

## SPECIFICATION

Part Number: **IMA.01.105111**

Product Name: External Iridium™ Marine Antenna

Features:

- 1616MHz ~1626.5MHz Iridium antenna
- Antenna Efficiency > 65% with 1.0 meter standard cable
- IP67 waterproof
- Standard 1M CFD-200 coaxial cable
- Bracket-Mount
- Custom cables and connectors available
- Dims: 108mm Ø90mm
- RoHS Complaint



## 1. Introduction

The IMA.01 Iridium Marine antenna is a high performance, durable, bracket mount antenna which is designed for applications using the Iridium® Satellite Communication system.

The durable IP67 rated housing and bracket mount makes the IMA.01 the ideal solution for permanent marine installations. The antenna exhibits excellent efficiency, greater than 65% with the standard 1.0 meter CFD-200 coaxial cable.

Iridium® has certified the IMA.01 antenna for commercial use in connection with the Iridium Communications System. Iridium Satellite LLC is the owner of Iridium® and all other Iridium trademarks, service marks, and logos contained herein.

The IMA.01 antenna is designed for free air operation, thus no ground plane is required.

## 2. Specification

ELECTRICAL		
Band	Iridium	
Center Frequency (MHz)	1621.5±5.25MHz	
Range of Receiving Frequency (MHz)	1621~1626.5	
Impedance (Ohms)	50 Ohms	
Polarization	Right Hand Circular	
VSWR		
Cable length (meter)	0.5	2.0
	1.0	1.8
	2.0	1.7
	3.0	1.6
	5.0	1.5
Efficiency (%)		
Cable length (meter)	0.5	79.3
	1.0	75.6
	2.0	67.4
	3.0	45.1
	5.0	38.3
Return Loss (dB)		
Cable length (meter)	0.5	-8.9
	1.0	-10.5
	2.0	-11.5
	3.0	-12.7
	5.0	-13.7
Peak Gain (dBi)		
Cable length (meter)	0.5	4.0
	1.0	3.9
	2.0	3.7
	3.0	2.2
	5.0	1.3
MECHANICAL		
Dimensions	Ø90x108mm	
Cable	CFD-200 Coaxial , 1 meter length	
Connector	SMA (M) 50 Ohms	
Termination	Ag (Environmentally-Friendly PB Free)	
Protection	IP67	
Weight	108 grams	
ENVIRONMENTAL		
Temperature Range	-40°C to +85°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity	40% to 95%	
Shock (Drop Test)	1m drop on concrete 6 axes	

