

# 1.8m Quick-Deploy Antenna System

## C-Band Option

### Features

- 4-Piece Aluminum Reflector
- Pre-Assembled Tripod Base Mount w/Pull Pins
- C, Ku and Ka Band Feed Systems Available
- Sturdy Boom Accommodates Outdoor Units
- Self-Leveling Feet for Uneven Surfaces
- Optional Lightweight Cases for Easy Transportation
- Azimuth and Elevation Hand Crank
- 10 Minute Setup, No Tools Needed

### Description

The Challenger Communications Quick-Deploy Antenna System incorporates precision machined reflector panels with our rugged **Antenna Armor™** backing structure.

To ensure quality and performance, Challenger panels are inspected for R.M.S. accuracy using the latest in laser measurement techniques.

All reflectors and mounts are produced from high quality materials and are made in the USA.

RF Specifications	C Linear		C Circular	
	Receive	Transmit	Receive	Transmit
Frequency (GHz)	3.4 - 4.2	5.7 - 6.725	3.625 - 4.2	5.85 - 6.425
Feed - 2 - Port Xpol				
Return Loss	17.7 dB typ	17.7 dB	17.7 dB typ	17.7 dB
Insertion Loss	0.2 dB typ	0.2 dB typ	0.3 dB typ	0.2 dB typ
Tx/Rx Isolation	40 dB	70 dB	40 dB	60 dB
Feed Interface	WR229	WR137 or N	WR137 or N	WR229

Antenna Specifications	C Linear		C Circular	
	Receive	Transmit	Receive	Transmit
Efficiency	70%	70%	70%	70%
Cross Polarization On Axis	30 dB	35 dB	21 dB	21 dB
within 1 dB Beamwidth	22 dB	25 dB	21 dB	21 dB
Tx/Rx Sidelobe Level	32 - 25 log $\theta$	100 $\lambda$ /D < $\theta$ < 48°	32 - 25 log $\theta$	100 $\lambda$ /D < $\theta$ < 48°
Midband Gain	36 dBi	39.8 dBi	35.6 dBi	39.5 dBi
Noise Temperature	55K @ 10°	-	65K @ 10°	-
	50K @ 30°	-	60K @ 30°	-



1.8m Quick-Deploy Antenna System  
4-piece reflector depicted

Mechanical Specifications	
Antenna Optics	Single Offset
Mount Type	Elevation over Azimuth Tripod
Elevation Adjustment	0° to 90° Continuous Fine Adjustment
Azimuth Adjustment	+30° Fine, 360° Continuous

2 Reflector Cases	90 lbs./41 kg	44 x 12 x 44 in. each 112 x 31 x 112 cm each
1 Mount Case	130 lbs./59 kg	66 x 22 x 18 in. 168 x 56 x 46 cm
1 Back Structure Case	100 lbs./46 kg	50 x 24 x 16 in. 127 x 61 x 41 cm

Environmental Performance	
Wind Loading:	
Operational (No Ballast/Anchors)	25 mph (40 km/h)
Operational (w/Ballast/Anchors)	45 mph (72 km/h)
Survival (w/Ballast/Anchors)	90 mph (145 km/h)
Operational Temperature	-40° to 140° F (-40° to 60° C)
Rain	.5 in./h (1.3 cm/h)
Solar Radiation	360 BTU/h/ft <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )

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**Made in the USA**