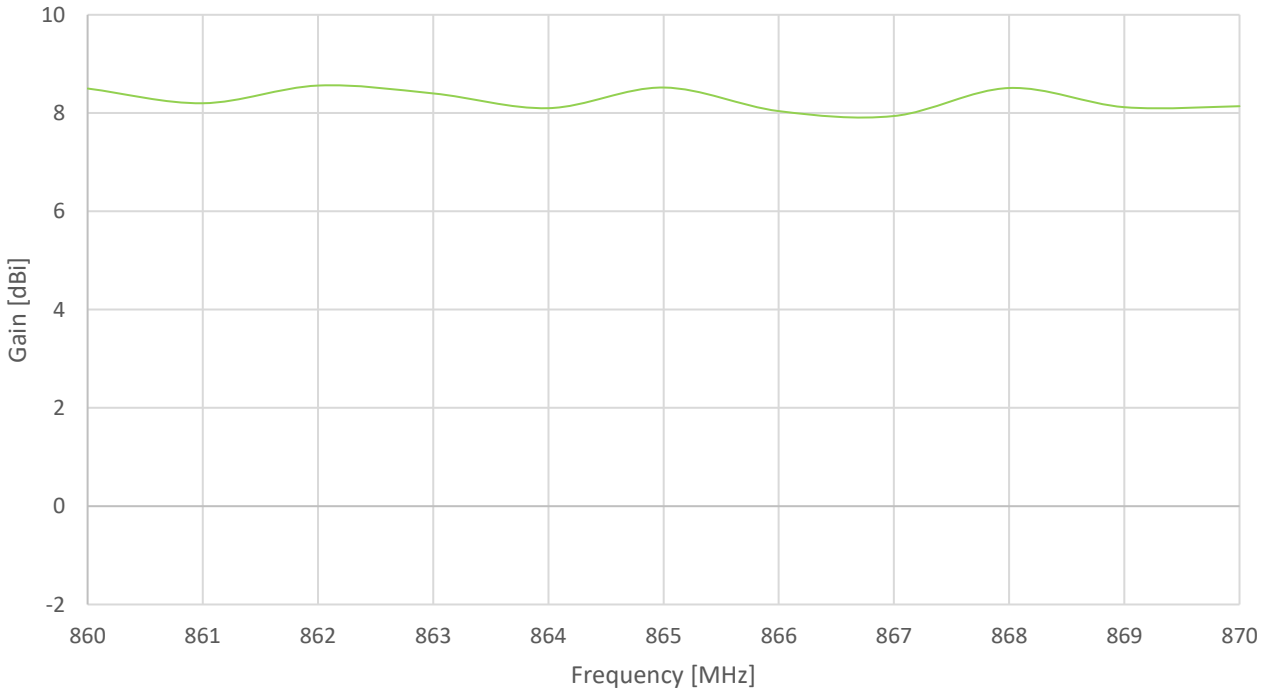
Electrical	
Standard	ISM 868
Band	860 – 870 MHz
Antenna Type	Collinear Dipole Array
Peak Gain	8 dBi
Polarization	Vertical
Impedance	50 ohms
Max Input Power	50 watts
VSWR	1.5:1
Radiation	Omni-Directional
Vertical Beamwidth	13 Deg
Horizontal Beamwidth	360 Deg
Internal Material	Copper
Connector	N Type Female
Mechanical	
Length	1474 mm(Max)
Bracket Dimension	70 x 73mm(Max)
Radome Diameter	24mm
Antenna Weight	720g
Mounting Accessories Weight	70g
Application	Indoor/Outdoor
Radome Material	White Fiberglass
Bracket Material	Aluminum
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

