

TECHNICAL SPECIFICATIONS



RF Interface

Radio Mounting	Feed Arm / Rear of Base / Inside Vehicle
Axis Transition	Twist-Flex Waveguide
Waveguide	WR75 Cover Flange Interface
Coaxial	RG6U from Feedhorn to Base Controller
Electrical Interface	10m ext. Cables with MIL Connectors
Feed	2 port - XPol

Motors

Electrical Interface	12 VDC 15A Max.
----------------------	-----------------

Maximum Mount Rotation

Azimuth	Full 360° in overlapping 200° sectors
Elevation	0-80°
Polarization	± 90°
Elevation Deploy Speed	Variable 2° /sec typ
Azimuth Deploy Speed	Variable 15° /sec typ, 10° /sec typ
Peaking Speed	0.1° /sec
VSWR	1.3:1 Max

Mechanical

Reflector	1.8m Offset Feed ⁽¹⁾
Mount Geometry	Elevation over Azimuth
Deployment Sensors	GPS Antenna Compass ± 2° Tilt Sensor ± 0.2°
F/D Ratio	0.61

Physical

Mounting Plate	L: 52" (1321mm) W: 28" (711mm)
Stowed Dish Ext. Dims	L: 98.1" (2492mm) W: 74.3" (1887mm) H: 26.4" (671mm)
Deployed Height	97.8" (2484mm)
Weight	341 lbs (155 kg)

Environmental Survival

Wind Deployed	70 mph (112km/hr)
Wind Stowed	140 mph (225 km/hr)
Temperature	-40° F to 150° F (-40° C to 65° C)

Operational

Wind	45 mph (72 km/hr)
Temperature	-26°F to 130°F (-32°C to 55°C)

Coax Cables

Standard	
Ku Band	Tx / Rx at 75 ohm (F-Type)
C Band	Tx / Rx at 75 ohm (F-Type)
Optional	Tx at 50 ohm (N-Type)

Warranty

Standard	2 years
----------	---------

Note: ⁽¹⁾Antenna based on Patriot, Model TX-INT180



Electrical

Rx & Tx Cables	2 RG6 cables (10m each)
Standard:	10m Ext. Cable
Optional:	upto 75m available

Ku-Band (Linear Orthogonal)

Transmit Power	1 to 200 Watt ⁽¹⁾	
	Receive	Transmit
Frequency	10.70 - 12.75 GHz	13.75 - 14.50 GHz
Feed Interface	WR75	WR75
Efficiency	70%	70%
Midband Gain	45.0 / 45.3 dBi	47.0 dBi
Antenna Noise Temperature		
10° Elevation	55 K	
30° Elevation	50 K	
Sidelobe Envelope, Co-Pol (dBi)		
	2° < Ø < 20°	29 - 25 Log Ø dBi
	20° < Ø < 26.3°	-3.5 dBi
	26.3° < Ø < 48°	32-25 Log Ø dBi
	48° < Ø	-10 dBi (averaged)
Cross-Polarization		
On Axis	-30 dB	-30 dB
Within 1 dB Beamwidth	-22 dB	-26 dB

X-Band (Circular)

Frequency	7.25 - 7.75 GHz	7.9 - 8.4 GHz
Feed Interface	WR112	WR112
Midband Gain	41.5 dBi	42.2 dBi
Antenna Noise Temperature		
10° Elevation	38 K	
30° Elevation	35 K	
Sidelobe Envelope, Co-Pol (dBi)		
	2° < Ø < 20°	29 - 25 Log Ø dBi
	20° < Ø < 26.3°	-3.5 dBi
	26.3° < Ø < 48°	32 - 25 Log Ø dBi
	48° < Ø	-10 dBi (averaged)
Cross-Polarization		
On Axis	-23 dB	-21 dB
Within 1 dB Beamwidth	-23 dB	-21 dB

C-Band (Linear)

	Receive	Transmit
Frequency (Std)	3.4 - 4.2 GHz	5.700 - 6.725 GHz
Frequency (INSAT)	4.5 - 4.8 GHz	6.725 - 7.025 GHz
Feed Interface	WR229	WR137
Midband Gain	36.0 dBi	39.8 dBi
Antenna Noise Temperature		
10° Elevation	55 K	
30° Elevation	50 K	
Sidelobe Envelope, Co-Pol (dBi)		
	2.0° < Ø < 20°	29 - 25 log Ø
	20° < Ø < 26.3°	-3.5 dBi
	26.3° < Ø < 48°	32 - 25 log Ø
	48° < Ø	-10 dBi (averaged)
Cross-Polarization		
On Axis (Std)	-30 dB	-30 dB
On Axis (INSAT)	-35 dB	-35 dB
Within 1 dB Beamwidth	-22 dB	-25 dB

C-Band (Circular)

Frequency	3.625 - 4.200 GHz	5.850 - 6.425 GHz
Feed Interface	WR229	WR137
Midband Gain	35.6 dBi	39.5 dBi
Antenna Noise Temperature		
10° Elevation	65 K	
30° Elevation	60 K	
Sidelobe Envelope, Co-Pol (dBi)		
	2.0° < Ø < 20°	29 - 25 log Ø
	20° < Ø < 26.3°	-3.5 dBi
	26.3° < Ø < 48°	32 - 25 log Ø
	48° < Ø	-10 dBi (averaged)
Cross-Polarization		
On Axis	-15.3 dB	-17.7 dB
Within 1 dB Beamwidth	-15.3 dB	-17.7 dB

Note: ⁽¹⁾ Depending on size and weight for feed arm mounting limitation