



## SM-T0258 RIFD Antenna

### Model

SM-T0258

### Product features

Electrical performance: The general-purpose antenna suitable for UHF band RFID applications has the characteristics of high gain, low standing wave, etc. It has the dual advantages of the far-distance reading distance of the linearly polarized antenna and the non-directionality of the circularly polarized antenna.

Mechanical properties: Beautiful and compact appearance, waterproof design with waterproof ring and silicone, shell with reinforced design, suitable for all kinds of harsh environments.

### Application

The SM-T0258 can be easily used in RFID applications such as access control, warehousing, logistics, and retail in the UHF band.

### Performance

Frequency: 902MHz~928MHz

Voltage standing wave ratio:  $\leq 1.3:1$

Gain:  $> 9\text{dBi}$

H side HPBW:  $70^\circ$

E side HPBW:  $70^\circ$

Polarization:

Relative humidity: 5%~95%

input resistance:  $50\ \Omega$

Connector type: N-50KFD (N-type male female) (two input ports)

### Specification

Size: 258mm×258mm×36mm

weight: 0.91kg

Material: ABS

Color: white

IP Grade: IP67

Operating temperature:  $-40^\circ\text{C}\sim+85^\circ\text{C}$

stored temperature:  $-40^\circ\text{C}\sim+85^\circ\text{C}$



Pic 1

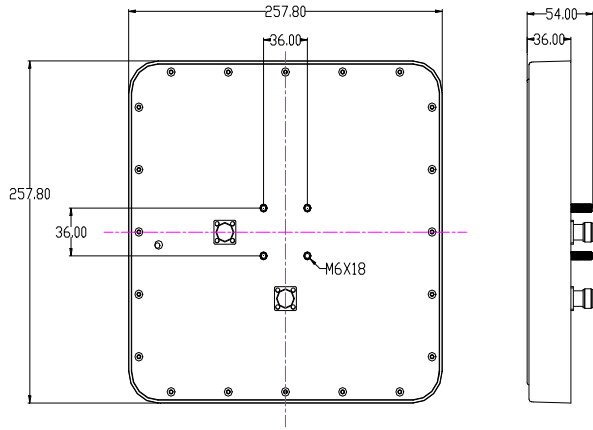
### Install

The SM-T0258 can be mounted on the steel frame structure or pillar by its own bracket or user-fitted bracket, and connected to the reader through the coaxial cable. The antenna can be installed horizontally or vertically, depending on the mounting orientation of the bracket. After installation, the tilt angle of the antenna can be adjusted according to the actual situation.

The antenna mount is an option and the customer can choose as needed.

### **Size:**

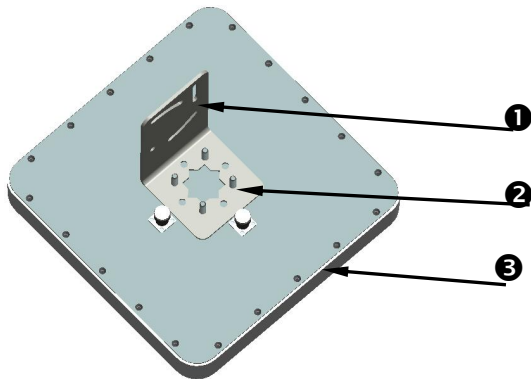
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Pic 2

## installation steps

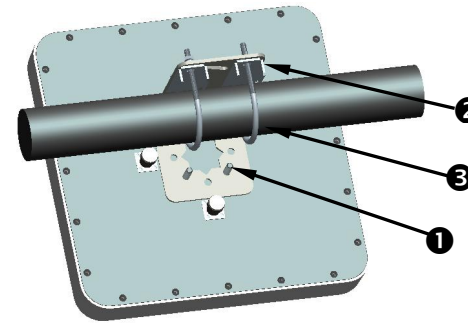
### 2.1 Horizontal installation



1	L Plat ( Mounting brackets )
2	M6 Nuts
3	SM-T0258 antenna

Pic3

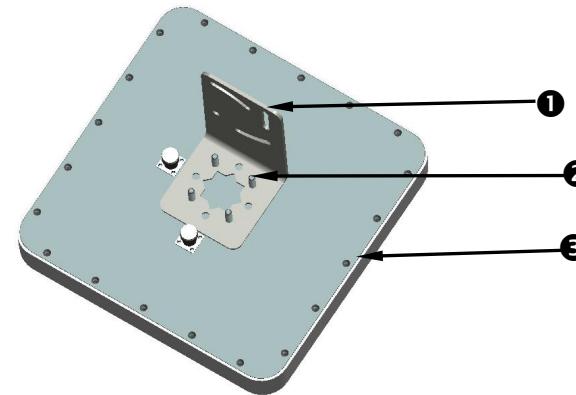
**Step 1:** Fix the L plate on the antenna with “M6 nut and flat washer, spring washer”, as shown in pic3. .



Pic 4

**Step 2:** : Use "M6 U-bolt, nut washer and flat washer" and "dog teeth" to fix the antenna on the horizontal or vertical steel frame structure or pillar, see Pic 4

### 2.2 Vertical installation



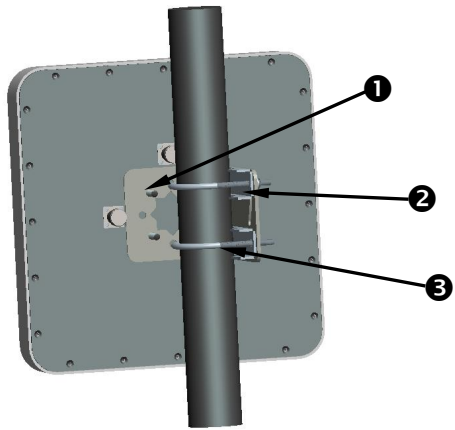
1	L plat ( mounting brackets )
2	M6 nuts
3	SM-T0258 antenna

Pic6

**Step 1:** Fix the L plate to the antenna with “M6 nut and flat washer, spring washer”, see Figure 5.

1	M6 nuts
2	
3	M6 U-bolt

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❶	M6 nuts
❷	
❸	M6 U-blot

## Pic 6

Step 2: Use the "M6 U-bolt, nut washer and flat washer" and "dog teeth" to fix the antenna on the horizontal or vertical steel frame structure or pillar, see Figure 6..

