

X, Ku and Ka-Bands

TP120 Flyaway Antenna



- 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, Ka frequency band options



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

The TP120 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.

EASE OF USE

The user friendly modular design of the TP120 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 TP120.

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 wave-guide 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

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SPECIFICATION

Antenna (HK 120/6S)	6 Segment, 1.2m 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

Ku-Band Performance

Receive

Polarisation	Linear
Frequency band	10,7 ~ 12,75 GHz
Gain @ 11.7 GHz	41.7 dBi

Transmit

Polarisation	Linear orthogonal
Frequency band	13,75 ~ 14,5 GHz
Gain @ 14,25 GHz	43.5 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	20.2 to 21.2 GHz
Gain @ 20 GHz	47.1 dBi
Gain @ 20.2 GHz:	46.2 dBi
Gain @ 20.5625 GHz:	46.35 dBi
Gain @ 20.925 GHz:	46.51dBi
Gain @ 21.2 GHz:	46.62 dBi

Transmit

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

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SPECIFICATION

Polarisation:	Circular
Frequency band:	30.0 to 31.0 GHz
Gain @ 30.0 GHz:	49.7 dBi
Gain @ 30.3625 GHz:	49.8 dBi
Gain @ 30.725 GHz:	49.9 dBi
Gain @ 31.0 GHz:	50.0 dBi
Antenna Diameter:	120cm
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
Temperature Specification for Survival:	-30°C to +60°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