

TracStar1450MER

Broadband Anywhere - Anytime
1.4 / 1.6 Meter with Modular Expandable Reflector

COBHAM

Data Specifications

The most important thing we build is trust

TracStar1450 Modular Expandable Reflector Fly Away Antenna System

The TracStar MER System allows operation as a 1.4M antenna for Ku / Ka operation. The addition of four Modular Expansion panels allows rapid transition to a 1.6M reflector for C and X Band operation as well. The auto-feed sensing control system automatically changes antenna parameters for the feed currently positioned on the boom. This auto-deploy auto-acquire antenna system allows personnel with little or no satellite experience to easily configure and operate this terminal enabling the user to access any broadband application over satellite.

Ease of Operation

TracStar One Button Control System

- Auto Leveling - up to 10 degrees autocorrection all axis
- No - Test Equipment for Alignment / Acquisition
- No - On-Site Technicians
- No - Calls to Service Provider for service coordination
- No - Laptop or External PC required for antenna operation

The TracStar 1.4M Expandable Reflector Antenna features:

Expansion to 1.6M for C and X Band Operation

TracStar Controller Options:

DirectPoint - immediate connection to data satellite*

Inclined orbit satellite tracking

Stacking Pedestal with Outrigger Legs

Light Weight-Fly Away antenna in 2 cases

HPA Mounting Option-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 5-100°, Pol ±95°

**modem dependent*

TracStar Antenna Controller

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

Reflector

Reflector Type	1.4M Carbon Fiber expandable to 1.6M
Optics	Offset, Prime Focus, 0.8 F/D
Feed	Precision Corrugated Horn
Positioner	Patented Roto-Lok®
Mount Geometry	Elevation over Azimuth
Polarization	Motorized Rotation of Feed

Travel

Azimuth	±200°
EI - Operational (Mechanical)	5°-100° of reflector boresight
Pol Drive System	Non-backdriving worm gear
Polarization	±95° for 2-port and 3-port Feeds

Travel Velocity

Slewing / Deploying	Az 2° per second / EI 1° per second
Peaking	0.2° per second
Tracking	0.1° per second

Electrical Interface

RF	75Ω Tx/Rx Type F Connector (50Ω option)
Axis Transition	Twist Flex or Rotary Joints
Inter-facility Link	30 ft (Dual RG6 Coax, 1 Control Cable)
Motors	Constant Torque 24VDC Servo w/ Optical Encoder
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



Setup Time

Less than 15 minutes

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

TracStar1450MER



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Data Specifications

Antenna Characteristics Ka Circular (1.0M)	Ku Linear (1.4M)		Ka Circular (1.4M)		C Band (1.6M) Expanded Reflector		X Band (1.6M) Expanded Reflector	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	10.95-12.75	13.75-14.5			3.625-4.20	5.85-6.425	7.25-7.75	7.9-8.4
Military (Ghz)			20.2-21.2	30.0 - 31.0				
Gain (Midband MIL) (dBi)	42.9	44.5	47.8	51.1	34.2	38.1	39.6	40.5
VSWR	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1
Beamwidth (-3dB)	1.3°	1.1°	0.7°	0.5°	3.4°	2.1°	1.8°	1.6°
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580-6, IESS 208		FCC §25.209, MIL-STD-188-164A		ITU-R S.580-6, IESS 207		Per MIL-STD-188-164A	
Ant Noise Temp @ 20 EL	54° K		107° K		49° K		45° K	
G/T w/55° LNB, midband	22.0 dB/K				15.8 dB/K		19.7 dB/K	
G/T w/100° LNB, midband			24.4 dB/K					
Polarization	Linear Orthogonal Co Pol Optional		RHCP or LHCP	LHCP or RHCP	Linear Orthogonal or Circular RHCP/LHCP		Circular RHCP/LHCP	
Axial Ratio (dB) (CP Only, within pointing cone)			1.5	1.0	2.3	1.3	1.21	2.0
Cross Pol Isolation (On-Axis/within pointing cone)					35/30	35/30		
Cross Pol Isolation (On Axis)	35/28	35/28						
Cross Pol Isolation Within Pointing Cone (std feed / MM Feed)	28/25	30/35						
Feed Port Isolation (dB, Tx to Rx)	35	80w/filter	80	80 w/filter	65	105 w/filter	115 w/filter	115w/filter
Power Handling (Watts / Port)		500		250		1000		1000

Weights & Measures

Positioner Case	23 x 19 x 19 in, 100 lbs (58.42 x 48.26 x 48.26cm, 45.35kg)
Reflector/Outriggers/Boom/Feed Case	30 x 30 x 16 in, 100 lbs (76.2 x 76.2 x 40.64cm, 45.35kg)
Additional Feeds	43 x 27 x 29 in, 70 lbs typical (109.2 x 68.58 x 73.66cm, 31.75kg)
Antenna Control Unit Dimensions - Desktop Power Supply	9" x 10.25" x 2.5", 4.5 lbs (22.86 x 26 x 6.35 cm, 2.04 kg)
Display Unit	5 1/2" x 3 1/4" x 1-3/8", 0.5 lbs (13.96 x 8.25 x 3.45 cm, 0.22kg)
Rack Mount (1RU)	19.0" x 8.0" x 1.75", 4.5 lbs (48.26 x 20.32 x 4.44 cm, 20.4 kg)

Environmental

Wind - Operational	
No Anchoring	Gusts to 30 mph (48.28 km)
Anchored	30 mph Gusting to 45 mph (48.28 - 72.42km)
Survival (anchored as 1.4M)	80 mph in 73° elevation position (128.74Km)



Pointing Loss in Wind 1.4M Refelector, Anchored

Ku Band Rx, Operational Winds, 0.6 dB typical, 1.0 dB Max
Ka Band Rx, Operational Winds, 1.3 dB typical, 2.0 dB Max

Expanded to 1.6M Reflector, Anchored

C Band Rx, Operational Winds, 0.1dB typical, 0.2dB Max
X Band Rx, Operational Winds, 0.5dB typical, 1.0dB Max

Temperature Operational	-22° to 125° F (-30° to 52° C)
Survival	-40° F to 140° F (-40° to 60° C)

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All specifications subject to change without notice

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

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