

## 1.45 Meter Vehicle-Mount Antenna

High Performance  
Light Weight  
X, Ku or Ka-Band



### Features

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- High Performance SNG Applications
- Intelsat and Eutelsat Compliant
- Multiple Controller Options
- Carbon Fiber Reflector
- Handcranks Included
- Low Stow Height and Space-Optimizing Stowed Configuration
- Designed for Boom Mounted Redundant RF Packages up to 100 lbs
- Multiple Feed Options for X, Ku, and Ka Bands
- High Reliability, Low Maintenance

### Overview

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The 1.45 Meter Vehicle-Mount Antenna from Advantech Wireless is a high performance light weight antenna designed for SNG and military applications. Key features include a precision carbon fiber reflector combined with a light weight pedestal that provides the integrator with a low stow height space saving profile. The elevation over azimuth pedestal provides excellent stiffness and low backlash characteristics for applications including Ka-Band frequencies.

The antenna is also designed for mounting redundant RF packages of up to 100 lbs directly on the feedboom. This allows for less waveguide losses between the amplifier and feed and increases the uplink EIRP. The antenna is designed to meet international RF performance requirements for commercial and military applications including Intelsat, Eutelsat, and FCC specifications.

# 1.45 Meter Vehicle-Mount Antenna

## Technical Specifications

### Electrical specifications

	2 Port X Band Circular		2 Port Cross Pol Ku Band Linear / SNG Feed		2 Port Cross Pol Ku Band Mode Matched Linear / SNG Feed		2 Port Cross Pol Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	7.25 – 7.75	7.9 – 8.4	10.70 – 12.75	13.75 – 14.5	10.95 – 12.75	13.75 – 14.5	20.2 – 21.2	30.0 – 31.0
Gain (Midband, dBi)	38.7	39.5	43.2	44.8	43.2	44.8	47.5	51.0
Noise Temperature (*K)								
10 deg El	79		55		56		155	
20 deg El	61		46		48		120	
Axial Ratio	1.5 dB	1.5 dB					1.5 dB	1.5 dB
Cross Pol								
On Axis	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB contour	-21.3 dB	-21.3 dB	-30 dB	-30 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Sidelobe Compliances	DSCS/188-164A		Meets ITU 580 FCC / Intelsat		Meets ITU 580/ FCC Intelsat/Eutelsat		DSCS/188-164A	
VSWR	1.30:1	1.30:1	1.30:1	1.25:1	1.4:1	1.30:1	1.35:1	1.30:1
Isolation								
Tx/Rx	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-110 dB	0 dBm input	-35 dB	0 dBm input	-35 dB	0 dBm input	-30 dB

## Mechanical / Environmental Specifications

Reflector	1.45 meters (58 in) Carbon Fiber
Reflector Configuration	Parabolic Single Offset, 0.8 F/D
Antenna Travel	
Azimuth	± 200° continuous
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Antenna Drive Rate	
Azimuth	3.0°/sec
Elevation	2.5°/sec
Polarization	3.0°/sec
Temperature	
Operational	-30 to 60°C (-22 – 140°F)
Survival	-40 to 70°C (-40 – 158°F)
Winds <sup>1</sup>	
Operational	45 mph Gusting to 60 mph (72 G 96 kph)
Survival	80 mph (128 kph) deployed any position
	100 mph (161 kph) stowed
Antenna Stow Height	14 3/4 in (377 mm)
Weight	165 lb (75 kg) - with Ku Feed
Integration <sup>2</sup>	
Feedboom Mounted <sup>3</sup>	100 lbs
Rain	
Operational	4 in/h (10 cm/h)
Survival	6 in/h (15 cm/h)
Relative Humidity	0 -100%
Solar Radiation	360 btu/h/ft <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )
Radial Ice (survival)	1 in (25.4 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

<sup>1</sup> Dependent on vehicle capabilities

<sup>2</sup> Dependent on mounting position relative to elevation axis

<sup>3</sup> Std weight shown, consult factory for special requirements

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