



Model 8016A is an 11.3 meter earth station antenna that provides superior performance through the use of precision stretch-formed reflector panels and a dual-shaped Cassegrain feed.

Corrugated conical feed horns ensure excellent antenna gain and sidelobe performance. Forty-eight high-strength aluminum panels are durable enough to withstand rough handling and a range of environmental conditions. Antenna panels mount to radial trusses attached to a central hub.

The hub also provides a protective enclosure for sensitive electronics. The high-strength structural steel mount employs an elevation-over-azimuth geometry for easy pointing to any satellite within the visible orbital arc. The mount's stiff, rugged construction provides pointing accuracy for continuous operation, even under adverse wind conditions.

The Model 8016A includes a TORQUETUBE™ mount with continuous 120° of motorized azimuth coverage in three overlapping sectors.

11.3 METER AT-A-GLANCE

- » Compliant with FCC, ASIASAT, INTELSAT, EUTELSAT, ITU and more
- » Meets INTELSAT Standard F-3 and B requirements
- » High-efficiency shaped Cassegrain optics
- » Use with C-band or Ku-band systems (custom frequency options — consult factory)
- » Add our 8860/8861A/8862 Antenna Controller with patented AdaptTrack for accurate tracking
- » Minimal satellite repointing time with high-speed motorized option
- » Generous electronics space in hub
- » Precision high-strength structural steel TORQUETUBE™ mount
- » Full line of feed, reflector, and mount options available including TT&C pointing upgrade
- » CE compliant

OPTIONS

- » 180° continuous azimuth coverage
- » TT&C pointing upgrade
- » Workplatform and ladder
- » Expanded workplatform and ladder
- » Hub light and fan
- » Hub cover
- » Standard power cross-axis transmit waveguide (2 kW C-band, 700 W Ku-band)
- » High power cross-axis transmit waveguide
- » Waveguide loads
- » Crossguide couplers
- » Lightning protection
- » Aircraft warning lights
- » De-icing

Model 8016A 11.3 Meter Earth Station Antenna Specifications

ELECTRICAL

	C-band	Ku-band
Operating Frequency (GHz)		
Transmit	5.850 – 6.425	14.0 – 14.5
Receive	3.625 – 4.2	10.95 – 12.75
Gain (Midband, Ref. Feed Horn)		
Transmit	55.67 dBi ³	62.8 dBi ⁴
Receive	52.17 dBi ¹	61.7 dBi ²
Feed Insertion Loss (dB)		
DP – 2-Port RX/RX Linear		
Receive	0.051 dB	0.14 dB
RT – 2-Port RX/RX Linear		
Transmit	0.10 dB	0.12 dB
Receive	0.10 dB	0.14 dB
4PL – 4-Port RX/RX Linear		
Transmit	0.15 dB	0.20 dB
Receive	0.15 dB	0.20 dB
4PC – 4-Port RX/RX Circular		
Transmit	0.17 dB	N/A
Receive	0.17 dB	N/A
VSWR		
TX	1:3:1	1:3:1
RX	1:3:1	1:3:1
Beamwidth (-3 dB)		
Transmit	0.29°	0.13°
Receive	0.43°	0.15°
First Sidelobe Level		
	14.0 dB	14.0 dB
Antenna Noise Temp (Typical, Ref. Fee Horn)		
Elevation		
10°	25 K	36 K
20°	18 K	27 K
30°	16 K	25 K
40°	15 K	24 K
Power Handling Per TX Port⁶		
	5 kW (CW)	1 kW (CW)
Cross Pol Isolation (on axis, min.) (Linear)		
Transmit	35 dB	35 dB
Receive	35 dB	35 dB
Feed Port Isolation (4-Port Linear)		
RX/TX (RX-band)	85 dB	50 dB
TX/RX (TX-band)	85 dB	85 dB
RX/RX	21 dB	35 dB
TX/TX	18 dB	35 dB
Axial Ratio (Circular Polarization)		
	1.06:1	
Radiation Pattern		
	Meets standards set by FCC, INTELSAT, ASIAT, EUTELSAT, ITU and others.	

MECHANICAL

Antenna Diameter	11 meters (444 inches)
Antenna Type	shaped dual reflector
Reflector Construction	48 aluminum panels on hub and truss structure
Mount Type	Elevation-over-azimuth
Antenna Travel	
Elevation	0° to 90° continuous ⁵
Azimuth	180° in 3 overlapping 120° sectors
Optional	180° continuous
Polarization Adjustment	
Manual	360°
Motorized	±90°
Antenna Travel Rate (Motorized)	Various — consult factory
Feed Interface	
Transmit C-band	CPR-137G
Transmit Ku-band	WR-75
Receive C-band	CPR-229G
Receive Ku-band	WR-75
Weight C-Band	
Net	6,818 kg (15,000 lb.)/6,909 kg (15,200 lb.)
Ship	9,773 kg (21,500 lb.)/9,863 kg (21,700 lb.)
Shipping Volume	73.6 cubic meters (2,600 cubic feet)
ENVIRONMENTAL	
Wind Loading	
Operational	72 km/h (45 MPH) gusting to 105 km/h (65 MPH)
Survival	161 km/h (100 MPH), any position, 15° C, no ice 201 km/h (125 MPH), stowed, 15° C, no ice
Temperature Range	
Operational	-40° C to +65° C (-40° F to +150° F)
Atmospheric Conditions	Salt, pollutants and corrosive contaminants as found in coastal and industrial areas

NOTES

- ¹ Referenced at 3.95 GHz
- ² Referenced at 11.95 GHz
- ³ Referenced at 6.175 GHz
- ⁴ Referenced at 14.25 GHz
- ⁵ Minimum elevation angle is 5° with the hot air de-icing option installed
- ⁶ Higher power options available, Consult factory.



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