

TP120

Flyaway Antenna X, Ku and Ka-bands

- **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**



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.

Easy 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.

Controlled by either a local hand held interface or via a touch GUI screen the TP120 is simple to use, even in adverse weather conditions or hostile environments.

Versatile

The novel light weight and sturdy tri-pod 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 Jog-controller
- Auto-Pointing controller
- Inclined orbit tracking controller
- 23kg weight packaging
- Sand shoes for extra stability
- Spectrum Analyser



Compact flight cases for sample TP120 system, other packaging options are available

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 : 38.9 dBi

Transmit

Polarisation : Circular

Frequency band : 7.9 to 8.4 GHz

Gain: 39.5 dBi

Ku-Band Performance

Receive

Polarisation : linear

Frequency band : 10,7 ~ 12,75 GHz

Gain @ 12,5 GHz : 42 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 @ 20.2 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)

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 :	120 cm
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/m2

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 3,000 m (9,850 ft)
Survival: Up to 10,000 m (32,800 ft)

Mechanical Data

All flight cases are sealed to IP65

APPROVALS & COMPLIANCE

- Eutelsat/Intelsat compliant.

UNITRONIX Pty Ltd

PO Box 486, Morisset NSW 2264

NSW: Tel: 61 2 4977 3511 Fax: 61 2 4977 3522

WA: Tel: 61 8 9455 2424 Fax: 61 8 9455 2458

unitsyd@unitronix.com.au www.unitronix.com.au