

Frequency Flexibility. Platform Scalability. Built on a Heritage of Reliability.
Any Network, Any Orbit, One Technology.

Product Sheet

When Connection Matters

The TRACKER antenna system powers HTS for more global offshore enterprises than any other brand today, unlocking new capabilities through unmatched performance and reliability. But, staying agile in the modern business environment demands greater flexibility than ever before. Managed IT service providers must position themselves to adapt quickly and cost effectively in delivering the desired customer outcome. Business decision makers increasingly expect a frictionless experience.

Introducing TRACKER 4000, a modern IT solution built for tomorrow's needs on the field-proven heritage of today's leading brand.

A Platform Designed for Scalability – invest at your own pace

Single, Dual, or Triband: invest in what you need today without sacrificing what you will want tomorrow. The TRACKER 4000 brings choice as the end user will have a single antenna pedestal capable of supporting C Band, Ku Band and Ka Band in any combination they desire. Capable of operating in any orbit, including LEO, MEO, GEO and HEO, TRACKER 4000 is the most versatile solution in the industry. Businesses can scale IT investment to suit their digital roadmap with a platform that enables flexibility. Service providers can build 100% orbit and network agnostic on-demand managed service offerings to meet evolving customer needs.

Unmatched Efficiency & Throughput – True 4m Performance Across All Frequencies

Built upon the heritage of over 30 years of research, development and customer collaboration, Cobham SATCOM has invested significantly in enhancing the new design to push performance. The RF

architecture offers the most efficient design in the industry allowing for almost double the RF power with the same size antenna, easily outperforming all other offerings. The improved RF performance is driven by a number of factors including superior cross-pol isolation at Ku band; full transmit waveguide to keep the amplifiers for both transmit and receive close to the feed (OMT) to minimize loss whilst increasing RF performance; and finally full illumination of the Ka tolerant reflector as another way of reducing loss of performance.

Furthermore, TRACKER 4000'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

One of the most important design considerations for any tracking antenna system is the pointing accuracy and reliability of the antenna system to ensure continuous operations under all environmental conditions. Cobham SATCOM invented the stabilized antenna systems and continues to be a leader in the market with new earth stations being deployed.

The TRACKER 4000 series allows customers to purchase a single or dual band system now and upgrade to Triband if or when required.

With the TRACKER 4000 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 (2 Piece)
Diameter	4 M (157.48 in)
Frequency TX	27.5-30.0 GHz
Frequency RX	17.7-20.2 GHz
Size	4 M (13.12 ft)
Gain TX	57.1 dBi at 29.0 GHz
Gain RX	55.7 dBi at 19.2 GHz
Pattern Mask	FCC 25.209
Mask start point	1.5 degrees
XPD	30 dB

G/T ELEVATION

5 degree	30.5 dB/K at 19.2 GHz
10 degree	31.2 dB/K at 19.2 GHz
20 degree	31.7 dB/K at 19.2 GHz
40 degree	32.1 dB/K at 19.2 GHz

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

Frequency TX	27.5-30.0 GHz
Frequency RX	17.7-20.2 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 Redundat BUC configurations are available

RADOME ASSEMBLY

Type	Frequency Tuned
Material	Composite foam/laminate
Radome Loss	0.75 dB (Reflective loss)
Radome Life	20 Years

SIZE

Diameter	5.49m (216 inch)
Height	5.23m (206 inch)
Side Door	.79 x .86m (31" wide x 34" high) (Angled ~36 degrees)
Number of panels	36 total Risers – 5 ea. Hexagon, lower – 5 ea. Pentagon with door opening – 1 ea. Pentagon lighting diverter – 1 ea. Pentagon, plain – 9 ea. Hexagon, plain - 15 ea.
Installed height:	5.69M (224 inch) Including 12" riser and 18" lightning diverter.

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	NA
Operational Shock and Vibration	NA
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)	NA
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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