

3.8m Offset Tx/Rx MultiBand

*Manual Adjustment / Dual Axis Motorized
 Multi-Band / Ku Linear, C Linear, C Circular, X Circular*

Description

The 3.8m antenna provides a level of surface accuracy, rugged stiffness, and precision not often found in similar products. Every Az/El fixed Kingpost antenna is fully upgradable in the field to a Dual-Axis Motorized antenna with 180° Horizon to Horizon Mount.

Features

- Feeds for Ku Linear, C Linear, C Circular and X Circular available
- Easy to ship - Installation without crane
- Extra support ribs for added rigidity - High Wind Option
- Long focal length for excellent sidelobe rejection



Dual-Axis Motorization

Includes the same basic features as manual adjustment antenna.

Unique Features

- Motorized Az/El Mount
- Easy Setup with Control Cable
- Limited Motion Mount
- Motorized Feed Assembly for Pol Adjustment
- Manual Jog or Tracking Motions Available
- Auto Locate Option Available
- Actuator Control

Made in the USA

Antenna Characteristics	Ku Linear	
	Receive	Transmit
Frequency (GHz)	10.7 - 12.75	13.75 - 14.5
Antenna Gain (dBi ± 0.2) (GHz)	51.2 @ 11.725	53.2 @ 14.125
Antenna Noise Temperature (°K) @11.725 GHz		
• 10° Elevation	62	-
• 20° Elevation	52	-
• 30° Elevation	48	-
Cross Polarization Isolation (dB)		
• On Axis	>30	>30
• Within 1dB beamwidth	>22	>26
VSWR	<1.5:1	<1.2:1
Port to Port Isolation (dB)	>45	>80
Sidelobe Performance	Compliant with ITU-R S.580	
Port Configuration	2 Port Cross Pol	

Antenna Characteristics	C Linear	
	Receive	Transmit
Frequency (GHz)	3.625 - 4.2	5.85 - 6.425
Antenna Gain (dBi ± 0.2) (GHz)	42.0 @ 3.9125	46.1 @ 6.1375
Antenna Noise Temperature (°K) @3.9125 GHz		
• 10° Elevation	54	-
• 20° Elevation	46	-
• 30° Elevation	42	-
Cross Polarization Isolation (dB)		
• On Axis	>30	>30
• Within 1dB beamwidth	>22	>26
VSWR	<1.5:1	<1.3:1
Port to Port Isolation (dB)	>60	>85
Sidelobe Performance	Compliant with ITU-R S.580	
Port Configuration	2 Port Cross Pol	

Challenger Communications
 704 North Clark Street
 Albion, Michigan 49224 USA
 Tel: +1 (517) 680 0125
 Fax: +1 (517) 680 0133
info@challengercommunications.com
www.ChallengerCommunications.com

3.8m Offset Tx/Rx MultiBand

Feed Characteristics	C Circular	
	Receive	Transmit
Operating Frequency (GHz)	3.7 - 4.2	5.925 - 6.425
	side port	through port
Voltage Axial Ratio	1.4 (2.95 dB)	1.3 (2.28 dB)
Cross Polarization Isolation (dB)	15.5 dB	17.7 dB
Feed Interface	WR-229	Type N or WR-137
Port-to-Port (Rx/Tx) Isolation	75 dB	
VSWR Max	1.33	
Port Configuration	2 Port Cross Pol	

Mechanical Specifications ⁽¹⁾		
Antenna Size	3.8 Meter	
Optics	Single Offset	
Reflector Construction	Stretch Formed Reinforced Panels	
Mount Type	El over Az Kingpost	
Standard Adjustment Range		
	Non-Motorized	Motorized
• Azimuth	± 82°	+75° / -85° Max ⁽²⁾
• Elevation	0° to 90°	5° to 90°
• Pol	360° Continuous	± 270° from 0°
High Wind Adjustment Range		
	Non-Motorized	
• Azimuth	± 55°	
• Elevation	0° to 90°	
Shipping Container 1	(cm, kg in parathensis) 192 x 51 x 32" (487.7 x 129.5 x 81.3)	194 x 52 x 45" (493 x 132 x 114.3)
Packaged Weight	1918 lbs. (870)	1896 lbs. (860)
Shipping Container 2	(Any Non-Motorized) 86 x 36 x 64" (218.4 x 91.4 x 162.6)	(Any Motorized) 119 x 49 x 80" (302.3 x 125 x 203.2)
Packaged Weight	1230 lbs. (558)	1948 lbs. (883.6)

Antenna Characteristics	X Circular	
	Receive	Transmit
Frequency (GHz)	7.25 - 7.75	7.9 - 8.4
Antenna Gain (dBi ± 0.2) (GHz)	47.7 @ 7.5	48.5 @ 8.15
Antenna Noise Temperature (°K) @ mid band		
• 10° Elevation	39	-
• 20° Elevation	32	-
• 30° Elevation	27	-
Cross Polarization Isolation (dB)		
• On Axis	>20	>20.8
• Within 1dB beamwidth	>20	>20.8
VSWR	<1.2:1	<1.2:1
Port to Port Isolation (dB)	>20	>20
Sidelobe Performance	Compliant with ITU-R S.580	
Port Configuration	2 Port Cross Pol	

Environmental Performance		
Wind Loading		
• Operational		
• Standard	45 mph (72.4 km/h)	
• High Wind	90 mph (144.8 km/h)	
• Survival (Stowed)		
• Standard	100 mph (160.9 km/h)	
• High Wind	150 mph (241.4 km/h)	
Temperature		
• Operational	-28.9°C to 51.7°C (-20°F to 125°F)	

⁽¹⁾ Weights are approximate

⁽²⁾ Option for ±90° available (w/o chain drive cover)

Made in the USA

Challenger Communications
 704 North Clark Street
 Albion, Michigan 49224 USA
 Tel: +1 (517) 680 0125
 Fax: +1 (517) 680 0133
 info@challengercommunications.com
www.ChallengerCommunications.com