



# M1621HCT-LP-MM

IRIDIUM SFX MAGNET MOUNT LOW-PROFILE ANTENNA

Part #: 100-00101-02

## Description

The M1621HCT-LP-MM is a high performance low profile antenna designed for the Iridium SFX/RUDICS/SBD network, and built on proprietary Maxtena Helicore® Technology. The Helicore® technology provides exceptional pattern control, polarization purity and high efficiency in a very rugged and compact form factor. The omnidirectional antenna pattern allows this antenna to be easily installed in any location. This antenna is designed to work with both Iridium voice and data modems including Iridium 9601, 9602N, 9603N, 9523N, 9522B and 9770 SFX. The antenna features a custom cable and SMA connector and is design to be magnet mounted onto any surface. The antenna is IP66 rated and optimized for harsh environments on both land and maritime applications.

## Electrical Specifications

Parameter	Specification
Frequency	1616 - 1626 MHz
Polarization	RHCP
Antenna Element Peak Gain	2.5 dBic (typical)
Peak Efficiency	73%
Beamwidth	147°
VSWR	2.0:1
Impedance	50 Ω



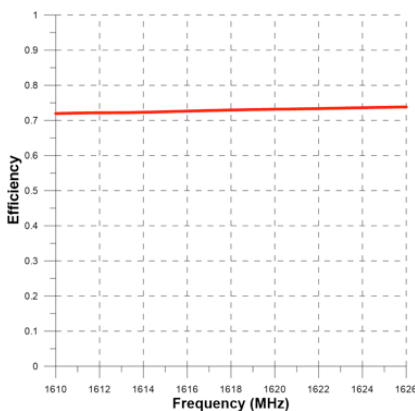
## Features

- Iridium SFX 9770 compliant
- IP67 and ROHS compliant
- Ground plane independent
- High gain & low axial ratio
- Magnet Mount
- Low profile

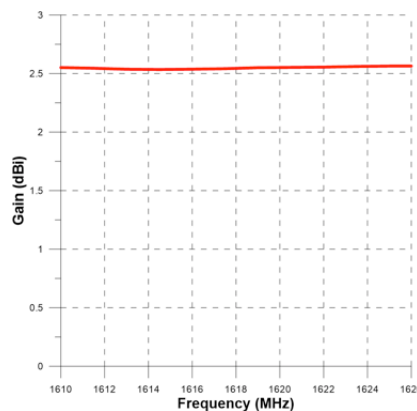
## Applications

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- IoT
- High quality voice applications
- Maritime industries
- UAV/Drones
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Data streaming

