

TracStar1220P4MB-4 Fly-Away

Broadband Anywhere - Anytime
1.2 Meter Multi-Band Fly Away Antenna System

COBHAM

Data Specifications

The most important thing we build is trust

TracStar1220P4MB-4 - A 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, anywhere, anytime.

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 - (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

Antenna Setup

Setup time < 15 minutes

Pedestal

The TracStar 1.2M Fly Away antenna features:
Stacking Pedestal with Outrigger Legs
Fly Away antenna in 4 cases
HPA Mounting Option—Feed Boom OR Back of Reflector
Solid Carbon-Fiber Reflector—High EIRP - High-Performance
Reliable—Zero-Backlash Roto-Lok® Cable Drive Durability in Extreme and Harsh Conditions
Unrivaled Az Range of 400°, Elevation 0-90°, Pol ±95°
Ku Standard - Configurable for Ka and X Band

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.

TracStar Controller Options:

DirectPoint - immediate connection to data satellite*
Inclined orbit satellite tracking
*modem dependent

Reflector / Feed

Reflector Type	4 Segment, 1.2M Carbon Fiber
Optics	Offset, Prime Focus, 0.8 F/D
Interchangeable Feeds	XCP, Ku LP, Ka CP or Ka LP
Positioner	Patented Roto-Lok®
Mount Geometry	Elevation over Azimuth
Polarization	Motorized Rotation of Feed

Travel

Azimuth	±200°
EI - Operational	0-90° of boresight with 400° Az Travel
Polarization	±95°

Travel Velocity

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

Electrical Interface

RF	75Ω Tx/Rx Type F Connector (50Ω option)
Inter-facility Link	100 ft RG6 Coax w/Low Loss Tx Cable 1 Control Cable, (Optional 150' Lengths)
Motors	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, 12V leads on pol
BUC Mounting	Feed Boom or Rear of Reflector *
Waveguide	WR 75 Groove Flange at Interface Point

* Extra Case Required

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Data Specifications

Antenna Characteristics

Ka Band	Rx	Tx
Frequency (GHz) Military	20.2-21.2	30-31
Frequency (GHz) Commercial	17.7-20.2	27.5-30
Gain (Midband) dBi	46.2	49.5
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	0.8°	0.6°
Ant Noise Temp @ 20° El	107°K	
G/T with 100° LNB, Midband	23.0 dB/K	
Circular Axial Ratio (in cone)	1.5 dB	1.0dB
Feed Port Isolation Tx to Rx dB	30	80 w/filter
Power Handling Capability (per port)		250 watts
Radiation Pattern Compliance	MIL-STD-188-164A, FCC 25.209	
Polarization	Linear or Circular Options	

X Band	Rx	Tx
Frequency (GHz)	7.25-7.75	7.9-8.4
Gain (Midband) dBi	37.6.0	38.1
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	2.3°	2.1°
Ant Noise Temp @ 20° El	52°K	
G/T with 55° K LNB, Midband	17.3 dB/K	
Axial Ratio (CP within Tracking Cone dB)	1.21	2.0
Feed Port Isolation Tx to Rx dB (includes optional filter)	115	115
Power Handling Capability (per port)		1000 watts
Radiation Pattern Compliance	MIL-STD-188-164A	
Polarization	Circular RHCP or LHCP	



Weights & Measures

Configuration - Rugged Hardigg Shipping Cases (cm, Kg)	
Motorized Positioner	24"x25"x24", 132 lbs (60.9x63.5x60.9, 59.9Kg)
Reflector	36"x34"x12", 110 lbs (91.4x86.4x30.5, 49.9Kg)
Outriggers/Feed/Boom	20"x59"x12", 108 lbs (50.8x149.9x30.5, 49Kg)
Feed (Typical)	26"x19.75"x 12", 45 lbs (66x50.2x30.5, 20.4Kg)

Environmental

Wind - Operational w/out anchoring	
	30 mph (56.3kmh)
w/anchoring	30 mph gusting to 45 mph (56.3-72.4kmh)
Survival (anchored)	80 mph in zenith position (128.8kmh)
Pointing Loss In Wind	
Ku Band Rx, Operational Wind Load	0.1dB typical, 0.5 dB max
Ka Band Rx, Operational Wind Load	0.3dB typical, 1.0 dB max
Temperature Operational	-22° to 125° F (-30° to 52° C)
Survival	-40° F to 140° F (-40° to 60° C)
Colors	Desert Tan, Olive Drab Green, Gray

Ku Band	Rx	Tx
Frequency (GHz)	10.95-12.75	13.75-14.5
Gain (Midband) dBi	41.6	43.1
VSWR	1.3:1	1.31
Ant Noise Temp @ 20° El	54°K	
Beam Width (degrees) -3dB	1.5°	1.2°
G/T with 50° LNB, Midband	21.3 dB/K	
Cross Pol Isolation (on axis) dB	35	35
<i>within pointing cone dB</i>	28 std	30 std
<i>within pointing cone dB MultiMode</i>	25 MM	35 MM
Feedport Isolation (Tx to Rx) dB	35	80 w/filter
Power Handling Capability (per port)		500 watts
Radiation Pattern Compliance	FCC 25.209, ITU-R S.580-6. IESS 208	
Polarization	Orthogonal Linear, Optional Co-pol linear	

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

All specifications subject to change without notice

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