



# Antenna Datasheet

**Product OC:** YENT005W7AM

**Version:** 1.0

**Date:** 2025-05-26

**Status:** Released

**Product Name:** LoRa Terminal Mount Fiberglass Array Antenna

**Key Features:**

Frequency Band: 863–873 MHz

Dimensions:  $\Phi$  25.5 mm  $\times$  600 mm

Efficiency: Up to 64 %

RoHS and REACH Compliant

IP Rating: IP67

# Overview

The YENT005W7AM is a LoRa fiberglass antenna measuring  $\Phi$  25.5 mm  $\times$  600 mm. This antenna provides broad coverage from 863–873 MHz. The antenna is terminated with N type Male connectors. This low profile, terminal mount omni-directional antenna, ideal for applications where the antenna is required to be discrete, is easy to install with maximum durability assured thanks to its IP67 rated FRP enclosure. It is compatible with Quectel's RM520x Series modules.

The antenna is designed as Array type to work in free space. It is a perfect antenna product for customers that desire highest performance. This omni-directional antenna is ideally suited for Medical Devices, Smart Monitoring, Smart Home, offering great performance with its high gain and efficiency.

Typical applications include:

- Medical Devices
- Smart Monitoring
- Smart Home

Quectel provides comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs. We have regional R & D centers to offer quick response to meet your requirements. Please contact our sales & FAEs if you have any requests.

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# 1 Specification

Test Condition: Free Space

## 1.1. Electrical

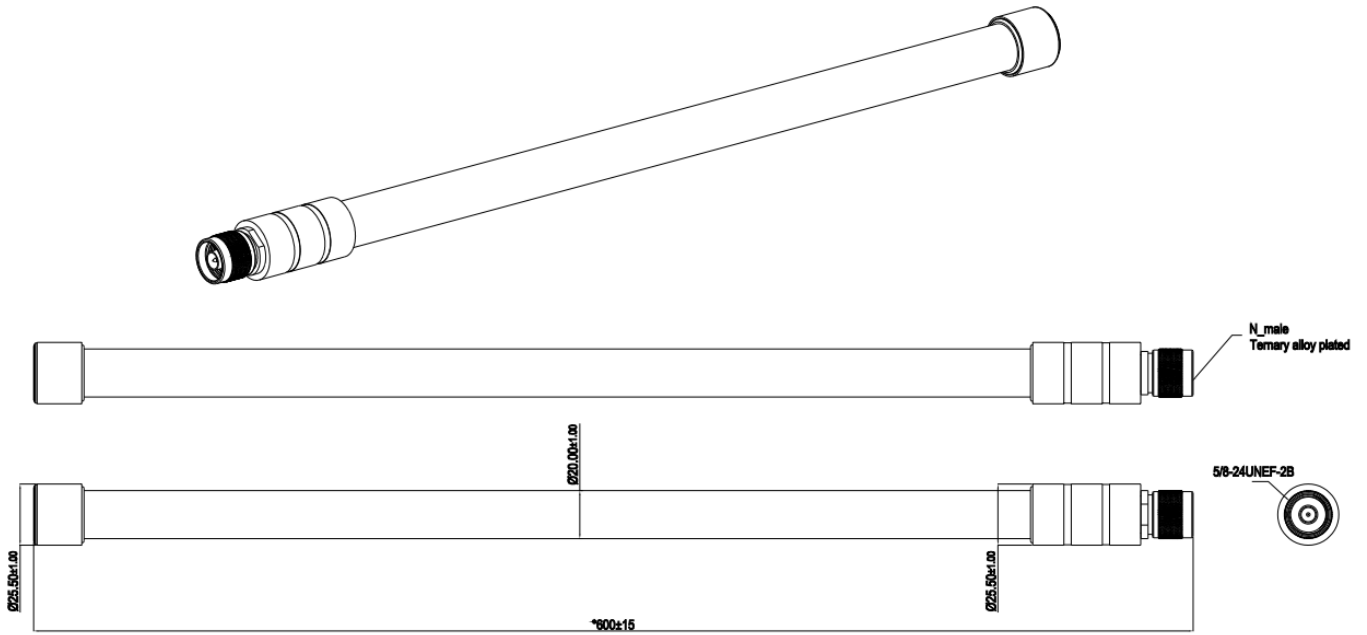
Electrical	
Frequency Range	863–873 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