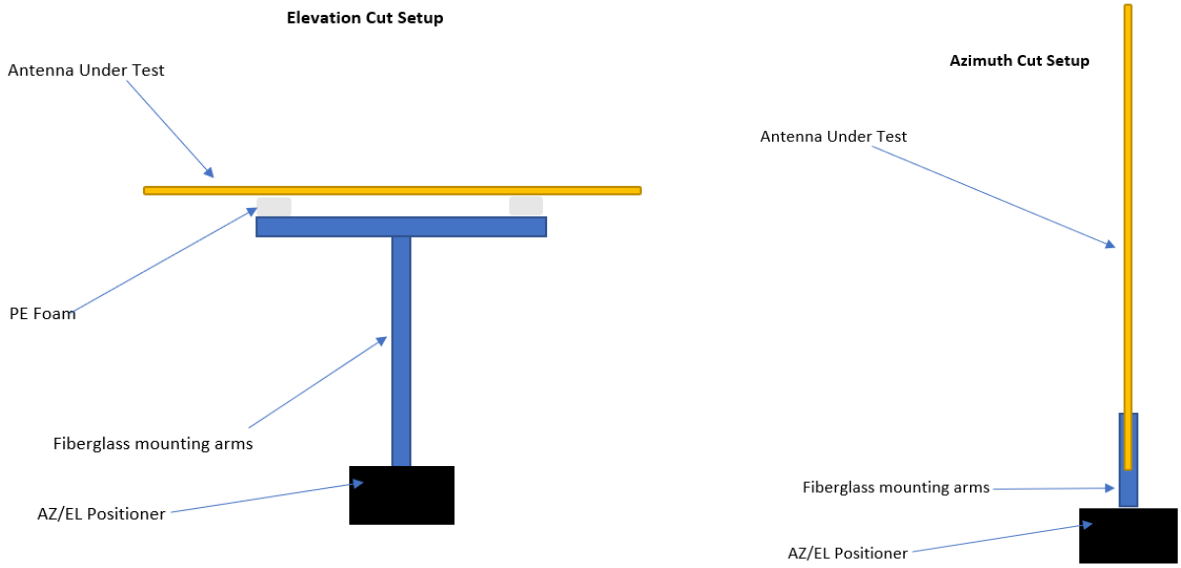


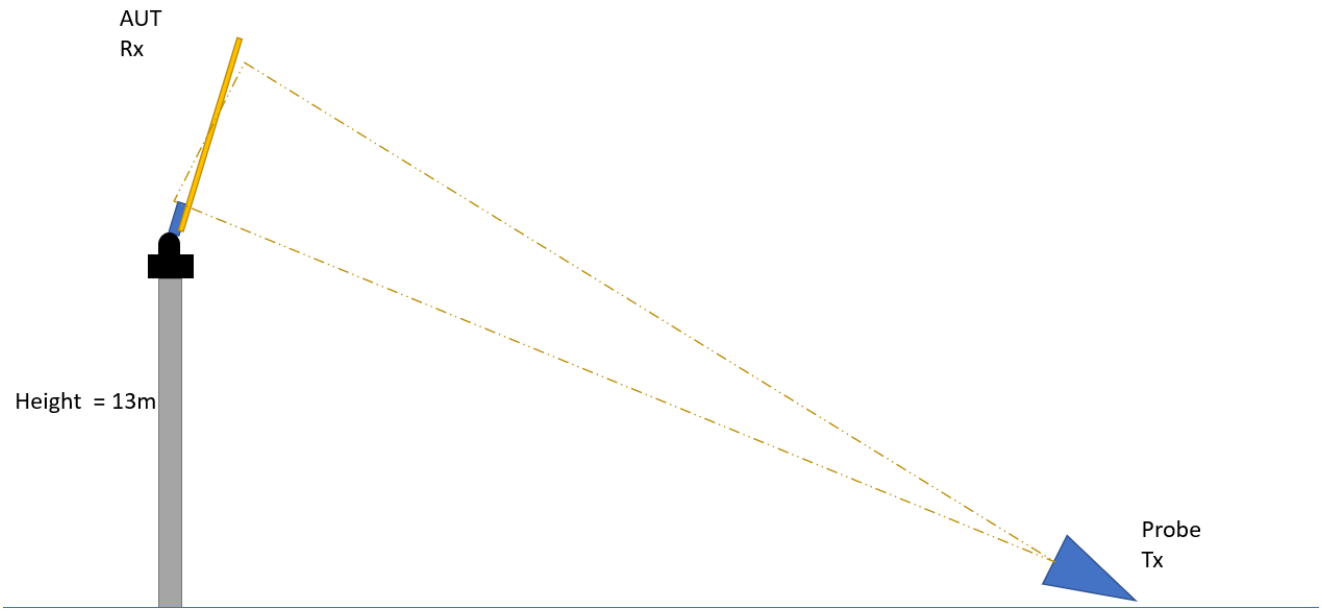
3.2 Peak Gain



4. Radiation Patterns

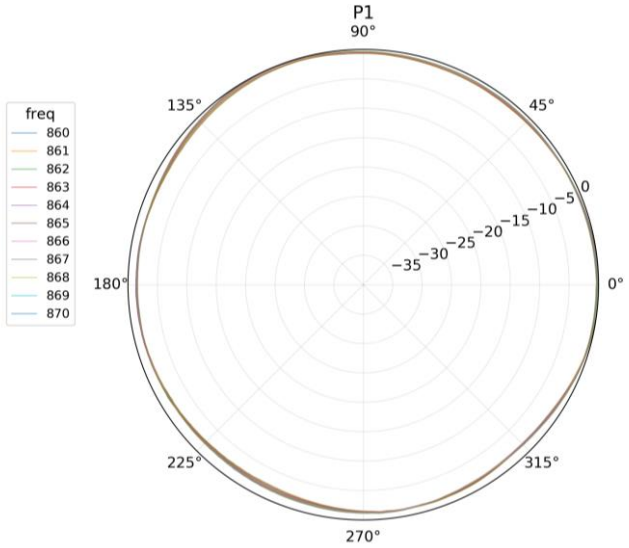
4.1 Test Setup

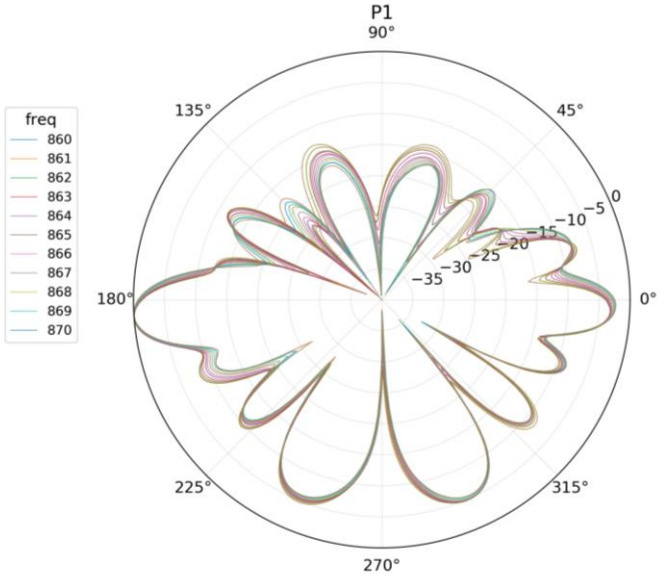




4.2 2D Radiation Patterns

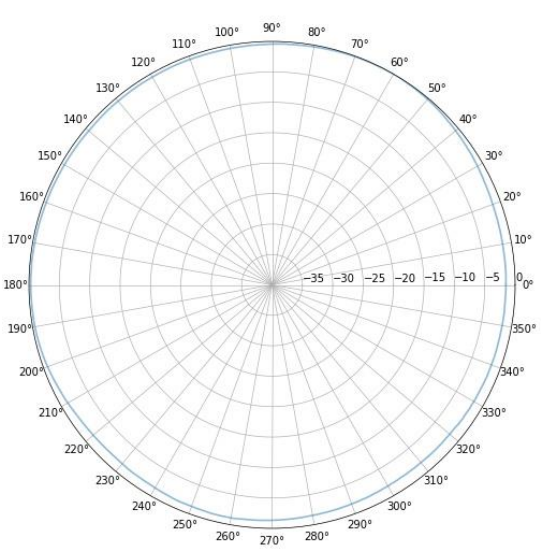
Azimuth	Elevation

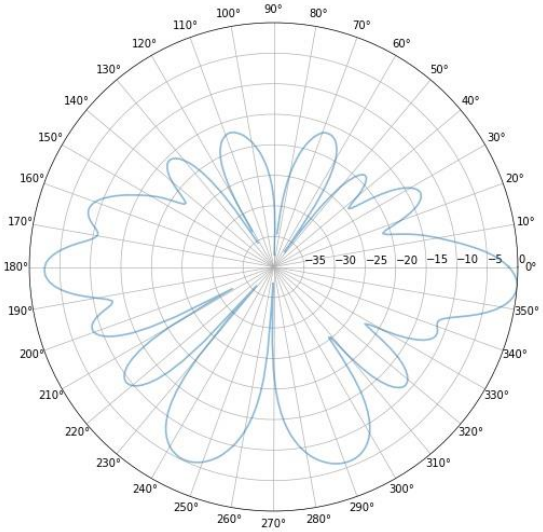




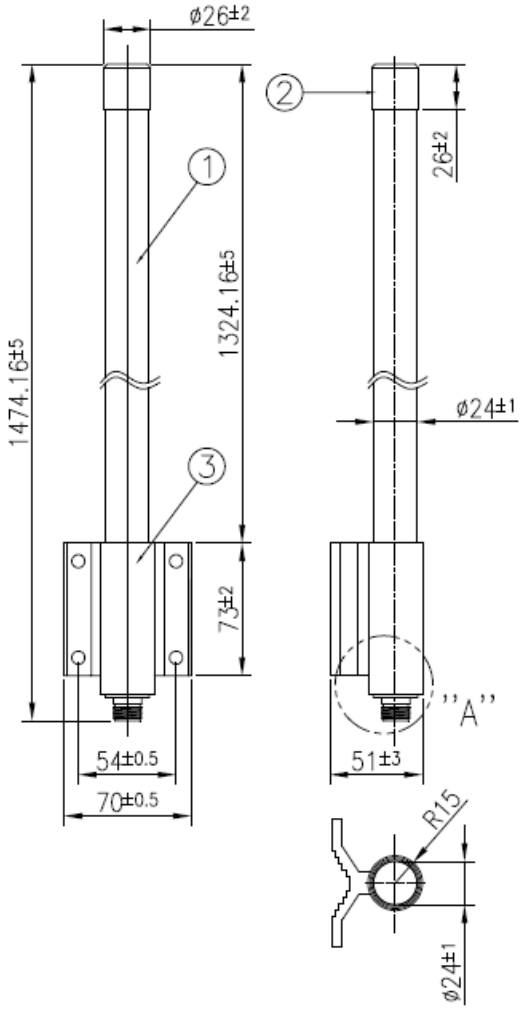
