

Sea Tel® 2400

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

Product Sheet

**COBHAM
SATCOM**
Connecting the future



The Sea Tel 2400 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.

Sea Tel 2400 – 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 Sea Tel 2400 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, Sea Tel 2400 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 2.4m Performance Across All Frequencies

Built upon a legacy 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, Sea Tel 2400’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. The Sea Tel 2400 supports Ka-band amplifiers up to 160W today.

Robust Design & Ease of Installation

One of the most important design considerations for any system is the pointing accuracy and stability of the antenna to ensure it stays on satellite whatever happens. Cobham SATCOM invented the stabilized antenna systems and continues to lead the market in terms of robustness, vibration and shock tolerance.

The Sea Tel 2400 is no exception and has passed rigorous testing to include IEC 60945 and MIL 901D class B testing for shock and vibration as well as temperature testing to ensure the Sea Tel 2400 will continue to operate and survive in the harshest environments experienced at sea. The robust antenna design allows the antenna to absorb a tremendous level of shock and vibrations with no impact on performance or longevity of the system.

Shipped in two crates in three pre-assembled units, the system is easily installed in a single day. As the installation footprint is identical to that of Sea Tel 9711, there is no need to change platforms when upgrading to the Sea Tel 2400.

The Sea Tel 2400 series allows customers to purchase a dual band system now and upgrade to Triband whenever you decide to do so. There is no longer a need to tie up capital for equipment now that you will not use for a year or two – or may not be certain that you will ever need it in the future. With the Sea Tel 2400 you are ready for the future. What you purchase today will be ready for the demands of tomorrow.

SYSTEM WEIGHT (ADE)

Install Weight (typically)	1300 Lbs (590kgs) (with 144" radome)
Shipment Weight (typically)	System Crate=1830lbs (830kgs) Radome Crate 1900lbs (862kgs)

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
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ANTENNA REFLECTOR (PRIMARY)

Type	Honeycomb Fiberglass Parabola 2.4 Meter Modified Offset
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AVAILABLE RF PAYLOAD OPTIONS

C-Band	Up to 600W
Ku-Band	Up to 400W
Ka-Band	Up to 160W
Supported RF Manufacturers	Terrasat, Comtech, Teledyne, Advantech, CPI, Mission Microwave, RevGO, AMKOM, others

IN RADOME RF PERFORMANCE

C-Band	
TX Gain	41.1 dBi @ 6.18 GHz
RX Gain	37.2dBi @ 3.95 GHz
G/T (30° elevation, clear sky)	18.6 dB/K @ 3.95 GHz (calculated)
Ku-Band	
TX Gain	41.1 dBi @ 14.25 GHz (using Sub Reflector)
RX Gain	46.7 dBi @ 11-8 GHz (using Sub Reflector)
G/T (30° elevation, clear sky)	26.3 dB/K @ 12.75 GHz (calculated)
Ka-Band	
TX Gain	54.1 dBi @ 28.75 (using Sub Reflector)
RX Gain	50.6 dBi @ 19.0 GHz (using Sub Reflector)
G/T (30° elevation, clear sky)	26.4 dB/K @19 GHz Calculated

PEDESTAL RANGE OF MOTION:

Elevation Bore Angle	-16.6 to +105.4 degrees
Cross Level (Inclined 30°)	+/- 30 degrees
Azimuth	Unlimited
Elevation Pointing	+0 to +85 degrees (with 15 degree Roll) +5 to +80 degrees (with 20 degree Roll) +10 to +75 degrees (with 25 degree Roll)
Relative Azimuth Pointing	Unlimited

MAXIMUM SHIP MOTIONS

Roll	+/- 25 degrees (Roll only) +/- 20 degrees (combined with Pitch)
Pitch	+/- 15° at 6-12 sec periods
Yaw	+/- 8 degrees at 15-20 sec periods
Turning rate	Up to 12 deg/sec and 15 deg/sec/sec
Headway	Up to 50 knots
Heave	0.5G
Surge	0.2G
Sway	0.2G

SPECIFIED SHIP MOTION (for stability accuracy tests)

Roll	+/- 20° at 8 second period
Pitch	10° Fixed
Relative Azimuth (Heading)	0, 45 and 90° with respect to roll input

RADOME ASSEMBLY (144 inch)

Material	Composite foam/laminate
Size	
Diameter	365.76cm (144 inch)
Height	360-68cm (142 inch)

OPTIONAL RADOME ASSEMBLY (168 inch)

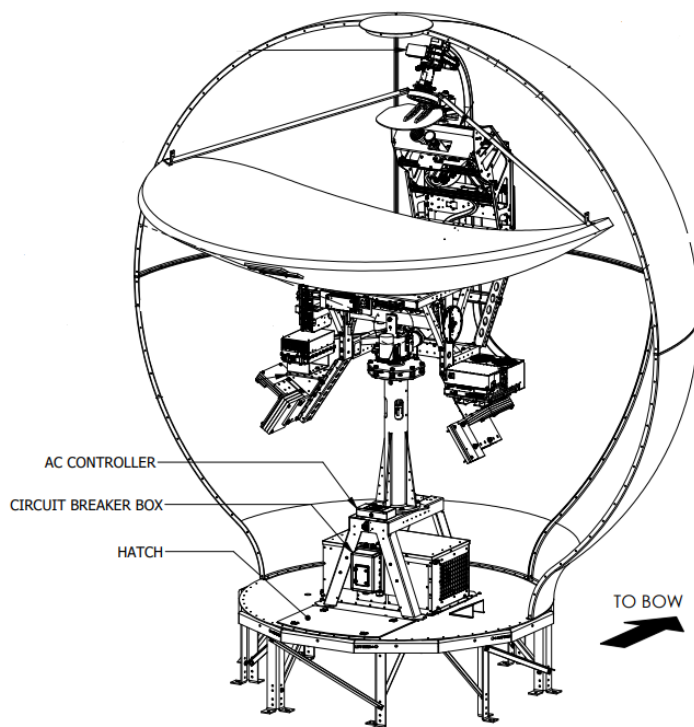
Material	Composite foam/laminate
Size	
Diameter	426.72cm (168 inch)
Height	391.16cm (154 inch)

ADE 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 equipment is specifically designed and manufactured for marine use.

BELOW DECKS 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



Subject to change without further notice.

For further information please contact:
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