



## 1.2m Ku-Band Tx/Rx Antenna Systems



**TX-INT120KUG**  
IA083A100



**TX-EUT120KU**  
EA-A020

### Features

- Navigator™ Style Fine Azimuth and Fine Elevation Adjustments
- Single Piece Deep Drawn Metal Reflector
- Sturdy 2" Square Boom Accommodates Many Outdoor Units, Holds up to 14 lbs / 6.35 kg at end of boom
- Az/EI interface to 2 7/8 or 3 in O.D. Pipe/ 7.30 or 7.62 cm
- Includes Two port Linear Tx/Rx Ku-Band Feed assembly
- Backframe Pre-assembled to Reflector

### Description

The excellent surface accuracy of the main parabolic reflector is complemented by the cast accuracy of the lightweight sub reflector. The two combine to create superior system performance at Ku-Band. The pre-assembled steel back structure adds strength and stability to the system and keeps the installation process simple.

The Navigator Style fine tune Azimuth and Elevation cap reduces pointing errors during installation, allowing more accurate boresighting on the satellite. Increased pointing accuracy leads to greater link availability. Special packaging techniques are employed for every system shipped to protect the surface of the dish.



# 1.2 m Ku-Band Tx/Rx Antenna Systems

Eutelsat Type Approval # EA-A020  
Intelsat Type Approval # IA083A00

	C-Band Linear		C-Band Circular	Ku-Band	Ku-Band Linear	
	Transmit	Receive	Transmit		Receive	Transmit
Frequency	5.7-6.725 GHz	3.625-4.2 GHz	5.85-6.425 GHz	Frequency	10.7 - 12.75 GHz	13.75 - 14.5 GHz
Feed - 2 Port Xpol				intelsat approved Frequency	10.7 - 12.75 GHz	13.75-14.5 GHz
Return Loss	20 dB typ	17.7 dB typ	20 dB typ	eutelsat approved Frequency	10.7 - 12.75 GHz	14.0 - 14.5 GHz
Insertion Loss	0.1 dB typ	0.5 dB typ	0.3 dB typ	Feed - 2 Port Xpol		
Tx/Rx Isolation	70dB	40 dB	60 dB	Return Loss	17.7 dB typ	20 dB typ
Feed Interface	WR137 or N	WR229	WR137 or N	Insertion Loss	0.3 dB typ	0.1 dBtyp
<b>Antenna</b>						
Efficiency	72%	68%	68%	Tx/Rx Isolation	40 dB	80 dB
Cross Polarization On Axis	30dB	17.7 dB typ	17.7 dB	Feed Interface	WR75	WR75
within 1 dB Beamwidth	25 dB	17.7 dB typ	17.7 dB	<b>Dual Optics Specifications</b>		
Tx/Rx Sidelobe Level	100λ/D <θ< 48° 48° < θ			Cross Polarization on axis	35 dB	35 dB typ
				within 1 dB Beamwidth	35 dB	35 dB typ
TXFLY-120C				Tx/Rx Sidelobe	29 - 25 log θ	2.5° < θ < 7°
Midband Gain	36.4 dBi	32.2 dBi	36.1 dBi	Level	8	7° < θ < 9.2°
(6.138 Tx, 3.913 Rx)					32 - 25 log θ	9.2° < θ < 48°
Noise Temperature		65 K@10 45K @ 30°EL	55K@ 30		-10	48° < θ

	Ka-Band Linear		Ka-Band Circular
	Transmit	Receive	Transmit
Frequency	27.5 - 31 GHz	19.7 - 20.2 GHz	29.5 - 30 GHz
Feed - 2 Port Xpol			
Return Loss	20 dB typ	16 dB typ	18 dB typ
Insertion Loss	0.1 dB typ	0.5 dB typ	0.3 dB typ
Tx/Rx Isolation	80 dB	40 dB	80 dB
Feed Interface	WR28	WR42	WR28
<b>Antenna</b>			
Efficiency	65%	65%	65%
Midband Gain	49.5 dBi	46.1 dBi	49.6 dBi
Noise Temperature	---	86K @ 10°EL 81K @ 30°EL	---
Cross Polarization On Axis	30 dB	21 dB	21 dB
within 1 dB Beamwidth	22 dB	21 dB	21 dB
Tx/Rx Sidelobe Level	100λ/D <θ< 48° 48° < θ		
TXFCC-120KA			

<b>Antenna</b>		
Efficiency	70%	70%
Cross Polarization On Axis	30 dB	35 dB
within 1 dB Beamwidth	22 dB	26 dB
Tx/Rx Sidelobe better than	100λ/D < θ < 20° 20° < θ < 26.3° 26.3° < θ < 48°	29 - 25 log θ -3.5 32 - 25 log θ
	48° < θ	-10
Midband Gain	41.8 dBi	43.5 dBi
(14.125 Tx, 11.725 Rx)		
Noise Temperature	58 K @ 10° EL 53 K @ 30° EL	---

### Mechanical Data

f/D Ratio	0.635
Focal Distance	30 in / 76.2 cm
Mount Type	Elevation over Azimuth
Mast Pipe Size	2 7/8 or 3 in / 7.30 cm or 7.62 cm O.D.
Offset Angle	22°
Elevation Adjustment	8° to 90° Continuous Fine Adjustment
Azimuth Adjustment	+ 3° Fine, 360° Continuous

### Environmental Data

Wind Loading	Operational	100 kph, gusts to 130 kph
	Survival	193 kph
125mph Wind forces	Wind Force	
	Overturning Moment	
Temperature	Operational	( -40° to 60°C)
	Survival	( -51° to 82°C)