

SAILOR® 600 VSAT KA

Maritime broadband on THOR 7 with the smallest and lightest antenna available

Product Sheet

The most important thing we build is trust

COBHAM

The SAILOR 600 VSAT Ka is the smallest, lightest and most advanced 3-axis stabilised Ka-band antenna system for the THOR 7 satellite network from Telenor Satellite. Its unique composite/aluminium design keeps weight down and the well-proven SAILOR VSAT technology streamlines the deployment process and maximises operational uptime.

Though SAILOR 600 VSAT Ka is a super light antenna, it has the ruggedness and reliability required of a professional maritime stabilised antenna system. Additionally, the low weight and compact form factor make it possible for smaller vessels to benefit from VSAT connectivity, when before it may not have been an option because of the need for larger, heavier antennas.

Super light, super rugged

SAILOR 600 VSAT Ka is built to withstand the toughest sea conditions and still deliver high bandwidth connectivity on THOR 7. It is the fastest tracking antenna available in this size, with superior dynamic performance in all axes; roll, pitch and yaw. This high performance means that vessels more affected by rough seas can make the most of THOR 7 services, as SAILOR 600 VSAT Ka can maintain a link even in extreme conditions.

A simple revolution in VSAT deployment

Advanced antenna systems like SAILOR 600 VSAT Ka simplify the once complex process of VSAT antenna procurement and installation. This saves time and money. Cobham SATCOM has achieved this revolution not through a single design breakthrough, but with a wealth of features and design details unique to the

SAILOR VSAT technology platform. For instance, a single cable between antenna and below deck equipment for RF, power and data combined with Automatic Azimuth Calibration and Automatic Cable Calibration enable unique 'one touch commissioning'. The Dynamic Motor Brakes inside the antenna remove the requirement for mechanical brake straps and make sure the antenna is kept in balance in any no-power situation, at sea or during transport.

Re-defining maritime broadband

Integrating SAILOR 600 VSAT Ka with the iDirect X7 Satellite Router is the smartest, most cost-effective way to access ground-breaking new high throughput satellite (HTS) services on THOR 7. Higher speeds, more reliability and class-leading

installation time and cost savings, means this combination of state-of-the-art hardware and next generation services offers the ultimate support for business applications, vessel operations and crew welfare.

Streamlining remote access and diagnostics

Just like all other SAILOR VSAT systems, the SAILOR 600 VSAT Ka is incredibly easy to manage; ensuring service providers can offer the best possible support to customers anywhere in the world. Easy remote access and diagnostic features include monthly statistics logging, SNMP and built-in e-mail clients that automatically email historical logging of system performance.



SAILOR® 600 VSAT KA

Maritime broadband on THOR 7 with the smallest and lightest antenna available



SYSTEM SPECIFICATIONS

| | |
|---------------------------|---|
| Frequency band | Ka-Band (e.g. THOR 7) |
| Reflector size | 65 cm / 25.5 inch |
| Certification | Compliant with CE (Maritime), ETSI, FCC |
| Type approvals | Telenor Satellite |
| System power supply range | 100-240 VAC, 50-60 HZ |
| Vibration, operational | EN60945, DNV 2.4-A, MIL-STD-167-1 |
| Vibration, survival | EN60945, MIL-STD-167-1 EN60721-3-6 6M3 mod. by EN60721-4-6 |
| Shock | EN60721-3-6 class 6M3 mod. by EN60721-4-6 |
| Temperature (ambient) | Operational: -25° C to 55° C Storage: -40° C to 85° C |

FREQUENCY BAND

| | |
|----|------------------|
| Rx | 19.2 to 20.2 GHz |
| Tx | 29.0 to 30.0 GHz |

ANTENNA CABLE

| | |
|-------------------------------|---|
| ACU to ADU cable | Single 50 Ω coax for Rx, Tx and power |
| ACU to ADU cable requirements | RF loss at 1950 MHz < 20dB, 4450 MHz < 35 dB. DC resistance: < 0.9 Ω |