SPEC	Band	
	470–510	863–873
Max VSWR	-	1.4
Max Return Loss (dB)	-	-13.3
AVG Eff. (%)	-	64.0
AVG. AVG Gain (dB)	-	-1.9
Max Peak Gain (dBi)	-	3.1 (873)

## 1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 25.5 mm × 600 mm
Material & Color	FRP & White
Connector Type	N-MALE
Mounting Type	Terminal
Weight	Typ. 220 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP67 (After Installation)
RoHS and REACH Compliant	Yes

# 2 Drawing

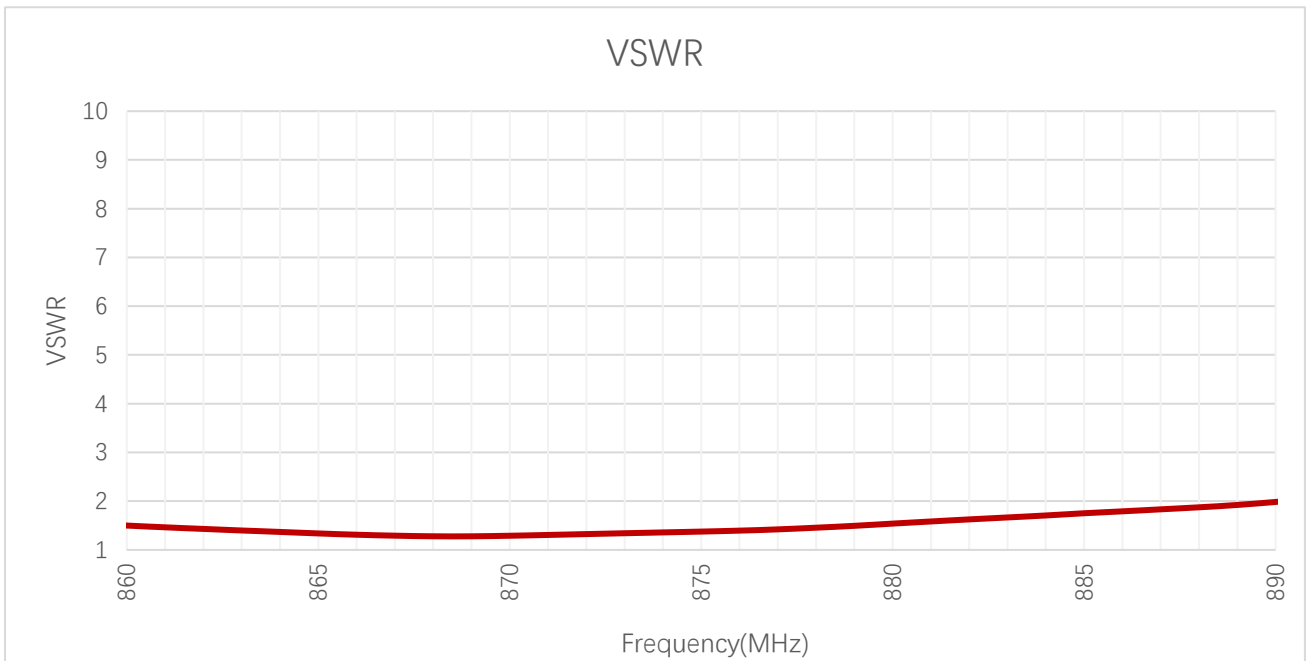


Unit: mm

# 3 Detailed Performance

## 3.1. S-Parameter Test

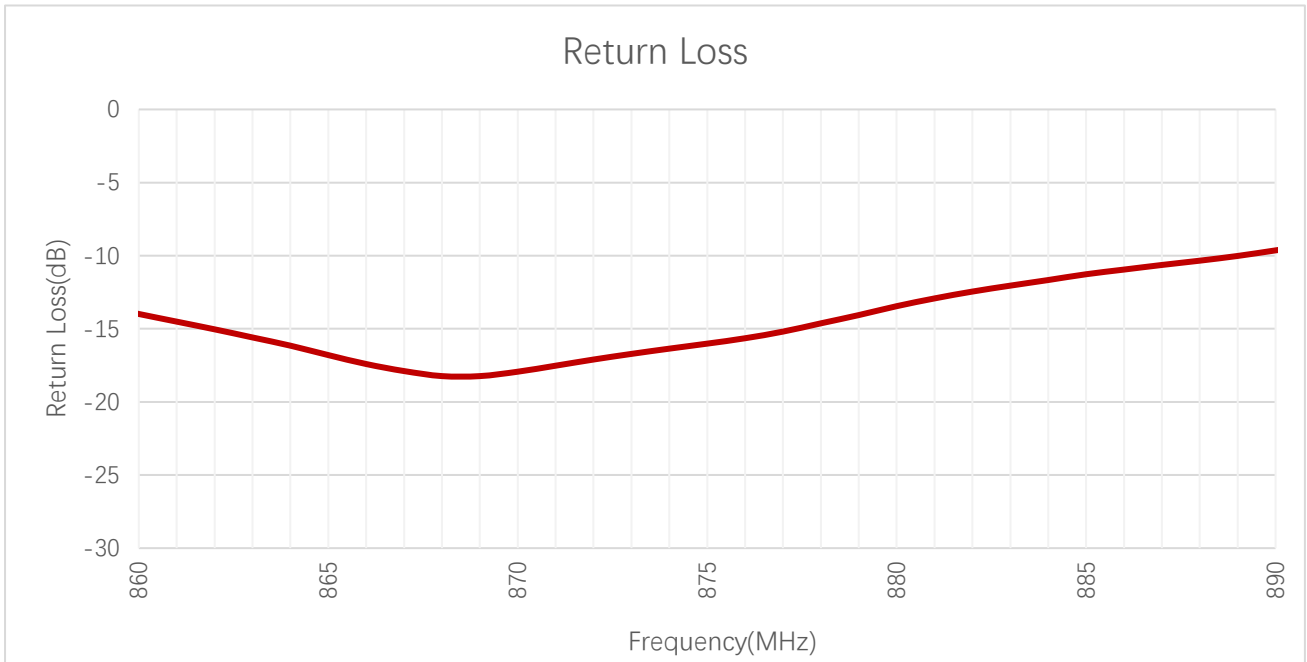
### 3.1.1. VSWR



**VSWR**

Frequency (MHz)	433	470	490	510	860	863	868	873	915	930
VSWR	-	-	-	-	-	1.4	1.3	1.3	-	-

