

Antenna Product Manual

HYN504

Product Features

Electrical Properties: It is a general antenna for UHF RFID applications with high gain and low VSWR.

Mechanical Properties: The compact and artistic antenna is suitable for all kinds of severe environment for its dual waterproof design with gasket and silicone and strengthening rib of shell.

Performance Specifications

Frequency Range: 860MHz~960MHz

Maximum VSWR: $\leq 1.3:1$

Gain: > 5 dBi

H side HPBW: 70°

E side HPBW: 70°

Polarization: Circular Polarization

Relative humidity: 5%~95%

Input Impedance: 50Ω

Antenna Connection: SMA-50KFD (external thread female)

Physical specifications

Size: 128mm*128mm*37.8mm

Weight: 0.3kg (without bracket)

Material: Engineering Plastic ASA、Aluminums

Color: Ivory-white

Enclosure Rating: IP67

Operational Temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

Storage Temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

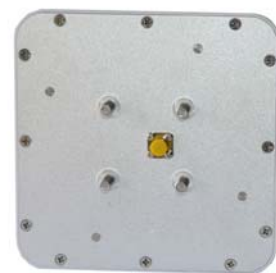


Figure 1 The photograph of the antenna

Antenna size

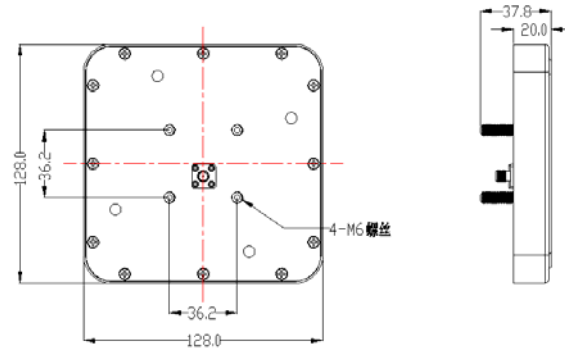


Figure 2 Installation size

Installation

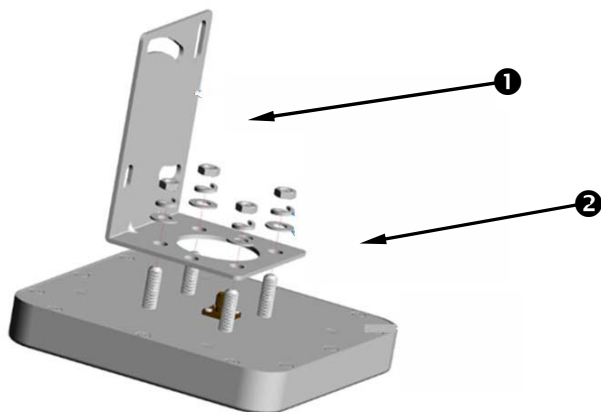
The antenna can be installed on steel framed structure or bracket by own antenna bracket, and connect with reader with coaxial line. The antenna can be installed horizontally or vertically, it is decided by installation location, the angle can be adjusted after installation according to the real environment.

Antenna bracket is an optional accessory, you can choose according to your special requirement.

Installation Steps

1 installation

Step 1: Fix the L board on the antenna by using M6 screw, elastic washer and plain washer, please see Figure 3.



1	L board(bracket)
2	M6 screw, elastic washer and plain washer,

Figure 3

The L board have been fixed on the antenna , please see figure 4.

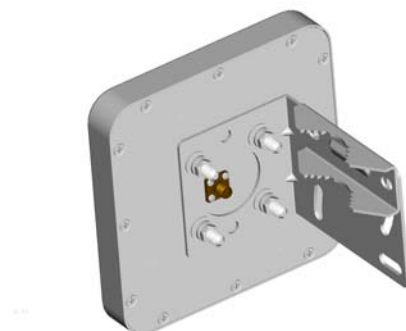
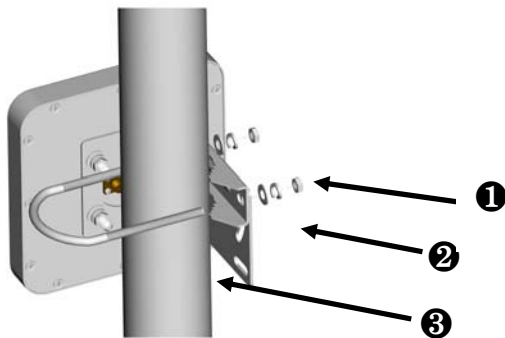


Figure 4

Step 2: Please use M6 screw, M6 U style screw bolt elastic washer and plain washer and “Dog tooth” to fix antenna on pole, as shown in Figure 5.



1	M6 screw elastic washer and plain washer,
2	Dog tooth
3	M6 U style screw bolt

Figure 5 fixing the antenna on pole

Antenna performance figure

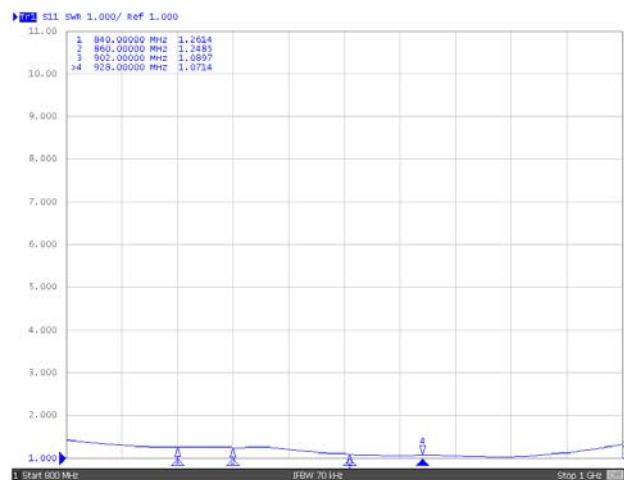


Figure 6 The VSWR

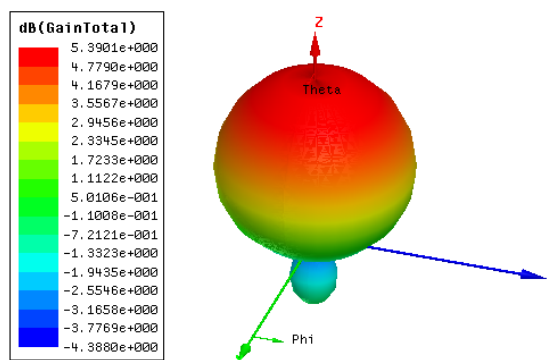


Figure 7 The radiation pattern (3D pattern, Gain>5 dBi)

Common Problems and Attention:

1. The antenna is a circular polarization antenna. Please kindly adjust the angle to get the best reading performance in practical applications.
2. The antenna can be used at the outdoor environments, but it's not good to use it in an acid/alkali environment.