ANTENNA CONNECTORS

| | |
|-----|---------------------------|
| ADU | Female N-Connector (50 Ω) |
| ACU | Female N-Connector (50 Ω) |

ABOVE DECK UNIT (ADU)

| | |
|-------------------------------------|--|
| Antenna type, pedestal | 3-axis stabilised tracking antenna with integrated GNSS (GPS, GLONASS, Beidou) |
| Antenna type, reflector system | Reflector/sub-reflector, ring focus |
| Transmit Gain | 43.4 dBi typ. @ 29.5 GHz (incl. radome) |
| Receive Gain | 40.4 dBi typ. @ 19.7 GHz (incl. radome) |
| System G/T | 17.2 dB/K typ. @ 19.7 GHz, at ≥10° elevation and clear sky (incl. radome) |
| BUC output power | 5 W BUC |
| EIRP | 50.4 dBW typ. @ 29.5 GHz |
| LNB | Ka single band LNB |
| Tracking Receiver | Internal "all band/modulation type" including e.g. narrow band, DVB-S2, GSC and modem RSSI |
| Polarisation | Circular Cross-Pol (TX: RHCP, RX: LHCP) |
| Tracking | 6-axis MEMS INU, conical scan, internal GNSS and Gyro/GPS Compass input |
| Elevation Range | -28° to +120° |
| Cross Elevation | +/-42° |
| Azimuth Range | Unlimited (Rotary Joint) |
| Ship motion, combined angular min. | Roll +/-25° (in 6 sec), Pitch +/-15° (in 5 sec), Yaw +/-10° (in 8 sec) |
| Ship, turning rate and acceleration | 15°/S and 15°/S ² |
| ADU motion, linear | Linear accelerations +/-2.5 g max any direction |
| Satellite acquisition | Automatic - with or without Gyro/GPS Compass input |

| | |
|--------------------------|---|
| Humidity | 100%, condensing |
| Rain / IP class | EN60945 Exposed / IPX6 |
| Wind | 80 kt. operational 110 kt. survival |
| Ice, survival | 25 mm / 1" |
| Solar radiation | 1120 W/m2 to MIL-STD-810F 505.4 |
| Compass safe distance | 1 m / 40" to EN60945 |
| Maintenance, scheduled | None |
| Maintenance, unscheduled | All electronic, electromechanical modules and belts are replaceable |
| Built In Test | Power On Self Test, Person Activated Self Test and Continuous Monitoring w. error logging |
| Power OFF | Automatic safe mode |
| Dimensions (over all) | Height: H 91cm / 36 inch Diameter: Ø 82 cm / 32 inch |
| Weight | 37 Kgs. / 82 lbs. |

ANTENNA CONTROL UNIT (ACU)

| | |
|-----------------------------|---|
| Dimensions, Rack Mount | 1U 19" ACU HxWxD: 4.4 x 48 x 33 cm HxWxD: 1.75" x 19" x 13" |
| Weight, Rack Mount | 4.5 kgs. / 10 lbs. |
| Interfaces | 1 x N-Connector for antenna RF Cable (50 Ω) w. automatic cable loss compensation 2 x F-Connectors (75 Ω) for Rx / Tx to Modem 1 x Ethernet (Modem Control) 1 x RS-422 (Modem Control) 1 x RS-232 (Modem Control) 1 x NMEA 0183 (RS-422 or RS-232) for Gyro/GPS Compass input (future NMEA2000) 2 x Ethernet (User) 1 x Ethernet (ThraneLink, service, set-up etc.) 1 x AC Power Input 1 x Grounding bolt |
| Input power | 100-240 VAC, 135W typical, 240W peak |
| Modem interface (control) | Generic, OpenAMIP, Custom protocol |
| Man Machine Interface (MMI) | Web MMI, OLED (red) display, 5 pushbuttons, 3 discrete indicator LEDs and ON/OFF switch |
| No transmit zones | Programmable, 8 zones with azimuth and elevation |
| Humidity | EN60945 Protected, 95% (non-condensing) |
| IP class | IP30 |
| Compass safe distance | 0.3 m / 12" to EN60945 |

For further information please contact:

satcom.ohc@cobham.com