

# SAILOR® 1000 XTR GX-R2

Your future-proof Ka-band system for Inmarsat Global Xpress®  
- available in 4.5W and 9W

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

Product Sheet



**Unlock the power to optimise delivery and performance of broadband for business applications, vessel operations and crew welfare, in any maritime environment with the new SAILOR 1000 XTR GX-R2; the most advanced 3-axis stabilized antenna system for the Inmarsat Global Xpress® satellite network.**

## A FUTURE-PROOF GX-R2 PLATFORM

Integrating the best of SAILOR VSAT Technology and SAILOR XTR™, the new cutting-edge technology platform at the heart of all next generation SAILOR antenna systems, SAILOR 1000 XTR GX-R2 represents the state-of-the-art for leveraging the full capabilities of Inmarsat Global Xpress® today, and tomorrow.

The SAILOR 1000 XTR GX-R2's advanced RF package with new Ka-band transceiver (XCVR) and feed horn supports dual-polarisation and wide-band Ka, making it ready to take advantage of Inmarsat's future GX 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 GX-R2 utilises 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 optimise 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 cellular.

## ONE PLATFORM FOR ALL ANTENNAS

- **Rapid deployment technology** - 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 Inmarsat GX 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 GX-R2



## SPECIFICATIONS

Reflector size	103 cm / 40.6 in.
Type approvals	Inmarsat
Certification	Compliant with CE (Maritime), ETSI, FCC
System power supply range	100-240 VAC, 50-60 Hz
Antenna system power consumption	4.5W: 135W typ. 185W max. 9.0W: 180W typ. 215W max.

## FREQUENCY BAND: Ka-Band (Inmarsat GX-R2)

Rx	17.7 to 20.2 GHz
Tx	27.5 to 30.0 GHz

## ANTENNA CABLE

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)

## SAILOR XTR ABOVE DECK UNIT (ADU)

Antenna type, pedestal	3-axis stabilized tracking antenna with integrated GNSS supporting GPS, GLONASS and Beidou
Radome top material	Glass-fiber reinforced plastic
Antenna type, reflector system	Reflector/sub-reflector, ring focus
Transmit Gain	48.3 dBi typ. @ 29.5 GHz (incl. radome)
Receive Gain	43.9 dBi typ. @ 19.7 GHz (incl. radome)
System G/T	20.6 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: ≥54.8 dBW (incl. radome) 9.0 W: ≥57.8 dBW (incl. radome)
LNB	Ka-band transceiver ("XCVR")
Polarisation	Circular (RHCP, LHCP), 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°/S <sup>2</sup>
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 / -13°F to +131°F Storage: -40°C to +85°C / -40°F to +185°F
With SAILOR Smart heater option:	Operational: -55°C to +55°C / -67°F to +131°F
Humidity	95%, condensing
Rain / IP class	EN60945 Exposed / IPx6
Wind	80 knots operational, 110 knots survival
Ice, survival	25 mm / 1 in.
Solar radiation	1120 W/m <sup>2</sup> to MIL-STD-810F 505.4
Compass safe distance	1.5 m / 59 in. to IEC EN 60945
Maintenance, scheduled	None
Maintenance, unscheduled	All modules, motor, RF parts and belts are replaceable through service hatch
Built In Tests	Power On Self-Test, Person Activated Self-Test and Continuous Monitoring w. error logging
Dimensions	Height: H 150 cm / 58.9 in. Diameter: Ø 130 cm / 51.3 in.
Weight	105 kg / 231 lb

## SAILOR XTR BELOW-DECK UNIT (BDU)

Dimensions	1U 19 in. Rack Mount HxWxD: 4.4 x 48 x 33 cm / 1.75 x 19 x 13 in.
Weight	3.6 kg / 8 lb
Temperature (ambient)	Operational: -25°C to +55°C / -13°F to +131°F Storage: -40°C to +85°C / -40°F to +185°F
Humidity	EN60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	30cm / 12 in. to IEC EN 60945
Interfaces	1x N-Connector for antenna RF Cable (50 Ω) with automatic cable loss compensation 2 x F-Connectors (75 Ω) for Rx & Tx to VSAT modem 1 x Ethernet Data (VSAT Modem Control) 2 x Ethernet (User) 1 x Ethernet (Remote access) 1 x Ethernet for Service and Configuration 1 x RJ-45, RS-422 Data (VSAT Modem Control) 1 x RJ-45, RS-232 Data (VSAT Modem Control) 1 x RJ-45, NMEA 0183 (RS-422 / RS-232) for Gyro/GPS Compass and external GPS input 1 x RJ-45, 4 x General purpose GPIO, Tx mute and Rx lock. 1 x Universal AC power input 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 Real-time blocking map recorder
Remote management and IoT	HTTPS, SSH, Telnet, SNMP Traps, Syslog, CLI, Diagnostic, Statistic, RESTful, MQTT

## VSAT MODEM SUPPORT

Modem protocols	Generic, OpenAMIP, OpenBMIP, SNMP
Modem hardware	iDirect SMB3315 Satellite Modem Board

## 7523A - SAILOR GX-R2 MODEM UNIT (GMU2)

Dimensions	1U 19 in. Rack Mount HxWxD: 4.4 x 48 x 33 cm / 1.75 x 19 x 13 in.
Weight	2.7 kg / 6 lb
Humidity	IEC EN60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	40 cm / 16 in. to IEC EN 60945
Interfaces	2 x SMA-connectors (75Ω) for Rx + Tx to BDU 1 x SMA-connector (RX2, not used) 1 x SMA-connector (Ref., not used) 2 x power (DC loop back) 4 x RJ-45 Ethernet: modem control + user data 1 x RJ-45 + D89: RS-422 (modem control) 1 x RJ-45 + D89: RS-232 Data (modem control) 1 x Universal AC power input
Grounding	1 x grounding bolt
Input power	100-240 VAC, 50-60 Hz, 90 W peak, 30 W typical
Modem interfaces	LAN, RS-422, RS-232C
User interface	Web MMI, On/Off switch + power/status LEDs
Temperature control	Built-in fan

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