



TX900-FPC-4420

Antenna Specification

868/915 MHz FPC Internal Antenna
IPX-I Connector (IPEX/MHF Gen 1)

Chengdu Ziisor Technology Co.,Ltd

Chapter 1 Product Introduction

The TX900-FPC-4420 is an 868/915 MHz dual-band internal FPC antenna. The antenna dimensions are approximately 44 mm × 20 mm, with an IPX-I (IPEX/MHF Gen 1) connector and a cable length of approximately 150 mm. It is suitable for various 868/915 MHz dual-band wireless modules and Internet of Things (IoT) devices.

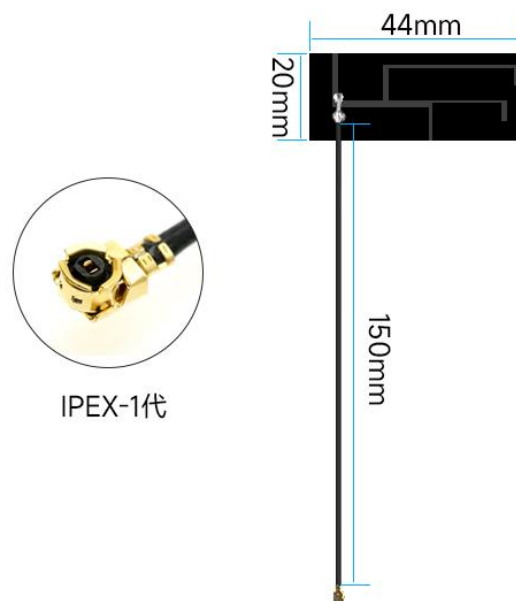


Fig. 1 TX900-FPC-4420 antenna outline

Chapter 2 Specifications

Electrical Parameters	
Center Frequency	868/915 MHz
Antenna Bandwidth	860 - 940 MHz
Antenna Gain	3 dBi
Voltage Standing Wave Ratio (VSWR)	≤ 1.5
Polarization	Linear
Radiation Pattern	Omnidirectional
Input Impedance	50 Ω
Power Handling	2 W

Other Parameters	
Product Dimensions	44 mm × 20 mm
Overall Weight	1 g
Antenna Material	FPC
Cable Material	RF1.13
Cable Length	150 mm (customizable)
Connector Type	IPX-I (IPEX/MHF Gen 1)
Operating Temperature	-40 °C ~ +85 °C
Storage Temperature	-40 °C ~ +85 °C

Chapter 3 Antenna Characteristics

Voltage Standing Wave Ratio (VSWR)

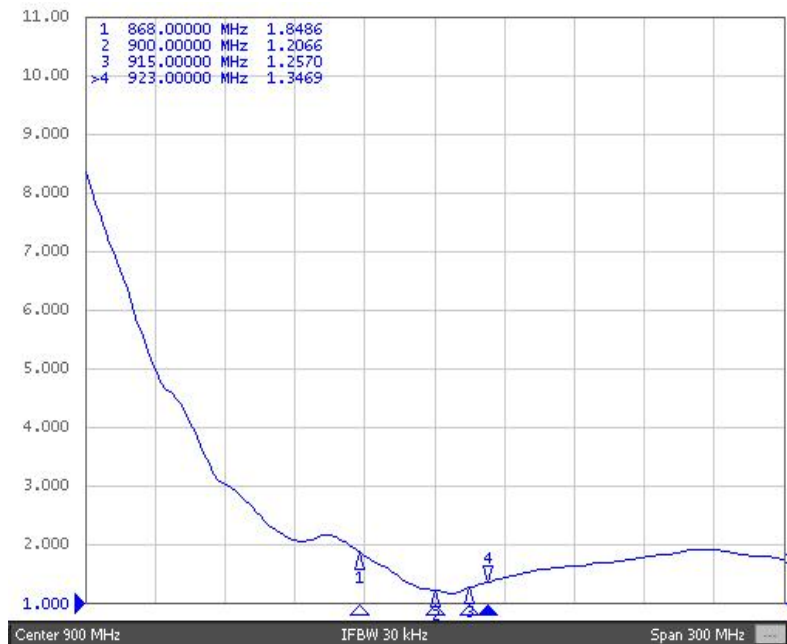


Fig. 2 Voltage Standing Wave Ratio (VSWR)