868MHz

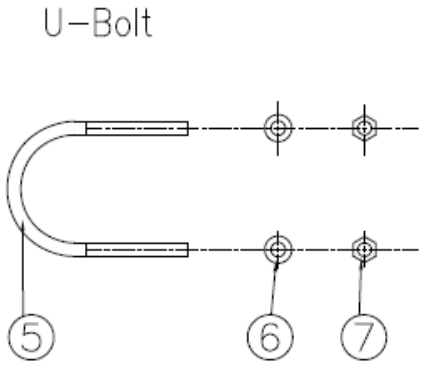
Azimuth	Elevation

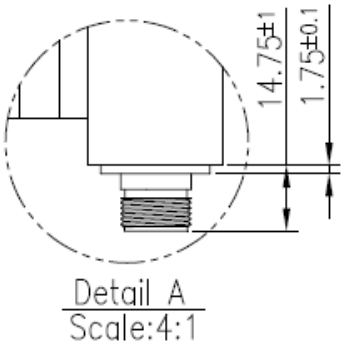


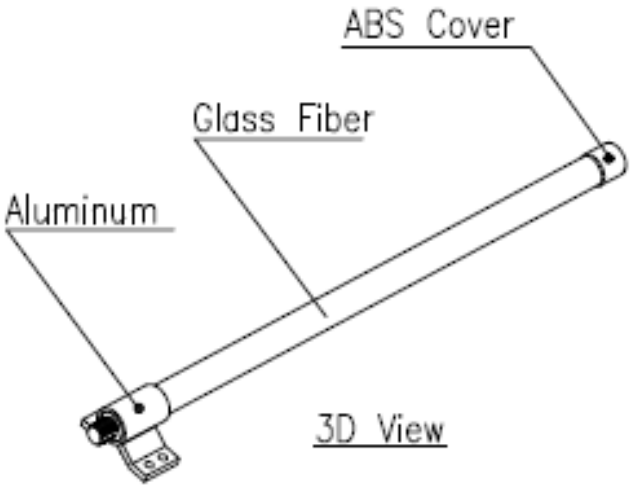


5. Mechanical Drawing (Units: mm)







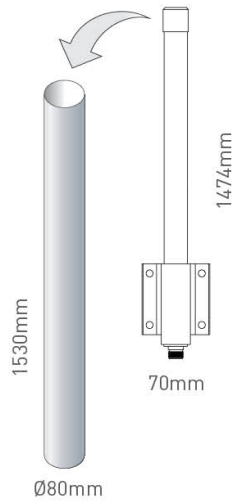


	Name	Material	Finish	QTY
1	OMB.868 Antenna	Fiberglass	White	1
2	Cover	ABS	Silver	1
3	Bracket	Aluminum	Silver	1
4	N Type(F)	Brass	Ni Plated	1