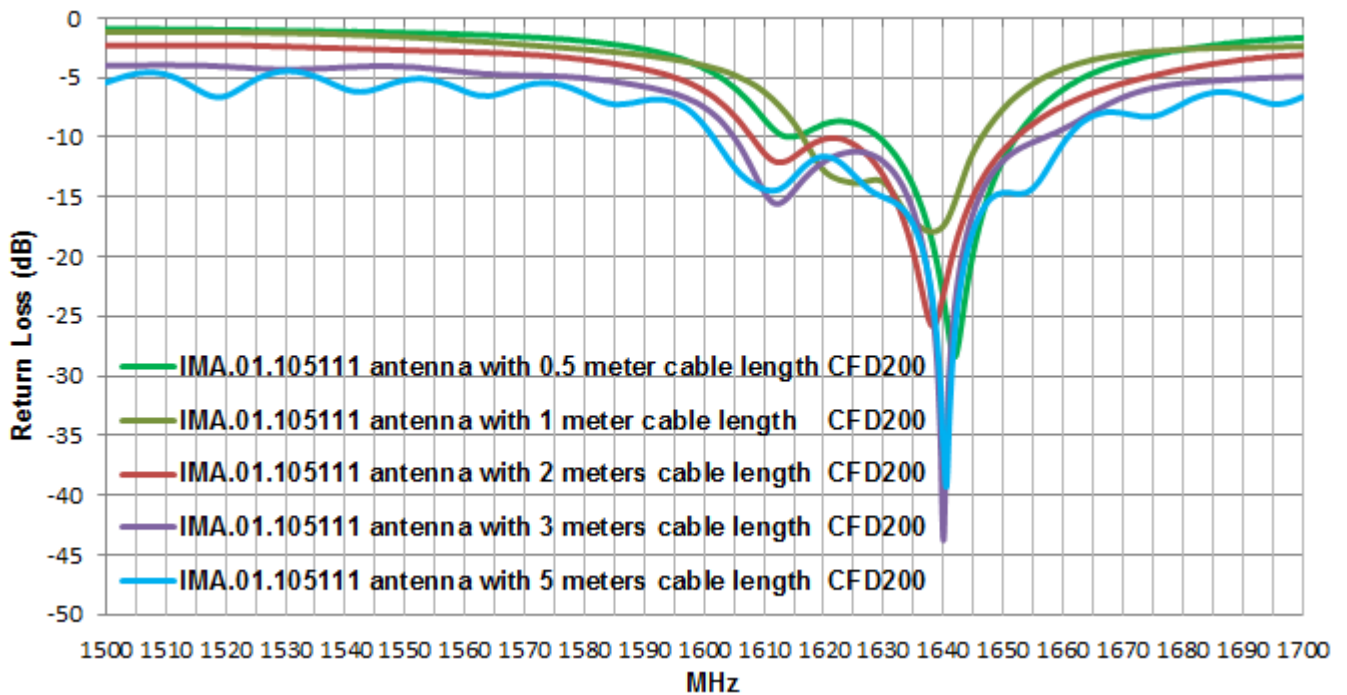
### 3. Test Setup



**Figure 1.** Impedance (left hand), Efficiency, peak gain, and radiation pattern measurements (right hand).

## 4. Antenna Parameters

### 4.1. Return Loss



**Figure 2.** Return Loss of the IMA.01 antenna.

## 4.2. VSWR

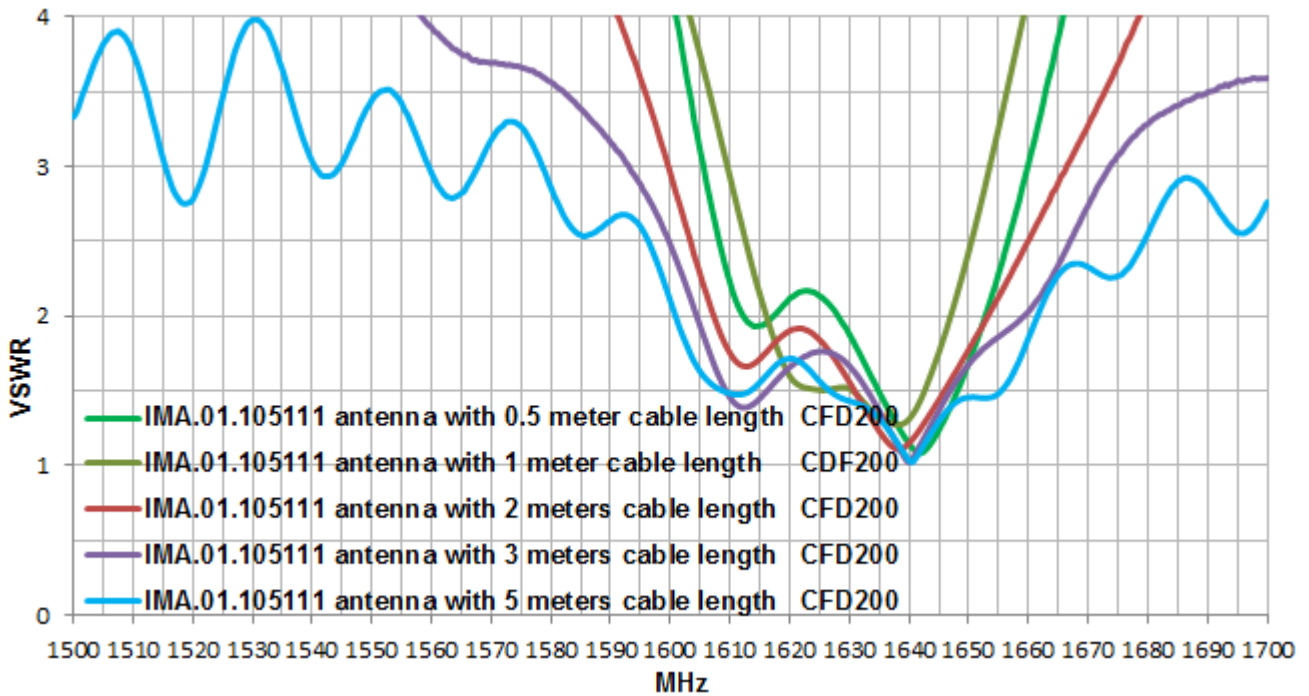


Figure 3. VSWR of the IMA.01 antenna.