Smith Chart

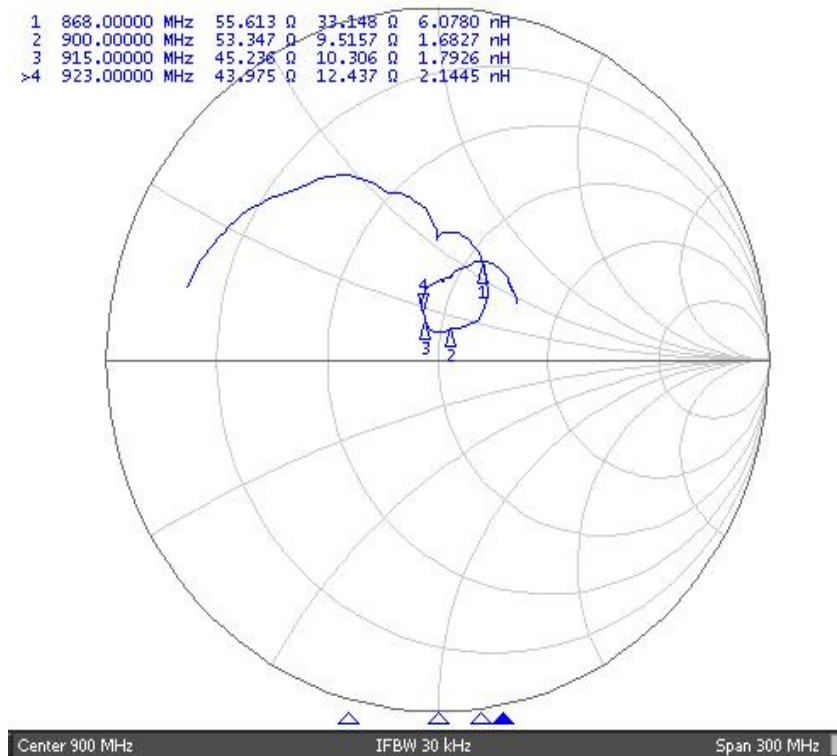


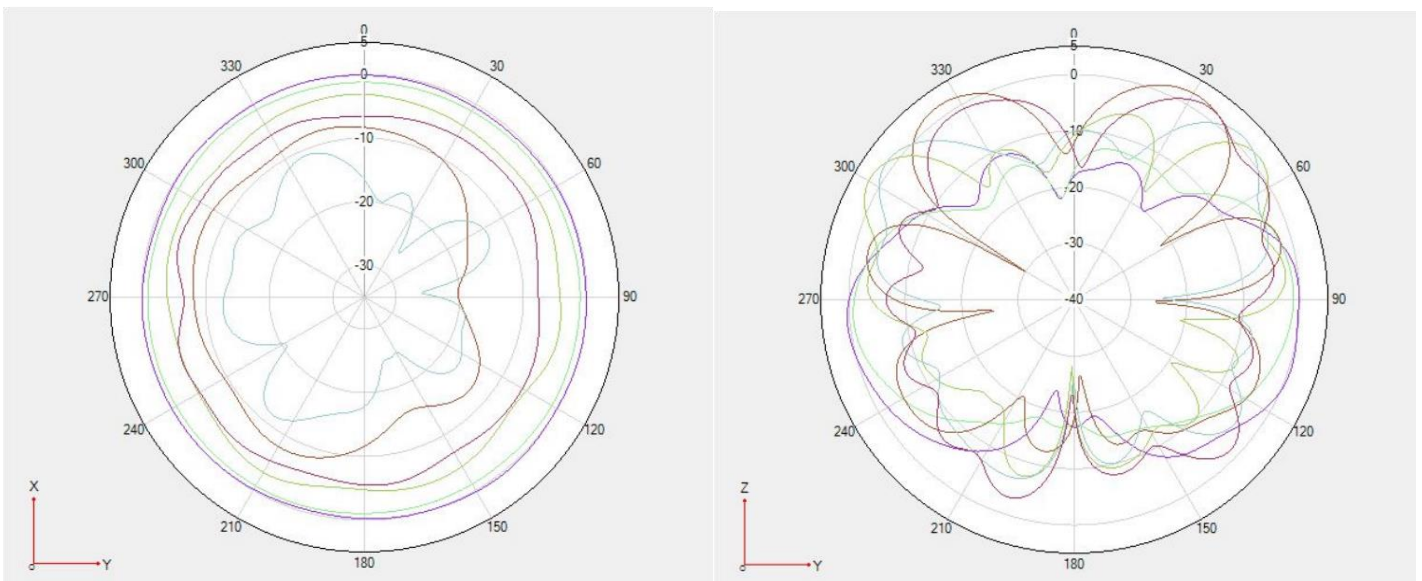
Fig. 3 Smith chart

Note: Tested with the antenna exposed in air; data is for reference only.

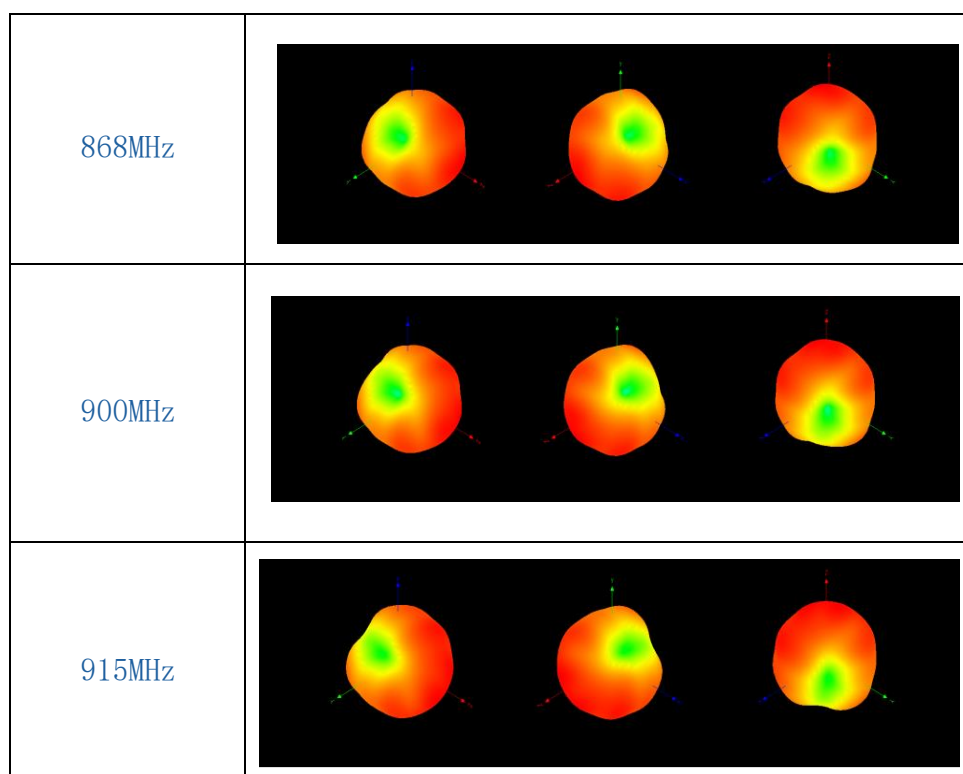
Efficiency、gain

Frequency/Mhz	Efficiency/ %	MaxGain/dBi
865	43.95	1.83
870	45.21	1.92
875	45.08	1.67
880	46.10	1.66
885	46.62	1.93
890	47.02	1.72
900	48.88	2.04
905	49.98	2.16
910	49.16	1.96
915	47.94	2.48
920	49.57	2.76
925	47.23	2.45
930	46.11	2.52
935	45.27	2.24
940	46.78	2.55
VAG	46.99	2.12

