

TracStar2400 Multiband



2.4 Meter, Ku / C Band Vehicle Mount Antenna System Data Specification

The most important thing we build is trust

TracStar2400 Multi Band Antenna System

The TracStar auto-deploy auto-acquire antenna system allows personnel with little or no satellite experience to operate mobile Very Small Aperture Terminal (VSAT) satellite communications equipment, enabling the user to access any broadband application over satellite.

This 2.4M antenna features:

- TracStar Controller Options—Available Options include DirectPoint and inclined orbit satellite tracking
- HPA Mounting Options— Feed Boom and Dual HPA minimizes waveguide losses and maximizes EIRP
- Carbon Fiber Reflector
- Compatible for 2° satellite spacing
- Reliable—Zero-Backlash Roto-Lok® Cable Drive Durability in Extreme and Harsh Conditions Unrivaled Az Range of 400°, Elevation 0-90°, Pol ±95°

With TracStar antennas, users enjoy the same reliable, secure, high-speed IP based data communications they are accustomed to in the office, while mobile. Further, complete solutions are available for one-stop shopping with field proven and reliable critical communication solutions.



Reflector

Size	2.4M Carbon Fiber
Optics - C Band	Offset, Prime Focus, 0.6 F/D
Optics - Ku Band	Offset, Prime Focus, 0.8 F/D
Feed	Precision Feed Horn
Az/El Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization	Motorized Rotation of Feed

Travel

Azimuth	400° with HPA on Antenna
Elevation—Operational	0°-90° of boresight
Polarization	±95° for 2 & 3 Port Feeds

Travel Velocity

Slewing/Deploying	2° per second
Peaking	0.2° per second
Tracking	0.1° per second

Electrical Interface

RF	75Ω Tx/Rx Type F Connector (50Ω option)
Interfacility Link	30 ft (9.14M) Dual RG6 Coax, 1 Control Cable Optional 50' / 80' / 100' / 150' Lengths
Motors	24 VDC Servo w/Optical Encoder, Constant Torque
Controller (1U) Power Supply	50/60Hz, 110/220VAC Single Phase
Power Consumption	
–Motors Active	250 Watts
–Motors Idle	30 Watts
Emergency Drive	Handcrank on Az, El; 12V leads on pol
BUC Mounting	Feed Boom or Rear of Reflector
C Band Waveguide	WR 137 Groove Flange at Interface Point
Ku Band Waveguide	WR 75 Groove Flange at Interface Point

Antenna Characteristics

Ku Band*	Rx	Tx
Frequency (Ghz)	11.7-12.2	13.75-14.5
Gain (Midband) 2-port	47.7 dBi	49.3 dBi
4-port	47.7 dBi	49.0 dBi
VSWR	1.30:1	1.30:1
Beamwidth		
–3 dB	.73°	.61°
–15 dB	1.34°	1.41°
Antenna Noise Temperature	45° K at 10° Elevation	
First Sidelobe Level (Typical)	-22 dB	-25 dB
Radiation Pattern Compliance	FCC §25.209, ITU-R S-580-6	
Polarization - Ku Band	Orthogonal std., Optional Co-Pol	
C Band	Linear Standard, Optional Circular	

Ku Antenna Characteristics Continued

Ku Band*	Rx	Tx
Cross Pol Isolation (minimum on axis)		
on axis (min)	35 dB	35dB
off axis (within 1dB BW)	25dB	27dB
Power Handling		1KW per port
Feed Port Isolation Tx to Rx	75dB	
Satellite System Compliance FCC, Intelsat, PanAmSat, SES Americom, etc		

C Band*	Rx	Tx
Frequency (GHz)	3.625 -4.2	5.850-6.425
Gain (Midband) 2-port	38.0dBi	41.8 dBi
VSWR	1.30:1	1.30:1
Beamwidth		
-3 dB	2.0°	1.4°
-10 dB	4.0°	2.7°
Antenna Noise Temperature	45° K at 10° Elevation	
First Sidelobe Level (Typical)	-20 dB	-25 dB
Radiation Pattern Compliance		
Ku Band	§FCC 25.209, ITU-R S.580-6	
C Band		
Tx 1.5° to 30°	29-25 Log Θ	32-25 Log Θ
Rx 2.4° to 30°		

Polarization	Linear Standard, Optional Circular	
Cross Pol Isolation (minimum on axis)		
Linear	35 dB	35dB
Circular	19dB	25dB
Power Handling		1KW per port
Feed Port Isolation Tx to Rx		70dB

* Requires articulating boom for interchanging bands

Antenna Controller

One button operation automatic satellite acquisition with integrated GPS/Compass/Level Sensors and user configurable satellite selection



Weights & Measures

Antenna Stowed Height	23" (58.42 cm)
Antenna Stowed Length	137.5" (349 cm)
Antenna Width	96" (244 cm)
Weight (290 kg)	640 lbs

Controller—Rack Mount (1RU)	
Weight	4.5 lbs (2.04 kg)
Dimensions	19" x 8.0" x 1.75", (48.26 x 20.32 x 4.44 cm)

Environmental

Wind - Survival	
Deployed	70 mph (113 kph)
Stowed	100 mph (161 kph)
Operational	45 mph (72 kph)
	Gusts to 60 mph (96 kph)

Pointing Loss in Wind	
20 mph (32 kph)	0.1 dB Typical
30 Gusting to 45 mph (48 to 97 kph)	0.6 dB Typical
Temperature	
Operational	+5°F to 125°F (-15° to 52°C)
Survival	-40°F to 140°F (-40° to 60°C)

Specifications subject to change without notice



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