

PRODUCT  
SPECIFICATIONS



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



## MilSatCom 3.9 Meter Trifold® Transportable Antenna

The modular 3.9 meter Trifold® transportable design allows one-person deployment in less than 30 minutes.

A broad range of adjustment provides non-critical positioner/trailer orientation and the ability to view geostationary satellites, horizon-to-horizon, from any location worldwide. The antenna's Trifold® reflector panels are cut from a single-piece of precision spun aluminum. Panel design and manufacture provide excellent thermal expansion characteristics and ensure the accurate surface contour. The struts and sub reflector are collapsible and store conveniently under the reflector. The 3.9 meter Trifold® transportable antenna is designed for C, X, and Ku-band superior performance specifications.

- U.S. FCC regulation 25-209 for mandatory pattern requirements for 2° satellite spacing. Based on off-satellite measurements at Ku-band.
- ITU-R S.580 and S.465 recommendations for pattern performance for 2° spacing.
- Three axis motorization, tracking and auto acquisition systems are available

## SPECIFICATIONS

### MilSatCom 3.9 Meter Trifold® Transportable Antenna

#### Electrical Performance

	C-band 2-Port Linear Pol Feed		C-band 2-Port Circular Pol Feed		X-band 2-Port* Circular Pol Feed		Ku-band 2-Port** Linear Pol Feed		Ku-band 4-Port Linear Pol Feed		Ku-band 4-Port Linear Pol Feed	
	Receive	Transmit	Receive	Transmit	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	7.250- 7.750	7.900- 8.400	10.950- 12.750	13.750- 14.800	10.700- 12.750	13.750- 14.800	20.200- 21.200	30.000- 31.000
Antenna Gain at Midband, dBi	42.30	46.30	42.30	46.30	47.40	48.00	51.60	53.10	51.30	52.80	56.10	58.50
Antenna Noise Temperature												
10° Elevation	49 K		49 K		78 K		57 K		67 K		127 K	
20° Elevation	41 K		41 K		63 K		41 K		53 K		80 K	
40° Elevation	38 K		38 K		61 K		39 K		50 K		72 K	
Cross Polarization												
On-Axis	30.0 dB	30.0 dB	20.7 dB	27.3 dB	21.3 dB	21.3 dB	35.0 dB	35.0 dB	35.0 dB	35.0 dB	27.3 dB	30.7 dB
Within 1 dB Beamwidth	28.0 dB	28.0 dB	20.7 dB	27.3 dB	21.3 dB	21.3 dB	27.0 dB	35.0 dB	27.0 dB	35.0 dB	27.3 dB	30.7 dB
Axial Ratio			1.20 dB	0.75 dB	1.50 dB	1.50 dB					0.75 dB	0.50 dB
VSWR Performance	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.35:1	1.25:1	1.35:1	1.35:1	1.30:1	1.30:1
Port-to-Port Isolation												
Rx/Tx (Rx Frequency)	0 dB	-30 dB	0 dB	50 dB	0 dB	-110 dB	0 dB	-30 dB	0 dB	-50 dB	0 dB	-50 dB
Tx/Rx (Tx Frequency)	-85 dB	0 dB	-85 dB	-0 dB	-110 dB	0 dB	-85 dB	0 dB	-85 dB	0 dB	-85 dB	0 dB
Waveguide Interface Flange	CPR-229 G	CPR-137 G	CPR-229G	CPR-137G	WR-112	WR-112	WR-75	WR-75	WR-75	WR-75	WR-42	WR-28
Total Power Handling Capability		2 kW CW		500 W CW		2 kW CW		2 kW CW		1 kW CW		1 kW CW

\*Includes 110 dB filters

\*\*Includes transmit reflect filter

#### Mechanical Performance

Optics Type .....	Dual Reflector, Gregorian
Reflector Material .....	Precision Formed Aluminum
Reflector Segments .....	3
Antenna Pointing Range, Course/(Continuous) .....	Elevation (85°) Azimuth (330°) Polarization (360°)

#### Environmental Performance

Operational Temperature .....	40°F to 125°F (-40°C to 50°C)
Wind Loading, Survival .....	with Motor ..... 125 mph (200 km/h) in Stationary Position without Motor ..... 125 mph (200 km/h) in Stationary Position
Rain .....	4 in/hr (102 mm/hr)
Solar Radiation .....	360 BTU/h/ft <sup>2</sup> (1135 W/m <sup>2</sup> )
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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