

1.8 m Type-Approved Ku-Band Tx/Rx Antenna Systems

Intelsat Type-Approval #IA091A00
Eutelsat Type-Approved

Ku-Band Specifications		Transmit	Receive
Polarity		Linear	Linear
Single Optic Frequency		13.75-14.5 GHz	10.7 - 12.75 GHz
Intelsat Type-Approved Specs			
Cross Polarization On Axis within 1 dB Beamwidth		35 dB 26 dB	30dB 22 dB
Tx/Rx Sidelobe Level		29 - 25 log θ -3.5 32 - 25 log θ -10	100 λ /D < θ < 20° 20° < θ < 26.3° 26.3° < θ < 48° 48° < θ
Eutelsat Type-Approved Specs			
Cross Polarization On Axis within 1 dB Beamwidth		35 dB 35 dB	35 dB typ 35 dB typ
Tx/Rx Sidelobe Level 2.5° < θ < 7°		+8 32 - 25 log θ	29 - 25 log θ 7° < θ < 9.2° 9.2° < θ < 48°
Feed - 2 Port Xpol			
Return Loss		17.7 dB typ Insertion Loss 0.3 dB typ Tx/Rx Isolation	20 dB typ 0.1 dB typ 80 dB 40
Feed Interface			
		WR75	WR75
Efficiency		70%	70%
Midband Gain		47.0 dBi	45.3 dBi
Noise Temperature		---	55 K @ 10° EL
Mechanical Data			
f/D Ratio		.610	
Focal Distance		43.2 in / 109.7 cm	
Mount Type		Elevation over Azimuth	
Mast Pipe Size		4 in / 10.16 cm O.D.	
Offset Angle		22°	
Elevation Adjustment		8° to 90° Continuous Fine Adjustment	
Azimuth Adjustment		+ 15° Fine, 360° Continuous	
Environmental Data			
Wind Loading	Operational	60 mph, gusts of 80mph	100 kph, gusts to 130 kph
	Survival	120 mph 193 kph	
Temperature	Operational	-40° to 140° F (-40° to 60°C)	
	Survival	-60° to 180°F (-51° to 82°C)	
Rain	Operational	1.5 in/hr (3.1 cm/h)	
	Survival	3 in/ her (7.6 cm/h)	
Ice	Survival	2.5 cm (1 inch) radial or 1.3 (.5 inch) radial	+ 100 kph (60 mph)



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TX-INT180KU
Intelsat Type-Approval #IA083A00



TX-EUT180KU

Features

\pm AZ/EL interface to 4 in O.D. Pipe / 10.16 cm

Azimuth Fine Tune $\pm 15^\circ$ for Pointing Accuracy

Dual side galvanized steel powder coated

Single Piece Deep Draw Reflector
Provides Superior Surface

Boom Supports 50 lbs / 22.26 kg

Includes Two port Linear Tx/Rx
Feed assembly

Description

Why pay more for a transmit/receive antenna? The Patriot single and dual optics antennas are excellent for VSAT applications and hold Intelsat type-approval. With a past history of use in high quality SNG (Satellite News Gathering) applications, the 1.8 m antenna provides a level of surface accuracy, rugged stiffness, and precision not often found in similarly priced products. The stamping process that produces the solid metal reflector results in superior surface accuracy and repeatability. The 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.