



Model 8009A is a 9.1 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 8009A includes a TORQUETUBE™ mount with continuous 120° of motorized azimuth coverage in three overlapping sectors. The Model 8009AE provides an extreme environment mount for high wind conditions.

9.1 METER AT-A-GLANCE

- » Compliant with FCC, ASIASAT, INTELSAT, EUTELSAT, ITU and more
- » Meets INTELSAT Standard F-3 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
- » CE compliant

OPTIONS

- » 180° continuous azimuth coverage
- » Extreme environment mount
- » TT&C pointing upgrade
- » 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 8009A 9.1 Meter Earth Station Antenna

ELECTRICAL

	C-band	Ku-band	DBS-band
Operating Frequency (GHz)			
Transmit	5.850 – 6.425	14.0 – 14.5	17.3 – 18.4
Receive	3.625 – 4.2	10.95 – 12.75	10.95 – 12.75
Gain (Midband, Ref. Feed Horn)			
Transmit	53.8 dBi ³	61.1 dBi ⁴	62.58 dBi ⁵
Receive	50.3 dBi ¹	59.6 dBi ²	59.6 dBi ²
Feed Insertion Loss (dB)			
DP – 2-Port RX/RX Linear			
Receive	0.051 dB	0.14 dB	N/A
RT – 2-Port RX/RX Linear			
Transmit	0.10 dB	0.12 dB	N/A
Receive	0.10 dB	0.14 dB	N/A
4PL – 4-Port RX/RX Linear			
Transmit	0.15 dB	0.20 dB	0.40 dB
Receive	0.15 dB	0.20 dB	0.54 dB
4PC – 4-Port RX/RX Circular			
Transmit	0.17 dB	N/A	N/A
Receive	0.17 dB	N/A	N/A
VSWR			
TX	1:3:1	1:3:1	1:3:1
RX	1:3:1	1:3:1	1:3:1
Beamwidth (-3 dB)			
Transmit	0.38°	0.16°	0.13°
Receive	0.58°	0.19°	0.19°
First Sidelobe Level			
	14.0 dB	14.0 dB	14.0 dB
Antenna Noise Temp (Typical, Ref. Fee Horn)			
Elevation			
10°	25 K	36 K	36 K
20°	18 K	27 K	27 K
30°	16 K	25 K	25 K
40°	15 K	24 K	24 K
Power Handling Per TX Port⁷			
	5 kW (CW)	1 kW (CW)	1 kW (CW)
Cross Pol Isolation (on axis, min.) (Linear)			
Transmit	35 dB	35 dB	35 dB
Receive	35 dB	35 dB	35 dB
Feed Port Isolation (4-Port Linear)			
RX/TX (RX-band)	85 dB	50 dB	50 dB
TX/RX (TX-band)	85 dB	85 dB	85 dB
RX/RX	18 dB	35 dB	35 dB
TX/TX	21 dB	35 dB	35 dB
Axial Ratio (Circular Polarization)			
	1.06:1		
Radiation Pattern			
	Meets standards set by FCC, INTELSAT, ASIASAT, UTELSAT, ITU and others.		

MECHANICAL

Antenna Diameter	9 meters (360 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	160° 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	5,440 kg (12,000 lb.)
Ship	7,800 kg (15,000 lb.)
Shipping Volume	56.6 cubic meters (2,000 cubic feet)

ENVIRONMENTAL

Wind Loading Operational	
Standard environment mount	145 km/h (90 MPH) Drive-to-stow
Extreme environment mount	177 km/h (110 MPH) Drive-to-stow
Survival	
Standard environment mount (120° or 180° AZ):	161 km/h (100 MPH) any position, no ice, 15° C 201 km/h (125 MPH) stowed, no ice, 15° C
Extreme environment mount (120° or 180° AZ):	201 km/h (125 MPH) any position, no ice, 15° C 241 km/h (150 MPH) stowed, no ice, 15° C
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 Referenced at 17.70 GHz
- ⁶ Minimum elevation angle is 5° with the hot air de-icing option installed
- ⁷ Higher power options available. Consult factory.

CONTACT

1725 BRECKINRIDGE PLAZA
DULUTH, GA 30096

WEB WWW.VIASAT.COM
EMAIL LIMITEDMOTIONANTENNAS@VIASAT.COM
TEL +1.678.924.2400
FAX +1.678.924.2480

