TRACKER® 2400 GD

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

Product Sheet

COBHAM SATCOM
Connecting the future

The TRACKER Range – enabling innovation and growth for constellations, New Space, and Government Solutions

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 2400 GD – Optimized for Government and Defense Applications

The TRACKER 2400 GD is a workhorse in the TRACKER range – a versatile, modular and cost-effective ground station antenna system that provides secure, mission-critical data and control links for a growing range of defense and government applications.
It serves as a compact gateway for mission critical links, and a powerful large user terminal for high data rate applications. Combining flexibility with resilience, the system is compliant with both MIL environment and EMI/EMC requirements, as well as incorporating cybersecurity features. In addition to compliance with stringent MIL requirements, the TRACKER 2400 GD is readily adapted to different transportable and field deployable platforms.

Enabling new mission capabilities

Capable of operating in any GEO and NSGO orbit, TRACKER 3700 GD is the most versatile solution available. Users can quickly switch between orbits, constellations, bands and satellites, expanding options and providing unprecedented mission agility. It can be configured for C-, Ku- and Ka-Band, or any combination; users can also start with a single or dual band system and upgrade to dual or triband if or when required.

Unmatched Efficiency & Throughput – True 2.4m 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.

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.

TRACKER® 2400 GD

SYSTEM WEIGHT (ADE)	
Install Weight (typically)	1300 Lbs (590kgs) (with 144" radome)
Shipment Weight (typically)	System Crate 1830lbs (830kgs) Radome Crate 1900lbs (862kgs)
STABILIZED ANTENNA PEDESTAL ASSEMBLY	
Type	Three-axis (Level, Cross Level and Azimuth)
Stabilization	Torque Mode Servo / Two Axis W/Pol
Stability Accuracy	0.1° RMS, 0.2° peak in presence of specified ship motions (see below).
POWER REQUIREMENTS	
ADE	85-264 VAC, 47-63Hz, single phase, Pedestal=450 Watts (brake release, pedestal drive and BUC drive)PLUS RF Equipment=2150Watts max. Total power consumption=2600Watts
ANTENNA REFLECTOR (PRIMARY)	
Type	Honeycomb Fiberglass Parabola 2.4 Meter Modified Offset
IN RADOME RF PERFORMANCE	
C-Band	
TX Gain	41.7 dBi at 6.18 GHz
RX Gain	37.5 dBi @ 3.95 GHz
G/T (30° elevation, clear sky)	19.2 dB/K @ 3.95 GHz (calculated)
Ku-Band	
TX Gain	48.5 dBi @ 14.25 GHz (using Sub reflector)
RX Gain	46.7 dBi @ 11.8 GHz (using Sub reflector)
G/T (30° elevation, clear sky)	27.2 dB/K @ 12.75 GHz (calculated)
Ka-Band	
TX Gain	53.9 dBi @ 28.75 GHz (using Sub reflector)
RX Gain	50.5 dBi @ 19.0 GHz (using Sub reflector)
G/T (30° elevation, clear sky)	26.4 dB/K @ 19.0 GHz (calculated)
PEDESTAL RANGE OF MOTION:	
Elevation Bore Angle	-16.6 to +105.4 degrees
Cross Level (Inclined 30°)	+/- 30 degrees
Azimuth	Unlimited
Relative Azimuth Pointing	Unlimited
POWER SUPPLY (ADE-PCU)	
A/C Input Voltage	85-264 VAC, 47-63Hz, single phase
Voltage	24 VDC, 150W
Wattage	150W (total)
Current Capacity	13.0A (total)
GPS (On Board)	
Waterproof	IPX7
Operating Temperature	-30°C to +60°C
Storage Temperature	-40°C to +60°C
Altitude	-304m to 18,000m`
Vibration	IEC 68-2-64
Shock	50G Peak, 11ms
Connector	RJ11
NMEA output messages	GGA, GLL
Refresh Rate	1s
INTEGRATED CONTROL UNIT (ICU)	
