



# Total-Field Horizon Nulling GPS Timing Antenna

The Total-Field Horizon Nulling (TFHN) GPS Timing Antenna reduces the impact of interference and multipath near and below the horizon. The unique quadrifilar helix design exhibits a null in the gain pattern at the horizon, with significantly reduced reception below the horizon, for all azimuth angles and all polarizations. The horizon null reduces gain in the direction of ground-based interference while the zenith beam maintains sufficient sky coverage for resilient timing functionality.

## Features

- Pole mountable (other options available)
- Lightweight
- Full military temperature range

## Electrical Specifications

- Frequency Range: GPS L1 (1.575 GHz)
- Polarization: Right Hand Circular (RHCP)
- VSWR: < 2.0:1
- Zenith Gain: +3dBiC
- LHCP Zenith-to-Horizon Gain Ratio (Mean around azimuth): > 30 dB
- RHCP Zenith-to-Horizon Gain Ratio (Mean around azimuth): > 30 dB
- Half Power Beamwidth (HPBW): 100°
- Axial Ratio: 1.0 dB maximum within HPBW, 0.3 dB @ zenith



## Physical

- Connector: SMA/TNC/N female
- Weight: ~810 g
- Overall Height: 25 cm
- Base Diameter: 18.7 cm
- Operating Temperature Range: -40°C ~ +85°C
- Base Material: Aluminum

