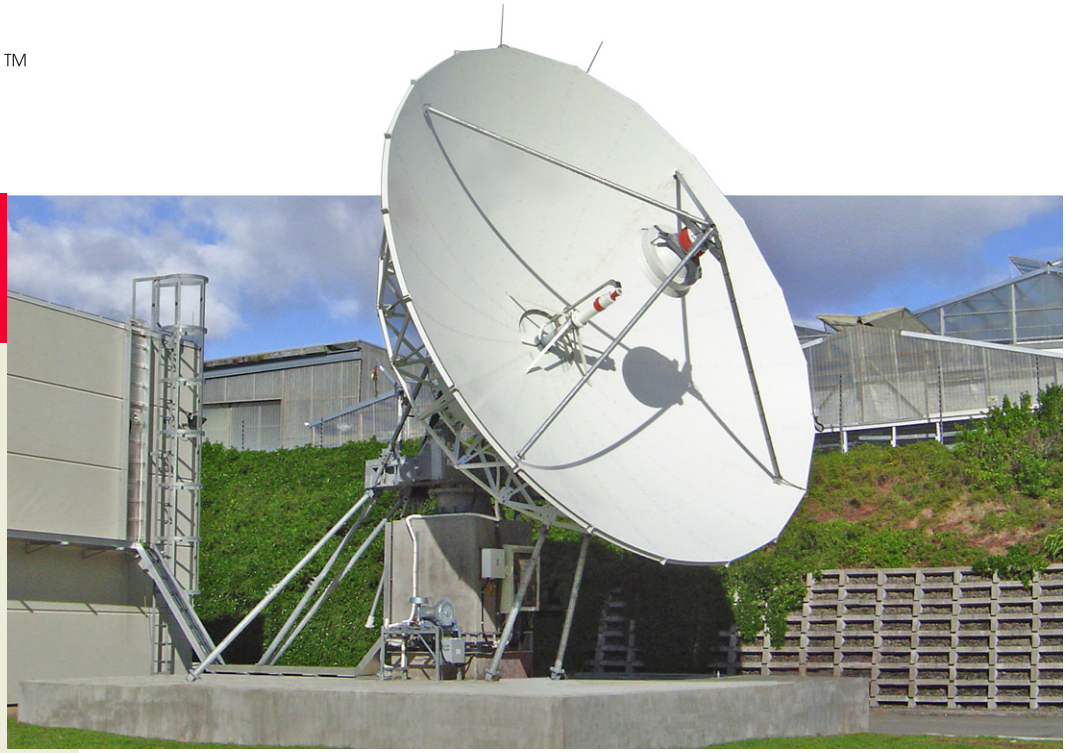
PRODUCT SPECIFICATIONS



# 8.1 Meter Ka-band Earth Station Antenna

The ASC Signal 8.1 meter Ka-band earth station antenna features a uniquely formed dual reflector Gregorian system coupled with close-tolerance manufacturing techniques. This configuration ensures superior pointing accuracy and excellent pattern characteristics.

The axial symetric design eliminates beam squint between polarizations. All structural components are covered by a three year warranty.

- Rugged construction
- Superior pointing accuracy
- Excellent pattern characteristics
- 3 year warranty on all structural components
- Deep equipment enclosure

**SPECIFICATIONS**

# 8.1 Meter Ka-band Earth Station Antenna

## Electrical Performance

| | Ka-band 4-Port Circular Pol Feed | | Ka-band 4-Port Circular Pol Feed | | Ka-band 4-Port Linear Pol Feed Eutelsat Frequency | |
|---|---|---|---|---|---|---|
| | Receive | Transmit | Receive | Transmit | Receive | Transmit |
| Frequency (GHz) | 20.200-21.200 | 30.000-31.000 | 18.300-20.200 | 28.300-30.000 | 17.700-20.200 | 27.000-30.050 |
| Antenna Gain at Midband | 62.50 dB | 65.40 dB | 61.80 dB | 65.30 dB | 61.60 dB | 65.30 dB |
| Antenna Noise Temperature ( Midband, Clear Sky Conditions at 68°F (20°C, Water Vapor Density < 7.5 g/m3) | | | | | | |
| 10° Elevation | 118 K | | 113 K | | 109 K | |
| 30° Elevation | 93 K | | 86 K | | 82 K | |
| 50° Elevation | 90 K | | 82 K | | 77 K | |
| Cross Polarization | | | | | | |
| On Axis | N/A | N/A | N/A | N/A | 35 dB | 35 dB |
| Within 1 dB Beamwidth | N/A | N/A | N/A | N/A | 35 dB | 35 dB |
| Axial Ratio | 0.50 dB | 0.50 dB | 0.50 dB | 0.50 dB | N/A | N/A |
| VSWR Performance | 1.30:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.30:1 |
| Port-to-Port Isolation | | | | | | |
| Rx to Rx | 18 dB | | 18 dB | | 35 dB | |
| Tx to Rx | 85 dB | | 85 dB | | 85 dB | |
| Tx to Tx | 18 dB | | 18 dB | | 35 dB | |
| Waveguide Interface Flange | WR42 | WR28 | WR42 | WR28 | WR42 | WR28 |
| Tx Power Capacity | 500 W/Port | | 500 W/Port | | 500 W/Port | |

## Mechanical Performance

| | | |
|---|---|---|
| Optics Type | | Dual Reflector, Gregorian |
| Reflector Material | | Precision Formed Aluminum |
| Reflector Segments | | 20 |
| Mount Type | | Pedestal Mount |
| Antenna Pointing Range | Elevation | 0° Coarse, 90° Continuous |

## Environmental Performance

| | | |
|---|---|---|
| Operational Temperature | | -40°C to 52°C (-40°F to 125°F) |
| Wind Loading (Survival) | with Motor | 200 km/h (125 mph) in Stationary Position |
| | without Motor | 200 km/h (125 mph) in Stationary Position |
| Wind Loading (Operational) | with Motor | 72 km/h (45 mph) with Gusts up to 105 km/h (65 mph) |
| | without Motor | 72 km/h (45 mph) with Gusts up to 105 km/h (65 mph) |
| Rain | | 102 mm (4 in per hour) |
| Relative Humidity | | 100% |
| Shock and Vibration | | As Encountered by Commercial Air, Rail and Truck |
| Atmospheric Conditions | | As Encountered by Moderately Corrosive Coastal and Industrial Areas |

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