TracStar1200P4K

1.2 Meter, Fly Away Antenna System
Data Specification

The most important thing we build is trust

TracStar1200P4K Antenna System

The TracStar Series of vehicle mount and fly-away antenna systems 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.

The TracStar Series of antennas are typically owned and operated by:

- Corporations with remote or mobile office and monitoring applications
- Federal, State and Public Safety agencies for law enforcement, emergency response and homeland security communications
- Military rapid deployment, SATCOM on the pause applications

Antenna Controller

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

RF Interface

BUC / HPA Mounting	
2-4 Watt (5 lbs max)	Feed Boom at Feed
8 Watt (10 lbs max)	Base of Feed Boom or Rear of Reflector
16-40 Watt (25 lbs max)	Rear of Reflector on Reflector
Waveguide (BUC)	WR 75 Groove Flange at Interface Point
Coax L-band Tx & RxRG59 with Type F at Base of Case Interface Point	

Reflector

Reflector	1.2 Meter Segmented Carbon Fiber
Optics	Offset, Prime Focus
Interchangeable Feeds	Ku LP, Ka CP
Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Motorized Rotation of Feed
Military Standard	COTS Plus to MIL-STED-188-164a Type E-V

Travel

Azimuth	400° ± 200° from Stow Position
Elevation	5-95° of Boresight ± 200° Az Travel 5-90° Operational @ 180° Az Travel
Polarization (Linear)	± 95°
Emergency Drive	Handcrank on Az, El; Knob on Pol

Travel Velocity

Slewing / Deploying (Ax/El)	2° per second
Peaking	0.2° per second
Manual Jog	1.0° or 0.2° per second

Electrical Interface

RF	75Ω Tx/Rx Type F Connector (50Ω option)
Interfacility Link	32' (9.75M) Dual RG6 Coax 1 Control Cable Optional 50'/ 80' / 100' / 150' Lengths
Motors	24 VDC Servo w/Optical Encoder Constnt Torque
Controller (1U) / Power Supply	50/60Hz, 110/220VAC, Single Phase
Power Consumption Motors Active	250 Watts
Power Consumption Motors Idle	30 Watts

Antenna Characteristics–Ku Band

	Rx	Tx
Frequency (Ghz)	10.95 - 12.75	13.75 - 14.5
Gain (Midband)	41.6 dBi	41.6 dBi
VSWR	1.30:1	1:30.1
Beam Width (degrees)		
-3 dB	1.5	1.5
-10 dB	2.7	2.7
First Sidelobe Level (Typical)	-22 dB	-25 dB
Radiation Pattern Compliance	FCC §25.209, ITU-R S-580-6	
Antenna Noise Temperature	51° K at 30° Elevation	
Polarization	Linear Orthogonal standard Optional Co-pol	
Power Handling Capability	500 watts per port	
Cross-Pol Isolation On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	30 dB	26 dB
Feed Port Isolation - TX to RX	85 dB	
Satellite System Compliance		
Standard Feed	FCC and Intelsat	
Mode Matched Feed	ALL	

Antenna Characteristics–Ka Band

	Rx	Tx
Commercial Frequency (GHz)	17.7 - 27.5	27.5 - 30.0
Military Frequency	20.2—21.2	30.0—31.0
Gain (Midband)	46.4 dBi	49.6 dBi
Axial Ratio	<1.5dB	<1.0dB
Power Handling Capability	250 Watts / Port	
Radiation Pattern Compliance	FCC & MIL-STD-188-164A	
Antenna Noise Temperature	51° K at 30° Elevation	
Polarization	Linear or Circular/RHCP or LHCP	
G/T with 100° LNB	24.1 dB/° K	

Weights & Measures

Ruggedized Cases	
Pedestal Case	165lbs (75 kg) 43"x27"x20" (109 x 69 x 51 cm)
Reflector/Feed Case	110 lbs (50 kg) 43"x27"x20" (109 x 69 x 51 cm)
Portable Power Supply/Display Unit	
Weight - Power Supply/Display Unit	4.5 lbs/.5 lbs (2.04/0.22 kg)
Dimensions - Power Supply	9" x 10.25" x2.5" (22.86 x 26 x 6.35 cm)
- Display Unit	51/2" x 31/4" x 1-3/8" (13.96 x 8.25 x 3.45 cm)
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	
Operational (non-anchored)	20 mph
Operational (anchored)	30 gusts to 45 mph
Survival (anchored)	80 mph stowed @ zentih
Temperature	
Operational	-30° to 125°F
Survival	-40° to 140°F
Designed to satisfy MIL-STD 810	
Operational	-20° F to 125° F
Storage	-40° F to 150° F

Specifications subject to change without notice.

For further information please contact:

TracStar Systems
1551 College Park Business Center Road
Orlando, Florida 32804 USA
Tel: + 1-407-650-9054
Fax: + 1-407-650-9086