## 4.3 Efficiency

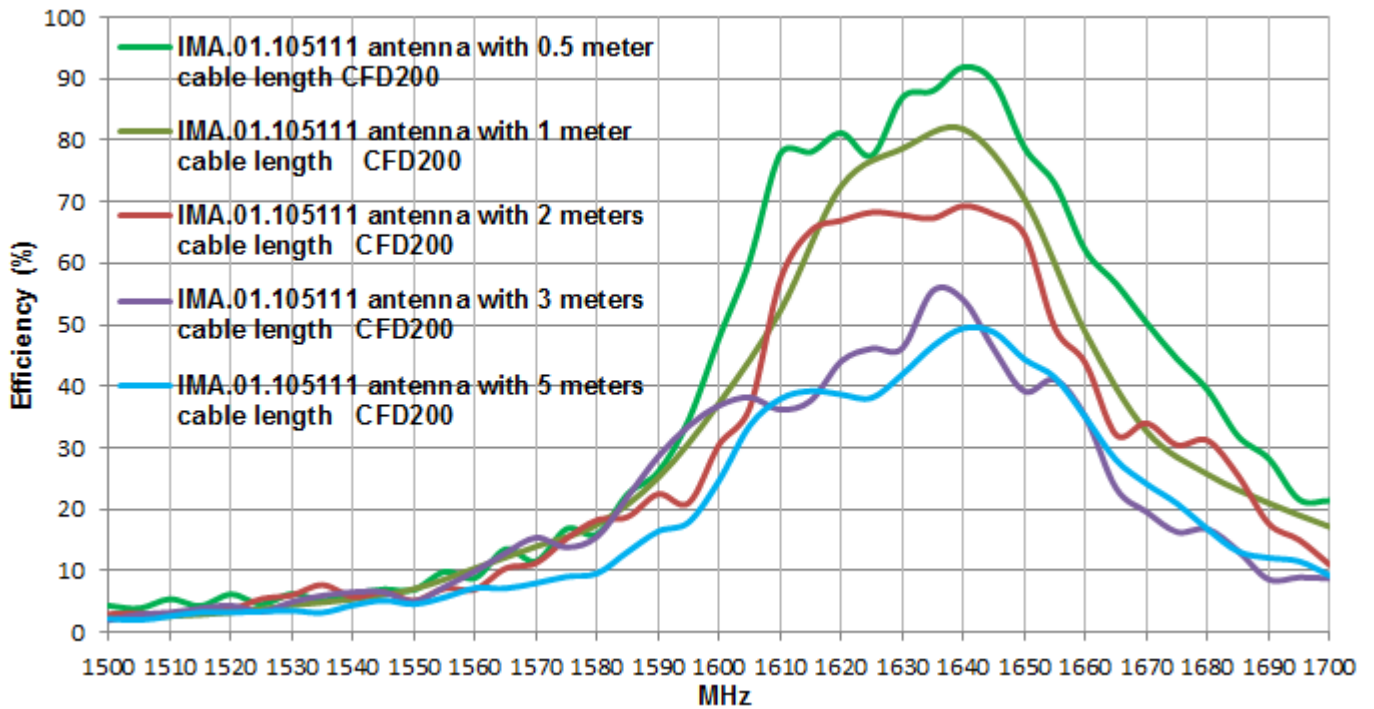


Figure 4. Efficiency of the IMA.01 antenna.

### 4.4 Peak Gain

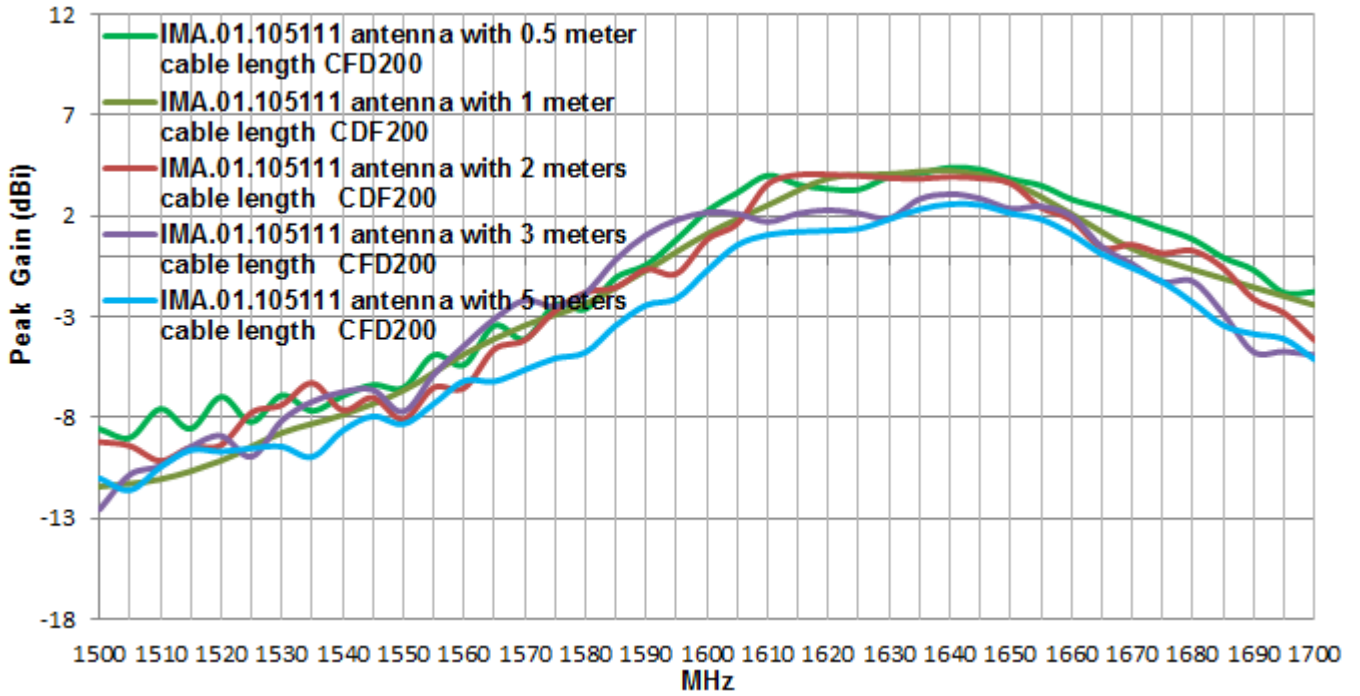


Figure 5. Peak Gain of the IMA.01 antenna.

