

TracStar2400P9 MultiBand Fly-Away

COBHAM

Broadband Anywhere - Anytime
2.4 Meter Fly Away Antenna System

Data Specifications

The most important thing we build is trust

TracStar2400P9 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. Setup time is less than 15 minutes.

Ease of Operation

TracStar One Button Control System eliminates the need for:

- Leveling the antenna - up to 10 degrees autocorrection
- Special Test Equipment for Alignment - e.g. Spectrum Analyzers
- On-Site Technicians
- Calls to Service Provider for service coordination
- Laptop or External PC



Applications

TracStar antennas work with any satellite modem and depending on the antenna, are compatible with Ku, Ka, C and/or X band networks. Users dependant on reliable, secure, high-speed IP based data communications can continue reliable critical operations from anywhere in the world where satellite access is available.

Providing for our customers -

- Secure, high speed digital communications
- High-speed internet access
- Complete voice and FAX communication solutions
- WAN Extension w/Meshed Remote Sites and Microwave Links
- Video Teleconferencing
- Streaming Video Solutions
- Complete Bandwidth Solutions

The TracStar 2.4M Fly Away antenna features:

TracStar Controller Options:

- DirectPoint - immediate connection to data satellite*
- Inclined orbit satellite tracking
- Stacking Pedestal with Outrigger Legs
- Light Weight-Fly Away antenna in 4 cases
- HPA Mounting Option-Back of Reflector
- Solid Carbon-Fiber Reflector, 9 Segment-High EIRP - High-Performance, Lightweight Fully-Compliant for FCC,
- Reliable-Zero-Backlash Roto-Lok® Cable Drive Durability in Extreme and Harsh Conditions
- Unrivaled Az Range of $\pm 200^\circ$, Elevation 7-90°, Pol $\pm 95^\circ$
- Upgradeable-to Ka, C and X Band

*modem dependent

TracStar Antenna Controller

Industry standard setting one button operation with automatic satellite acquisition and cross-pol adjustment, integrated GPS, Compass and Level Sensors and user configurable satellite selection for primary and secondary satellites.

Reflector

Reflector Type	2.4M Carbon Fiber, 9 Segments
Optics	Offset, Prime Focus, 0.8 F/D
Interchangeable Feeds	Ku, Ka, C, X Bands
Positioner	Patented Roto-Lok®
Mount Geometry	Elevation over Azimuth
Polarization	Motorized Rotation of Feed

Travel

Azimuth	$\pm 200^\circ$
EI - Operational	7°-90° of boresight
Polarization	$\pm 95^\circ$

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)
Inter-facility Link	100 ft Dual RG6 Coax
Motors	1 Control Cable, Optional 150' Lengths 24VDC Servo w/ Optical Encoder Constant Torque
Controller (1U) Power Supply	50/60Hz, 110/220VAC Single Phase
Power Consumption-Motors Active	250 Watts
Power Consumption-Motors Idle	30 Watts
Emergency Drive	Handcrank on Az, EI; Knob on Pol
BUC Mounting	Feed Boom or Rear of Reflector
Waveguide	WR 75 Groove Flange at Interface Point

TracStar2400P9 MultiBand



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Antenna Characteristics

Ku-Band	Rx	Tx
Frequency (Ghz)	10.95 - 12.75	13.75 - 14.5
Polarization	Linear Orthogonal	Standard Optional CoPol Linear
Gain (Midband) 2 Port	47 dBi	48.8 dBi
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	0.7°	0.6°
Antenna Noise Temp @ 20° El	61°K	
G/T with 50°K LNB, Midband	26.5 dB/K	
Radiation Pattern Compliance	FCC §25.209, ITU-R.580-6, IESS 208	
Cross Pol Isolation (minimum on axis)		
within pointing cone	35 dB	35dB
within pointing cone	28dB Std	30dB Std
within pointing cone	25dB MM opt.	35dB MM opt.
Feed Port Isolation - Tx to Rx (dB)	35	80 w/filter
Power Handling Capability		500 watts per port

Ka-Band	Rx	Tx
Frequency (Ghz)		
Commercial	17.7-20.2	27.5-30.0
Military	20.2-21.2	30.0-31.0
Polarization	Circular or Linear	
Gain Midband (MIL)	52.1 dBi	55.0 dBi
VSWR	1.3:1	1.3:1



Turnkey Solutions Available
Full Integration
VoIP / RoIP / LAN / WAN / FAX / VPN / Video
Bandwidth Solutions - Part Time / Full Time
Phone Termination to PSTN

Ka-Band (continued)	Rx	Tx
Beamwidth (-3dB)	0.4°	0.3°
Antenna Noise Temperature @ 20° El	104°K	
G/T with 100° LNB	29.0 dB/K	
Radiation Pattern Compliance	FCC §25.209; MIL-STD-188-164A	
Axial Ratio	1.5 dB	1.0 dB
Feed Port Isolation - Tx to Rx	30	80 w/filter
Power Handling Capability		250 watts per port

X-Band	Rx	Tx
Frequency (Ghz)	7.25-7.75	7.9-8.4
Polarization	Circular RHCP and LHCP	
Gain Midband	43.3 dBi	44.1 dBi
Beamwidth (-3dB)	1.2°	1.1°
VSWR	1.3:1	1.3:1
Antenna Noise Temp @ 20° El	59°K	
G/T with 55°K LNB, Midband	22.7 dB/K	
Radiation Pattern Compliance	MIL-STD-188-164A	
Axial Ratio within Tracking Cone	1.21dB	2.0dB
Feed Port Isolation - Tx to Rx (dB)	115 w/optional filter	
Power Handling Capability	1000 watts per port	

C-Band*	Rx	Tx
Frequency (Ghz)	3.625-4.20	5.85 -6.425
Polarization	Linear or Circular	
Gain (Midband)	38.0 dBi	41.8 dBi
Beamwidth (-3dB)	2.2°	1.4°
VSWR	1.3:1	1.3:1
Antenna Noise Temperature @ 20° El	49°K	
G/T with 20°K LNB	19.5 dB/K	
Radiation Pattern Compliance	FCC §25.209, ITU-R.580-6, IESS 208	
Axial Ratio within Tracking Cone	2.3 dB	1.3 dB
Cross-Pol Isolation	35 dB	35 dB
Feed Port Isolation	65 dB	105 dB w/filter
Power Handling Capability	1000 watts per port	

*Requires special approval by satellite operator

Weights & Measures

Configuration - Rugged Hardigg Shipping Cases (cm/Kg)	
Motorized Positioner	26"x24"x30" 170 lbs (66 x 61 x 76) (77.1)
Outriggers/Feed/Boom (2)	71"x18"x19" 110 lbs (180.3 x 45.7 x 48.2) (49.9)
Reflector Panels	38"x38"x22" 120 lbs (96.5 x 96.5x 55.9) (54.4)
Feeds (up to 3 per case)	43"x28"x21" 70 lbs typical (109.2 x 71.1 x 53.34) (31.75)

Environmental

Wind - Operational	
w/o anchoring	30 mph (48.3kmh)
w/anchoring	30 mph gusting to 45 mph ((48.3 to 72.4kmh)
Survival	80 mph in zenith (90° elevation) (128.8kmh)
Temperature Operational	-22° to 125° F (-30 to 52° C)
Survival	-40° F to 140° F (-40° to 60° C)

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