



Model 8060 is a 6.1 meter earth station antenna that provides superior performance through the use of precision stretch-formed reflector panels and a dual-shaped Cassegrain feed.

The features corrugated conical feed horns to ensure excellent antenna gain and sidelobe performance. Sixteen high-strength aluminum panels are durable enough to withstand 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 tripod 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.

Model 8060 includes a galvanized structural steel tripod mount with a continuous 115° of motorized azimuth coverage in three overlapping sectors. An optional TORQUETUBE™ configuration adds continuous 180° motorized azimuth coverage.

### 6.1 METER AT-A-GLANCE

- » Compliant with FCC, ASIASAT, INTELSAT, EUTELSAT ITU and more
- » Meets INTELSAT Standard F-2 and E-3 requirements
- » High-efficiency shaped Cassegrain optics
- » Use with C-, Extended C-, or Ku-band systems (optional combined feed — dichroic)
- » Add our 8860/8861A/8862 Antenna Controller with patented AdaptTrack for accurate tracking
- » Minimal satellite repointing time with high-speed motorized option
- » Protected environment for LNAs/LNBs in hub
- » CE compliant

### OPTIONS

- » 180° continuous azimuth
- » Multiband feeds
- » Cross-axis transmit waveguide (2 kW C-band, 700 W Ku-band)
- » Waveguide loads
- » Crossguide couplers
- » Hub cover
- » Hub heater
- » Lightning protection
- » De-icing

# Model 8060 6.1 Meter Earth Station Antenna Specifications

## ELECTRICAL

|   | C-band   | Ku-band               |
|---|--|-----------------------|
| <b>Operating Frequency (GHz)</b>                    |  |                       |
| Transmit  | 5.850 – 6.425  | 14.0 – 14.5           |
| Receive   | 3.625 – 4.2  | 10.95 – 12.75         |
| <b>Gain (Midband, Ref. Feed Horn)</b>               |  |                       |
| Transmit  | 49.8 dBi <sup>3</sup>  | 57.3 dBi <sup>4</sup> |
| Receive   | 46.0 dBi <sup>1</sup>  | 56.1 dBi <sup>2</sup> |
| <b>Feed Insertion Loss (dB)</b>                     |  |                       |
| DP – 2-Port RX/RX Linear                            |  |                       |
| Receive   | 0.051 dB   | 0.12 dB               |
| RT – 2-Port RX/RX Linear                            |  |                       |
| Transmit  | 0.10 dB  | 0.10 dB               |
| Receive   | 0.10 dB  | 0.12 dB               |
| 4PL – 4-Port RX/RX Linear                           |  |                       |
| Transmit  | 0.15 dB  | 0.27 dB               |
| Receive   | 0.15 dB  | 0.27 dB               |
| 4PC – 4-Port RX/RX Circular                         |  |                       |
| Transmit  | 0.17 dB  | N/A                   |
| Receive   | 0.17 dB  | N/A                   |
| <b>VSWR</b>   |  |                       |
| TX  | 1:3:1  | 1:3:1                 |
| RX  | 1:3:1  | 1:3:1                 |
| <b>Beamwidth (-3 dB)</b>                            |  |                       |
| Transmit  | 0.56°  | 0.25°                 |
| Receive   | 0.86°  | 0.30°                 |
| <b>First Sidelobe Level</b>                         |  |                       |
|   | 14.0 dB  | 14.0 dB               |
| <b>Antenna Noise Temp (Typical, Ref. Fee Horn)</b>  |  |                       |
| Elevation   |  |                       |
| 10°   | 27 K   | 36 K                  |
| 20°   | 20 K   | 27 K                  |
| 30°   | 17 K   | 25 K                  |
| 40°   | 14 K   | 24 K                  |
| <b>Power Handling Per TX Port</b>                   |  |                       |
|   | 5 kW (CW)  | 2 kW (CW)             |
| <b>Cross Pol Isolation (on axis, min.) (Linear)</b> |  |                       |
| Transmit  | 35 dB  | 35 dB                 |
| Receive   | 35 dB  | 35 dB                 |
| <b>Feed Port Isolation (4-Port Linear)</b>          |  |                       |
| 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                 |
| <b>Axial Ratio (Circular Polarization)</b>          |  |                       |
|   | 1.06:1   |                       |
| <b>Radiation Pattern</b>                            |  |                       |
|   | Meets standards set by FCC, INTELSAT, ASIASAT, EUTELSAT, ITU and others. |                       |

## MECHANICAL

|  |  |
|--|--|
| <b>Antenna Diameter</b>                | 6.15 meters (242 inches)   |
| <b>Antenna Type</b>                    | shaped dual reflector  |
| <b>Reflector Construction</b>          | 16 precision stretch formed steel panels on galvanized steel hub and truss structure |
| <b>Mount Type</b>                      | elevation-over-azimuth   |
| <b>Antenna Travel</b>                  |  |
| Elevation                              | 0° to 90° continuous <sup>5</sup>  |
| Azimuth                                | 225° in 3 overlapping 120° sectors   |
| Optional                               | 180° continuous  |
| <b>Polarization Adjustment</b>         |  |
| Manual                                 | 360°   |
| Motorized                              | ±90°   |
| <b>Antenna Travel Rate (Motorized)</b> | Various — consult factory  |
| <b>Feed Interface</b>                  |  |
| Transmit C-band                        | CPR-137G   |
| Transmit Ku-band                       | WR-75  |
| Receive C-band                         | CPR-229G   |
| Receive Ku-band                        | WR-75  |
| <b>Weight C-band</b>                   |  |
| Net                                    | 1,360 kg (3,000 lb.)   |
| Ship                                   | 2,630 kg (5,800 lb.)   |
| <b>Shipping Volume</b>                 | 14.2 cubic meters (500 cubic feet)   |

## ENVIRONMENTAL

|                               |  |
|-------------------------------|--|
| <b>Wind Loading</b>           |  |
| Operational                   | Drive-to-stow 129 km/h (80 MPH)<br>177 km/h (110 MPH) any position,<br>15° C, no ice |
| Survival                      | 201 km/h (125 MPH), stowed,<br>15° C, no ice   |
| <b>Temperature Range</b>      |  |
| Operational                   | -40° C to +65° C (-40° F to +150° F)   |
| <b>Atmospheric Conditions</b> | Salt, pollutants and corrosive contaminants as found in coastal and industrial areas |

## NOTES

- <sup>1</sup> Referenced at 3.95 GHz
- <sup>2</sup> Referenced at 11.95 GHz
- <sup>3</sup> Referenced at 6.175 GHz
- <sup>4</sup> Referenced at 14.25 GHz
- <sup>5</sup> Minimum elevation angle is 5° with the hot air de-icing option installed



## CONTACT

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