

**PRODUCT
SPECIFICATIONS**



The antenna's Trifold® reflector panels are cut from a single-piece of precision spun aluminum.



3.9 Meter Ka-band Trifold® Transportable Satellite Antenna

The 3.9m Ka-band Trifold® is a Transportable Satellite Antenna System, designed for use worldwide in various applications, serving data, voice and communication networks. The system features a heavy duty reflector that has been designed around a single-piece of precision spun aluminum. Reinforced backstructure provides extra stiffness in the system for accurate satellite tracking and for resisting heavy wind loads. The struts and subreflector are made from lightweight fiberglass material for easy stow and deploy. The Low Profile Positioner allows the antenna system to be transportable via a C-130 aircraft. The Positioner also features a dual azimuth chain drive for eliminating system backlash for accurate pointing accuracy. A dual jack screw drive system ensures system stability. The 3.9 meter Trifold® is designed for C, X, Ku, K, and Ka-band superior performance operation.

- Dual Reflector Gregorian Optics
- Auto-Acquisition and Step Tracking
- Meets U.S. FCC 25-209
- Meets ITU-R S.580 and S.465
- C, X, Ku, Ka and X-band
- X-band Low PIM
- Heavy Duty Antenna Positioner
- C-130 Roll-on / off Transportable
- Rugged Aluminum Reflector

3.9 Meter K to Ka-band Trifold® Transportable Antenna

Electrical Performance

	K - band 4 Port		K - Band 4 – Port		Ka - band 4 - Port		Ka - band 4 - Port	
	Linear	Pol Feed	Circular	Pol Feed	Linear	Pol Feed	Circular	Pol Feed
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	10. 700- 12. 750	17. 300- 18. 400	10. 700- 12. 750	17. 300- 18. 400	20. 200- 21. 200	30. 000- 31. 100	20. 200- 21. 200	30. 000- 31.100
Antenna Gain at Midband, dBi	51.30	54.60	51.20	54.50	55.80	54.60	55.80	58.60
Antenna Noise Temperature								
10° Elevation	75 K		79 K		145 K		155 K	
20° Elevation	65 K		68 K		116 K		131 K	
40° Elevation	60 K		63 K		80 K		93 K	
Pattern Beamwidth								
-3 db at Midband	0. 43°	0. 29°	0. 43°	0. 29°	0. 27°	0. 18°	0. 27°	0. 18°
-15 db at Midband	0. 99°	0. 65°	0. 99°	0. 65°	0. 55°	0. 32°	0. 55°	0. 32°
Cross Polarization								
Motorized Pol Drive	x		x					
Cross Polarization - On-Axis	35. 0 dB	35. 0 dB	27. 3 dB	30. 7 dB	27. 3 dB	30. 7 dB	27. 3 dB	30. 7 dB
Within 1 dB Beamwidth	27. 0 dB	35. 0 dB	27. 3 dB	30. 7 dB	27. 3 dB	30. 7 dB	27. 3 dB	30. 7 dB
Axial Ratio			75 dB	0.50 dB			75 dB	0.50 dB
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
Port-to-Port Isolation								
Rx/Tx (Rx Frequency)	80 dB		80 dB		85 dB		18 dB	
Tx/Rx (Tx Frequency)	80 dB		80 dB		85 dB		85 dB	
Tx1/Tx2 (Rx Frequency)	38 dB		40 dB		40 dB		18 dB	
Rx1/Rx2 (Rx Frequency)	35 dB		42 dB		40 dB		18 dB	
Waveguide Interface Flange	WR- 75 G	WR- 62 G	WR- 75 G	WR- 62 G	WR- 42 G	WR - 28 G	WR-142 G	WR-28 G
Total Power Handling Capability	2 kW CW		2 kW CW		1 kW CW		1 kW CW	

*Includes 110 dB filters

**Includes transmit reflect filter

Mechanical Performance

Antenna Size.....3.9 Meters (12. 8 feet)

Optics Type.....Dual Reflector, Gregorian

Reflector Construction.....Dual Piece Aluminum Spinning

Mount Configuration.....Elevation over Azimuth Heavy Duty Positioner

Elevation Drive Type.....Manual or Motorized Jack Screw

Azimuth Drive Type.....Motorized Gearmotor System

Azimuth Travel Range.....±146° from Center

Elevation Travel Range.....5° to 90°

Shipping Volume and Weight Depends on System Configuration, Contact ASC Signal for information

Environmental Performance

Operational Wind Loading.....30mph (48 km/h) Gusting to 45 mph (72 km/h)

Wind Loading, Survival..... Go to stow at 80mph (129 km/h)

Wind Survival in any Position.. 65mph (105 km/h) Gusting to 80 mph (129 km/h)

Wind Survival in “Stow” Position..... ..125 mph (201 km/h)

Operational Temperature.....-40°F to 1 25°F (-40°C to 52°C)

Rain.....4 inch (102 mm) per hour

Relative Humidity.....100%

Solar Radiation360 BTU /h / ft² (1135 Watts /m²)

Ice (survival).....1 inch (2.5 cm) on all surfaces

Atmospheric Conditions.....As encountered in corrosive coastal and industrial Areas.

Shock and Vibration.....As encountered by Commercial Air, Rail and Road shipments



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