

TP150 Flyaway Antenna

X, Ku and Ka-Bands

The TP150 antenna system from Holkirk is renowned for its compact size, lightweight and powerful performance which has been designed to excel in today's increasingly demanding DSNG market place.



- Quick deploy assembly (under 5 minutes)
- No assembly tools required
- High gain carbon fibre reflector
- Light weight IATA compliant
- Compact and robust
- Full auto-pointing options
- SSPA/TWT integration
- X, Ku and Ka frequency band options.

Easy of use

The user friendly modular design of the TP150 antenna allows for simple, fast and accurate location and acquisition of the satellite, either as a manually controlled mount or as a fully auto-pointing and motorised system, there are no tools required to assemble the TP150.

Versatile

The novel light weight and sturdy tripod design includes a truly versatile HPA cradle which can accommodate a wide range of third party HPA's up to 400W in X, Ku and Ka-bands, neatly doing away with the long lengths of fragile flexible waveguide normally associated with flyaway systems.

Revolutionary

The main reflector is manufactured from high quality carbon fibre and is supplied in six easily assembled petals that employ a revolutionary spherical dowel locking mechanism to ensure perfect alignment.

Options

- High stability LNB
- 3 axis job-controller
- Auto-pointing controller
- Incline orbit tracking controller
- 23kg weight packaging
- Sand shoes for extra stability
- Spectrum analyser.

Specification

Antenna (HK 120/6S)	8 Segment, 1.5m carbon fibre reflector, prime focus offset with high quality mode matched feed for superior cross-pol performance.
Side Lobe Performance	29-25 Log e dBi
Polarisation Performance	XPD >35 dB

X-Band Performance

Receive

Polarisation	Circular
Frequency band	7.250 to 7.775 GHz
Gain	39.5 dBi

Transmit

Polarisation	Circular
Frequency band	7.9 to 8.4 GHz
Gain	40.3 dBi

Ka-Band Performance

Receive

The Rx antenna gain is defined at the Rx filter / LNB interface and includes the transmit reject filter loss.

Polarisation	Circular
Frequency band	18 to 21 or 20.2 to 21.2 GHz
Gain @ 20 GHz	47.1 dBi

Transmit

(The Tx antenna gain is defined at the Tx port OMT interface)

Polarisation	Circular
Frequency band	27.5 to 30 or 30.0 to 31.0 GHz
Gain @ 30.0 GHz	51.0 dBi

Ku-Band Performance

Receive

Polarisation	Linear
Frequency band	10,7 ~ 12,75 GHz
Gain @ 12.5 GHz	43.7 dBi

Transmit

Polarisation	Linear orthogonal
Frequency band	13,75 ~ 14,5 GHz
Gain @ 14,25 GHz	45.55 dBi



Specification

Polarisation		Circular
Frequency band		30.0 to 31.0 GHz
Gain @ 30.0 GHz		51.0 dBi
Antenna Diameter		150cm
Geometry		Single offset
Reflector Material		Carbon fibre
Weight		65kg (Ku-Band)
Feed Case		23kg per band
Speed (Motorised)		
Elevation	Fast	2°/Sec
	Slow	0.5°/Sec
Azimuth	Fast	5°/Sec
	Slow	1°/Sec
Ambient Temperature Operational		-30°C to +55°C
Storage		-40°C to +70°C
Solar Radiation		1,200 W/m ²
Wind Speed Max.		
Operational (with ballast or anchors)		20m/s (45 mph)
Operating Humidity		100% condensing
Rainfall Maximum		100 mm/h (4 in/h), excluding link budget effects.
Altitude		Up to 3,000M (9,850 ft)
Survival		Up to 10,000M (32,800 ft)

Mechanical Data

All flight cases are sealed to IP65

APPROVALS AND COMPLIANCE

Intelsat Compliant
 XTAR Compliant
 GOVSAT Approved



Compact flight cases for sample TP system, other packaging options are available