

# HC600E



## Embedded Iridium® Helical Passive Antenna

Frequency Coverage: Iridium

### Overview

The patented HC600E embedded 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 4 g, the light and compact HC600E 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) and Iridium® voice and data applications.

Calian provides an optional embedded helical mounting ring (P/N 23-0219-0), which traps the outer edge of the antenna circuit board to the host circuit board or to any flat surface. Calian also provides support for installation and integration of embedded helical antennas to enable the integrator to achieve a successful installation and obtain optimum antenna performance.

For mounting instructions, visit:  
[https://www.tallysman.com/downloads/Helical\\_Mounting\\_Instruction.pdf](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 ( $\leq 0.5$  dB at zenith)
- ESD circuit protection (15 kV)
- REACH and RoHS compliant

### Benefits

- Extremely light (4 g)
- Excellent RH circular polarized signal reception
- Increased system accuracy
- Excellent signal-to-noise ratio
- Industrial temperature range
- 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](http://www.calian.com)

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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	27.5 mm (dia.) x 38.7 mm (h.)
Weight	4 g
Radome	-
Mount	Helical mounting ring P/N 23-0219-0
Connector	MCX (female)

## Environmental

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +95 °C
Vibration	-
Shock	-
Salt Fog	-
IP Rating	-
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

## Warranty

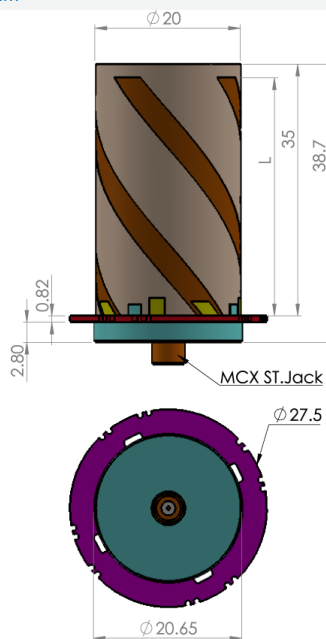
Parts and Labour	1-year standard warranty
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## Low Noise Amplifier (LNA) - Measured at 3V and 25°C

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-HC600E

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