

# HC600

## HC600 Passive Iridium Helical Antenna

Frequency Coverage: Iridium

The HC600 passive helical antenna is designed to enhance the signal-to-noise ratio of communications over voice and data modems on the Iridium<sup>®</sup> 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 Tallysman 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.

Tallysman'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](https://www.tallysman.com/downloads/Helical_Mounting_Instruction.pdf)



### Applications

- Iridium<sup>®</sup> 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 ( $\leq 0.5$  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 Tallysman:** With global headquarters and manufacturing in Ottawa, Canada, Tallysman is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Tallysman'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.tallysman.com](http://www.tallysman.com)

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Frequency Coverage: Iridium

Antenna			
Technology		Single-frequency, RHCP quadrifilar helix	
		Gain	Axial Ratio
		dBic typ. at Zenith	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 correction services		-	-
Satellite Communications			
Iridium		3.7	≤ 0.5
Globalstar		-	-
Phase Centre			
Phase Centre Variation (PCV)		-	-
Phase Centre Offset (PCO)		-	-

Mechanicals	
Mechanical Size	33.3 mm (dia.) x 54.2 mm (h.)
Weight	24 g
Available Connectors	SMA (male)
Radome / Enclosure	Radome and base: EXL9330
Mount	2x M2.5 screws

Environmental	
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-50 °C to +95 °C
Random Vibration	MIL-STD-810E - Test method 514.5 4 hours per axis (x, y, z) at 3.674 Grms
Shock and Drop	-
Salt Fog	-
IP Rating (housing)	IP67
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

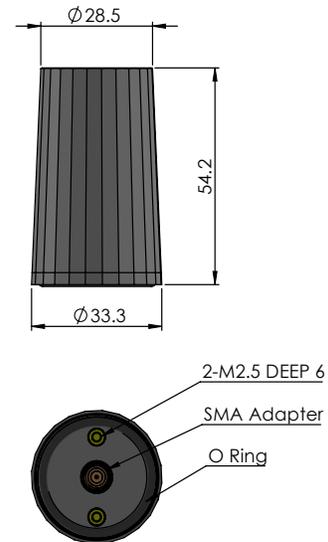
Warranty:	
Parts and Labour	3-year standard warranty

## Low Noise Amplifier (LNA) - Measured at 3.0 VDC and 25°C

Frequency Bandwidth	Out-of-Band Rejection	
Lower Band	-	-
Upper Band	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 Variation	-

## 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/>