

TrackSat Antennas 2.4m-EOS

- **Professional X/Y Antennas for Low Earth Orbiting (LEO) Satellites.**
- **Applications - Ideal for Remote Sensing, Communications, and TT & C.**
- **Science Missions - EOS, NASA - ESSP, Disaster Monitoring Constellation.**
- **Fixed and Transportable Systems.**
- **Smooth Tracking to better than 0.1°.**
- **Low Slew Rates.**
- **Antenna Sizes range from 1.8m to 7m.**
- **Complete Hemispherical Coverage - No Cone of Silence or cable wrap.**
- **Antenna Control and Satellite Scheduling Software.**
- **Options include: Radomes, Anti - Ice Kits, Lightning Protection, Extended Temperature Range, and GPS Time Synchronisation.**
- **Custom Design of Antenna Pedestals and Support Structures.**
- **Site Installation, Civil Engineering, and Maintenance Contracts.**



TrackSat Antennas 2.4m-EOS Specification

Positioning System

Degrees of Freedom	Two (X/Y)
Velocity	4°/Sec
Acceleration	10°/Sec/Sec
Lost Motion	0.05°
Position Step Resolution	0.00004°
X/Y Drive Motors	DC Brushless Servo
Limit Switches	Both Axes ~91°

Reflector

Reflector	2.4m Solid Aluminium
Type	Prime Focus
Focus	898.5mm
F/D	0.375

Environmental

Humidity	0 to 100% RH
Rain	Driving, up to 10cm/hr
Temperature	Operating: -10° to +45° C Survival: -20° to +60° C
Wind	Operating: 80 km/hr Survival: 160 km/hr
Corrosion	Resistant to salt air and spray.

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Clinometer

Angular Range	+/-10 degrees
Resolution	0.002 degrees
Repeatability	0.01 degrees
Hysteresis	0.02 degrees
Time Constant	0.15 seconds
Natural Frequency	7Hz
Temperature Coefficient	10 arc seconds/°C
Output	RS232 NEMA
Operating Temperature	-40°C to +85°C

Servo Cabinet

Control Interface	Physical	RS422
	Command & Status	Bidirectional Text String
Upper Axis Interface	Motor	PWM Signals & Brake
	Encoder	Hall, Incremental Encoder, Motor Temp, and Limit.
Lower Axis Interface	Motor	PWM Signals & Brake
	Encoder	Hall, Incremental Encoder, Motor Temp, and Limit.
Clinometer Interface		RS232 & +24VDC
Power		220 - 240 Vac, 1ph, 13A

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X-Band Feed

Frequency Range	7.2 to 8.5 GHz
Polarisation	LHCP or RHCP
Axial Ratio	2.0 dB (max)
VSWR	1.45:1 (max)

X-Band LNA

Frequency Range	7.7 to 8.5 GHz
Gain	50.0 dB (min)
Gain Flatness	+/-1.5 dB (max)
Noise Figure	45K (max)
VSWR In/Out	2:1 (max)
Output Power @ 1dB Comp	+10 dBm (min)
Nominal DC Power @ 15VDC	150mA
Operating Temperature	-40°C to +60°C