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RE-ENTRY ANTENNAS

COMPACT ANTENNAS PORTFOLIO

FOR SATELLITES

- > PATCH ANTENNA
- > DATA DOWN LINK ANTENNA

THERMAL PROTECTED ANTENNAS

- > **RE-ENTRY ANTENNAS**
- > LAUNCHERS ANTENNAS

SERVICES

- > RF & EMC MEASUREMENTS

RE-ENTRY ANTENNAS

TELEMETRY AND TRACKING TRAJECTORY ON SPACE REENTRY VEHICLES

ArianeGroup designed a new concept of antennas in order to transmit telemetry data (S-band) and to track space vehicle trajectory (C-band). The antenna volume is drastically reduced thanks to a new patented design that consists in replacing the classical excitation of the waveguide, made with a coaxial probe, by a patch located inside the waveguide.

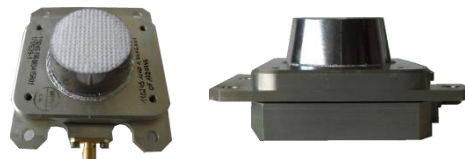
Telemetry Antenna (TM)

- > **Rectangular** shaped patch for linear polarization
- > Microstrip **coupling** feeding
- > The radom is a waveguide with 3DSiSi ArianeGroup **thermal protection**
- > Stub inserted into the radom to **tune the frequency**



Trajectography (TJ)

- > **Square** patch with truncated corners for circular polarization
- > Microstrip **direct** feeding
- > The radom is a waveguide with 3DSiSi ArianeGroup **thermal protection**
- > **Wideband** antenna (no tuning required)



	TM Antenna	TJ Antenna
Frequency	S	C
VSWR	< 1.5	< 2
Polarization	Linear	Circular
Bandwidth	80 MHz tunable	900 MHz
Gain	5 dBi	5 dBi
Dimensions	80 x 75 x 40 mm	77 x 67 x 35 mm



Telemetry antenna with window on ARD (Atmospheric Reentry Demonstrator)

HIGH PERFORMANCE TECHNOLOGIES

- > Hemispherical radiation pattern compliant with space vehicles need.
- > Technology qualified to harsh mechanical and thermal environment: Thermal fluxes and temperatures up to 2000°C impose the radom thickness
- > Reduced volume and low weight

CONTACT

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