Integrated SCPC Receiver	
Tuning Range	950 to 1950 MHz in 1 KHz increments
Input RF Level	-85 to -25dBm typical
Output RF Level	Input level +/- 1dB typical
Sensitivity	30mV/dB typical (25 counts/dB typical)
Bandwidth (3dB)	150 KHz
Interfaces	
Modem/MXP M&C Interface	OpenAMIP & Legacy
Network Interface	4-port managed fast ethernet switch
User Interface	Web Browser/Console Port 1s
RADOME ASSEMBLY (144 inch)	
Type	Frequency Tuned
Material	Composite foam/laminate
Size	
Diameter	365.76cm (144 inch)
Height	360-68cm (142 inch)
Hatch Size	45.72cm x 86.36cm (18" high x 34" wide)
Side Door	45.72cm x 91.44cm (18" wide x 36" high)
Number of panels	Twelve panels (6 upper & 6 lower panels), one top cap and one base pan
Installed height	416-56cm (164 inch) including base frame if mounted with standard Legs, 375.92cm (148 inch) if Flush-mounted
Installed weight	See System Weight of the ADE Above (includes Radome, base frame w/standard legs & braces and the Antenna Pedestal Assembly)
Wind:	Withstand relative average winds up to 201 Kmph (125 mph) from any direction.
Ingress Protection Rating	IP 56
OUTDOOR EQUIPMENT ENVIRONMENTAL CONDITIONS	
Temperature Range (Operating)	-25° to +55° Celsius (-13° to +131° F)
Humidity	100% Condensing
Wind Speed	56 m/sec (125 mph)
Solar Radiation	1,120 Watts per square meter, 55° Celsius
Spray	Resistant to water penetration sprayed from any direction.
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.
Corrosion	Parts are corrosion resistant or are treated to endure effects of salt air and salt spray. The equip ment is specifi cally designed and manufactured for marine use.
INDOOR EQUIPMENT	
Media Xchange Point (MXP)	
Standard 19 Inch Rack mount	One Unit High
Physical Dimensions	17 X 17 X 1.75 (Inches)/ 43.18 x 43.18 x 4.45 (cm)
Input Voltage	85-264 VAC, 47-63Hz, single phase, 110 Watts
Weight	6.6lbs/ 3.0 kgs
Rear Panel Connections	
AC Input	Modular AC Power Input Receptacle
J1	F (F) - RXIF Output to Satellite Modem
J2	SMA (F) - RXIF Input from ADE
J3 B/A	Ethernet - 2 ports of the 4 Port 10/100
J4 B/A	Ethernet - 2 ports of the 4 Port 10/100
J5	SFP Gigabit Ethernet
J6	Mini USB Antenna M&C
J7	USB Host (Type A) - N/C - Future Developement
J8	DE9 (F) - Serial Console - Antenna Serial M&C
J9 A/B	RJ45 Serial M&C - A=Radio M&C, B=Pass through
J10 C/D	RJ45 Serial M&C - C=Modem, D=OBM
J11	Terminal Strip - Gyro Compass (SBS-Synchro)
J12	Terminal Strip - Auxiliary Interface Terminals
J13	DE-9 (M) - NMEA 0183 Interface Port
J14	DE-9 (M) - AUX (RS-232) Interface Port
J15	NMEA 2000 Interface Port - Future Development
BDE ENVIRONMENTAL CONDITIONS	
Temperature	0 to 40 degrees C
Humidity	Up to 100% @ 40 degrees C, Non-Condensing
REGULATORY COMPLIANCE	
Survival Shock and Vibration	IEC-60945, MIL-STD-167
Operational Shock and Vibration	Operational: IEC-60945, Survival: MIL STD-167
EMI/EMC Compliance Ku-Band	ETSI EN 301 843-1 V1.4.1 (2004-06) ETSI EN 301 489-1 V1.4.1 (2002-08) ETSI EN 300 339 (1998-03) IEC EN 60945:1997
Satellite Earth Stations and System (SES)	ETSI EN 301 428-1 V1.3.1 (2006-02) ETSI EN 302 340 V1.1.1 (2006-04)
Safety Compliance	IEC EN 60950-1:2001 (1st Edition)
Environmental Compliance	RoHS Green Passport
FCC ESV Compliance C-Band	47 C.F.R. § 25.221
FCC ESV Compliance Ku-Band	47 C.F.R. § 25.222
FCC ESV Compliance Ka-Band	47 C.F.R. § 25.138 (FSS)
Options	Bluetootht

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Subject to change without further notice.