



HC771 GPS L1 + GLONASS G1 + Galileo E1 + BeiDou B1 Helix Antenna

The HC771 is a helix based antenna with GPS L1, GLONASS G1, Galileo E1, and BeiDou B1 coverage and is especially designed for precision dual frequency positioning where light weight is important.

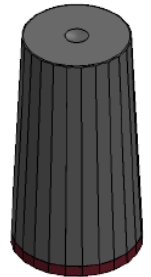
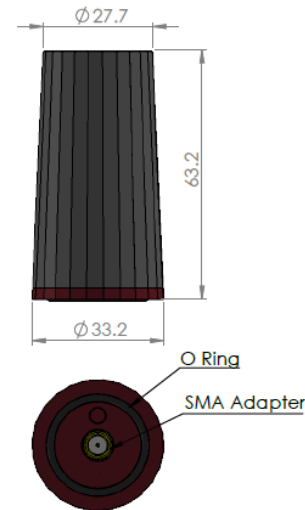
The HC771 features a precision tuned, helix element.

The HC771 offers excellent axial ratio, light weight, and does not require a ground plane.

The HC771 includes an integrated SMA connector for screw-on mounting along with an O-ring and sealed housing to reach IP67.

The HC771 covers GPS L1/WAAS/EGNOS/MSAS (1575.42MHz), GLONASS G1 (1602MHz, centre), Galileo (1575.42MHz centre), and BeiDou B1 (1575.42MHz centre)

The HC771 has a pre-filter which increases the antenna's immunity to high amplitude interfering signals, such as LTE and other cellular signals.



Applications

- Airborne Unmanned Autonomous Vehicles
- Precision GPS position
- Dual Frequency RTK receivers
- Mission Critical GPS Timing
- Military & Security
- Network Timing and Synchronization

Features

- Very low Noise Preamp, 2.5dB
- Axial ratio: <2dB typ.
- LNA Gain 28 dB typ.
- Low current: 12 mA typ.
- ESD circuit protection: 15 KV
- Invariant performance from: +2.5 to 16VDC

Benefits

- Lightweight
- Ideal for L1 RTK surveying systems
- Great multipath rejection
- Increased system accuracy
- Excellent signal to noise ratio
- IP67, REACH, and RoHS compliant



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Specifications (Measured at Vcc = 3V, and Temperature = 25°C)

Antenna

| | |
|--|----------------------------------|
| Element Architecture | Dual Frequency Quadrifilar Helix |
| Peak Gain | 2.5 dBic peak gain at Zenith |
| Axial Ratio, over full bandwidth, both L1 & L2 | ≤ 2dB typ, 1 dB max. at Zenith |
| Polarization | RHCP |

Electrical

| | |
|------------------------|--|
| Bandwidth | 1559MHz-1606MHz |
| Overall LNA Gain | 30dB typ, 28dB min |
| LNA Noise Figure | 2.5dB typ @25°C |
| VSWR (at LNA output) | <1.5:1 typ. 1.8:1 max. |
| Supply Voltage Range | +2.5 to 16VDC nominal, up to 50mV p-p ripple |
| EMI Immunity | 50V/Meter |
| Supply Current | 12 mA typ. At 25°C. |
| ESD Circuit protection | 15 KV air discharge. |
| Out-of-Band Rejection | |
| | <1400 MHz >45 dB |
| | <1500 MHz >45 dB |
| | >1625 MHz >45dB |
| | >1700MHz >47dB |

Mechanicals & Environmental

| | |
|-----------------------------|---|
| Mechanical Size | 63.2mm (h) x 33.2mm (d) |
| Connector | SMA Male |
| Enclosure | Radome: EXL9330, Base: EXL9330 |
| Operating Temperature Range | -40°C to +85°C |
| Weight | 24 g |
| Environmental | RoHS and REACH compliant |
| Shock | Vertical axis: 50 G, other axes: 30 G |
| Vibration | 3-axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G |

Ordering Information

HC771 – Helical GPS L1 + GLONASS G1 + Galileo E1 + BeiDou B1

33-HC771

Please refer to the Ordering Guide (<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.



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