

TRACKER 6000

Frequency Flexibility. Platform Scalability. A Heritage of Reliability.
Any Orbit. Any Network. Anywhere.

Product Sheet

COBHAM

WHEN CONNECTION MATTERS



The TRACKER Range – built for tomorrow's needs on the proven heritage of today's leading brand.

A new approach to gateways and user terminals – scalable, easily implemented and supported, and cost-effective. TRACKER Gateways and User Terminals have been selected by LEO/MEO constellation operators, government agencies, and EO and New Space service providers based on proven performance and reliability, robust design suitable for all environments, low total cost of ownership, and Cobham SATCOM's ability to meet demanding implementation schedules.

TRACKER 6000 – A Platform Designed for Performance and Scalability

Single, Dual, or Triband: invest in what you need today without sacrificing what you will want tomorrow. The TRACKER 3700 can be configured for C Band, Ku Band and Ka Band, in any combination. Customers can start with a single or dual band system and upgrade to dual or triband if or when required. Capable of operating in any GEO and

NSGO orbit, TRACKER 6000 is the most versatile solution in the industry. Service providers can build 100% orbit and network agnostic on-demand service offerings to meet evolving customer needs.

Unmatched Efficiency & Throughput – True 6m Performance Across All Frequencies

Built upon a legacy of over 30 years of research, development and customer collaboration, Cobham SATCOM has optimized the TRACKER series to achieve industry-leading performance. The RF architecture offers the most efficient design in the industry, permitting up to almost double the RF power with the same size antenna and enabling higher throughput and margins.

The optimized RF performance includes superior cross-pol isolation; full transmit waveguide to keep the Tx and Rx units close to the feed (OMT), minimizing loss while increasing RF performance; and full illumination of the reflector to maximize gain efficiency. Additionally, this RF design allows the user to configure and reconfigure with of a much broader range of leading commercial RF units than competing systems.

Furthermore, TRACKER 6000's RF payload design allows the system to support far greater amplifier power in all bands than any other option. Existing Sea Tel systems in operation today exceed 2Kw in RF power operating in C and Ku-band.

Robust Design & Ease of Installation

The protective radome shields the antenna from all environmental conditions and yields higher tracking accuracy and throughput, with industry-leading reliability. Adding ease and flexibility of installation, and the proprietary balanced low-power tracking system ensure uninterrupted operation at a significantly lower total cost of ownership than other systems.

Systems are delivered pre-configured and pre-tested, with simple software tools and standard interfaces, allowing quick installation, configuration and connection to the user network. They also come with a full warranty, backed by Cobham SATCOM's 24/7 customer service and global support network, with optional installation and tailored support services. With the TRACKER 6000 you are ready for the future. What you purchase today will be ready for the demands of tomorrow.

STABILIZED ANTENNA PEDESTAL ASSEMBLY

Type	Three-axis (Level, Cross Level and Azimuth)
Pointing	Torque Mode Servo
Azimuth, Level, Cross Level Motors	Size 34 FOV Controlled Step motors operating in Torque Mode
Inertial reference	3 Axis Solid State Rate Sensors
Gravity reference	3 Axis Solid State Accelerometers
AZ transducer	16 Bit Absolute Encoder
Pointing accuracy (open loop)	0.5 degrees
Pointing accuracy (closed loop)	0.05 degrees (0.02 degrees Typ)

PEDESTAL RANGE OF MOTION

Elevation Joint Angle	0 to + 180 degrees
Cross Level	+/- 15 degrees
Azimuth	+/- 270 nominal
Elevation Pointing	+5 to +175 degrees
Tracking modes	Dishscan (Autotrack), Program Track (TLE, ECEF)

ANTENNA REFLECTOR

Type	Prime Focus, Parabola (1 Hub & 8 Petals)
Diameter	6 m (236 in)
Frequency TX	5.091 - 5.24912 GHz
Frequency RX	6.875 - 7.055 GHz
Size	6 m (19.685 ft)
Gain TX	47.3 dB
Gain RX	49.4 dB
Pattern Mask	FCC 25.209
Mask start point	1.5 degrees
XPD	30 dB

G/T ELEVATION

5 degree	24.9 dB/K at 7.775 GHz
10 degree	25.6 dB/K at 7.775 GHz
20 degree	26.1 dB/K at 7.775 GHz
40 degree	26.5 dB/K at 7.775 GHz

KA-BAND FEED (TX/RX) 4-PORT OMT

Frequency TX	5.091 - 5.24912 GHz
Frequency RX	6.875 - 7.055 GHz
Polarization	LHCP/RHCP
XPD	30 dB
VSWR	<1.3:1
Interface Antenna	Circular
Optics	Ring focus backfire

RF EQUIPMENT

Various BUC's and LNB's available per customer requirements

REDUNDANCY

Options for Dual Redundant BUC configurations are available

RADOME ASSEMBLY

Type	Frequency Tuned
Material	Proprietary composite foam/laminate
Shape	Modified/truncated sphere
Materials	Proprietary a sandwich
Diameter	8m (216 inch)
Height - radome only	745.0 cm (293.3 inch)
Height - radome with hazard light/lightning spike	889.35 cm (350.12 inch)
Side door opening	WxH 86 cm x 126 cm [33.8 x 49.6 inch], with 15 cm/6 inch stepover height.
Number of panels	12 Lower, 12 Middle Lower, 12 Middle Upper, 12
RF attenuation	<0.35 dB
Wind:	Withstand relative average winds up to 201
Kmph	(125 mph) from any direction.
Ingress Protection Rating	IP 56

FOUNDATION

Mounting	Contract grade cement pad
Mechanical alignment leveling	Not required
Mechanical alignment pointing	Not required

ENVIRONMENTAL CONDITIONS

Temperature Range (Operating)	-40° to +55° Celsius (-40° to +131° F)
Humidity	100% Condensing
Wind Speed	56 m/sec (125 mph)
Solar Radiation	1,120 Watts per square meter, 55° Celsius
Icing	Survive ice loads of 4.5 pounds per square foot. Degraded RF performance will occur under icing conditions.
Rain	Up to 101.6mm (4 inches) per hour. Degraded RF performance may occur when the radome surface is wet.
Ingress Protection Rating	IP 56

REGULATORY COMPLIANCE

Survival shock and vibration	N/A
Operational shock and vibration	N/A
Safety	IEC 60950
EMI/EMC Compliance	ETSI EN 301 489-1 V1.4.1 (2002-08) ETSI EN 300 339 (1998-03)
Satellite earth stations and system (SES)	N/A
Safety compliance	IEC EN 60950-1:2001 (1st Edition)
Environmental compliance	RoHS Green Passport
Lightning/surge protection	IEC 61643-1, IEC 6143-12 & NFPA-780

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