



# M1621HCT-LP-SM

IRIDIUM SFX HOLE MOUNT LOW-PROFILE ANTENNA

Part #: 100-00101-01



## Description

The M1621HCT-LP-SM 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 TNC connector and is design to be through hole mounted onto any surface. Optional mounting brackets for easy installation are available. 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

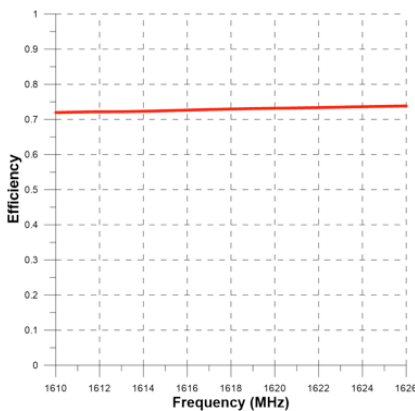
## Features

- Iridium SFX 9770 compliant
- IP67 and ROHS compliant
- Ground plane independent
- High gain & low axial ratio
- Through hole mount
- Low profile

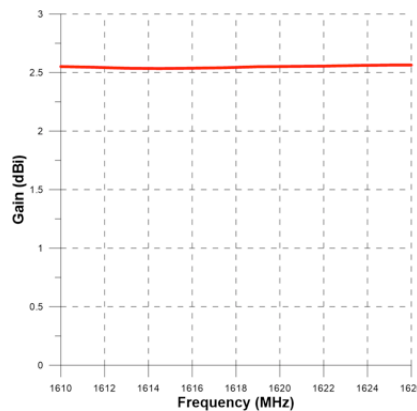
## Applications

- 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]



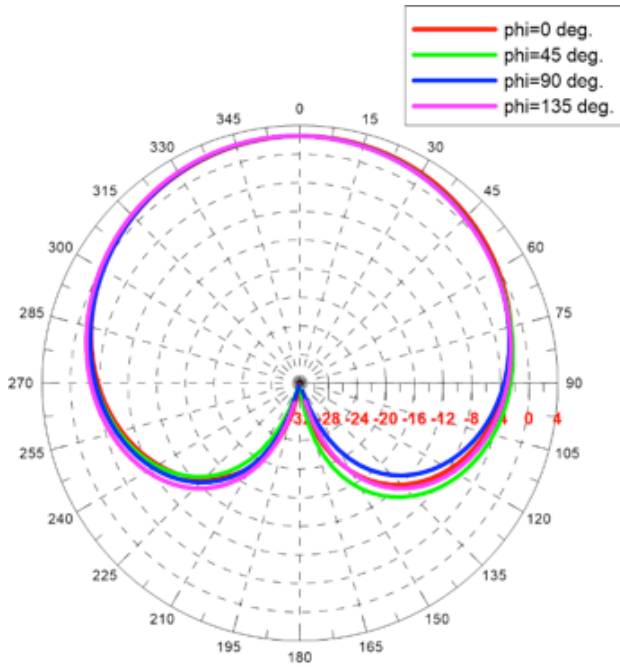
## Radiation Specifications

### Iridium Radiation Patterns

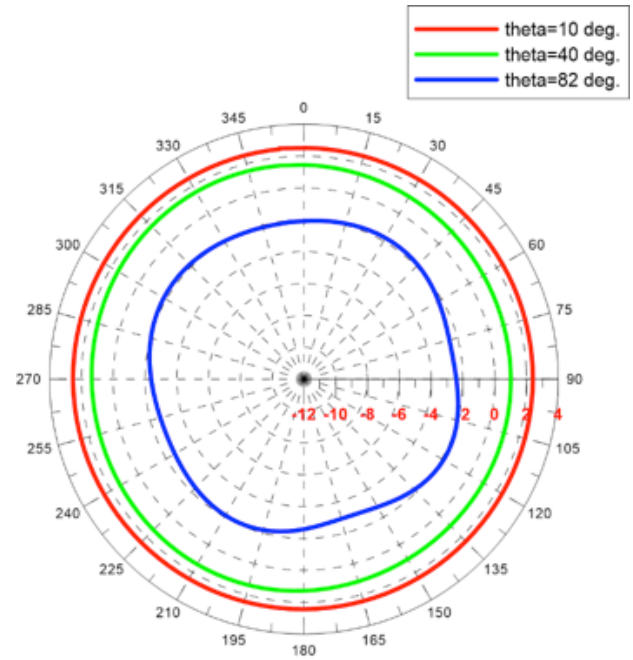
Maxtena's M1621HCT-LP-SM has unique features that make it the best option for high-accuracy Iridium applications.

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.

