

HC600



Iridium® Helical Passive Antenna

Frequency Coverage: Iridium

Overview

The patented HC600 passive helical antenna is designed to enhance the signal-to-noise ratio of communications over voice and data modems on the Iridium® frequency band (1616.0 - 1626.5 MHz).

Weighing only 24 g, the light and compact HC600 features a precision-tuned helix element that provides excellent axial ratios and operates without the requirement of a ground plane, making it ideal for a wide variety of applications, including unmanned aerial vehicles (UAVs).

All Calian housed helical antenna elements are protected by a robust military-grade IP67-compliant plastic enclosure. The enclosure's base provides two threaded inserts for secure attachment, as well as a rubber O-ring around the outer edge to seal the antenna base and its integrated male SMA connector.

Calian's helical family has passed a rigorous 30-hour vibration test procedure, consisting of five cycles of 2-hour tests per axis (x, y, z):

- Cycle 1: 1.05 Grms;
- Cycle 2: 1.20 Grms;
- Cycle 3: 1.35 Grms;
- Cycle 4: 3.67 Grms;
- Cycle 5: 3.67 Grms.

For mounting instructions, visit:

https://www.tallysman.com/downloads/Helical_Mounting_Instruction.pdf



Applications

- Iridium® voice and data applications
- Sea and land container tracking
- Fleet management and asset tracking
- Marine and avionics systems
- Law enforcement and public safety

Features

- Gain over full bandwidth (3.7 dBic)
- Excellent axial ratio (≤ 0.5 dB at zenith)
- ESD circuit protection (15 kV)
- Robust industrial-grade enclosure
- IP67, REACH, and RoHS compliant

Benefits

- Extremely light (24 g)
- Excellent RH circular polarized signal reception
- Increased system accuracy
- Excellent signal-to-noise ratio
- Industrial temperature range
- Rugged design, ideal for harsh environments
- Remote SBD antenna

About Calian: With global headquarters and manufacturing in Ottawa, Canada, Calian is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian's mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at www.calian.com

Revision: 202406

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Frequency Coverage: Iridium

Antenna

Technology Single-frequency, RHCP quadrifilar helix

		Gain dBic typ. at Zenith	Axial Ratio dB at Zenith
GNSS			
GPS / QZSS	L1	-	-
	L2	-	-
	L5	-	-
GLONASS	G1	-	-
	G2	-	-
	G3	-	-
Galileo	E1	-	-
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	-	-
	B2	-	-
	B2a	-	-
	B3	-	-
IRNSS / NavIC	L5	-	-
QZSS	L6	-	-
L-Band Services (1525 MHz - 1559 MHz)		-	-
Satellite Communications			
Iridium		3.7	≤ 0.5
Globalstar		-	-
Other			
Axial Ratio at 10°	-	Efficiency	-
PC Variation	-		

Mechanicals

Size	33.3 mm (dia.) x 54.2 mm (h.)
Weight	24 g
Radome	EXL9330
Mount	2x M2.5 screws
Connector	SMA (male)

Environmental

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +95 °C
Vibration	MIL-STD-810D Method 514.3-1
Shock	-
Salt Fog	-
IP Rating	IP67
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

Warranty

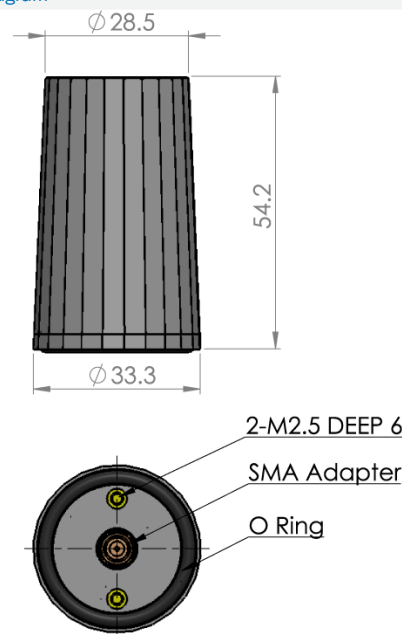
Parts and Labour	3-year standard warranty
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Low Noise Amplifier (LNA) - Measured at 3V and 25°C

Frequency Bandwidth	Out of Band Rejection
1616.0 - 1626.5 MHz	-

Architecture	Passive
Gain	-
Noise Figure	-
VSWR	< 1.5:1 typ., 1.8:1 max.
Supply Voltage Range	-
Supply Current	-
ESD Circuit Protection	15 kV air discharge
P 1dB Output	-
Group Delay	-
PCO	-

Mechanical Diagram



Ordering Information

Part Number 33-HC600

Please refer to our **Ordering Guide** to review available radomes and connectors at:
<https://www.tallysman.com/resource/tallysman-ordering-guide/>