### 4.5. 3D Radiation Pattern

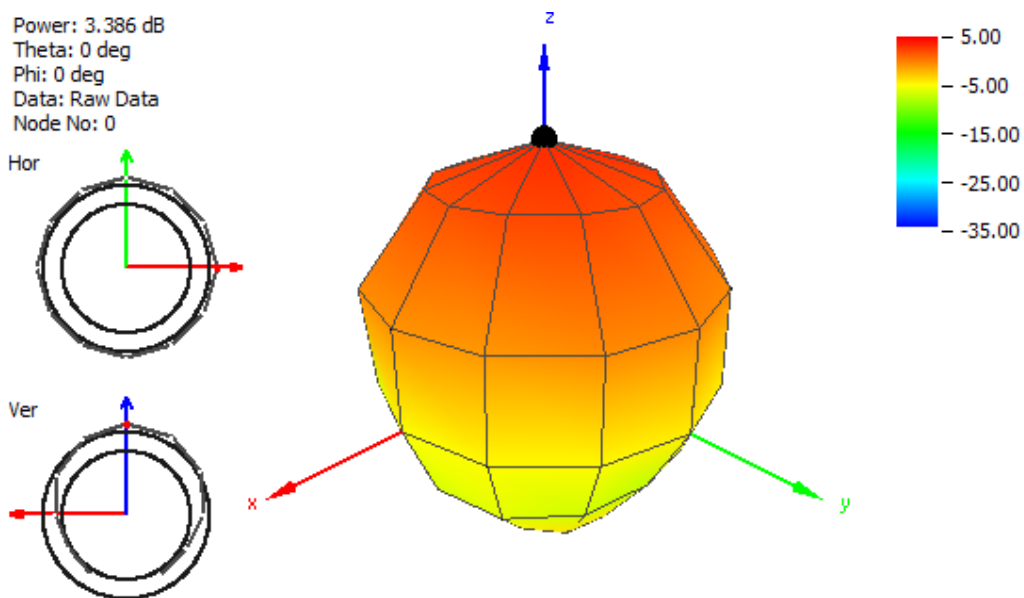
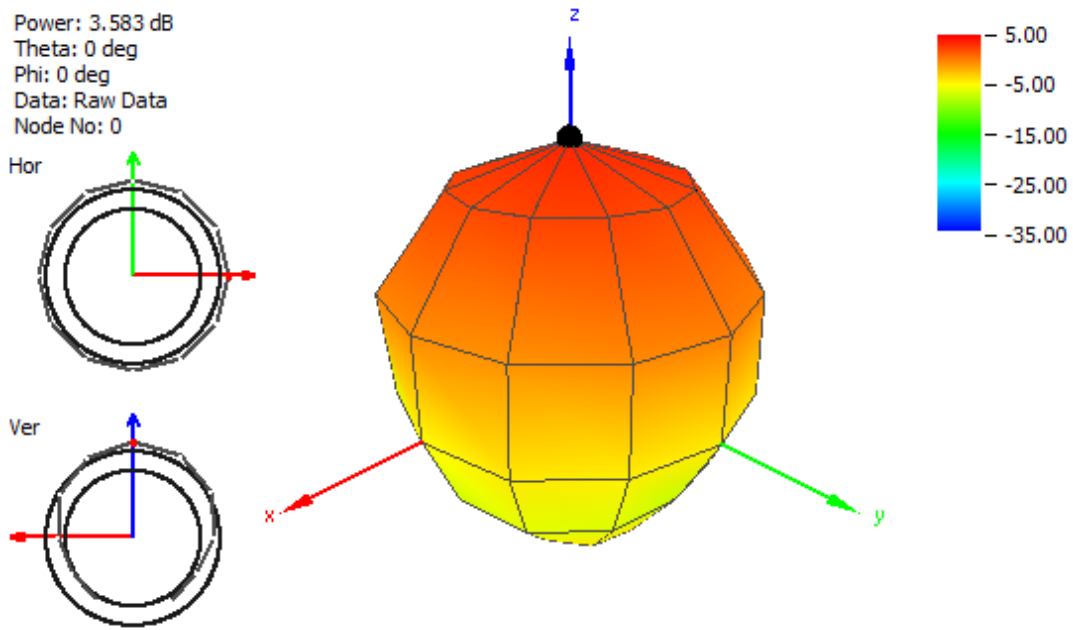
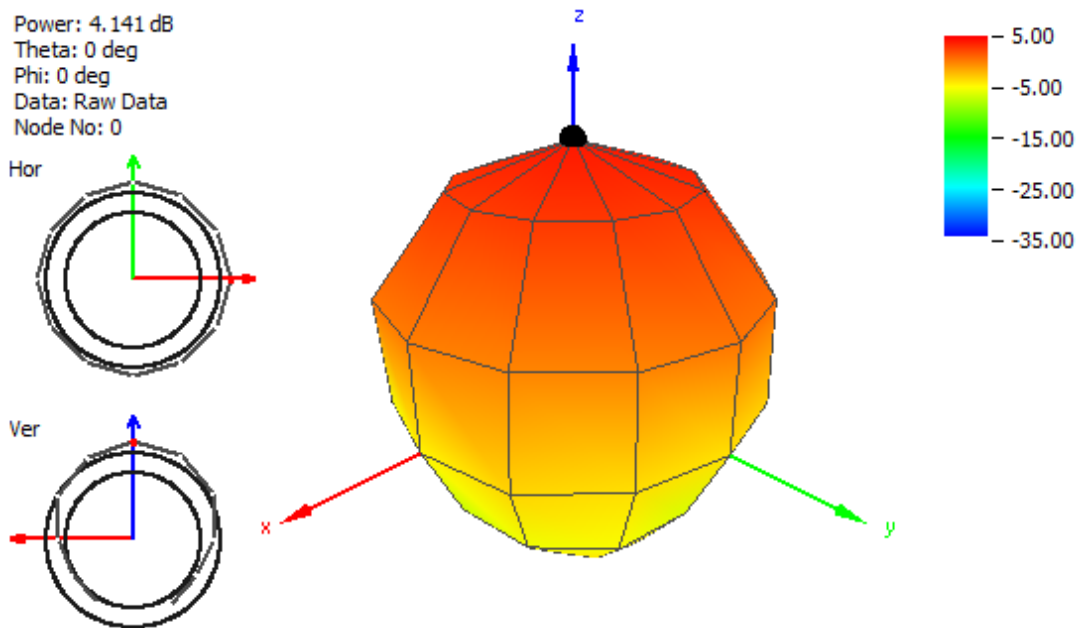


