SAILOR® 600 XTR™ GX-R2

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

Product Sheet

COBHAM SATCOM
Connecting the future

Your compact and lightweight future-proof Ka-band system for Inmarsat Global Xpress® – available with either 4.5W or 9W wideband, dual-pol transceiver.
Enjoy fast, dependable broadband for operations, business and entertainment with the powerful combination of cutting-edge SAILOR 600 XTR GX-R2 antennas and Inmarsat Fleet Xpress services.
Small, superlight and feature-packed, SAILOR 600 XTR GX-R2 delivers the ultimate at-sea connectivity experience for any size of vessels.

Light, Rugged, Future-proof

SAILOR 600 XTR GX-R2 is built to withstand the toughest sea conditions and still deliver high bandwidth connectivity on Inmarsat Fleet Xpress™. It is the fastest tracking antenna available in the 60 cm class and features superior dynamic performance in all axes (roll, pitch and yaw) so vessels more affected by rough seas can now benefit from high service availability regardless of conditions.

Based on the new generation SAILOR XTR technology platform, the SAILOR 600 XTR GX-R2 features an advanced RF package with new Ka-band transceiver (XCVR) and feed horn which supports dual-polarisation and wide-band Ka, making it ready to take advantage of Inmarsat's future satellite constellations.

Next Generation Feature-set

Because SAILOR 600 XTR GX-R2 leverages the SAILOR XTR platform, it benefits from sophisticated Rapid Deployment Technology, which reduces installation complexity and cost. This unique set of capabilities and features including the XTR™ Installation Wizard and a true one-cable solution.
SAILOR XTR introduces technical features including the new XTR Antenna System Control Module inside the Above Deck Unit (ADU) with a lightning-fast processor as the heart of the new modular star network component topology, with deep self-diagnostics capabilities and extended, highly secure remote access. Additionally, fully integrated IoT protocols enable on-demand antenna health and performance data, and unique 'in-dome' Ethernet accommodates simple integration of third-party services such as Wi-Fi or cellular.

SAILOR® XTR™ – One Platform For All Antennas

- **Rapid deployment technology** with a true one-cable, software-controlled solution.
- **Best-in-class RF performance** for end-users to get more value from their investment.
- **Powerful new controller and motors** to improve performance at all levels.
- **Built-in flexibility** to ensure Inmarsat GX constellations readiness now and in the future.
- **Dual antenna operation** for reliable automatic switching between two antennas.
- **New secure software platform** to protect businesses against any cyber security risks.
- **New pedestal simplified design** to improve mechanical performance.
- **Easy servicing and operation** to enable higher QoS and business continuity.

SAILOR® 600 XTR™ GX-R2

Equipped with a dual-pol, wideband Ka-band transceiver and feed - available in 4.5W and 9W variants

SYSTEM SPECIFICATIONS

Frequency band	Ka-band (Inmarsat GX-R2)
Reflector size	65 cm / 25.5”
Type approvals	Inmarsat
Certification	Compliant with CE (Maritime), ETSI, FCC
System power supply range	100-240 VAC, 50-60 Hz
Total system power consumption	4.5W: 135 W typical, 185 W max (excl. Modem) 9.0W: 180 W typical, 215 W max (excl. Modem)

FREQUENCY 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	43.6 dBi typ. @ 29.5 GHz (Incl. radome)
Receive Gain	39.1 dBi typ. @ 19.7 GHz (Incl. radome)
System G/T	16.4 dB/K typ. @ 19.7 GHz, at ≥10° elevation and clear sky (incl. radome)
GX-R2 transceiver output	4.5W or 9.0W
EIRP	4.5W: 50.1 dBW typ. @ 29.5 GHz (incl. radome) 9.0W: 53.1 dBW typ. @ 29.5 GHz (incl. radome)
LNB	Inmarsat GX-R2 transceiver
Polarisation	Circular (RHCP, LHCP) independent controlled for Rx & Tx
Tracking receiver	Internal “all band/modulation type” including e.g. power, DVB-S2X, GSC and modem RSSI
Satellite acquisition	Automatic - with and without Gyro/GPS Compass input. Support for gyro free operation.
Elevation Range	-20° to +128°
Cross Elevation	-42° to +42°
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: EN 60945 (8.7.2), DNV 2.4A, MIL-STD-167-1 (5.1.3.3.5). Random: Maritime
Vibration, survival	Sine: EN 60945 (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
Humidity	95%, condensing
Rain / IP class	EN 60945 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 m / 59” (EN 60945)
Maintenance, scheduled	None
Maintenance, unscheduled	All modules, motor, RF parts and belts are replaceable
Built In Test	Power On Self-Test, Person Activated Self-Test and Continuous Monitoring w. error logging
Dimensions (over all)	Height: H 91 cm / 36” Diameter: Ø 82 cm / 32”
Weight	35 kg / 77 lb

BELOW DECK UNIT (BDU)

Dimensions	1U 19” rack mount HxWxD: 4.4 x 48 x 33 cm / 1.73” x 18.9” x 13”
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	EN 60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	0.3 m / 12” to EN60945
Interfaces	1 x Male N-Connector for antenna RF Cable (50Ω) with automatic cable loss compensation. 2 x F-Connectors (75 Ω) for Rx and 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 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, Custom protocol
Modem hardware	SAILOR GX Modem

SAILOR GX MODEM UNIT (GMU)

Dimensions	1U 19” Rack Mount HxWxD: 4.4 x 48 x 33 cm / 1.73” x 18.9” x 13”
Weight	3.5 kg / 7.7 lb
Humidity	EN60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	0.4 m / 16” to EN60945
Interfaces	2 x F-Connectors (75 Ω) for Rx and Tx to BDU 1 x RJ-45 LAN connector for control and user data, routes through BDU 1 x RS-422 (Modem Control) 1 x RS-232 Data (Modem Control) 1 x RS-232 Modem console 1 x Universal AC Power input 1 x Grounding bolt
Input power	100 – 240 VAC, 50-60 Hz, 90 W peak, 30 W typical
Modem interface (control)	OpenAMIP, OpenBMIP, RS-422 and RS-232
Display	Web MMI, On/Off switch and power LED
Temperature control	Built-in fan and heater

For further information please contact:
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