

S-BAND PATCH ANTENNA

Compact Footprint. Critical Connectivity.

Engineered for the rigorous demands of space, the S-Band Patch Antenna delivers robust uplink and downlink performance in a compact 55x55 mm form factor.

Optimized for CubeSats and NanoSats, S-Band Patch Antenna combines a wide 96° beamwidth with flight proven reliability, ensuring your mission stays connected from LEOP to end-of-life.

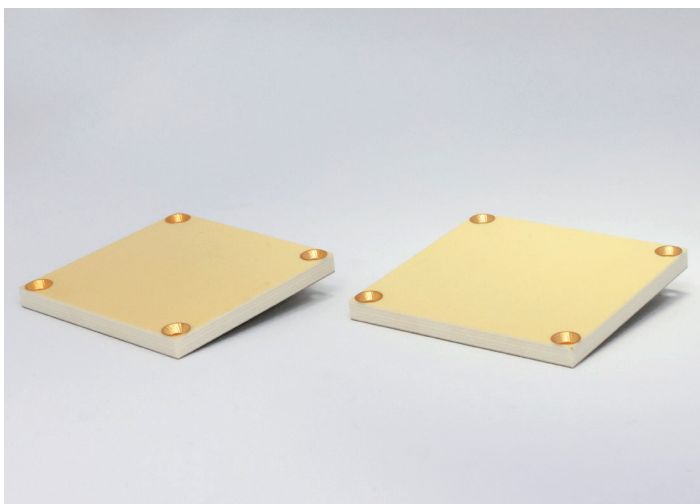
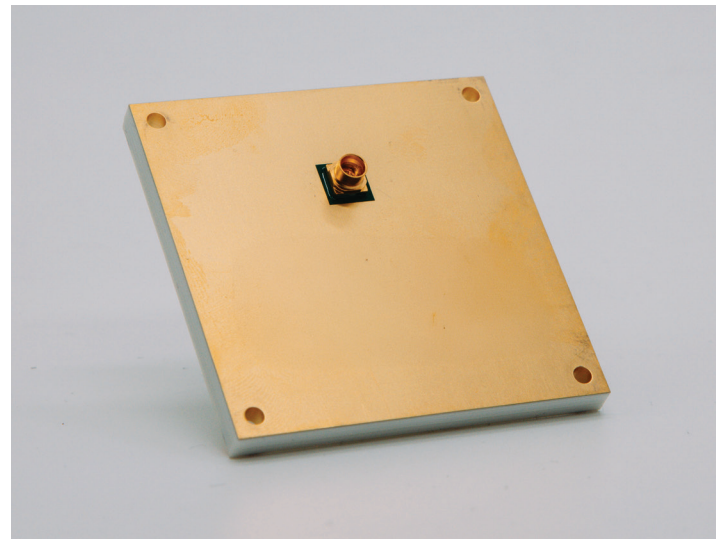
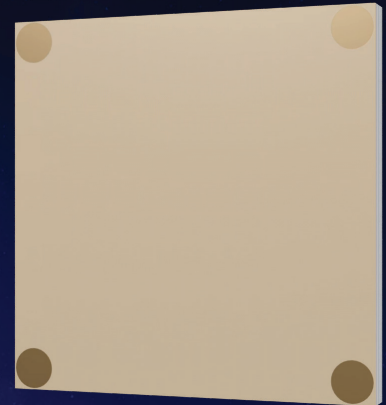
KEY HIGHLIGHTS

The S-Band Patch Antenna is designed for integration into modern small satellite platforms that demand high reliability without sacrificing payload volume.

Available in dedicated Rx (2025-2110 MHz) and Tx (2200-2290 MHz) configurations, these antennas offer a superior link margin for Telemetry, Tracking, and Command (TT&C) operations.

With a flight heritage and full Thermal Vacuum (TVAC) qualification, this low-profile antenna (<4.6 mm) is built to withstand the harsh space environment.

S-Band Patch Antenna's wide half-power beamwidth ensures continuous communication even during non-ideal satellite orientation, making it the reference choice for mission-critical links.

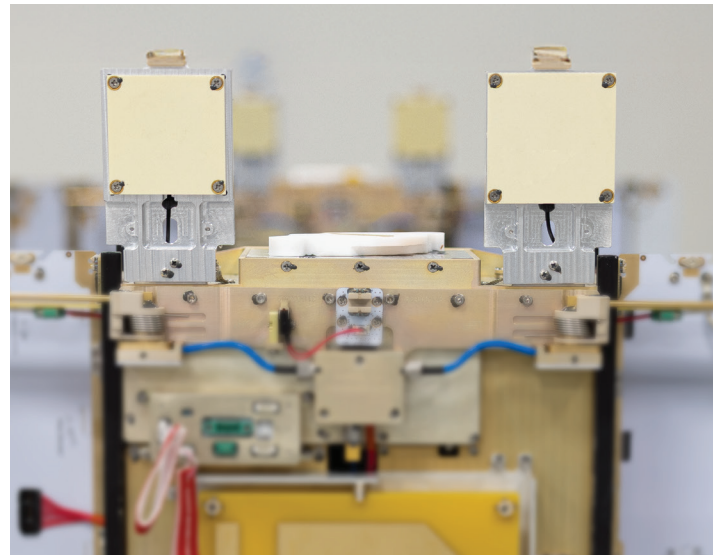


MISSION BENEFITS

- ▶ **Flight Proven Reliability:** Fully qualified with TVAC testing and proven flight heritage. Operational from -40°C to +85°C.
- ▶ **Wide Angular Coverage:** The 96° beamwidth provides a broad field of view, minimizing pointing requirements and securing links during tumbling or emergency modes.
- ▶ **High Efficiency:** Excellent impedance matching (VSWR < 1.5) and low axial ratio (< 2 dB) ensure maximum power transfer and signal integrity.
- ▶ **Easy Integration:** Standard 55x55 mm footprint with 4 x M2.5 mounting points and selectable SMA/SMP connectors allow for seamless mechanical and electrical integration.

TECHNICAL FEATURES

Frequencies	Rx Model: 2025-2110 MHz Tx Model: 2200-2290 MHz
Peak Gain	> 6 dBi
Isolation	> 30 dB (Port-to-Port)
VSWR	< 1.5:1
Beamwidth	95°±2°
Ports	1x SMA Female (or SMP)
Dimensions	55x55x4.7mm (RX) 50x50x4.7mm (TX)
Polarization	RHCP or LHCP
Mounting	4x M2.5 Screws
Operating Temperature	-40°C to +85°C
Qualification	TVAC Tested / Flight Proven



HERITAGE / QUALIFICATION

▶ Post-Vibration Deployment

Verification performed

▶ Random Vibration Qualification

14.1 gRMS (20-2000 Hz), 3 min per axis (X, Y, Z)

▶ Thermal Cycling Test

-40 °C to +85 °C, 10 Cycles

▶ Proven in Orbit

Flight heritage demonstrated on 19 Satellites

STANDARDS & COMPLIANCE

▶ Environmental Verification

Compliant with NASA GEVS (GSFC-STD-7000)