Figure 6. Radiation pattern of the antenna IMA.01 at 1616 MHz with 1 meter cable length.

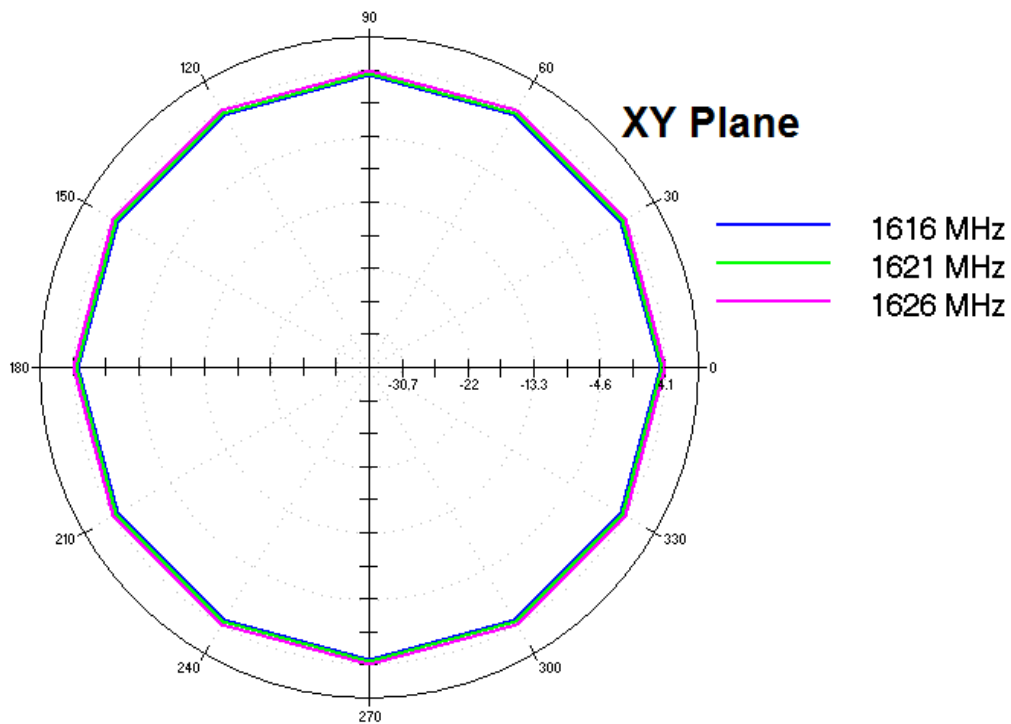


**Figure 7.** Radiation pattern of the antenna IMA.01 at 1621 MHz with 1 meter cable length.

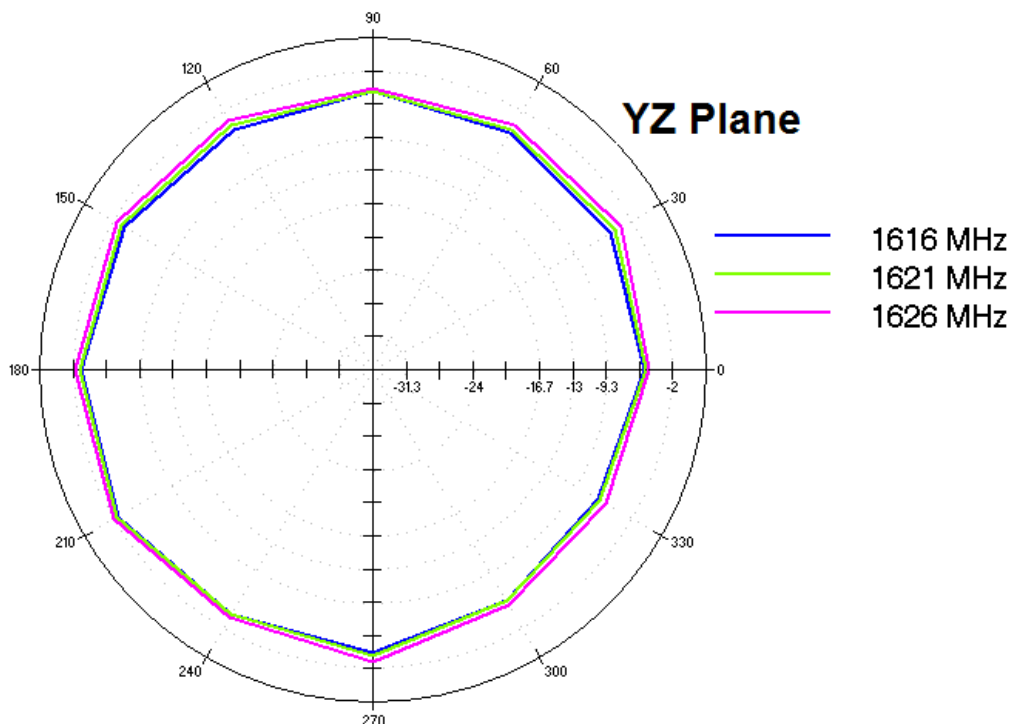


