

W-1RA6

Dual Band 2.4G 5G Antenna

CELLULAR

WIFI

The W-1RA6 is an ultraband antenna for 5G, LTE, and WCDMA that can also cover Wi-Fi frequencies. It's a compact and durable external antenna with a wide band and high efficiency.

The W-1RA6 allows the antenna to be positioned for optimum performance compared to a fixed whip design. The antenna attaches with an SMA connector.



168 × 13 mm

www.mioticsolutions.com

info@mioticsolutions.com

Document Information

Product	W-1RA6
Part Number	W-1RA6
Description	Dual Band 2.4G 5G Antenna
Version	2.0 (current)
Date	14-Sep-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
1.1	07-July-2023	Hazel Xu	New layout and design
2.0	14-Sep-2023	Ivy Liao	New layout and design

Product Overview

Product Description

The W-1RA6 is an ultraband hinged monopole blade cellular antenna for 5G, LTE, and WCDMA that can also cover Wi-Fi frequencies. It's a compact and durable external antenna with an ultra-wide range and high efficiency. It's an ideal solution for cellular IoT applications requiring a durable and cost-effective external antenna.

The hinged swivel design allows the antenna to be positioned for optimum performance and reduces the potential for damage from impact compared to a fixed blade design. The antenna attaches with an SMA plug (male pin) connector.

Key Features

- Operates in 2410-2490 MHz and 4920-5925 MHz
- Dual band antenna
- Vertical polarization
- High gain of 2 dBi
- VSWR 1.2
- Omni-directional pattern

Applications

- Wifi radios
- Gateways
- Set-Top Boxes
- Security
- IoT
- M2M
- Transportation
- Smart agriculture

Electrical Specifications

Frequency				VSWR	Peak Gain	Efficiency
2.4G WiFi	2400	2500	MHz	1.2	2.0 d Bi	60%
5G WiFi	4920	5925	MHz	1.9		

Frequency Range	2400 – 2500/4920-5925 MHz
Impedance	50 Ω
Polarization	Vertical

Radiation	Omnidirectional
Electrical Type	Monopole
Lighting Protection	Direct Current earth

Mechanical Specifications

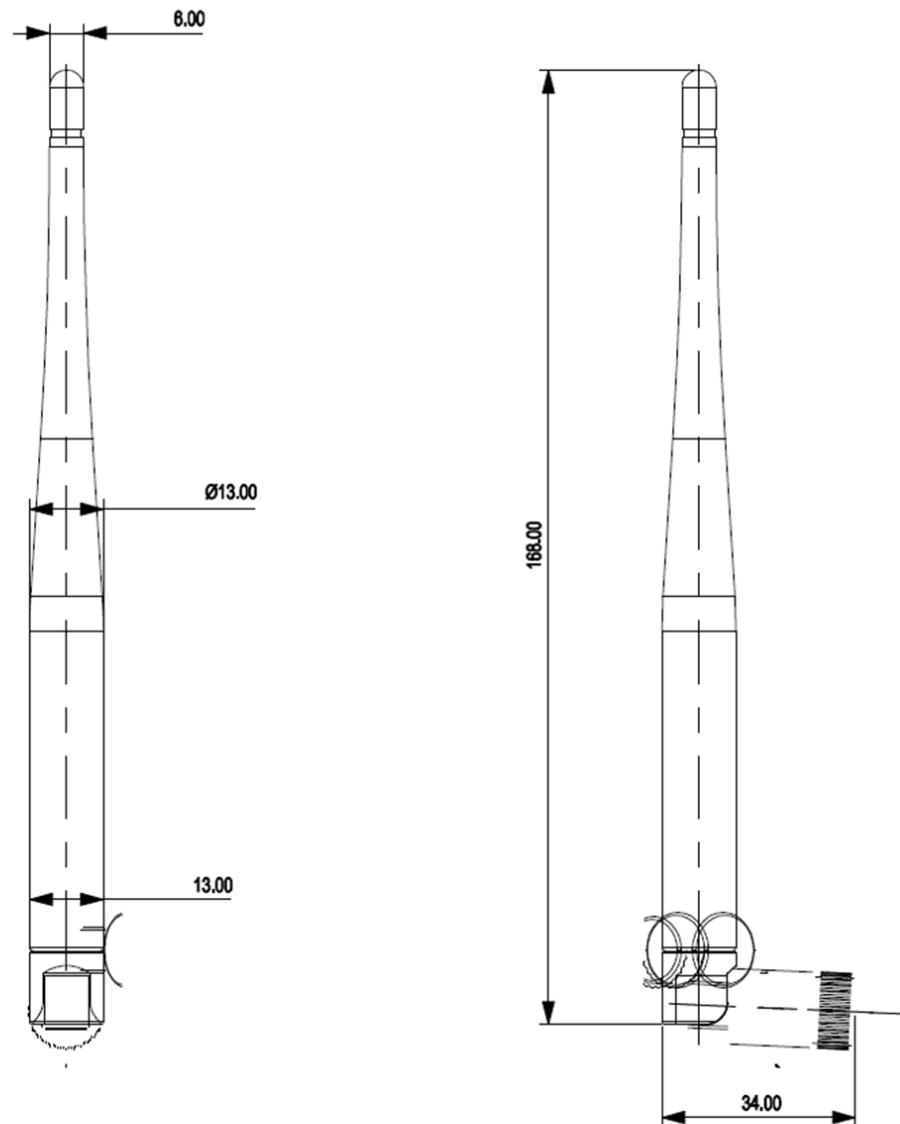
Cable Type	RG-178	Enclosure	TPE
Dimensions	168 × 13 mm	Color	Black
Connector (Termination)	SMA-RP	Material	PBT + PC

