

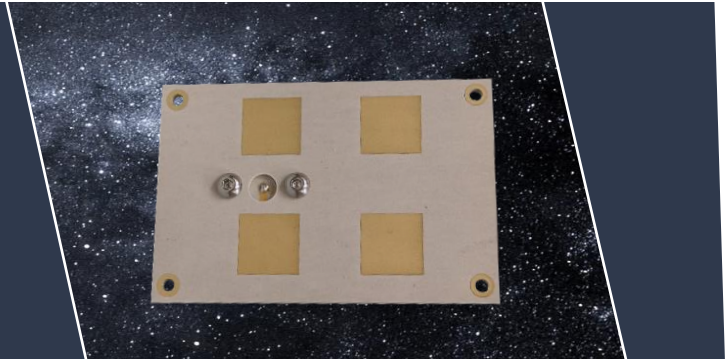
## X Band Antenna

→ patch antenna 60 x 40 mm<sup>2</sup>  
→ 8.025 – 8.400 GHz or

→ 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 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. Alternative designs for X band uplink frequency and X band downlink frequency are available.

### 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)

10 dBi

#### Half power beam width

40°

#### Outer dimensions (x/y/z, w/o connector)

60 x 40 x 1.8 mm<sup>3</sup>

#### RF power input

< 2 W

#### Temperature range

-30°C ... +60°C

#### VSWR

< 1.4 @ typ.  
< 1.8 @ full BW

#### Impedance

50 Ω

#### Polarization

RHCP (opt. LHCP)

#### Mass

20 grams

#### Connector type

SMA (f)

#### Type

Patch

Product specification may be subject to change without notification.