### Efficiency



### Antenna Element Gain [dB]



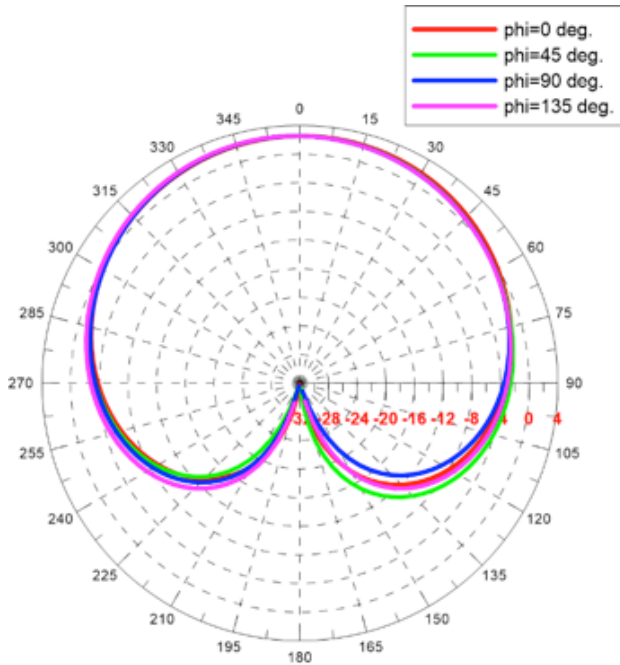
## Radiation Specifications

### Iridium Radiation Patterns

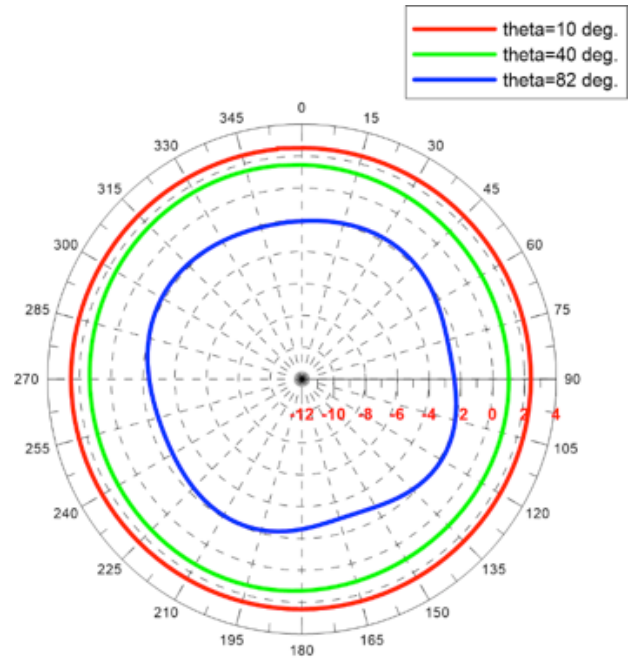
Maxtena's M1621HCT-LP-MM has unique features that make it the best option for high-accuracy Iridium applications.

1. Highly symmetric radiation pattern guarantees there will be no direction of weak reception or blind spots.
2. A 147 degree beamwidth ensures excellent hemispherical coverage.

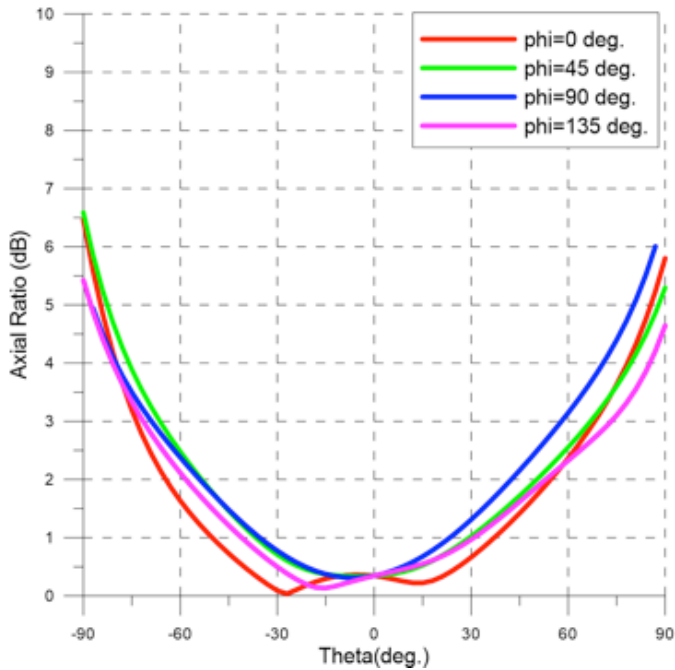
RHCP Realized Gain [dBic] - Elevation Cuts



