

# Antenna

# YCGO004AA Datasheet

## Antenna Services

Version: 1.2

Date: 2022-05-24

Status: Released



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**Quectel Wireless Solutions Co., Ltd.**

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: [info@quectel.com](mailto:info@quectel.com)

**Or our local offices. For more information, please visit:**

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-05-14	Kenny YIN/ Aria CHU	Creation of the document
1.0	2021-05-14	Kenny YIN/ Aria CHU	First official release
1.1	2021-12-05	Kenny YIN/ Aria CHU	Updated the product description in Chapter 1.
1.2	2022-05-24	Kenny YIN	<ol style="list-style-type: none"><li>1. Updated some details about the antenna (Chapters 3, 4.1 and 4.5).</li><li>2. Updated the antenna drawing (Chapter 6).</li></ol>

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## 1 Product Description

This Quectel GNSS antenna adopts a diversity of forms to guarantee the most suitable polarization type. Quectel's positioning products support single-band or multi-band operation modes to meet various high-precision positioning requirements of customers' products. Quectel also provides both passive and active antennas to satisfy the customer demand for high gain. Such antenna supports different installation or connection methods such as pin mount, surface mount, magnetic mount, internal cable, and external SMA. Customized connector type and cable length are provided according to requirements.

## 2 Product Features

- GPS L1
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency	1575.45 ±1.5 MHz
Input Impedence	50 Ω
VSWR	≤ 2
Gain	< -2.0 dBi
Polarization Type	RHCP

#### Mechanical Specifications

Antenna Size	10 mm × 10 mm × 6.3 mm
Material	Ceramics
Connector Type	I-PEX MHF 1
Working Temperature	-40 °C to +85 °C
Radome Color	-

## 4 Overall Performance

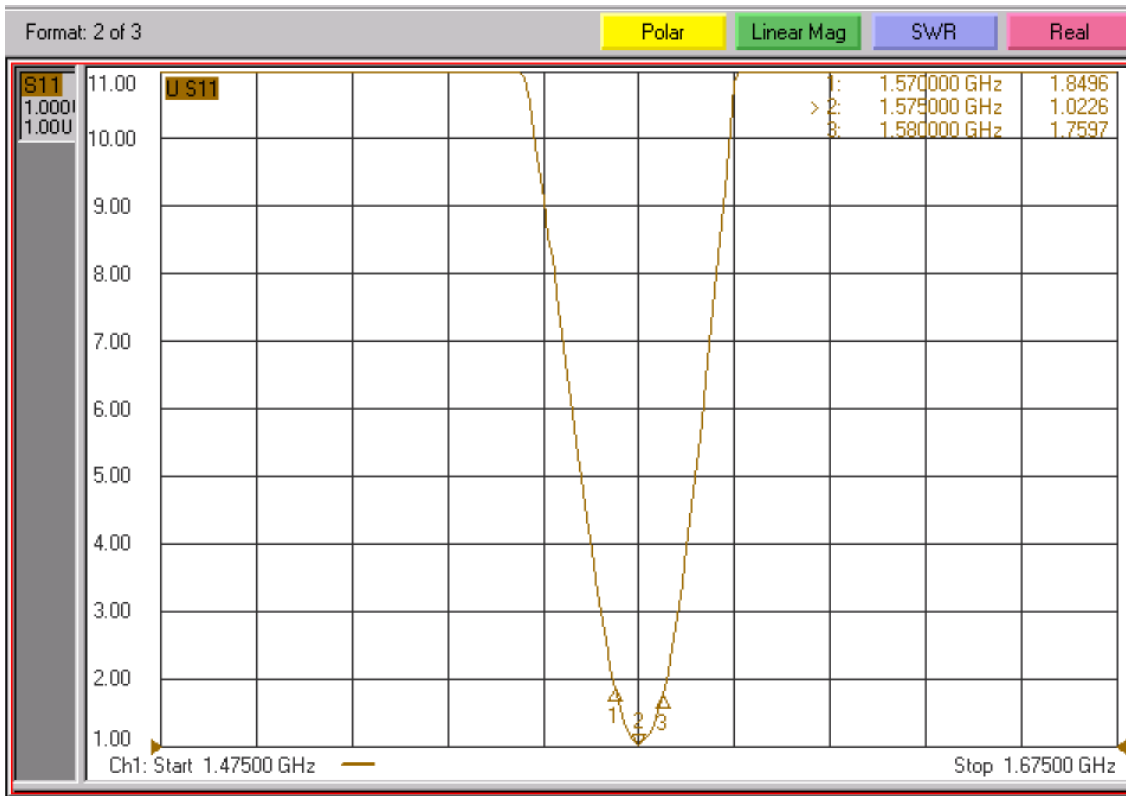
### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