## Antenna pattern

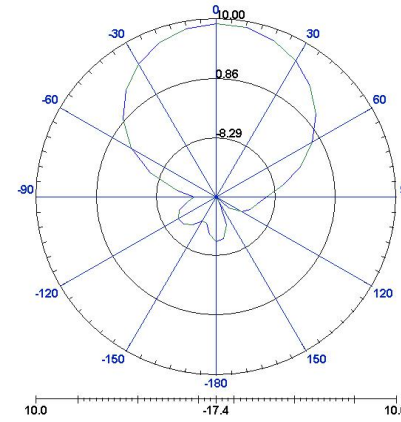
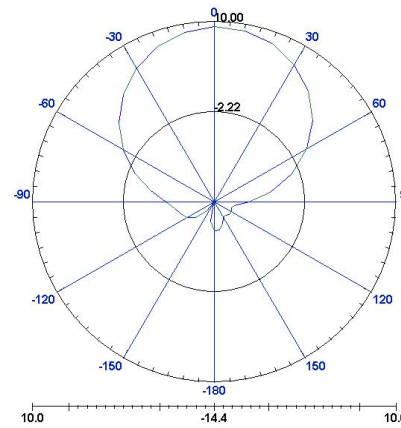
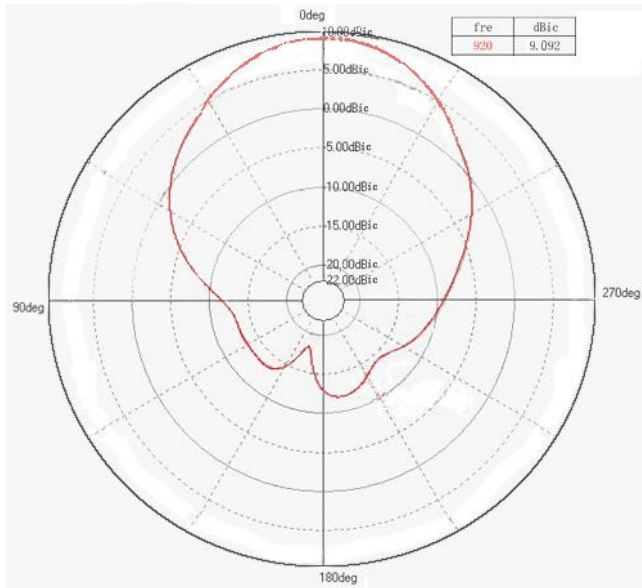


Figure 7 Antenna pattern 1 (E side)

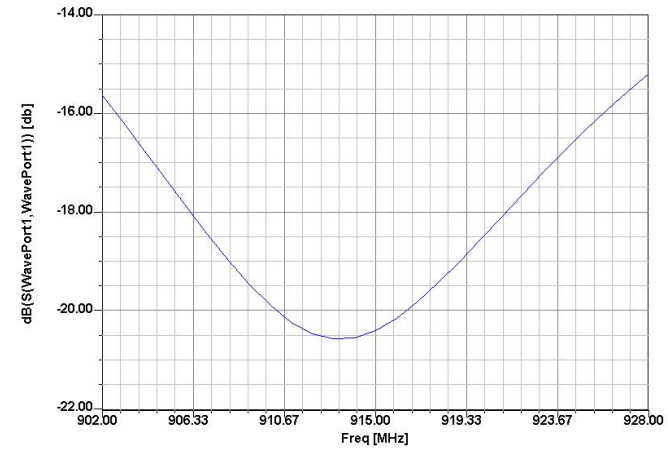


Pic 8 Antenna pattern 2 (H side)

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Pic 9 Antenna pattern 3 (two-dimensional pattern, gain display greater than 9 dBi)

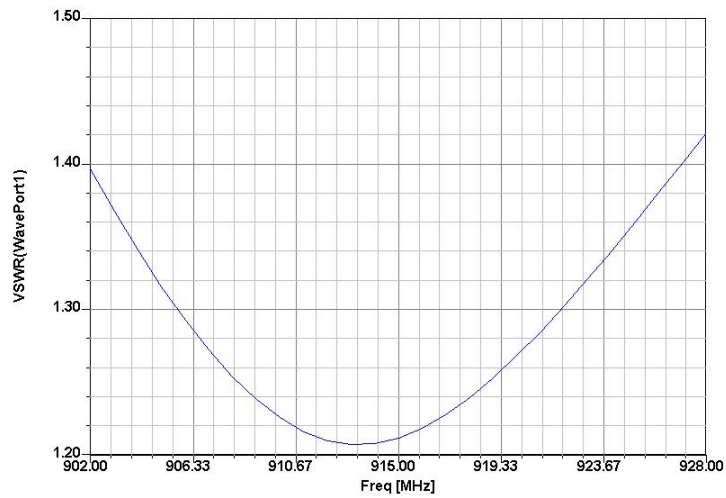


Pic 11 Antenna input port S parameter

## Questions

**The SM-T0258 is a cross-line polarized directional antenna. When using it, care should be taken to adjust the tilt angle of the antenna to obtain optimal read performance.**

**SM-T0258 can be used outdoors, but not suitable for use in acid/alkaline environments**



Pic 10