PRODUCT SPECIFICATIONS

3.5 Meter Ka-band, K-band Earth Station Antenna

The ASC Signal 3.5 Ka-band earth station antenna provides superior performance and pointing accuracy. The precision one-piece spun aluminum reflector, along with its rugged aluminum and steel construction provide extraordinary strength and precise pointing.

This antenna features a uniquely designed Gregorian sub reflector tracking system which eliminates the need for costly jack drives and large motors.

- Bonded and riveted torsion box for rigidity
- Heavy mounting ring for strength
- Advanced dual reflector Gregorian optics
- Sub reflector closed loop positioning for precise pointing accuracy
- Compliant to ITU 580-5/465-5, FCC 25.209

SPECIFICATIONS

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Electrical Performance

	Ka-band 4-Port Circular Pol Feed		Ka-band 4-Port Wideband Circular Pol Feed		Ka-band 4-Port Linear Pol Feed		Ka-band 4-Port Linear Pol Feed Eutelsat Frequency		K-band 2-Port Linear Pol Feed		K-band 4-Port Linear Pol Feed	
	Receive	Transmit	Receive	Transmit	Receive	Transmit	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	21.400-22.000	27.000-30.050	10.700-12.750	17.300-18.100	10.700-12.750	17.300-18.400
Antenna Gain at Midband	55.10 dB	58.50 dB	54.70 dB	58.30 dB	54.30 dB	58.00 dB	55.50 dB	58.00 dB	51.10 dB	54.70 dB	50.90 dB	54.50 dB
Antenna Noise Temperature (Midband, Clear Sky Conditions at 68°F (20°C, Water Vapor Density < 7.5 g/m^3)												
10° Elevation	171 K		145 K		130 K		202 K		44 K		58 K	
30° Elevation	137 K		111 K		96 K		168 K		31 K		45 K	
50° Elevation	130 K		104 K		89 K		161 K		29 K		43 K	
Cross Polarization												
On Axis	N/A	N/A	N/A	N/A	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB
Within 1 dB Beamwidth	N/A	N/A	N/A	N/A	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB	35 dB
Axial Ratio	0.50 dB	0.50 dB	0.50 dB	0.50 dB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VSWR Performance	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	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		35 dB				35 dB	
Tx to Rx	85 dB		85 dB		85 dB		85 dB				85 dB	
Tx to Tx	18 dB		18 dB		35 dB		35 dB		40 dB		35 dB	
Waveguide Interface Flange	WR42	WR28	WR42	WR28	WR42	WR28	WR42	WR28	WR75	WR62	WR75	WR62
Tx Power Capacity	500 W/Port		500 W/Port		500 W/Port		500 W/Port		1 kW			750 W/Port

Mechanical Performance

Optics Type	Dual Reflector, Gregorian
Reflector Material	Precision Formed Aluminum
Reflector Segments	1
Mount Type	Tubular Post Pedestal
Antenna Pointing Range, Course/(Continuous)	360° Coarse, 30° Steps (±24° Continuous) 0° to 90° Continuous

Environmental Performance

Operational Temperature	-40°C to 50°C (-40°F to 125°F)
Wind Loading, Survival	150 mph Any Position 88 mph with Ice
Rain	102 mm (4 in per hour)
Solar Radiation	360 BTU/h/ft^2 (1135 W/m^2)
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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