**X Band Antenna**

- Patch antenna 60 x 40 mm²
- 8.025 – 8.400 GHz
- 7.145 – 7.250 GHz

**Highlights**
- Circular polarization (RHCP)
- High gain
- Ultra-small shape
- Low mass
- 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.

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

Due to the four combined patches, a high antenna gain can be achieved, considering small form factor requirements.

As RF interface, a robust SMA (female) 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 various successful LEO missions. Equivalent design for X band uplink frequency is available, too.

**Features**
- Flight grade tested design
- Patch antenna design
- Cost effective
- Short delivery time

**Key Specifications**
- Operation frequency: 8.025-8.400 GHz
  7.145-7.250 GHz
- Maximum gain (main direction): 11 dBi
- Half power beam width: 40°
- RF power input: < 2 W
- VSWR: < 1.4 typ.
  < 1.8 @ full BW
- Impedance: 50 Ω
- Polarization: RHCP (opt. LHCP)
- Temperature range: -30°C ... +60°C
- Mass: 20 grams
- Type: Patch
- Connector type: SMA (f)
- Outer dimensions (x/y/z, w/o connector): 60 x 40 x 1.8 mm³

Product specification may be subject to change without notification.