**3.1.2. Return Loss**

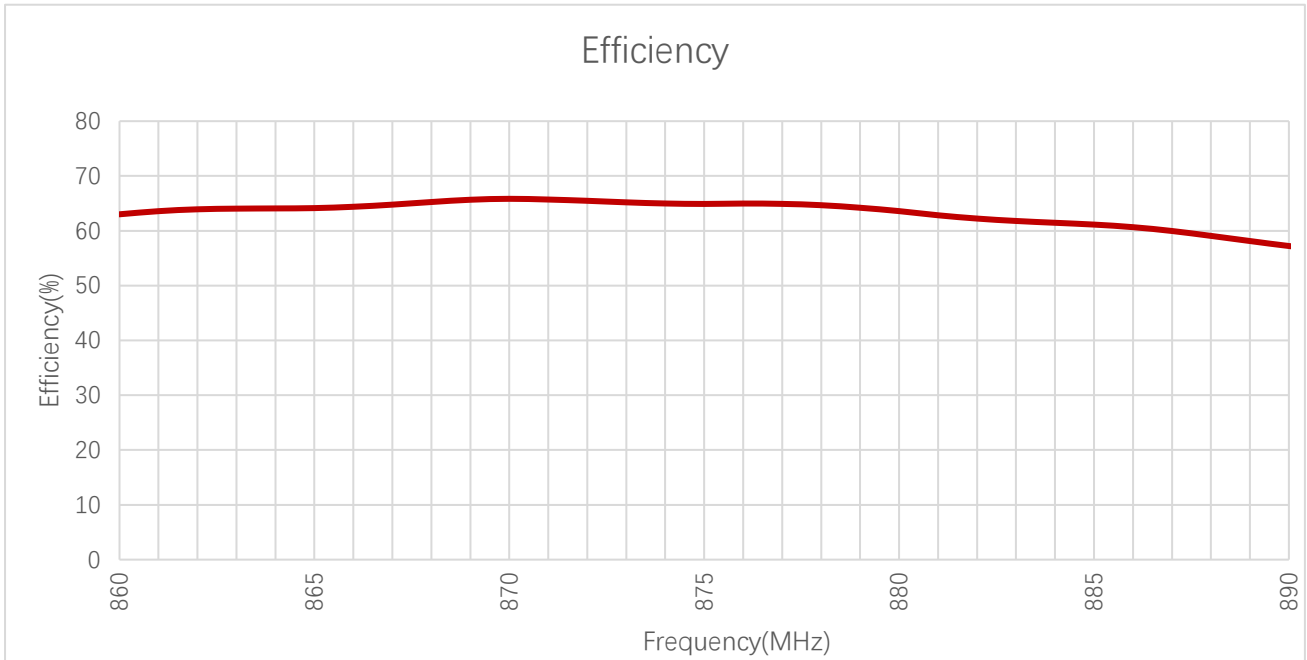


**Return Loss (dB)**

Frequency (MHz)	433	470	490	510	860	863	868	873	915	930
Return Loss (dB)	-	-	-	-	-	-15.6	-18.2	-16.7	-	-

### 3.2. Radiation Performance Test

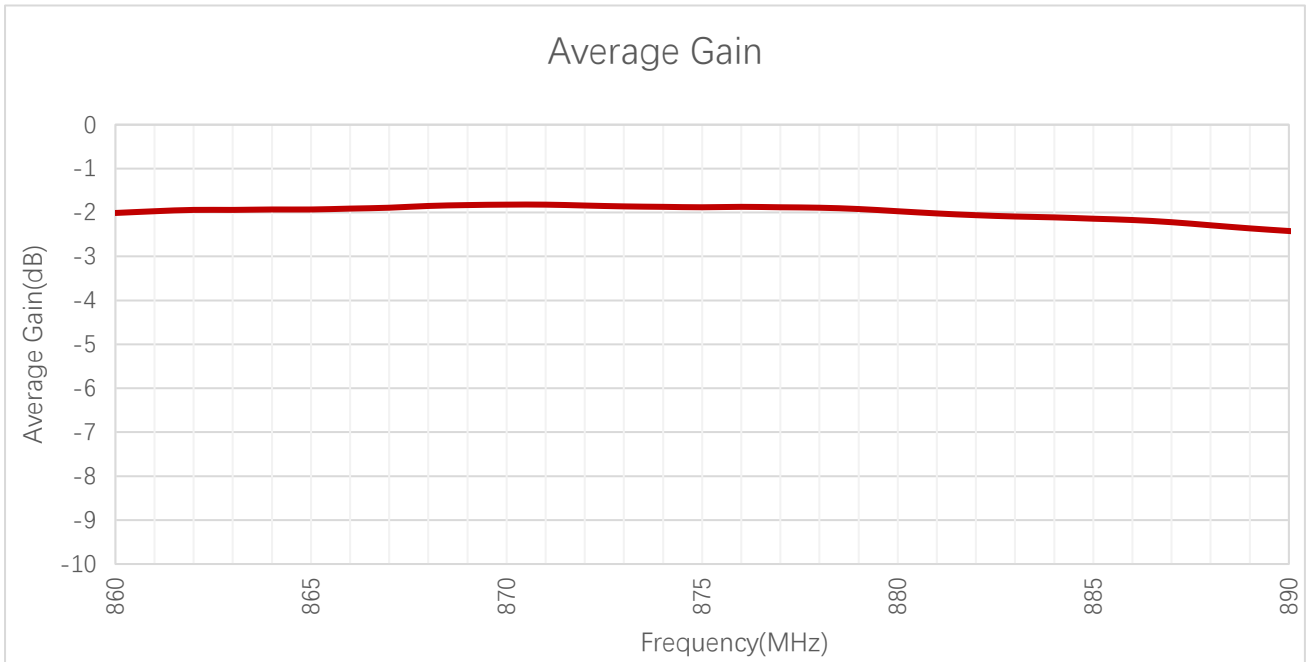
#### 3.2.1. Efficiency



**Efficiency (%)**

Frequency (MHz)	433	470	490	510	860	863	868	873	915	930
Efficiency (%)	-	-	-	-	-	64.0	65.3	65.2	-	-