5	M6 U Bolt	Stainless Steel	Silver	1
6	M6 Washer	Stainless Steel	Silver	2
7	M6 Nut	Stainless Steel	Silver	2

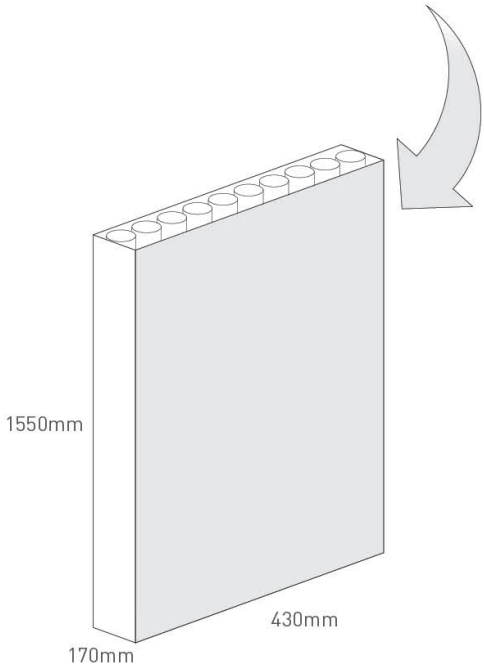
6. Packaging

Packaging Specifications

1 OMB.868.B08F21 per tube
Tube Dimensions - Ø80mm*Height 1530mm
Total Weight - 1250g



10 tubes per carton
Carton Dimensions - 1550*430*170mm
Weight - 15.3Kg



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-15-08-052 - OMB.868.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:	2018-08-03
Changes:	Added Installation Guide
Changes Made by:	Jack Conroy

Revision: B	
Date:	Unknown
Changes:	
Changes Made by:	Technical Writer

Revision: A (Original First Release)	
Date:	2015-11-27
Notes:	
Author:	Technical Writer

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