

5.3 Meter X-Band Antenna Tracking System



ATS-5.3 consists of the 16-panel 5.3-meter dual reflector with X-Y or El-Az pedestal configuration. The pedestal is mounted on a rigid base extension tube suitable for installation on the ground or rooftop with an optional NPM (None penetrating Mount). Thanks to dual shape optics for achieved superior G/T performance. The full sky coverage without a zenith keyhole makes this antenna suitable for tracking any satellite or flying object.

ATS-53 INCLUDES:

- 5.3-meter dual-reflector shape antenna
- Full sky coverage motorized mount with X-Y (or El-Az) configuration without zenith keyhole
- high resolution (0.01°) absolute encoders
- Limit switches' safety mechanism
- Touch screen Rack mount Antenna Control Unit
- Outdoor Antenna Drive Unit
- X-band horn with Simultaneous LHC and RHC Polarization
- 50-meter cables (includes an optical cable connection)
- One year warranty and 10 years part supply



RF SPECIFICATIONS:

Operating frequency	8.0 to 8.5 GHz (other frequencies also available)
Polarization	Simultaneous RHCP and LHCP
G/T	31.2 dB/K @8.2GHz El>5°
Gain	50.1 dBi
VSWR	≤1.35:1
Beamwidth	0.48° @ 8.2GHz
First Sidelobe	< -14dB
Axial ratio	≤1dB
Isolation	≥40dB

MECHANICAL/ENVIRONMENTAL SPECIFICATIONS:

Antenna Diameter	5.3m (or 7m)
Reflector type	Dual reflector shape
Mount type	X-Y type (or El over Az)
Antenna travel range	X/Y ±90° (or El=0 to 180 and Az=0 to 360) without zenith keyhole
Acceleration (each axis)	0 to 5°/s ²
Velocity (each axis)	0 to 5°/s
Tracking Accuracy	<0.2° (higher accuracy model also available)
Pointing accuracy	<0.15° (higher accuracy model also available)
Surface Accuracy	0.5 mm
Outdoor Operating Temperature	-40° to +55° C
Indoor Operating Temperature	10° to 30° C
Outdoor Humidity	0%~100%
Indoor Humidity	<85% non-condensing
Operational Wind	75 km/h gusting to 85 km/h
Survival Wind	180 km/h (in park position at zenith) gusting to 210 km/h
Seismic	0.3 G horizontal, 0.15 G vertical
Ice Loading	13mm Operational; 25mm Survival
Adaptation	Salt, pollutant, radiation, rain

OPTIONS:

- NPM (None Penetrating Mount)
- Radome
- LNA and RF components
- L, C, Ku, S, and Ka bands feed (Tx/Rx or Rx only)
- Dual S/X band feed
- Monopulse tracking feed, comparator, and receiver system