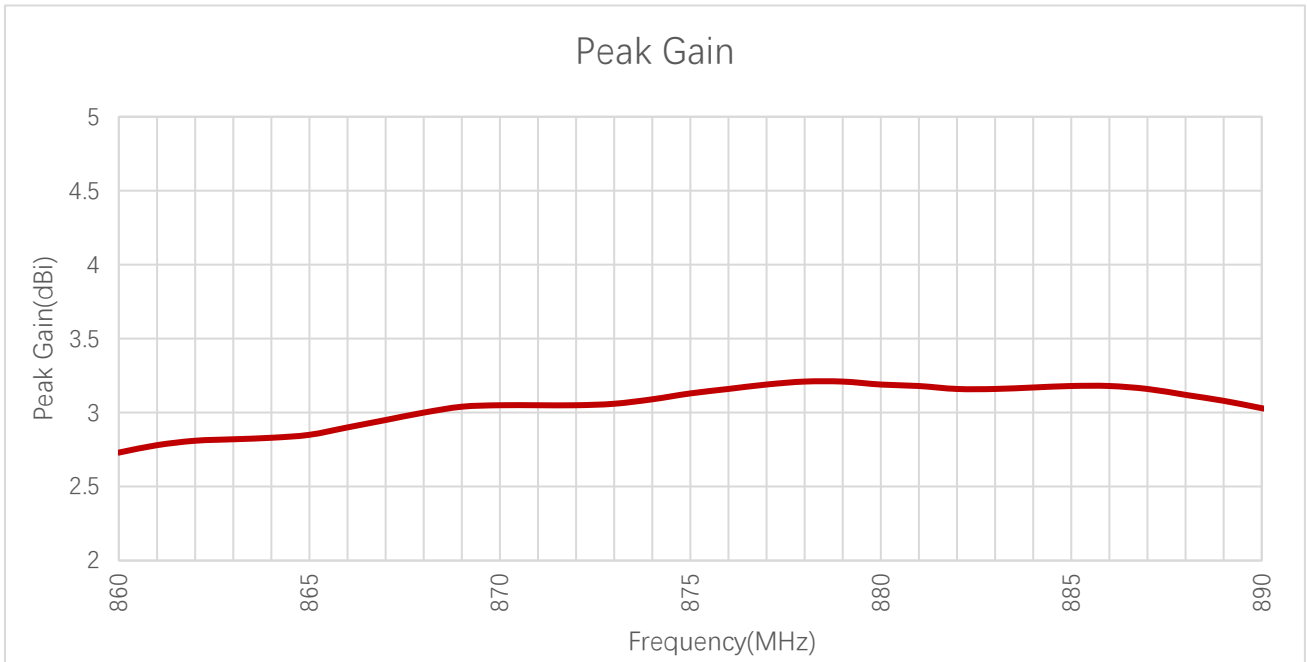
**3.2.2. Average Gain**



**Average Gain (dB)**

Frequency (MHz)	433	470	490	510	860	863	868	873	915	930
Peak Gain (dBi)	-	-	-	-	-	-1.9	-1.9	-1.9	-	-