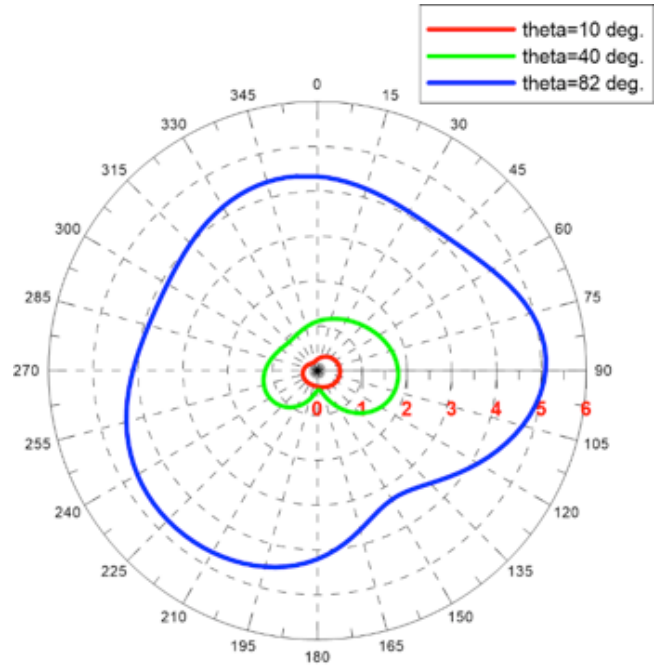
RHCP RealizedGain [dBic] - Azimuth Cuts



Axial Ratio [dB] - Elevation Cuts



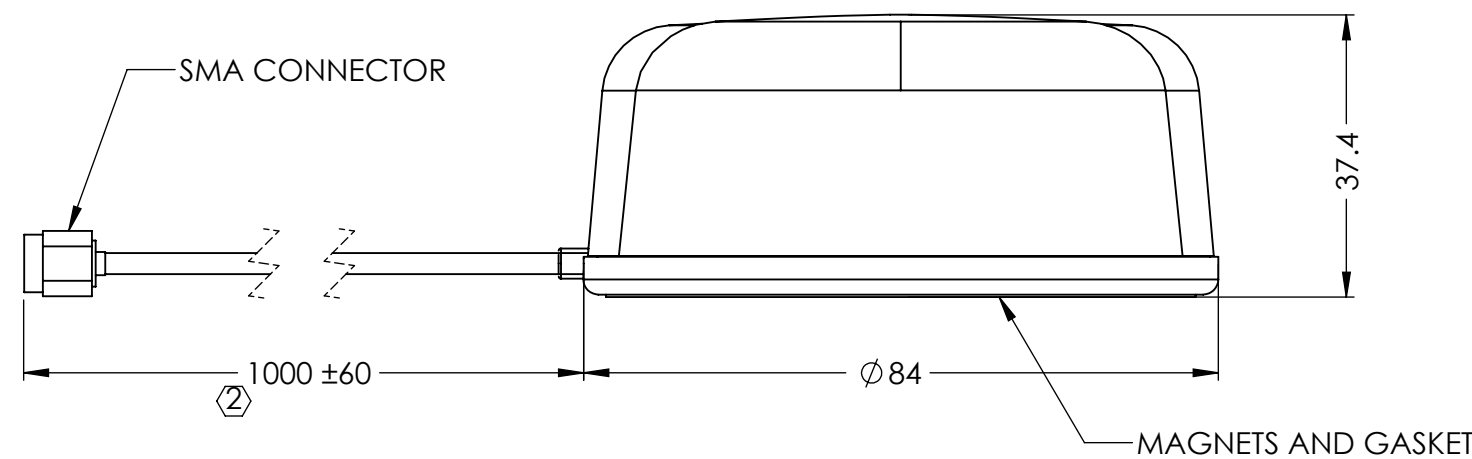
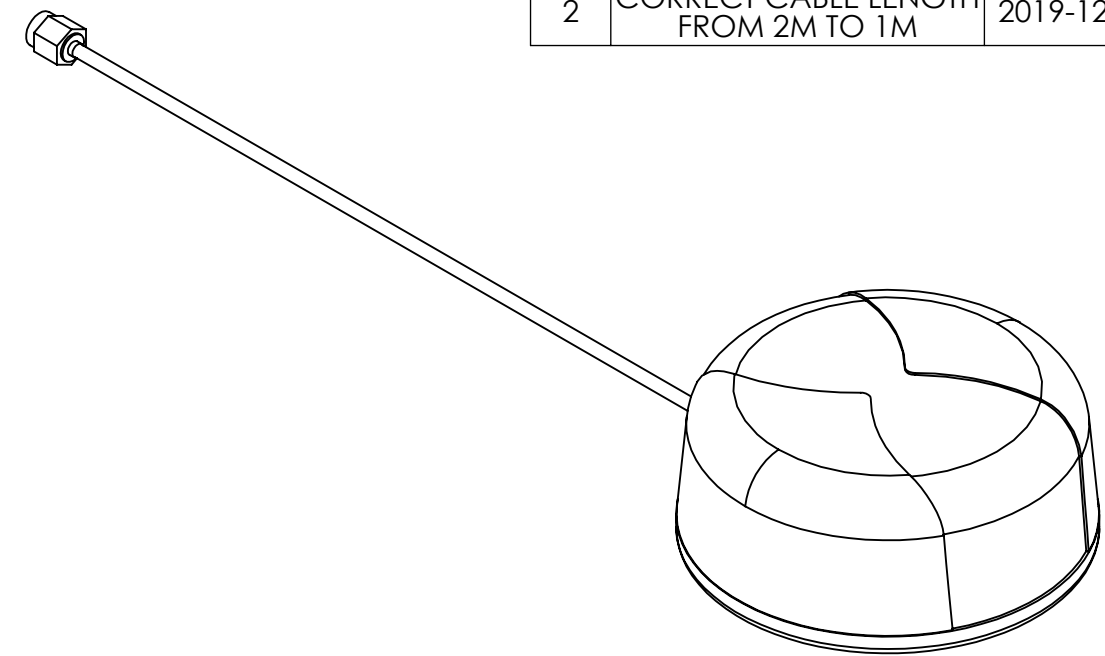
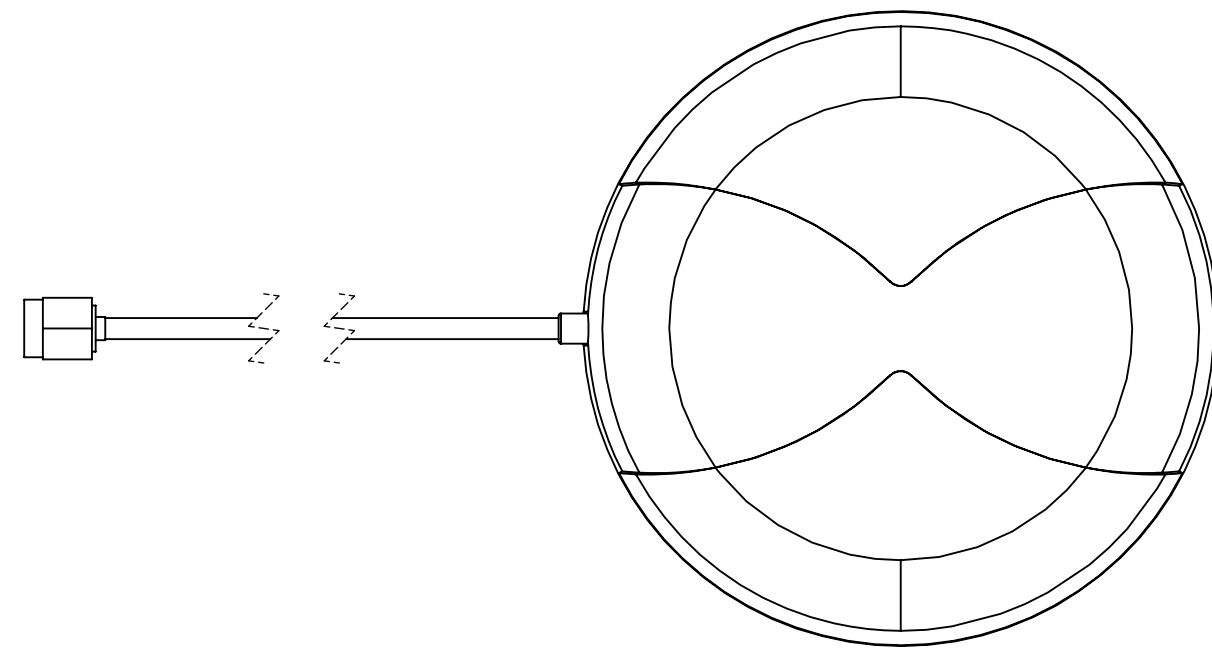
Axial Ratio [dB] - Azimuth Cuts