**Figure 8.** Radiation pattern of the antenna IMA.01 at 1626 MHz with 1 meter cable length.

## 4.6. 2D Radiation Pattern



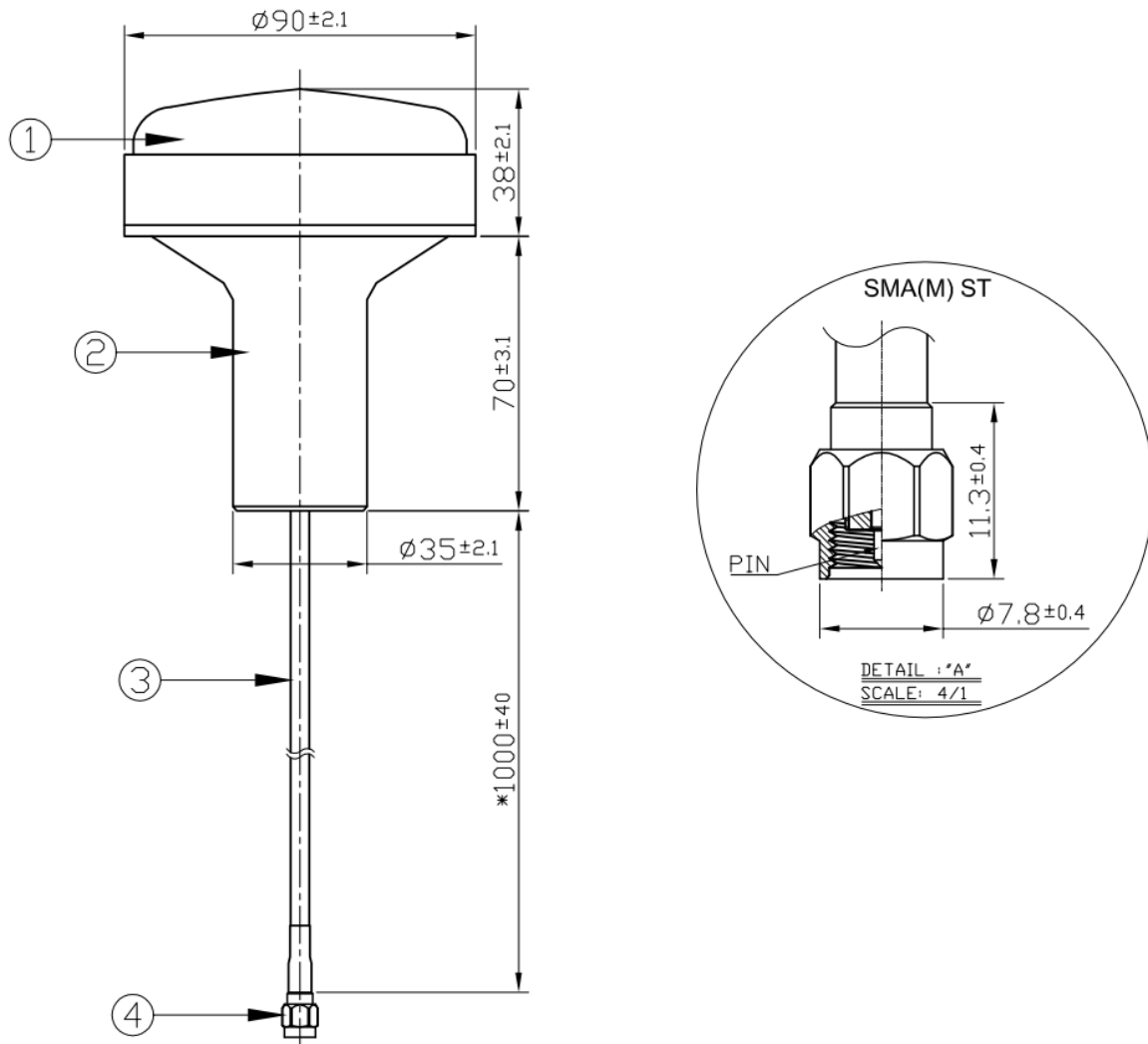
**Figure 9.** XY Plane Radiation Pattern of the antenna IMA.01 with 1 meter cable length.