Radiation Pattern-2D



Radiation Pattern-3D



Chapter 4 Common Questions

1. The antenna frequency must match the frequency of the wireless device; otherwise, the communication performance will be poor.
2. The lower the communication frequency, the longer the wavelength and the better the diffraction (bending) performance.
3. When there are obstacles in the line-of-sight path, the communication distance will be attenuated accordingly.
4. Pay attention to the antenna radiation direction. Incorrect antenna installation direction will lead to a shorter transmission distance.
5. The ground absorbs radio waves. Testing near the ground will result in poor performance; it is recommended to increase the height.
6. Seawater has a strong ability to absorb radio waves, so testing near the sea will result in poor performance.
7. If there are metal objects near the antenna or the antenna is placed inside a metal enclosure, the signal attenuation will be very severe.
8. Poor impedance matching between the antenna and the communication device will lead to poor communication performance.

Contact Information

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Tmall Flagship Store	https://ziisor.tmall.com/

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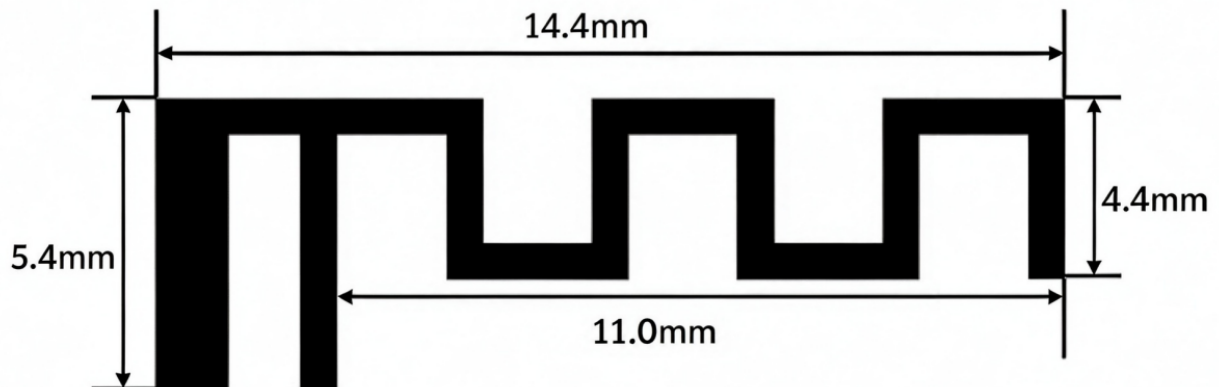


Inverted F Antenna Specification

Summary

ITEM	ANT SPEC					
Model Name	2.4G ANT					
Center Frequency	Horizontal			Vertical		
	2400MHz	2450MHz	2500MHz	2400MHz	2450MHz	2500MHz
	1.72	1.98	1.99	0.78	1.36	1.53
MAX. Gain	2.00 dBi					
Polarization	Horizontal and Vertical					
Azimuth Beam Pattern	Omni-directional					
Impedance	50 Ohm					
Antenna Length	47.20mm					
Manufacture	AdoModel Tech Inc.					
Address	6679 Peachtree Industrial Blvd Suite N, Peachtree Corners, Georgia 30092, United States					