### Mechanical Specification

Overall Dimensions	37.4 mm (height) x 84 mm (diameter)
Weight	134 g
Operating Temperature	from -40°C to 85°C
RF Connector	SMA
Environmental	IP67 and RoHS Compliant

DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	INITIAL RELEASE	2019-09-12	ZX
2	CORRECT CABLE LENGTH FROM 2M TO 1M	2019-12-26	ZX



NOTES:

- DESCRIPTION: IRIIDIUM SFX MAGNET MOUNT LOW PROFILE ANTENNA.
- MATERIAL:
  - HOUSING: PC/ASA PLASTIC, BLACK;
  - BASE: ALUMINUM.
- ATTACHMENT METHOD: MAGNETIC
- CONNECTOR: SMA MALE
- WATERPROOF RATE : IP67

CONFIGURATION: 100-00101-02

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN MM	DRAWN ZX	2019-12-26
TOLERANCES:	CHECKED	
FRACTIONAL ±	ENG APPR. NPC	2019-12-26
ANGULAR: MACH ± .5° BEND ±	MFG APPR.	
INTEGER ± 1	Q.A.	
ONE PLACE DECIMAL ± 1.0		
TWO PLACE DECIMAL ± .50		
INTERPRET GEOMETRIC TOLERANCING PER:		
	CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.	
THIRD ANGLE PROJECTION		
DO NOT SCALE DRAWING		

ITEM 100-00101-02 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	INITIAL RELEASE	2019-05-15	ZX
2	CORRECT CABLE LENGTH	2019-12-26	ZX

MAXTENA, INC		
TITLE: 100-00101-02		
M1621HCT-LP-MM		
SIZE B	DWG. NO. 117-00300-01	REV 2
CAGE CODE: 5KQH7	SCALE: NONE	SHEET 1 OF 1

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