

G-1RE8

Active GPS/GLONASS Antenna

MAGNETIC

GNSS

This compact antenna G-1RE8 is designed and tuned with precision for navigational automotive applications and fleet management that operate within 1575~1602 MHz bands. With magnetic mount combined with a compact size form factor make this antenna a popular choice for temporary or permanent installations.

This antenna is designed with a high active GNSS gain of 28 dB @ 3.3-5V and will maintain constant M2M signal strength for maximum precision.



49 x 38 x 17 mm

Document Information

Product	G-1RE8
Part Number	G-1RE8
Description	Active GPS/GLONASS Antenna
Version	2.0 (current)
Date	12-Sep -2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
1.1	04-July -2023	Hazel Xu	New layout and design
2.0	12-Sep -2023	Ivy Liao	New layout and design

Product Overview

Product Description

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Key Features

- High Gain
- Compact Size and Low Profile
- Pin Type
- Customization Available
- RoHS Compliance

Applications

- Automotive navigation
- PND
- Surveying equipment
- Healthcare monitoring devices
- Laptop

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
GNSS	1575~1602	MHz	1.5	5 d Bi	40%

Antenna

Frequency Range	1575~1602 MHz	Gain	5 DBi
Impedance	50 Ω	Band Width	CF $\pm$ 5MHz
Polarization	RHCP	VSWR	$\leq$ 1.5

LNA

Boost Gain	28 $\pm$ 2dB	Noise Figure	<1.5
Filter Insertion Loss	<3dB	Ex-band Attenuation	35dB@CF+50MHz/50dB@CF-100MHz
Supply Voltage	3.3~5V DC	Current Consumption	10~20mA

VSWR	$\leq$ 2.0
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Mechanical Specifications

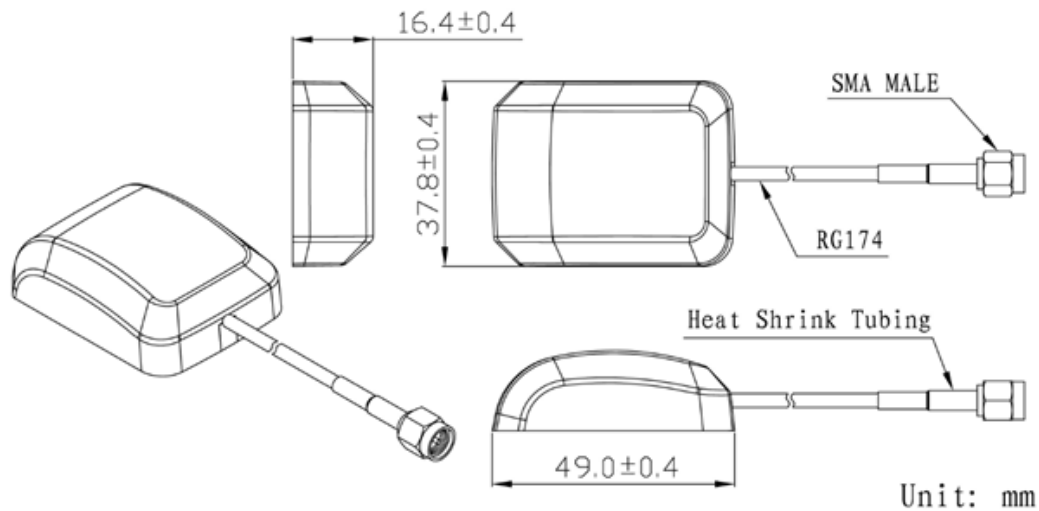
Type	External	Casing	Yes
Dimensions	49 x 38 x 17 mm	Color	Black
Connector (Termination)	SMA or others	Material	ABS
Cable	RG174(1m)	Cable Length	3m(default)
Mounting Type	Magnetic	Weight	TBC (to be confirmed)