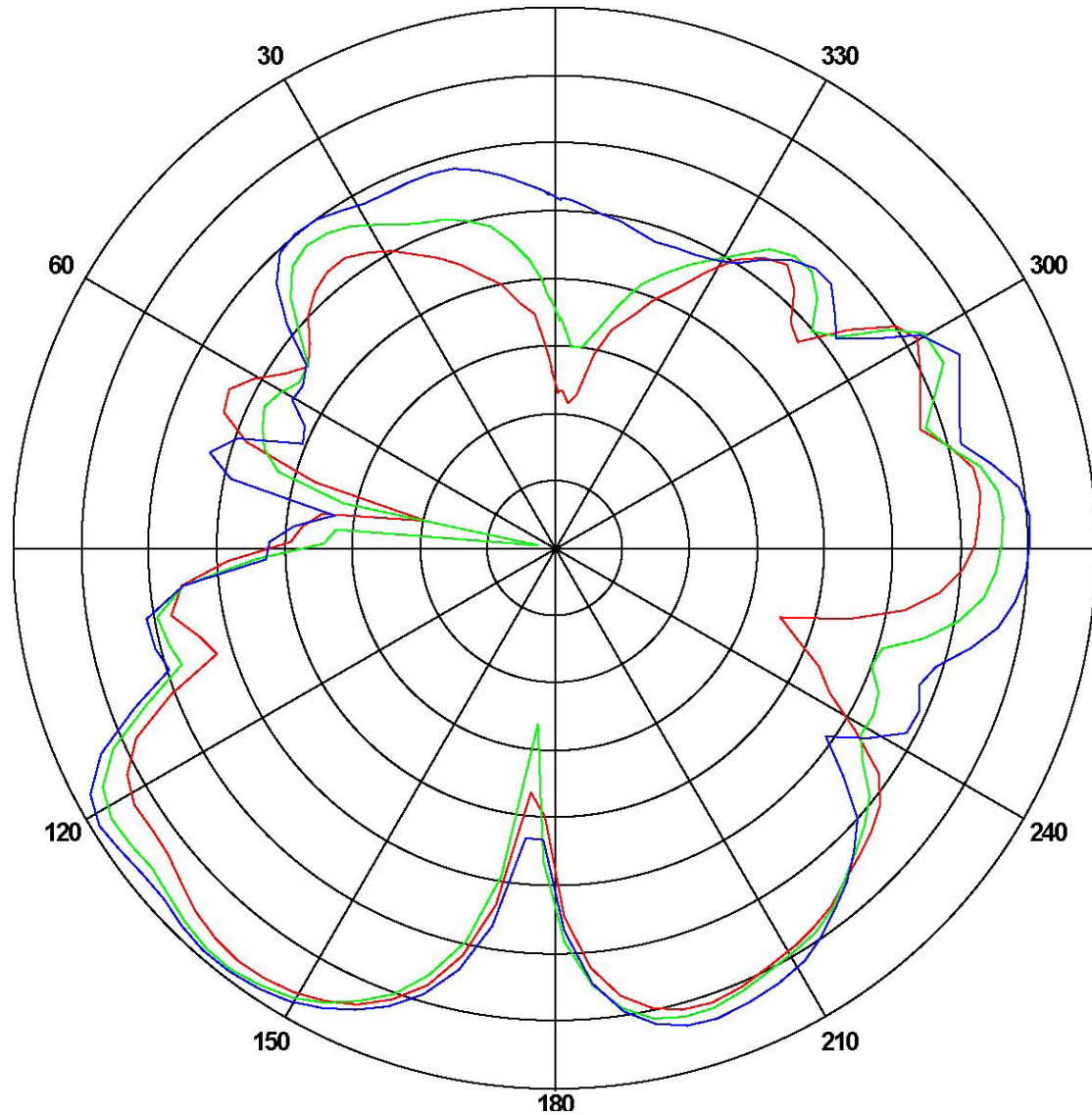
Antenna Photo & Length (mm)



Horizontal: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 2 Min: -6 Scale: 1/div