Caution:

1. Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components, as this will cause damage to the component.
2. Do not expose the component to an open flame.
3. This specification applies to the functionality of the component as a single unit. Please ensure the component is thoroughly evaluated in the application circuit.

Product Image and Dimensions



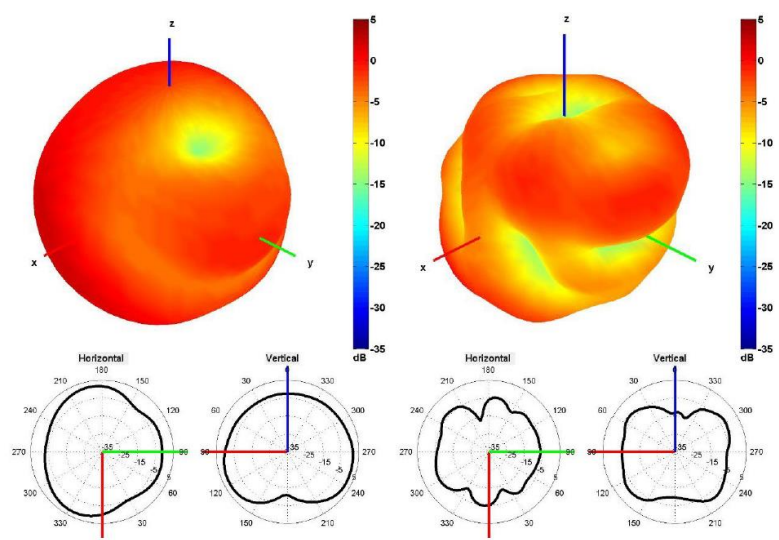


Radiation Pattern

A radiation pattern is a graphical representation of the directional properties of an antenna. It shows how electromagnetic waves are distributed in space in relation to the direction of propagation.

By understanding the information provided by a radiation pattern, it is possible to optimize the design and performance of an antenna for specific applications.

3D – Pattern



2450 and 5500 MHz Radiation pattern

Antenna Efficiency and Gain

Frequency	Efficiency	Gain
2442 MHz	0.70	2.5
5180 MHz	0.37	0.3
5500 MHz	0.40	1.2
5825 MHz	0.53	2.3

Environmental Data

Operating Temperature	-45 °C to +85 °C
IP Rating	IP55
Compliance	RoHS

Ordering Information

Product Variants

Part Number	Description
W-1RA6	Dual Band 2.4G 5G Antenna

About MIOT

Miot Wireless Solutions, headquartered in Suzhou, China, was established in 2017. It has subsidiaries in Canada, the United States, Brazil, and EMEA. MIOT is a professional designer and manufacturer of Antennas and IoT PCBA products, providing turn-key service to customers worldwide.

Our talented R&D team has experienced antenna, hardware, and software engineers who can participate in your new project, from something simple like antenna/selection and design, to complete turn-key services, which entails taking your concept and ideas through design, prototyping, debugging, certification, and manufacturing. Miot offers reliable products at reasonable prices with fast delivery times to help you get ahead in the market.

Contact

MIOT Wireless Solutions Co. Ltd.
120-5800 Ambler Dr, MISSISSAUGA
ONTARIO L4W 4J4
Canada

Website: www.mioticsolutions.com
Email: info@miotsolutions.com

The information contained herein is provided "as is" and MOIT assumes no liability for using the information. No warranty, either express or implied, is given, including but not limited to the accuracy, correctness, reliability, and fitness for a particular purpose of the information. This document may be revised by MOIT at any time.

MIOT reserves all rights to this document and the information contained herein. Reproduction, use, modification, or disclosure to third parties of this document without express permission is strictly prohibited.

Copyright © 2023, MIOT Wireless Solutions Ltd. All Rights Reserved



www.mioticsolutions.com