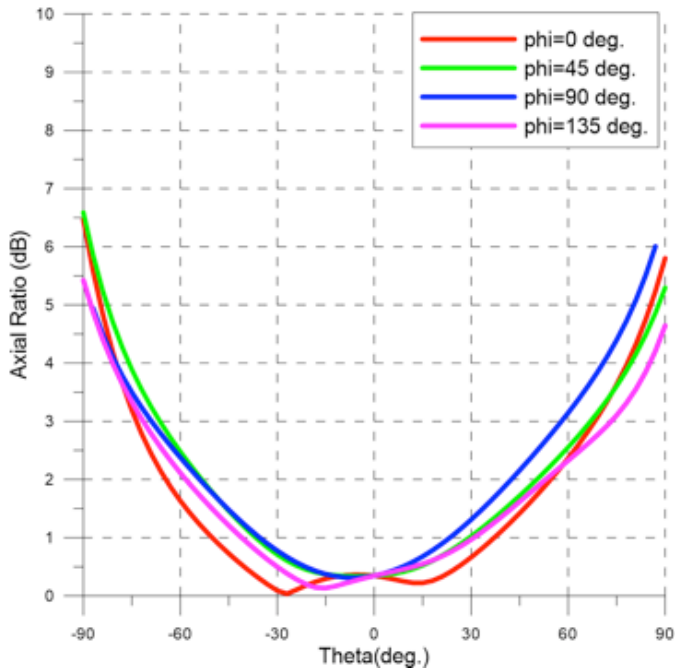
RHCP Realized Gain [dBic] - Elevation Cuts



