

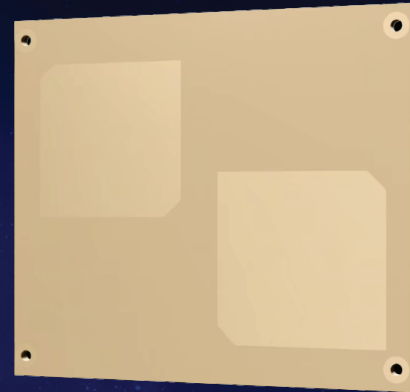
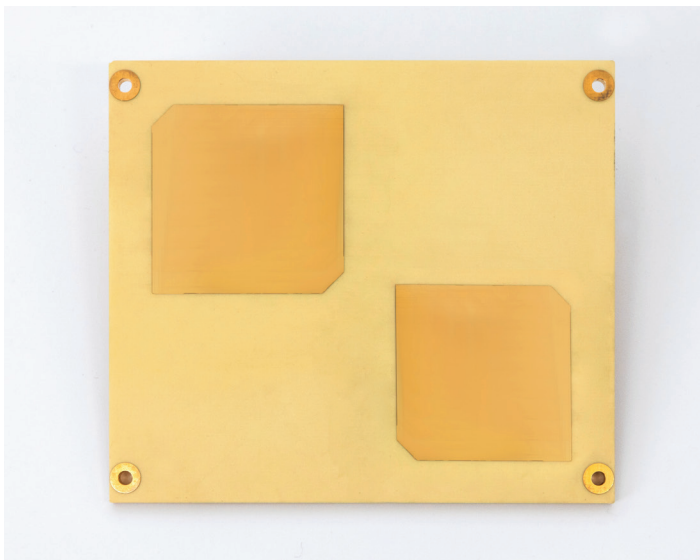
S-BAND DUAL PATCH ANTENNA

Space Heritage. Dual-Band Performance.

Designed for demanding S-band SatCom & TT&C missions, this compact stacked-patch antenna combines reliable circular polarization, broad coverage & mission-ready environmental robustness in an efficient form factor.

KEY HIGHLIGHTS

The S-Band Dual-Band Patch Antenna operates over 2025-2110 MHz and 2200-2290 MHz through a dual-port, enabling easy integration into compact RF subsystems.

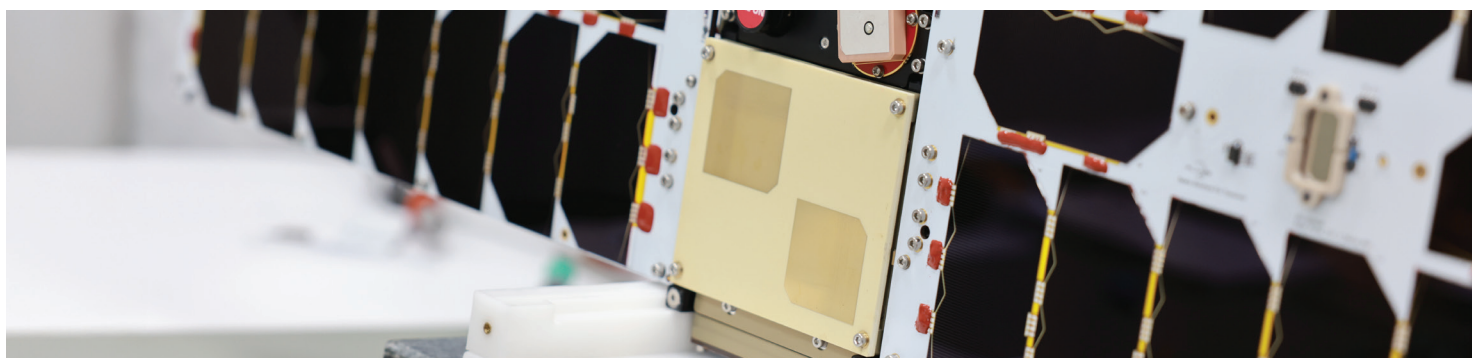


With verified RF characteristics, environmental qualification, and in-orbit heritage, S-Band Dual-Band Patch Antenna brings proven capability to compact satellite platforms.

Designed for spaceborne use, S-Band Dual-Band Patch Antenna offers balanced coverage and consistent link performance across both operating bands.

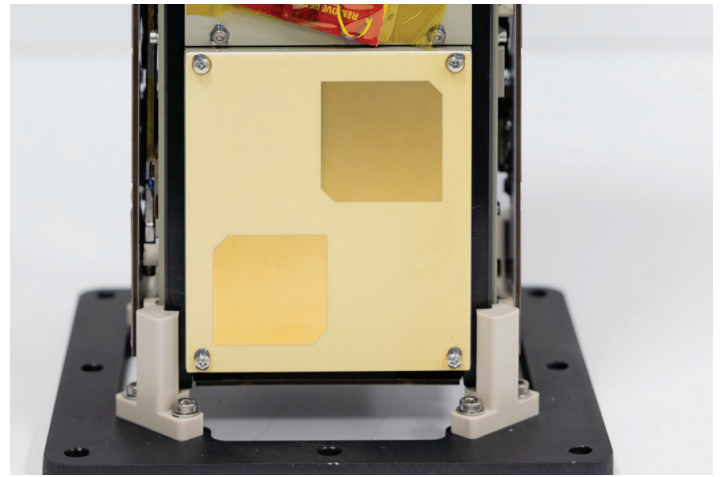
MISSION BENEFITS

- ▶ **Operational Performance:** Designed to support reliable communication across both operating bands, the antenna combines dual-band capability and balanced coverage to help maintain stable SatCom and TT&C links under varying mission conditions.
- ▶ **Integration Advantage:** Its compact stacked-patch architecture and dual-port configuration help simplify platform integration by supporting multiple communication functions within a single antenna solution, making it well suited for space-constrained systems.
- ▶ **Mission Readiness:** Environmental verification under thermal, vacuum, shock, and vibration conditions reinforces confidence in the antenna's suitability for demanding deployment environments and spaceborne communication platforms.



TECHNICAL FEATURES

Frequencies	2025 - 2110 MHz / 2200 - 2290 MHz
Gain	~ 6.1 dBic in Both Bands
Axial Ratio	< 4.5 dB, ~1.5 dB at Band Centers
VSWR	< 1.7:1
Port Isolation	> 23 dB
Polarization	Right-Hand Circular Polarized (RHCP)
Feed & Configuration	2 x MMCX Male, Dual-Port Stacked Patch Antenna, 50 ohm
Mechanical / Mounting	86 x 98 x 3.25 mm, Excluding Connectors; 4 x M2.5 Countersunk Screws



HERITAGE / QUALIFICATION

- ▶ **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
- ▶ **Vacuum Compatibility**
Verified compatibility with space-environment conditions

- ▶ **RF and Mechanical Verification**
Supported by measured RF verification and satellite-level integrated mechanical testing
- ▶ **Proven in Orbit**
Flight heritage demonstrated on 2 satellites

STANDARDS & COMPLIANCE

- ▶ **Environmental Verification**
Compliant with NASA GEVS (GSFC-STD-7000)

- ▶ 1U Cubesat Compatible
- ▶ All stated RF performance is supported by measured verification in anechoic chamber