**Figure 10.** YZ Plane Radiation Pattern of the antenna IMA.01 with 1 meter cable length.

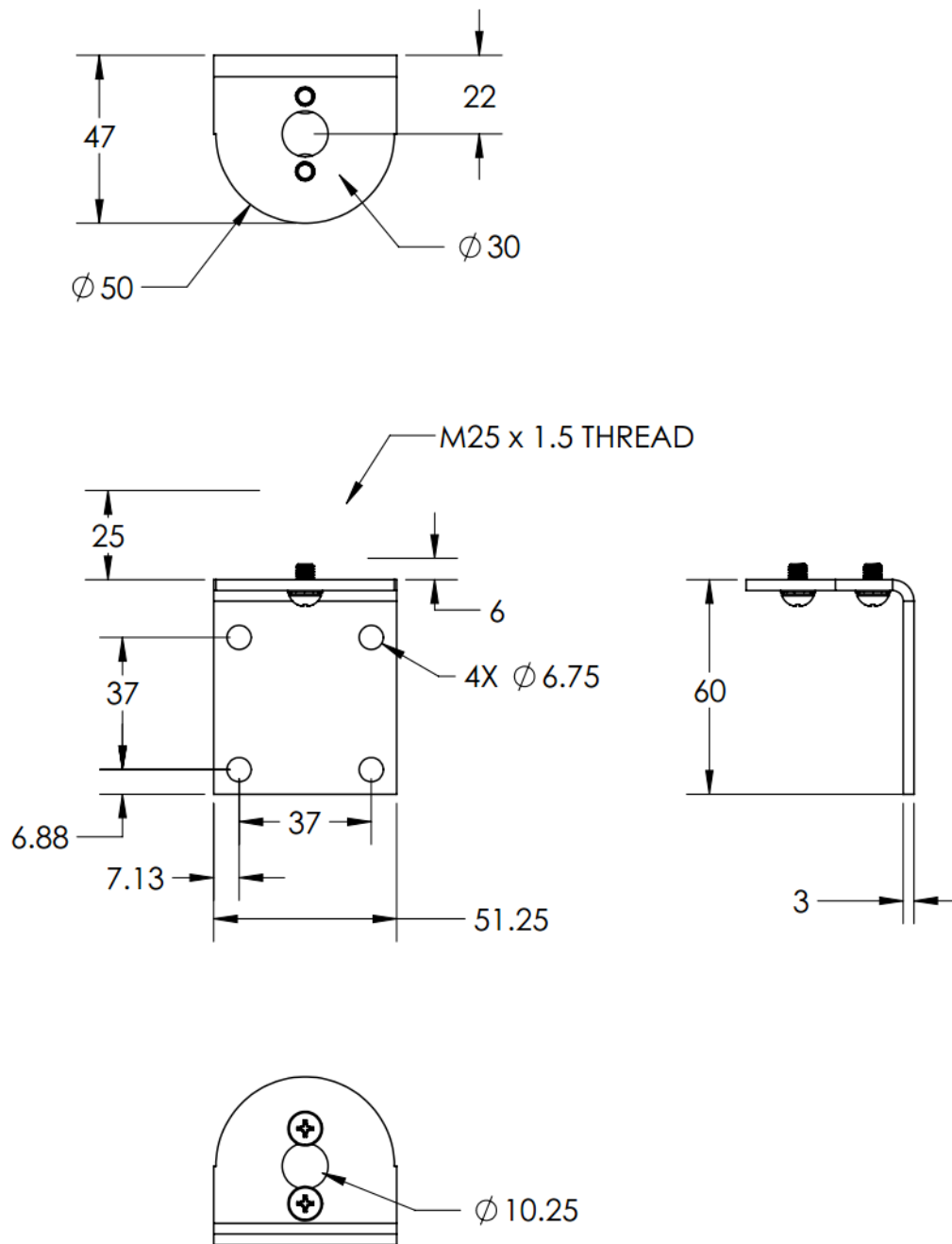


## 5. Mechanical Drawing (Unit: mm)



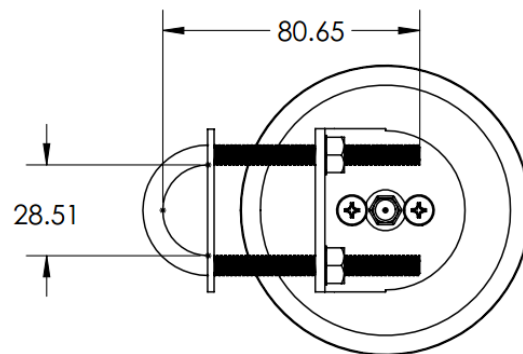
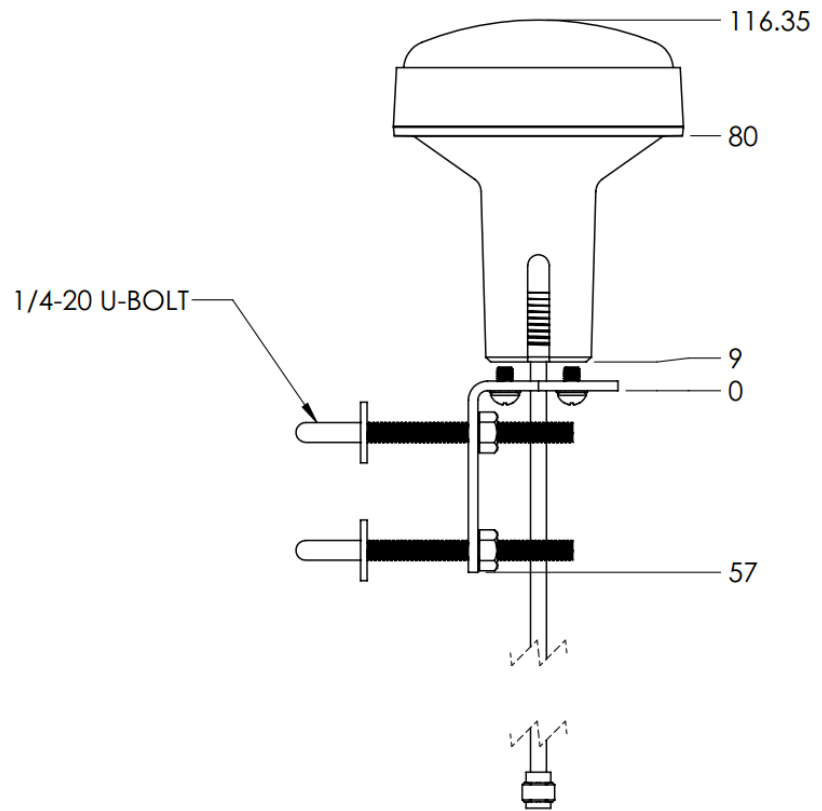
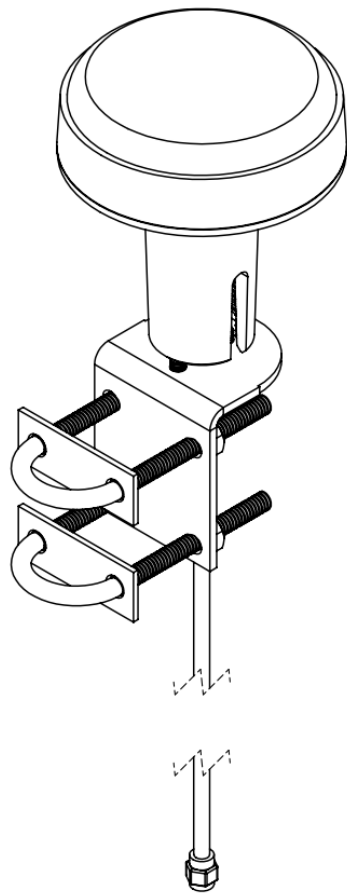
	Name	Material	Finish	QTY
1	Housing_Top	ABS	N/A	1
2	Housing_Bottom	ABS	N/A	1
3	CFD200	PVC	Black	1
3	SMA(M) ST	Brass	Gold	1

## 5.1 Bracket



\* See P/N - **IMA.01.105111.wm** if bracket is needed for further implement.

## 5.2 U-Bolt



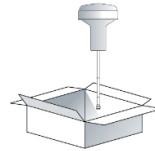
