



# SKY120 Ku-band 120cm Antenna

## Key Features:

- Commercial and Military Ku-band coverage
- Compatible with Skyware Technologies Ku-band RF
- Precision reflector geometry for optimum performance
- Strong weatherproof construction for optimum stability and long life
- 720 hour salt spray tolerance

## Compatible Products:

- Ku Feed Assembly
- XRZ



The SKY120 Ku-band 120cm Antenna from Skyware Technologies employs state of the art materials and uses the latest manufacturing methods in order to deliver premium performance at an attractive price complementing the range of Skyware Technologies Ku-band RF equipment.

The reflector material is a specially formulated glass fibre reinforced polyester which offers strength, accuracy and stability under the harshest conditions. The precision Azimuth/Elevation mount is manufactured from corrosion resistant galvanised steel designed to allow easy pointing adjustment with minimal backlash and lockdown errors.

This antenna is designed for use with Skyware Technologies Ku-band RF feed assemblies and for installation on a standard 73mm (2 7/8 inch) or 78mm (3 inch) outside diameter mast pipe.

- *Operating frequency: TX 12.75 - 14.50 GHz, RX 10.7 - 12.75 GHz*
- *Gain: TX 43.1 dBi, RX 41.4 dBi*
- *3dB beamwidth: TX 1.3°, RX 1.6°*
- *Antenna optics: precision one-piece offset feed prime focus*
- *Power coated pre-galvanized steel reflector*

## SPECIFICATIONS

# SKY120 Ku-band 120cm Antenna

## Electrical

Parameter		Minimum	Typical	Maximum	Unit	Note
Operating Frequency*	Transmit	13.75		14.50	GHz	
	Receive	10.70		12.75	GHz	
Operating Frequency*	Transmit	12.70		14.50	GHz	
	Receive	10.70		11.70	GHz	
Polarization	Transmit	Linear Orthogonal				
	Receive					
Gain** +/- 0.5 dB	Transmit		43.1		dBi	@ 14.25 GHz
	Receive		41.4		dBi	@ 11.7 GHz
3 dB Bandwidth	Transmit		1.3		°	@ 14.25 GHz
	Receive		1.6		°	@ 11.7 GHz
Sidelobe Envelope Tx Co-Pol	100 $\lambda/D < \theta < 20^\circ$		29 - 25 Log $\theta$		dBi	
	20° < $\theta$ < 26.3°		-3.5		dBi	
	26.3° < $\theta$ < 48°		32 - 25 Log $\theta$		dBi	
	48° < $\theta$ < 180°		-10		dBi	
Antenna Cross Polarisation	Transmit		> 30		dB	w/in 1dB bandwidth
	Receive		> 30		dB	
Antenna Noise Temperature				60	K	@ 30° Elevation
VSWR				1:3:1		
Feed Interface		Custom Circular, or WR75				
Isolation Port to Port			Tx > 80		dB	

\* Subject to RF Electronics payload

\*\* Gain and Noise Temperature at Feed Horn Flange

## Mechanical

Parameter	Typical
Reflector Material	Powder coated pre-galvanized steel reflector
Antenna Optics	One piece offset Feed Prime Focus
Mast Pipe Size	73 mm OD (2 7/8 inch) or 78 mm OD (3 inch)
Elevation Adjustment Range	5° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous Coarse Adjustment ± 5° Fine Adjustment

## Environmental

Parameter	Typical	
Wind Loading	Operational	73 km/h (45 mph)
	Ultimate Survival	201 km/h (125 mph)
Temperature	Operational	-40° C to 60° C
Rain	Operational	10 mm/h
Atmospheric Conditions		Salt, pollutants and contaminants as encountered in coastal and industrial areas 720 hour ASTM B117 Salt Spray
Relative Humidity		0 - 100% with condensation
Solar Radiation		1135 W/m <sup>2</sup>
Shipping Weight (bulk)		36 kg (80 lbs)