

ANP0022C

Antenna 1,2m Offset
for DSNG system

Model Type: **ANP0022C**

The antenna is a Gregorian type reflector of 1,2m dimension (double reflector system) with a subreflector that enables uniform feed illumination, maximal efficiency and low secondary lobes. The principal reflector is constituted by a support structure with one dish in reinforced aluminium.

The dish is manufactured with the best shape for the highest electromagnetic performance. The subreflector is fixed directly at the feed arms without any regulation: the auto-alignment system allows to fix the subreflector in the correct position (the same for the feed).

The feed has a corrugated horn for better symmetric patterns and low secondary lobes. The OMT (Ortho Mode Transducer) facilitates the two ports to allow both transmission and reception in linear polarization.

The antenna features also a motorized handling in three axes (azimuth, elevation and polarization). The command to move and check the antenna handling is supervised by the ACU "ASC0003B" (Antenna Satellite Controller).

The antenna is provided with a 13-bit Optical Encoder (for azimuth and elevation axes) and with a potentiometer for the polarization axis. All cables between the Antenna and the ACU are provided. Azimuth, elevation and polarization switches limit is installed and connects directly to the ACU for the safety control of the antenna handling.



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Electrical Specification

Frequency Range:	RX 10.70 -12.75 GHz TX 13.75 -14.5 GHz
TX/RX Polarization:	Linear orthogonal
Polarization isolation	@ -1 dB contour: > 35dB
Gain in RX Band (11.700 GHz):	41.5 dBi
Gain in TX Band (14.250 GHz):	45.3 dBi
Side-lobes mask:	29 -25 log(f) dBi for $2.5^\circ < f = 7.0^\circ$ 8 dBi for $7.0^\circ < f = 9.2^\circ$ 32 -25 log(f) dBi for $9.2^\circ < f = 48^\circ$ -10 dBi for $48^\circ < f$
Feed type:	2 ports
Insertion Loss:	TX 0.15 dB max RX 0.20 dB max
VSWR TX/RX:	< 1.20:1
Isolation between TX and RX ports :	> 80dB

Mechanical Specification

General

Antenna diameter	1.2 m
Total Structure dimension	2083x1230x491 mm
Antenna Optic	Offset Gregorian
Azimuth coverage	+/-175 Deg.
Elevation coverage	0 -70 Deg.
Azimuth speed	0,2 Deg./sec.
Elevation speed	0,2 Deg./sec.
Polarization speed	1 Deg./sec.
Structure weight	140 Kg

Travel Ranges

Antenna pointing	Automatic with GPS, ASC0003B and BRC0009B;
Antenna Sensors	13 Bit Optical Encoder (For Elevation and Azimuth Axis)

Operative Conditions

Max wind load	70 Km/h
Environmental condition	-20/+50 °C

Environmental Specification

Solar radiation	1000 W/mq
Rain	Operational and survival in heavy rainstorms
Relative humidity	0% to 100% with condensation

Survivor Conditions

Max wind load (stowed)	120 Km/h
Environmental condition	-40/+60 °C
Radial ice, survival	2.5cm on whole surface

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