\* See P/N - **IMA.01.105111.wm** if bracket is needed for further implement.

## 6. Packaging

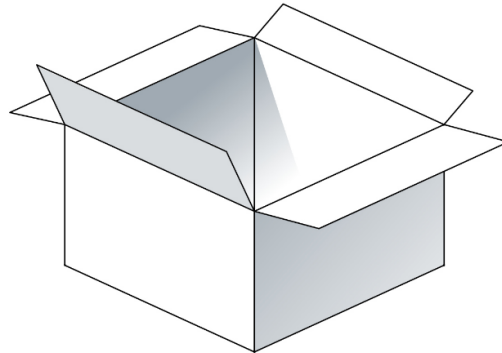
IMA.01.105111

### Packaging Specifications

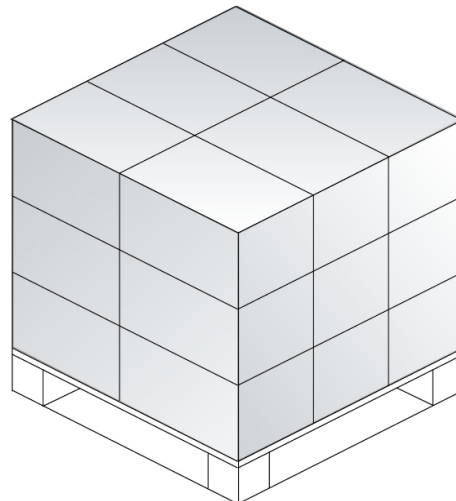
1pc IMA.01.105111 per small box  
Box Dimensions - 100\*140\*128mm  
Weight - 550g



30 small boxes in one carton  
Carton Dimensions - 300\*410\*525mm  
Weight - 16Kg



Pallet Dimensions 1100\*1100\*1725mm  
18 Cartons per Pallet  
6 Cartons per layer  
3 Layers



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