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



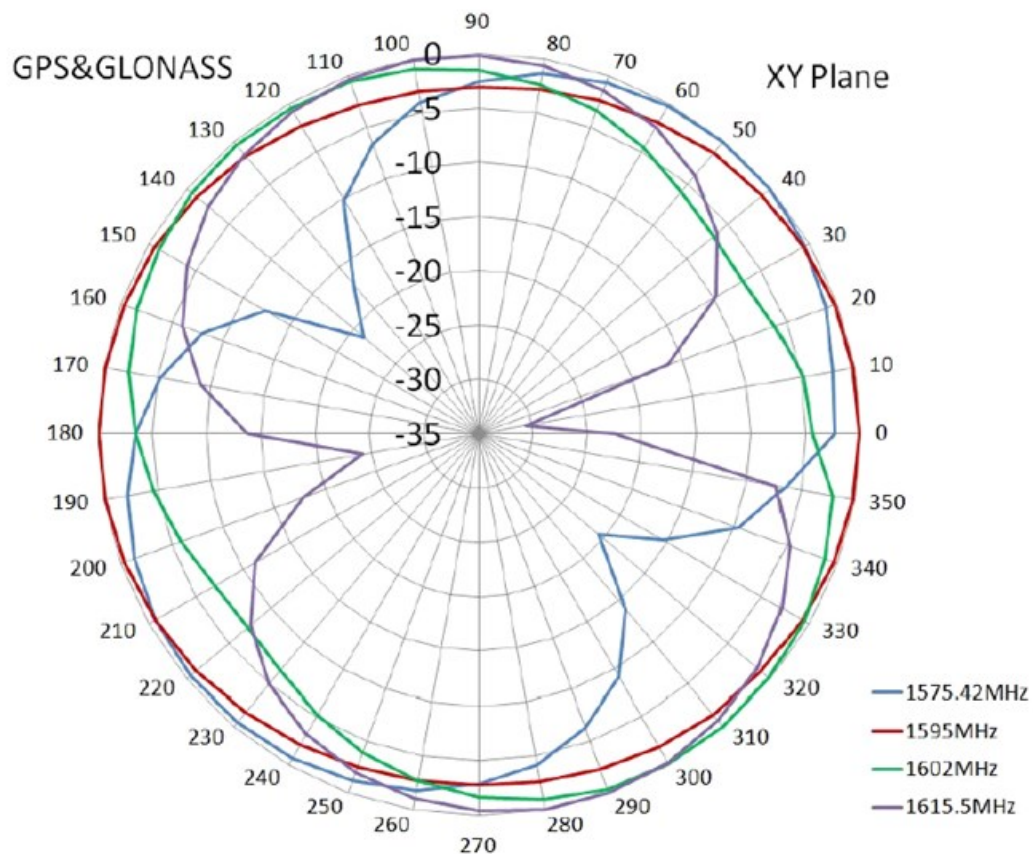


Radiation Pattern

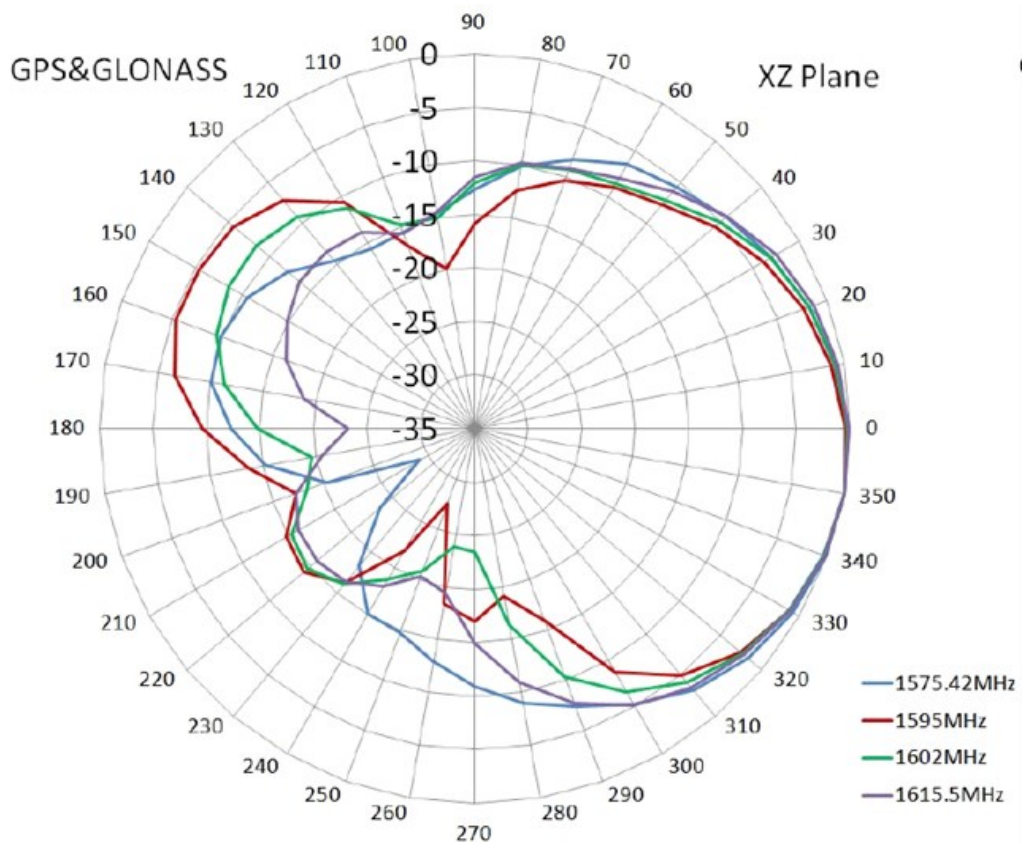
A radiation pattern is a graphical representation of the directional properties of an antenna. It shows how electromagnetic waves are distributed in space in relation to the direction of propagation.

