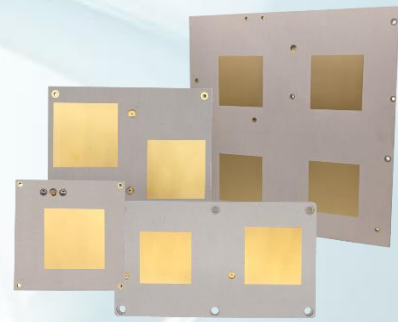


S Band Antenna

- single patch antenna
- dual patch antenna for Tx and Rx
- quad patch high gain antenna
- 1.980 – 2.500 GHz

Highlights

- **Circular polarization (RHCP and LHCP)**
- **High gain**
- **Small shape**
- **Single, dual or high gain patch antenna**
- **Compatible to 1U CubeSat**
- **Robust design**



This COTS **antenna** is designed for pico and nano satellite applications to realize satellite-to-ground links. The mechanical dimensions fit a 1U CubeSat as well as larger satellites. Various designs of different frequencies are available and customer specific solutions can be provided.

With circular polarization, the antenna provides a robust solution regarding the steering accuracy to the ground station antenna.

The design could be either single patch antennas or dual patch antennas for separate Tx and Rx ports. Thereby the duplex filter requirements are minimized.

As RF interface a robust SMA (female) or an UMP connector is used. Four screws provide a proper mounting of the antenna.

The antenna backside shall be grounded properly to the satellite chassis. As dielectric, ROGERS™ laminate for space applications is used. Patches and conductors are Cu with NiAu surface finish.

With the basic design TRL 9 has been achieved with numerous successful LEO missions.

Features

- Flight grade tested design
- Patch antenna design
- Various designs available
- Cost effective
- Short delivery time

Key Specifications

- Operation frequency: 1.980-2.500 GHz
- Bandwidth: 50 MHz (within frequency band)
- Gain: 6...11 dBi (typ.)
- Vertical beam: $\pm 40^\circ$ (typ.)
- Horizontal beam: $\pm 40^\circ$ (typ.)
- F/B ratio: > 20 dB
- VSWR: < 1.25 @ typ.
< 1.8 @ full BW
- Impedance: 50 Ω
- Polarization: RHCP (opt. LHCP)
- Mass: 49 grams (single)
62 grams (dual)
180 grams (quad)
- Type: Patch
- Connector type: SMA (f), UMP
- Outer dimensions (x/y/z, w/o connector):
 - Single patch: 70 x 70 x 3.4 mm³
 - Dual patch: 80 x 100 x 3.4 mm³
 - Quad patch: 160 x 160 x 3.4 mm³
- TRL: 9

Product specification may be subject to change without notification.