

# Patriot .66m Transmit/Receive Antenna System

# COBHAM

Elliptical Broadband VSAT  
Ku-Band Option  
2009 Data Sheet

The most important thing we build is trust

## Basic Features

- AZ/EL interface to 2" O.D. Pipe
- Dual side galvanized steel powder-coated
- Includes Two Port Linear Tx/Rx Ku-Band Feed Assembly
- Back frame Pre-Assembled to Reflector
- New Patent Pending Fine Tune Mount
- Single Piece Deep Drawn Metal Reflector
- Sturdy 1" x 2" Boom Fits Most Outdoor Units, holds up to 10 lbs. at end of boom

## Description

The Patriot .66m elliptical antennas are perfect for use with higher powered satellites that feature a highly accurate stamped surface that delivers excellent gain and X-Pol performance.

The stamping process produces solid metal reflectors that result in superior surface accuracy and repeatability.

The Patent Pending mount reduces pointing errors during installation, allowing more accurate boresighting on the satellite.

Increase pointing accuracy leads to greater link availability.

## RF Specifications

	Transmit	Receive
Frequency in GHz	13.75 - 14.5	10.7 - 12.75
Feed- 2 Port Xpol		
Return Loss	20 dB typ	17.7 dB typ
Insertion Loss	0.1 dB typ	0.3 dB typ
Tx/Rx Isolation	80 dB	40 dB
Feed Interface	WR75	WR75

## Antenna Specifications

	Transmit	Receive
Efficiency	68%	68%
Midband Gain	38.2	36.6
Offset Angle	12.75°	-
Focal Length	22.1	-
f/D	.85	-
Noise Temperatre @ 30° EL	-	57K
Cross Polarization On Axis	35 dB	30 dB
within 1 dB Beamwidth	26 dB	22 dB
Tx/Rx Sidelobe Level	29-25 log $\theta$	100 $\lambda$ /D < $\theta$ < 20°
	-3.5	20° < $\theta$ < 26.3°

## Mechanical & Environmental Data

Antenna Optics	Single Offset, Elliptical Aperture
Mount type	Elevation over Azimuth
Mast Pipe Size	2" or 5.08 cm O.D.
Elevation Adjustment	8° to 90° Continuous Fine Adjustment
Wind Loading	Operational: 50 mph (80 kph) Survival: 125 mph (160 kph)
Temperature	Operational: -40° to 140° F (-40° - 60° C) Survival: -60° to 180° (-51° to 82° C)
Rain	Operational: 1/2 in/hr (1.25 cm/hr) Survival: 3 in/hr (7.6 cm/hr)
Ice	Survival: 1" (2.5 cm) radial 1/2" (1.25 cm) radial + 60 mph (100 kph)



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