

Patriot 1.0m Transmit/Receive Antenna

COBHAM

Elliptical Broadband Microterminals:
Ka-Band Option
2008 Data Sheet

The most important thing we build is trust

Basic 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
Az/El 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

Description

The Patriot 1.0m Intelsat and Eutelsat Type-Approved antenna systems feature a solid stamped metal reflector with superior surface accuracy and one of the strongest feed booms in the industry.

The Patriot "one-size-fits-all" approach eliminates the complexity of different models of the same size antenna with different weight ratings.

RF Specifications	Linear		Circular	
	Transmit	Receive	Transmit	Receive
Frequency in GHz	27.5 - 31	18.2 - 21.2	29.5 - 30	19.7 - 20.2
Feed - 2 Port Xpol				
Return Loss	20 dB typ	17.7 dB typ	18 dB typ	16 dB typ
Insertion Loss	0.1 dB typ	0.3 dB typ	0.3 dB typ	0.5 dB typ
Tx/Rx Isolation	80 dB	40 dB	80 dB	41 dB
Feed Interface	WR28	WR42	WR42	WR28

Antenna Specifications	Linear		Circular	
	Transmit	Receive	Transmit	Receive
Efficiency	65%	65%	65%	65%
Midband Gain	47.8 dBi	44.2 dBi	48.1 dBi	44.6 dBi
Offset Angle	22°	-	-	-
Focal Length	25 in	-	-	-
f/D	.635	-	-	-
Noise Temperature	-	78K @ 30° EL	-	53K @ 30° EL
Cross Polarization On Axis	35 dB	30 dB	21 dB	21dB
within 1 dB Beamwidth	25 dB	22 dB	21 dB	21 dB
Tx/Rx Sidelobe Level	-	29-25 log θ	-	100 λ /D < θ < 20°
	-	- 3.5	-	20° < θ < 26.3°
	-	32 - 25 log θ	-	26.3° < θ < 48°
	-	- 10	-	48° < θ

Mechanical & Environmental Data

Antenna Optics	Single Offset, Elliptical Aperture
Mount type	Elevation over Azimuth
Mast Pipe Size	2 7/8 or 3 in / 7.30 or 7.60 cm O.D.
Elevation Adjustment	8° to 90° Continuous Fine Adjustment
Azimuth Adjustment	+3° Fine, 360° Continuous
Wind Loading	Operational: 60 mph, gusts of 80 mph Survival: 120 mph (193 kph)
Temperature	Operational: -40° to 140° F (-40° - 60° C) Survival: -60° to 180° (-51° to 82° C)
Rain	Operational: 1.5 in/hr (3.1 cm/hr) Survival: 3 in/hr (7.6 cm/hr)
Ice	Survival: 1" (2.5 cm) radial



1.0 Transmit/Receive Antenna System

Other Bands Available:

Ku

For further information please contact:

Cobham SATCOM Land Systems
704 North Clark Street
Albion, Michigan 49224 USA

Tel: (01) 517 629 5990
Fax: (01) 517 629 6690

satcom.albioninfo@cobham.com