

# SAILOR® 1000 XTR Ka

Your future-proof antenna system for Ka-band satellite services  
- available in 4.5W and 9W

Product Sheet

**COBHAM**  
**SATCOM**  
Connecting the future



**Unlock the power to optimize delivery and performance of broadband for business applications, vessel operations and crew welfare, in any maritime environment with the new SAILOR 1000 XTR Ka; the most advanced stabilized antenna system available. Works on satellites in geosynchronous orbit (GSO) and non-GSO, e.g., MEO such as SES O3b mPOWER.**

## A FUTURE-PROOF KA PLATFORM

Integrating the best of SAILOR VSAT Technology and SAILOR XTR™, the new innovative technology platform at the heart of all next generation SAILOR antenna systems, SAILOR 1000 XTR Ka represents the state-of-the-art for leveraging the full capabilities of Ka services today, and tomorrow.

The SAILOR 1000 XTR Ka's advanced RF package with new Ka-band transceiver (XCVR) and feed horn supports dual-polarization and wide-band Ka, making it ready to take advantage of existing and future Ka-band satellite constellations. It also features sophisticated Tracking Receiver technology to ensure fast satellite acquisition at start-up and after blockages caused by e.g., atmospheric conditions or vessel superstructure.

## FEATURE RICH, QUICK & EASY TO DEPLOY

SAILOR 1000 XTR Ka utilizes sophisticated Rapid Deployment Technology to reduce installation complexity and cost. This is a combination of mechanical and software elements such as a true one-cable solution, Dynamic Motor Brakes, the XTR™ Installation Wizard enabling quick and trouble-free deployments.

Technical features include the new XTR Antenna System Control Module located inside the Above Deck Unit (ADU) with a lightning-fast processor, enabling new modular star network component topology, deep self-diagnostics capabilities and extended, highly secure remote access contribute to optimize every aspect of operation and management of SAILOR XTR™ antennas.

Further developments include IoT protocols providing on-demand antenna health and performance data, and unique 'in-dome' Ethernet for simple integration of third-party devices such as a cellular device.



## SAILOR 1000 XTR KA WORKS ON THESE SATELLITE NETWORKS

- THOR 7 by Telenor Satellite/Space Norway
- SES O3b mPOWER
- SES-17
- Hispasat
- Eutelsat Konnect VHTS

## ONE PLATFORM FOR ALL ANTENNAS

- **Rapid deployment** – true one-cable, software-controlled solution
- **Best-in-class RF performance** – end-users get more value from their investment
- **Powerful new controller and motors** – improved performance on all levels
- **Built-in flexibility** – ready to deliver now and on future satellite constellations
- **Dual antenna operation** – reliable automatic switching between two antennas
- **New secure software platform** – protects against cyber security risks
- **New lighter pedestal design** – simplicity improves mechanical performance
- **Easy servicing and operation** – enable higher QoS and business continuity

# SAILOR 1000 XTR Ka

Your future-proof Ka-band system - available in 4.5W and 9W



## SYSTEM SPECIFICATIONS

|                                |                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------|
| Reflector diameter             | 103 cm                                                                             |
| Type approvals/Certifications  | Telenor Satellite, SES O3b mPOWER                                                  |
| Certification                  | Compliant with CE (Maritime), ETSI, FCC                                            |
| System power supply range      | 100-240 VAC, 50-60 Hz                                                              |
| Total system power consumption | 4.5W: 135W typ. 185W max. (excl. modem)<br>9.0W: 180W typ. 215W max. (excl. modem) |

## FREQUENCY BANDS (Ka-band)

|    |                  |
|----|------------------|
| Rx | 17.7 to 20.2 GHz |
| Tx | 27.5 to 30.0 GHz |

## ANTENNA CABLE & CONNECTORS

|                     |                                                                   |
|---------------------|-------------------------------------------------------------------|
| BDU to ADU cable    | Coax cable (50 Ω) for Rx, Tx, MoCA and DC power on a single cable |
| ADU cable connector | Female N-Connector (50 Ω)                                         |
| BDU cable connector | Female N-Connector (50 Ω)                                         |