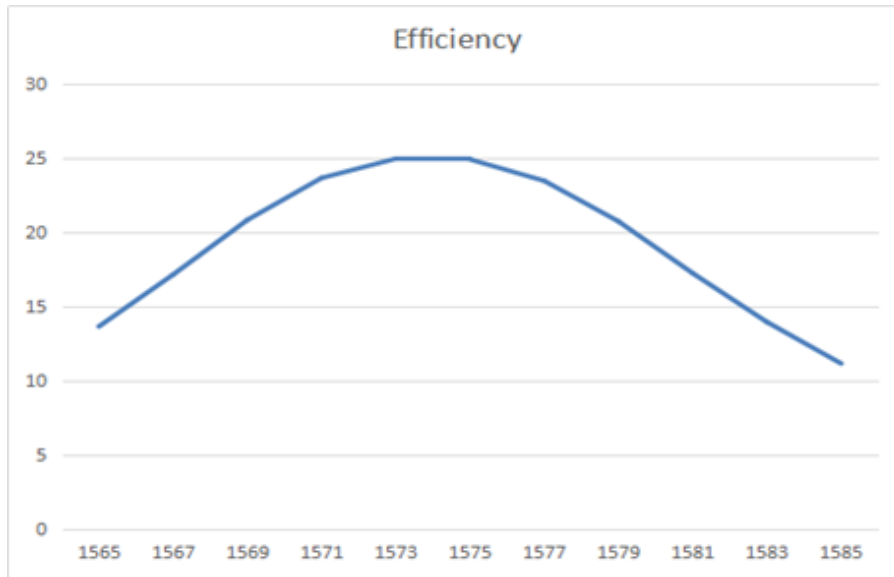


### 4.2. VSWR



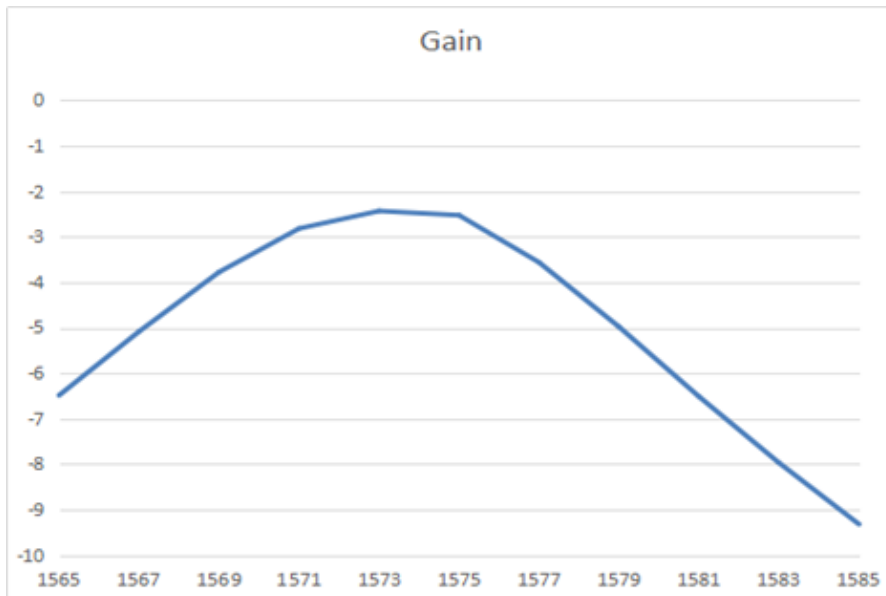
Frequency (MHz)	1575
VSWR	1.02

### 4.3. Efficiency



Frequency (MHz)	1575
Efficiency (%)	25

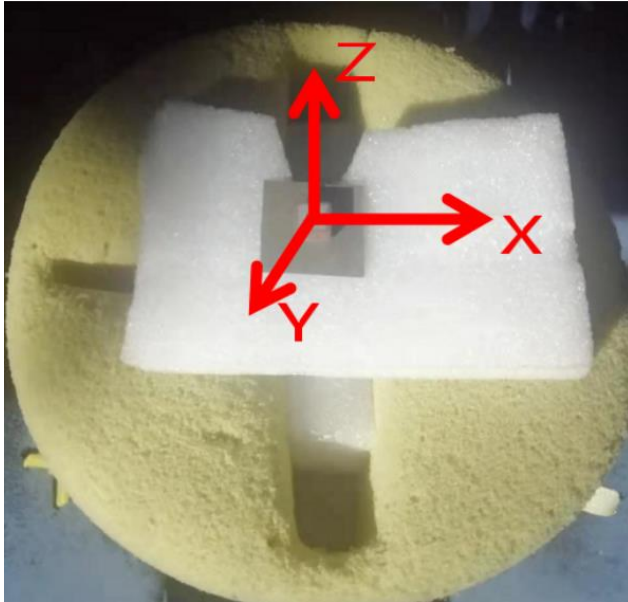
### 4.4. Gain



Frequency (MHz)	1575
Gain (dBi)	-2.55

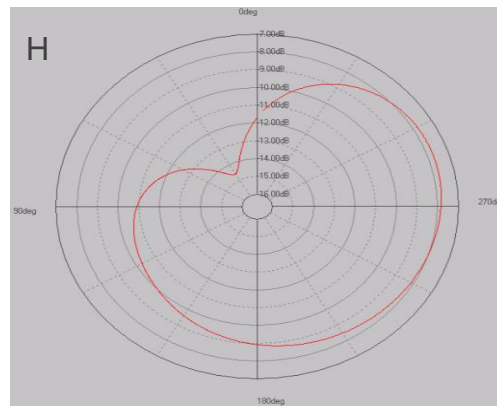