**3.2.3. Peak Gain**



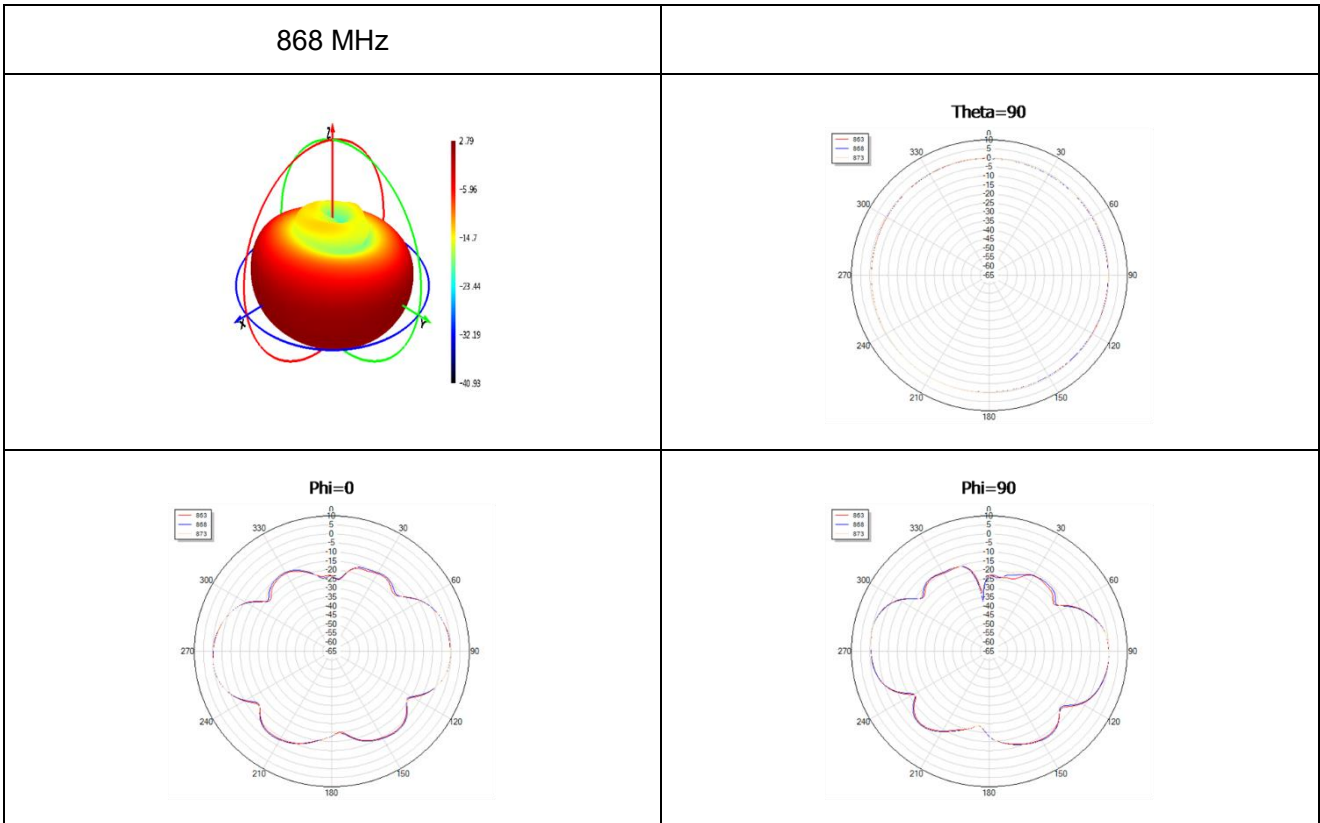
**Peak Gain (dBi)**

Frequency (MHz)	433	470	490	510	860	863	868	873	915	930
Peak Gain (dBi)	-	-	-	-	-	2.8	3.0	3.1	-	-

