

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

DATASHEET

DCP GNSS ANTENNA

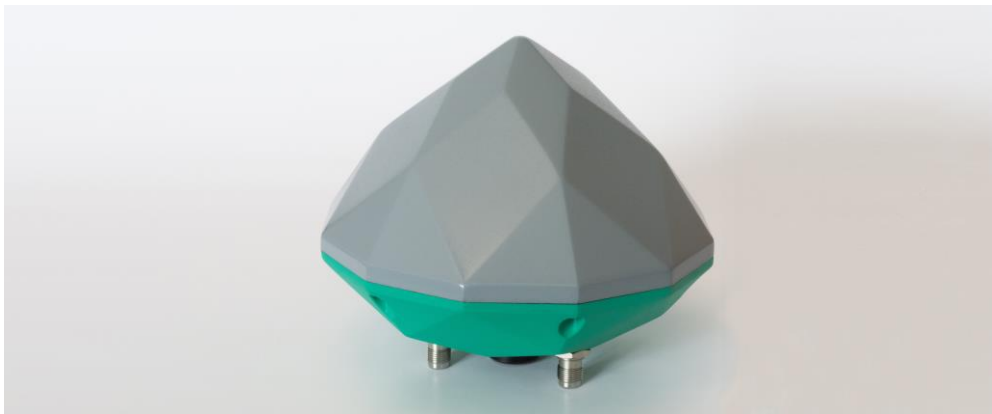


Figure 1.
Prototype

Active Dual Circularly Polarized GNSS Antenna (DCP GNSSA)

The DCP GNSSA is an active antenna for positioning, surveying and navigation that receives both the RHCP and LHCP signals simultaneously and with a high isolation. It covers all GNSS frequencies in L band, shows excellent performance in open-sky environments and clearly detects signals which have been corrupted by diffraction and reflections. The antenna can also be mounted in a customer-specific housing.

Fraunhofer Institute for Integrated Circuits IIS
Am Wolfsmantel 33
91058 Erlangen, Germany

Contact
Dr. Alexander Popugaev
Chief Scientist
alexander.popugaev@iis.fraunhofer.de

www.iis.fraunhofer.de

Technical Data

| Parameter | Value |
|-------------------------------------------------------|---------------------------------|
| Passband | 1160–1300 MHz and 1525–1610 MHz |
| Passive zenith gain | >4 dBic |
| Gain roll-off zenith to 10° elevation | <10 dB |
| Gain difference zenith and -45° elevation or below | >20 dB |
| Axial ratio (10-90° elevation) | <5.6 dB (XPD 10 dB) |
| Noise figure | <2.2 dB |
| Active antenna gain (overall) | >38 dBic |
| Passband ripple | <2dB in each 30 MHz |
| VSWR output connector | <1.7:1 |
| Supply voltage (provided via RHCP and/or LHCP output) | 5V±10% |
| DC current | 2 × 140 mA |
| Connector type RHCP and LHCP outputs | TNC |
| Connector type calibration signal input | SMA |
| Dimensions | 170 × 170 × 120 mm |
| Weight | 0.5 kg |

Table 1.
Specifications

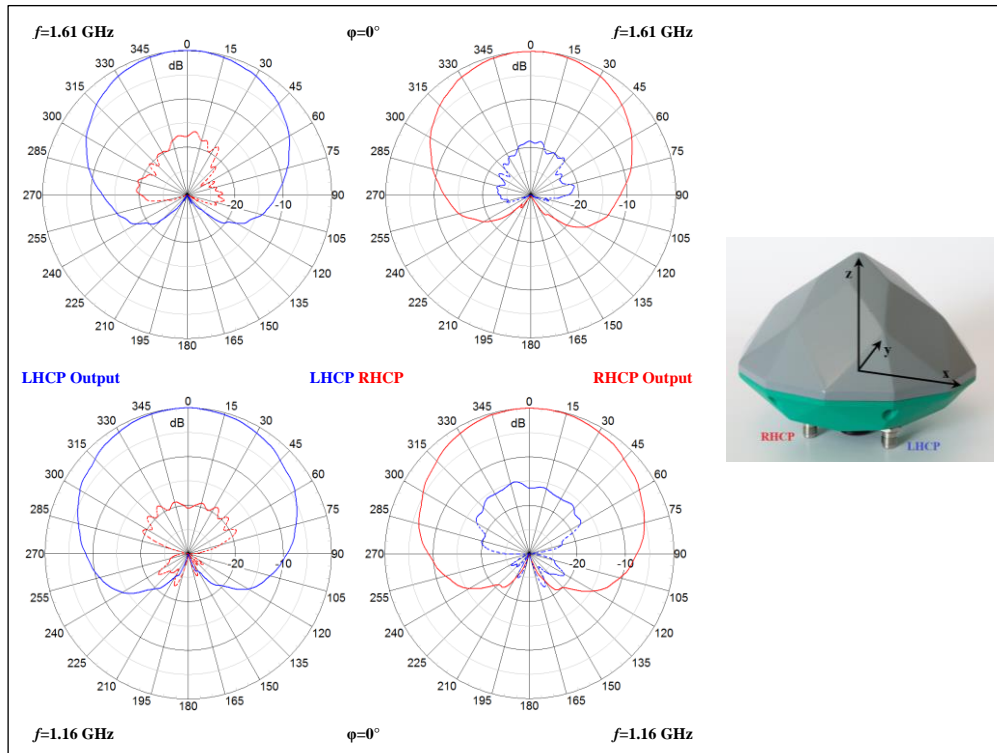


Figure 2.
Measured Radiation Patterns
(Normalized)