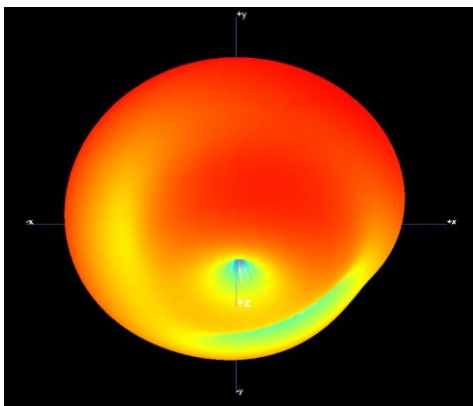
### 4.5. Radiation Pattern

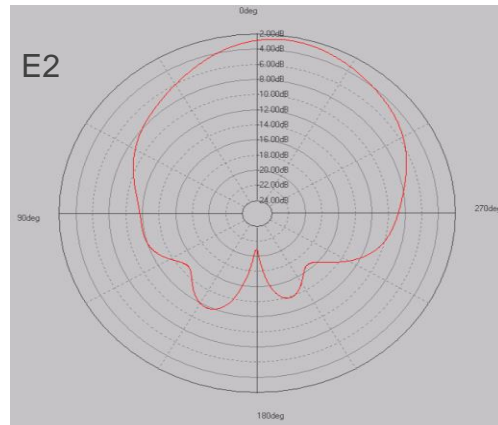
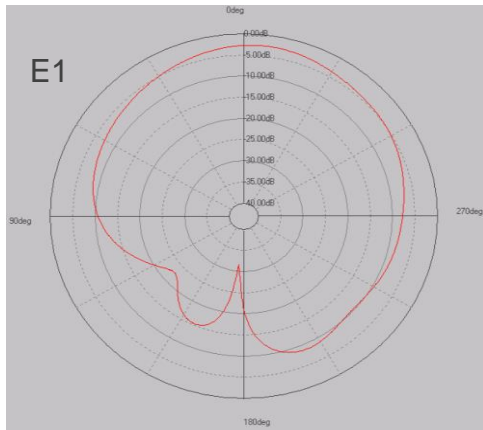
Test condition: by 30 mm square ground plane.



H plane: the tangent of XY  
E1 plane: the tangent of XZ  
E2 plane: the tangent of YZ

#### 4.5.1. 1575 MHz





## 5 Product Size

RoHS

