

# 1800



## 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	Connectors for Controller, 10m ext. Cable
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
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)

Standard warranty: 2 years

[www.c-comsat.com](http://www.c-comsat.com)  
(613) 745-4110 (877) 463-8886



Specifications are subject to change

Mar. 2010

# 1800



## TECHNICAL SPECIFICATIONS



### Electrical

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

### Ku-Band (Linear Orthogonal)

Transmit Power	1 to 200 Watt *	
	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° < $\theta$ < 20°	29 - 25 Log $\theta$ dBi
	20° < $\theta$ < 26.3°	-3.5 dBi
	26.3° < $\theta$ < 48°	32-25 Log $\theta$ dBi
	48° < $\theta$	-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° < $\theta$ < 20°	29 - 25 Log $\theta$ dBi
	20° < $\theta$ < 26.3°	-3.5 dBi
	26.3° < $\theta$ < 48°	32 - 25 Log $\theta$ dBi
	48° < $\theta$	-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° < $\theta$ < 20°	29 - 25 log $\theta$
	20° < $\theta$ < 26.3°	-3.5 dBi
	26.3° < $\theta$ < 48°	32 - 25 log $\theta$
	48° < $\theta$	-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° < $\theta$ < 20°	29 - 25 log $\theta$
	20° < $\theta$ < 26.3°	-3.5 dBi
	26.3° < $\theta$ < 48°	32 - 25 log $\theta$
	48° < $\theta$	-10 dBi (averaged)
Cross-Polarization		
On Axis	15.3 dB	17.7 dB
Within 1 dB Beamwidth	15.3 dB	17.7 dB

\* Depending on size and weight for feed arm mounting limitation

[www.c-comsat.com](http://www.c-comsat.com)  
(613) 745-4110 (877) 463-8886



Specifications are subject to change

Mar. 2010