3.8 m FCC Compliant Offset Tx/Rx Antenna System

PATRIOT
Antenna Systems
ISO 9001/2000

Features

- Motorized Kingpost w/180° H to H, or Az/El Motorizable Kingpost Mount
- Extra support ribs for added rigidity in wind
- High Wind Load Options Available
- Easy To Ship, Installation without Crane
- Sub-Reflector Option for Ku-Band Low Cross Pol Applications
- Various Frequency and Feed Options
- Long Focal Length for Excellent Sidelobe Rejection

Description

Solid Performer Ideal for Commercial C-Band and Ku-Band Applications

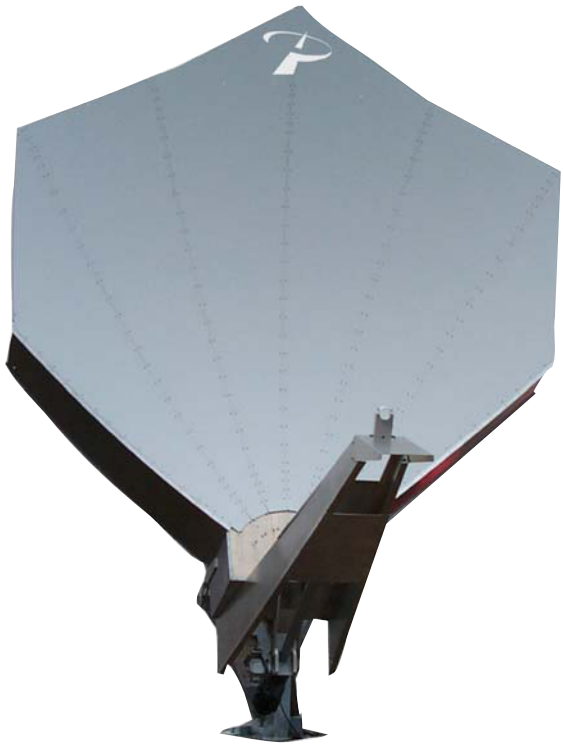
Need a more cost effective solution for a 3.8 meter transmit/receive antenna? Many customers require the extra link margin that a larger antenna like a 3.8 meter can provide, for the hub station in their VSAT networks, a video uplink, or an SCPC central station. However, affordable prices are not often found when considering the other antennas on the market. The Patriot 3.0 and 3.8 meter offsets are the affordable, flexible choice. Every Az/El fixed Kingpost antenna is fully upgradable in the field to a Dual-Axis Motorized antenna with 180° H to H Mount.

Patriot's newest offset antenna is not just affordable, it's a solid performer. The stretch formed antennas with kerf panels provides superior surface accuracy. This antenna allows for easy installation without the need for a crane or a lifting device.

3.0 / 3.8 m FCC Compliant Offset Tx/Rx Antenna System

3.8m Offset

RF SPECIFICATIONS	Circular Single Optic		Linear Single Optic	
C-Band	Receive	Transmit	Receive	Transmit
Frequency in GHz	3.625 - 4.20	5.850 - 6.425	3.40 - 4.20	5.7 - 6.725
Midband Gain (Rx/Tx)	42.1 dB	46.2 dB	42.3 dB	46.3 dB
Antenna Noise Temperature at 30° Elevation	35 K		30 K	
Typical G/T @ 30° EL 3.912 GHz Clear Horizon w/ 50 K LNA		23.0 dB/K		23.1dB/K
Cross Pol Isolation on Axis (4port)	17.7 dB	27.3 dB	30.0 dB	35.0 dB
within 1 dB Beamwidth	17.7 dB	27.3 dB	22.0 dB	26.0 dB
Return Loss	17.7 dB	19.0 dB	17.7 dB	19.0 dB
RF SPECIFICATIONS	**Linear Dual Optic**		**Linear Single Optic**	
Ku-Band	Receive	Transmit	Receive	Transmit
Frequency in GHz	10.70 - 12.75	13.75 - 14.50	10.70 - 12.75	13.75 - 14.50
Midband Gain	51.8 dB	53.5 dB	51.8 dB	53.5 dB
Antenna Noise Temperature at 30° Elevation	30 K		30 K	
Typical G/T @ 30° EL 11.725 GHz Clear Horizon w/ 80 K LNA	31.4 dB/K			31.4 dB/K
Cross Pol Isolation on Axis	30.0 dB	35.0 dB	30.0 dB	35.0 dB
within 1 dB Beamwidth	30.0 dB	35.0 dB	22.0 dB	26.0 dB
Return Loss	17.7 dB typ	20.0 dB	17.7 dB typ	20.0 dB



Tx/Rx Sidelobe Level		
	29 - 25 log θ	100λ/D < θ < 20°
	-3.5	20° < θ < 26.3°
	32 - 25 log θ	26.3° < θ < 48°
	-10	48° < θ

Mechanical Specs		
Mount	Motorized Kingpost w/180° H to H Mount or Az/El Motorizable Kingpost Mount Elevation adjustment 0-120° Azimuth 180°)	
Kingpost Mount	Hot-Dip Galvanized	
Reflector Structure	uminum with powder coating on reflector surface	
Environmental Specs		
Windload Operational / Survival	45 mph gusts of 125 mph	73 kmh gusts of 200 kmh)
Ambient Temp. Operational	-40° to 122°F	-40° to 50°C
Ambient Temp. Survival	-40° to 140°F	-40°C to 60°C
Relative Humidity		0% to 100%

High Wind Mechanical Specs		
Mount	Az/El Motorizable Kingpost Mount Elevation adjustment 0-90°, Azimuth 120°	
Kingpost Mount	Hot-Dipped Galvanized	
Reflector Structure	Aluminum with powder coating on reflector surface	
Environmental Specs		
Windload Operational / Survival	90 mph / gusts of 1	150 kmh / gusts of 250kmh
Ambient Temp. Operational	-40° to 122°F	-40° to 50°C
Ambient Temp. Survival	-40° to 140°F	-40°C to 60°C
Relative Humidity	0% to 100%	

Call For Specialty 4-Port Feed Assemblies

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