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

XY Plane (H)

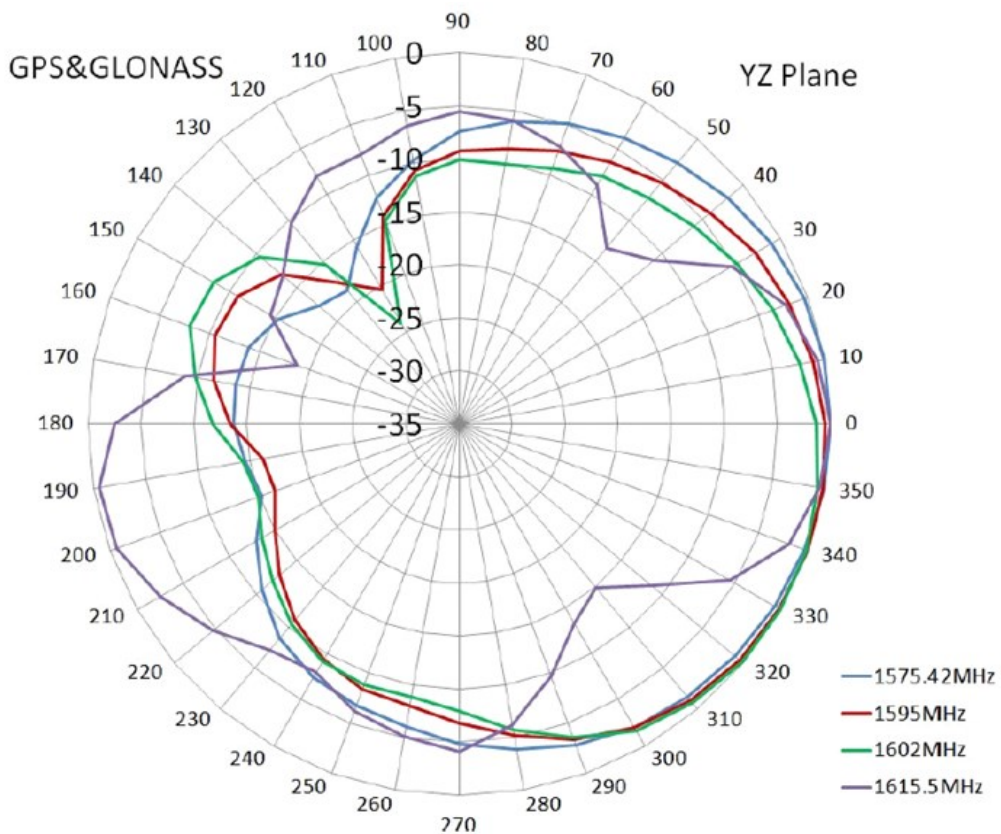


XZ Plane (E1)



YZ Plane (E2)

1575.42 MHz



Environmental Data

Operating Temperature	-40 °C to +85 °C
Relative Humidity	Up to 75%
Vibration	10 to 55Hz with 1.5mm amplitude 2hours
Compliance	RoHS

Ordering Information

Product Variants

Part Number	Description
G-1RE8	Active GPS/GLONASS 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

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