

PRODUCT
SPECIFICATIONS



4.5 Meter Trifold® Transportable



The ASC Signal 4.5 Meter Trifold® antenna is designed for worldwide use in transportable applications serving high density data, voice and communications networks. Like all ASC Signal earth station antennas, this Transportable Earth Station Antenna provides high gain and exceptional pattern characteristics. The electrical performance and exceptional versatility allows configuration with your choice of transmit/receive feed assemblies. Designed to meet a wide range of regulatory standards, including INTELSAT®'s standard F1 and E2 specifications. The antenna's Trifold® reflector panels are cut from a single-piece of precision spun aluminum. Each panel is designed and manufactured to provide excellent thermal expansion characteristics and ensures the extremely accurate surface contour.

All Trifold® antennas meet or exceed Asiasat, Eutelsat, Panamsat, and INTELSAT® F-1 and E-2 requirements. In addition, they meet or exceed ITU-R S.580 and S.465 recommendations for pattern performance for 2° satellite spacing.

The unique Trifold® design enables one-person deployment in less than 30 minutes. A large range of adjustment provides non-critical positioner/trailer orientation and allows viewing of geostationary satellites, horizon to horizon, from any location world wide. An aluminum back structure and hot-dipped galvanized steel positioner maintain pointing accuracy, durability and reliability.

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Electrical Performance

	C-band 2-Port Circular Pol Feed		C-band 2-Port Linear Pol Feed		Ku-band 2-Port Linear Pol Feed		X-band 2-Port Circular Pol Feed	
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	3.625- 4.200	5.850- 6.425	3.625- 4.200	5.850- 6.425	10.700- 13.250	13.750- 14.800	7.250- 7.750	7.900- 8.400
Insertion Loss dB	0.30	0.20	0.20	0.20	0.10	0.10	0.20	0.20
Gain @ Feed Output Flange (dBi ± 0.2 dB)								
	3.625 GHz	42.70	42.70					
	6.425 GHz	46.80	46.90					
	7.250 GHz							48.40
	8.400 GHz							49.80
	10.700 GHz					51.40		
	14.500 GHz					52.90		
Antenna Noise Temperature								
10° Elevation	52 K		47 K		53 K		45 K	
30° Elevation	39 K		34 K		41 K		34 K	
50° Elevation	35 K		30 K		38 K		29 K	
Port-to-Port Isolation								
Rx to Tx	50 dB		100 dB		30 dB			
Tx to Rx	85 dB		40 dB		40 dB		20 dB	
Waveguide Interface Flange	Brass CPR-229G	Brass CPR-2137G	Brass CPR-229G	Brass CPR-137G	Brass WR75	Brass WR75	Aluminum WR112	Aluminum WR112
Tx Power Capacity	500 W		5000 W		1000 W		750 W	
Maximum Pressurization	0.50 psi		0.50 psi		0.50 psi		0.50 psi	

Mechanical Performance

Optics Type	Prime Focus
Reflector Material	Precision Formed Aluminum
Reflector Segments	3
Mount Type	Pedestal

Environmental Performance

Operational Temperature	-45.5°C to 52°C (-50°F to 125°F)
Wind Loading	Survival 105 km/h (65 mph) (with or without Motor Drives)
	Operational ... 72 km/h (45 mph) with Gusts to 105 km/h (65 mph) (with or without Motor Drives)
Seismic (Earthquakes):	1 G Vertical and Horizontal Acceleration; Equivalent to a Richter Magnitude 8.3 and Grade 11 on the Modified Mercalli scale
Rain	102 mm (4 in per hour)
Solar Radiation	360 BTU/hr/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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