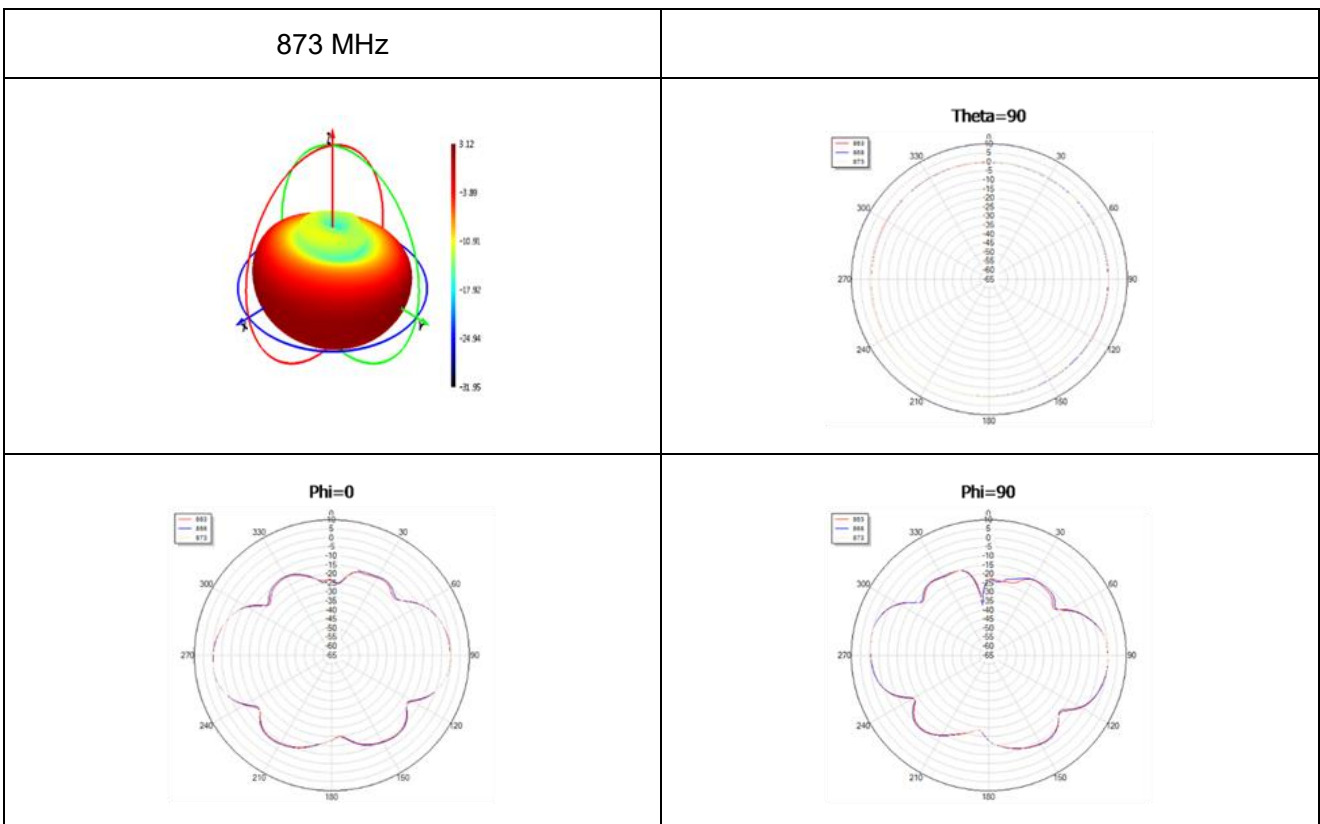
### 3.2.4. 3D & 2D Radiation Pattern

- Test Condition: Free Space
- Test Chamber: HF-G-1

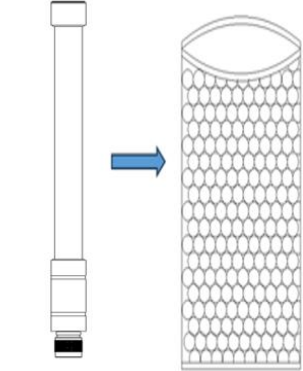
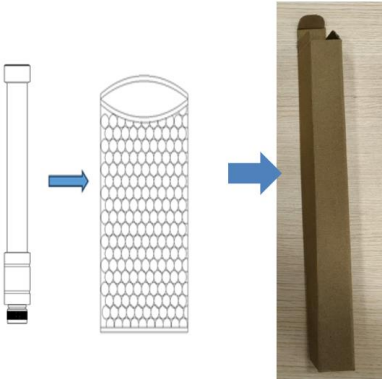



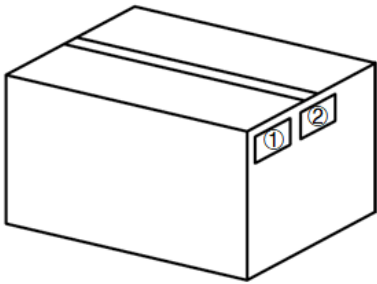
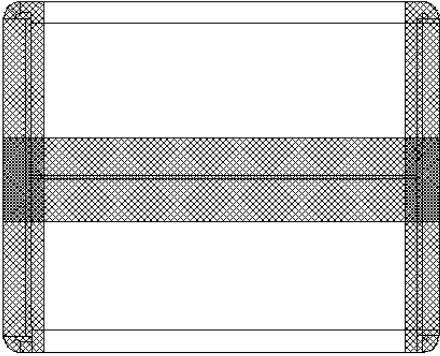


● **Max Peak Gain**



# 4 Packaging

Step	Packaging picture / 2D picture	Description
1		<p>1 pc antenna product in a bubble bag. (1 PC Antenna / Bubble Bag)</p>
2		<p>1 pc antenna product in an inner box. (1 PC Antenna / Inner Box)</p>
3		<p>20 pcs inner boxes in a carton box. (20 PCS Antennas / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> <u>L × W × H = 640 × 480 × 125 mm</u></p>

<p>4</p>		<p><b>Position for Attaching Labels</b></p> <ul style="list-style-type: none"> <li>① Carton Label</li> <li>② Quality Label</li> </ul>
<p>5</p>		<p><b>Sealing Cartons</b> H-shaped sealing cartons</p>
<p>Note</p>	<p>The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.</p>	

# Contact Us

**At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:**

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

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# Revision History

Version	Date	Author	Note
-	2025-05-26	Nero ZHANG/ Lance SUN/ Riva REN/ Rainey LIAO	Creation of the document
1.0	2025-05-26	Nero ZHANG/ Lance SUN/ Riva REN/ Rainey LIAO	First official release

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