

Model 8010 7-Meter Satellite Earth Station Antenna

SPECIFICATIONS

Electrical

	<u>C-Band</u>	<u>Ku-Band</u>
Operating Frequency (GHz):		
Transmit	5.850 to 6.425	14.0 to 14.5
Receive	3.625 to 4.2	10.95 to 12.75
Gain (Midband, Ref Feed Horn):		
Transmit	51.2 dBi ³	58.1 dBi ⁴
Receive	47.8 dBi ¹	57.1 dBi ²
Feed Insertion Loss (dB)		
DP - 2-Port RX/RX Linear:		
Receive	.05 ¹	.22 ²
RT - 2-Port RX/TX Linear:		
Transmit	.10 ³	.21 ⁴
Receive	.10 ¹	.22 ²
4PL -4-Port RX/TX Linear:		
Transmit	.15 ³	.31 ⁴
Receive	.15 ¹	.33 ²
4PC -4-Port RX/TX Circular:		
Transmit	.17 ³	-
Receive	.17 ¹	-
VSWR (Transmit/Receive):	1.3:1	1.3:1
Beamwidth (-3 dB):		
Transmit	0.48°	0.22°
Receive	0.71°	0.25°
First Sidelobe Level:	14.0 dB	14.0 dB
Radiation Pattern: (C-Band and Ku-Band): Meets current FCC, INTELSAT, EUTELSAT, and CCIR specifications		
Antenna Noise Temperature (Typical, Ref. Feed Horn):		
<u>Elevation</u>	<u>C-Band</u>	<u>Ku-Band</u>
10°	27 K	36 K
20°	20 K	27 K
30°	17 K	25 K
40°	14 K	24 K
Power Handling Capability	5 kW (CW)	2 kW (CW)
Cross Polarization Isolation (on axis, min.) (Linear):		
Transmit	35 dB	35 dB
Receive	30 dB	30 dB
Feed Port Isolation (4-port Linear):		
TX/RX	85 dB	85 dB
RX/RX and TX/TX	35 dB	35 dB
Voltage Axial Ratio: (Circular Polarization)	1.06:1	

Mechanical

Antenna Diameter: 7 Meters (23 ft)
 Antenna Type: Cassegrain
 Reflector Construction: 18 panels, precision stretch-formed aluminum
 Mount Type: Elevation-over-azimuth
 Antenna Travel:
 Elevation: 0° to 90° continuous
 Azimuth: 180° available in 3 overlapping 110° sectors
 Polarization Adjustment:
 Manual: 360° continuous
 Motorized: ±90°
 Antenna Travel Rate (Motorized): Various - Consult Factory

	<u>C-Band</u>	<u>Ku-Band</u>
Feed Interface:		
Transmit:	CPR-137G	WR-75
Receive:	CPR-229G	WR-75
Weight:		
Net: 4,500 lbs (2,041 kg)		
Shipping: 6,500 lbs (2,948 kg)		
Shipping Volume: 820 ft ³ (23.2 m ³)		

Environmental

Wind Loading:
 Operational: 80 mi/h (129 km/h) gusting to 95 mi/h (153 km/h)
 Survival: 125 mi/h (201 km/h), no ice 87 mi/h (140 km/h), with 1 in. (2.5 cm) radial ice
 Temperature Range:
 Operational/Survival: -40°F to +150°F (-40°C to +65°C)
 Atmospheric Conditions: Salt, pollutants and corrosive contaminants as found in coastal and industrial areas.

Note: ¹ Referenced at 3.95 GHz
² Referenced at 11.95 GHz
³ Referenced at 6.175 GHz
⁴ Referenced at 14.25 GHz

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Specifications and product availability are subject to change without notice.

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