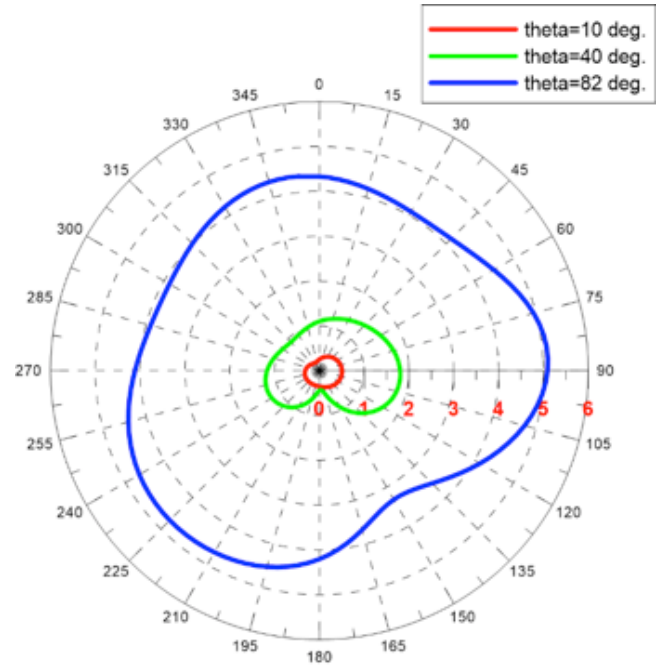
RHCP RealizedGain [dBic] - Azimuth Cuts



Axial Ratio [dB] - Elevation Cuts



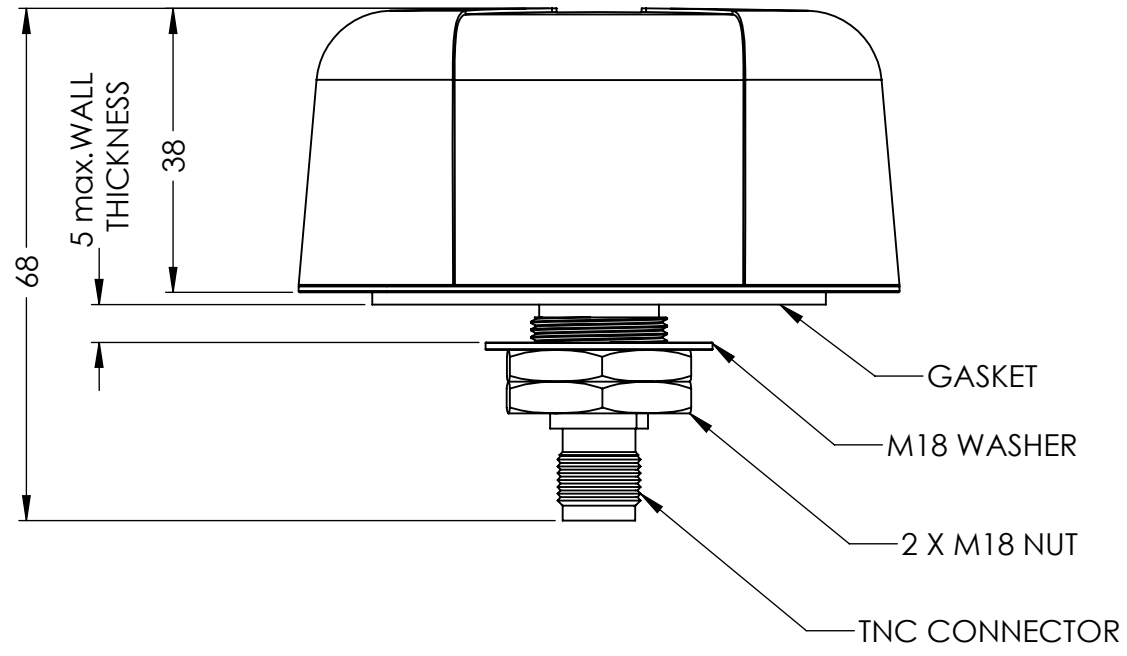
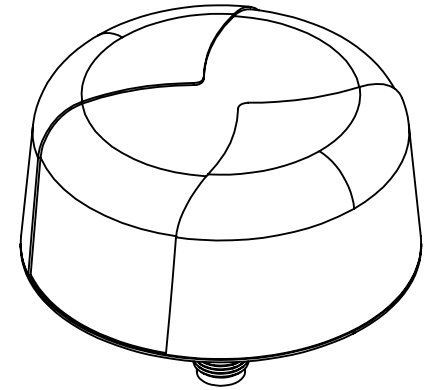
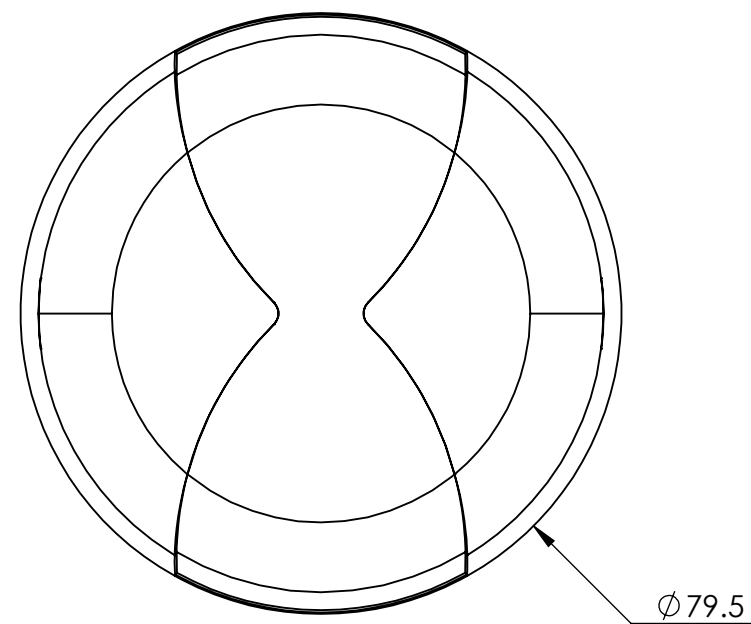
Axial Ratio [dB] - Azimuth Cuts



### Mechanical Specification

Overall Dimensions	38 mm (height) x 79.5 mm (diameter)
Weight	125 g
Operating Temperature	from -40°C to 85°C
RF Connector	TNC
Environmental	IP67 and RoHS Compliant
Attachment Method	19 mm through hole mount

DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	INITIAL RELEASE	2019-09-12	ZX



NOTES:

- DESCRIPTION: IRIIDIUM SFX HOLE MOUNT LOW PROFILE ANTENNA.
- MATERIAL:
  - HOUSING: PC/ASA PLASTIC, BLACK;
  - BASE: ALUMINUM.
- ATTACHMENT METHOD: THROUGH HOLE (M18 X 1 THREAD)
- CONNECTOR: TNC FEMALE
- WATERPROOF RATE : IP67

CONFIGURATION: 100-00101-01

ITEM 100-00101-01 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	INITIAL RELEASE	2019-05-15	ZX

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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM  
TOLERANCES:  
FRACTIONAL ±  
ANGULAR: MACH ± .5° BEND ±  
INTEGER ± 1  
ONE PLACE DECIMAL ± 1.0  
TWO PLACE DECIMAL ± .50  
INTERPRET GEOMETRIC TOLERANCING PER:

	NAME	DATE
DRAWN	ZX	2019-09-12
CHECKED		
ENG APPR.	NPC	2019-09-12
MFG APPR.		
	Q.A.	

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

MAXTENA, INC

TITLE: 100-00101-01  
M1621HCT-LP-SM

SIZE B DWG. NO. 117-00276-01 REV 1

CAGE CODE: 5KQH7 SCALE: NONE SHEET 1 OF 1