## ABOVE DECK UNIT (ADU)

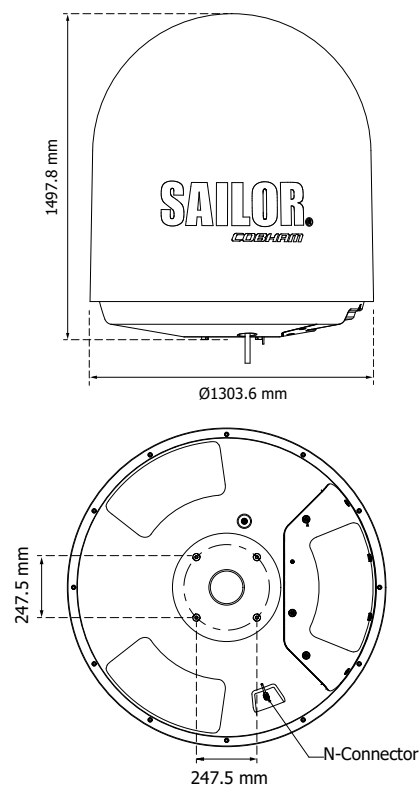
|                                     |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Antenna type, pedestal              | 3-axis stabilized tracking antenna with integrated GNSS supporting GPS, GLONASS and Beidou                      |
| Antenna type, reflector system      | Reflector/sub-reflector, ring focus                                                                             |
| Transmit Gain                       | 47.6 dBi typ. @ 29.5 GHz (incl. eDome)                                                                          |
| Receive Gain                        | 44.4 dBi typ. @ 19.7 GHz (incl. eDome)                                                                          |
| System G/T                          | 21.0 dB/K typ. @ 19.7 GHz, at ≥10° elevation and clear sky (incl. radome)                                       |
| Ka-band transceiver output power    | 4.5 Watt or 9 Watt                                                                                              |
| EIRP                                | 4.5 W: ≥54.1 dBW (incl. eDome)<br>9.0 W: ≥57.1 dBW (incl. eDome)                                                |
| Polarization                        | Circular (RHCP, LHCP) independent controlled for Rx and Tx                                                      |
| Tracking Receiver                   | Internal "all band/modulation type" including e.g., power, DVB-S2X, GSC and modem RSSI                          |
| Satellite acquisition               | Automatic - with gyro-/GPS compass input. Support for gyro-free operation.                                      |
| Elevation Range                     | -20° to +120°                                                                                                   |
| Cross Elevation                     | -37° to +37°                                                                                                    |
| Azimuth range                       | Unlimited (rotary joint)                                                                                        |
| Ship motion, angular                | Roll ±30° (6 sec), Pitch ±15° (5 sec), Yaw ±10° (8 sec)                                                         |
| Ship, turning rate and acceleration | 15°/S and 15°/S2                                                                                                |
| ADU motion, linear                  | Linear accelerations ±2.5 g max any direction                                                                   |
| Vibration, operational              | Sine: EN60945 (8.7.2), DNV 2.4A, MIL-STD-167-1 (5.1.3.3.5). Random: Maritime                                    |
| Vibration, survival                 | Sine: EN60945 (8.7.2) dwell, MIL-STD-167-1 (5.1.3.3.5) dwell. Random: EN60721-3-6 class 6M3 mod. by EN60721-4-6 |
| Shock                               | EN60721-3-6 class 6M3 mod. by EN60721-4-6. MIL-STD-810F 516.5 (Proc. II)                                        |
| Temperature (ambient)               | Operational: -25°C to +55°C<br>Storage: -40°C to +85°C                                                          |
| With SAILOR SMART heater option:    | Operational: -55°C to +55°C                                                                                     |
| P/N: 407090-001                     |                                                                                                                 |
| Humidity                            | 95%, condensing                                                                                                 |
| Rain / IP class                     | EN60945 Exposed / IPx6                                                                                          |
| Wind                                | 80 knots operational, 110 knots survival                                                                        |
| Ice, survival                       | 25 mm                                                                                                           |
| Solar radiation                     | 1120 W/m2 to MIL-STD-810F 505.4                                                                                 |
| Compass safe distance               | 1.5 meters to IEC EN 60945                                                                                      |
| Maintenance, scheduled              | None                                                                                                            |
| Maintenance, unscheduled            | All modules, motor, RF parts and belts are replaceable through service hatch                                    |
| Built In Test                       | Power On Self-Test, Person Activated Self-Test and Continuous Monitoring w. error logging                       |
| Dimensions                          | Height: H 150 cm<br>Diameter: Ø 133 cm                                                                          |
| Weight                              | 113 kg                                                                                                          |

## BELOW-DECK UNIT (BDU)

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                | 1U 19" rack mount; HxWxD: 4.4 x 48 x 33 cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Weight                    | 3.6 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temperature (ambient)     | Operational: -25°C to +55°C<br>Storage: -40°C to +85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Humidity                  | EN60945 Protected, 95% (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| IP class                  | IP30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Compass safe distance     | 30 cm to IEC EN 60945                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Interfaces                | 1 x N-Connector for antenna RF Cable (50 Ω) with automatic cable loss compensation<br>2 x F-Connectors (75 Ω) for Rx and Tx to VSAT modem<br>1 x Ethernet Data (VSAT Modem Control)<br>2 x Ethernet (User)<br>1 x Ethernet (Remote access)<br>1 x Ethernet for Service and Configuration<br>1 x RJ-45, RS-422 Data (VSAT Modem Control)<br>1 x RJ-45, RS-232 Data (VSAT Modem Control)<br>1 x RJ-45, NMEA 0183 (RS-422 / RS-232) for Gyro/GPS Compass and external GPS input<br>1 x RJ-45, 4 x General purpose GPIO, Tx mute and Rx lock.<br>1 x AC power input<br>1 x Grounding bolt |
| User interface            | Webserver, OLED display (red), 5 pushbuttons, 3 discrete indicator LEDs and On/Off switch, TX Mute and Modem Lock indicator.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Temperature control       | Built-in fan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| No transmit zones         | Programmable, 8 zones with azimuth and elevation<br>Real-time blocking map recorder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Remote management and IoT | HTTPS, SSH, SNMP Traps, Syslog, CLI, Diagnostic, Statistic, RESTful API, MQTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## VSAT Modem Support

|                 |                                                    |
|-----------------|----------------------------------------------------|
| Modem protocols | Generic, OpenAMIP, OpenBMIP, Custom protocol       |
| Modem hardware  | iDirect X7, iDirect MDM3315/20, Gilat Aquarius Pro |



For further information please contact:  
satcom.maritime@cobhamsatcom.com