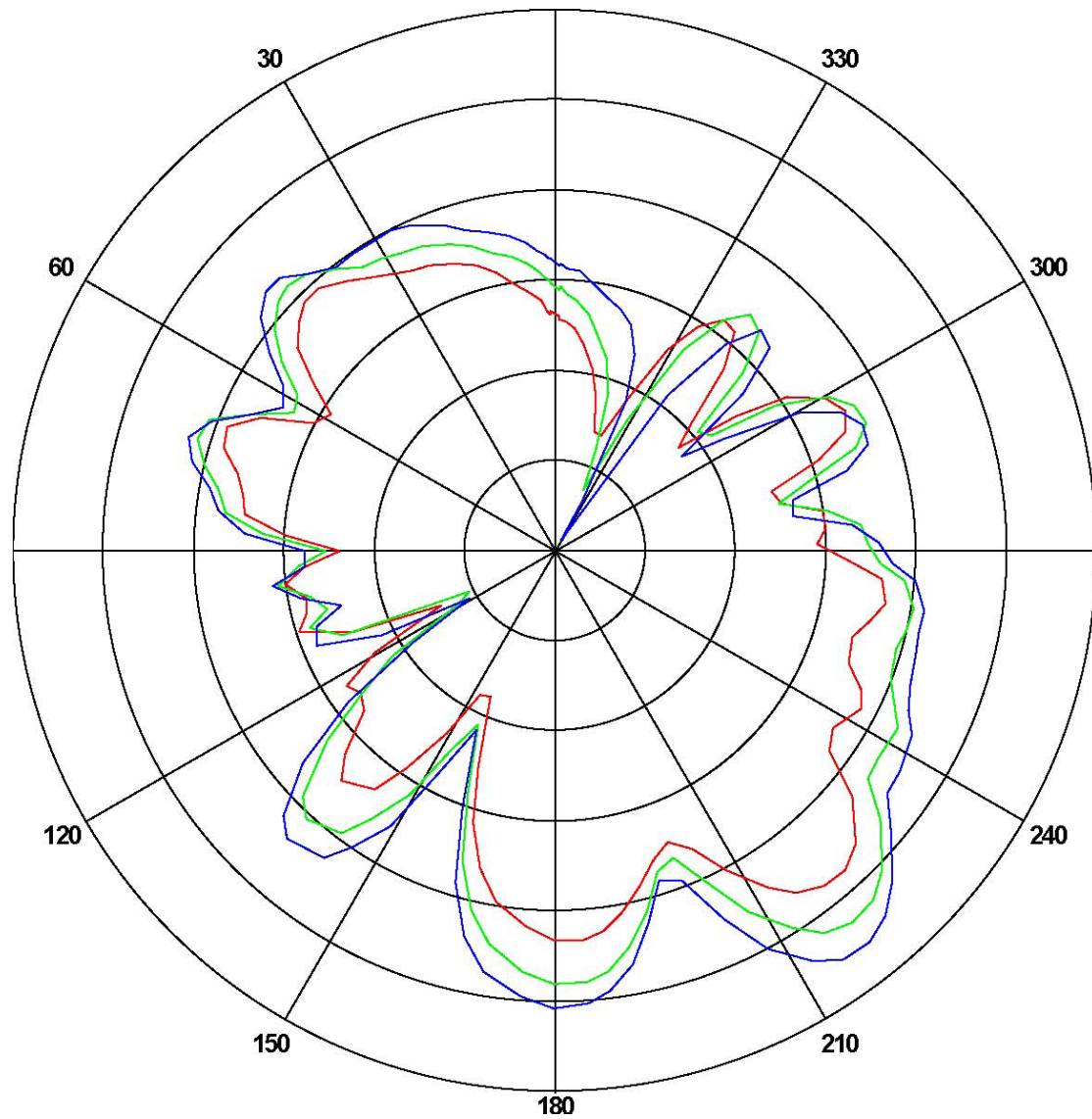


Frequency (MHz)	Gain(dB)		
	Max	Min	Avg
2400	1.72174	-3.98912	-0.83716
2450	1.98302	-5.86047	-0.78023
2500	1.98782	-3.53156	-0.69127

Vertical: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 2 Min: -4 Scale: 1/div



Frequency (MHz)	Gain(dB)		
	Max	Min	Avg
2400	0.77537	-1.61424	-1.42934
2450	1.36311	-3.38327	-1.37062
2500	1.53120	-3.97849	-1.20432