

# SAILOR® 60 GX-R2

# COBHAM

Equipped with the new wideband dual-pol Ka-band transceiver and feed, the legendary SAILOR 60 GX is now available in 4.5W and 9W variants

## Product Sheet

**The upgraded SAILOR 60 GX-R2 is still small, superlight and advanced user terminal for the Inmarsat Fleet Xpress maritime broadband services. Its unique robust composite/aluminium antenna design keeps weight down while the well-proven SAILOR VSAT technology streamlines the deployment process and maximises operational uptime.**

Although SAILOR 60 GX-R2 is a super light antenna, it has the ruggedness and reliability demanded by a professional maritime stabilised antenna system. Additionally, the low weight and compact form factor make it possible for smaller vessels to benefit from broadband connectivity, when before it may not have been an option due to space available or difficulties and costs associated with the installation of larger, heavier antennas. With the SAILOR 60 GX-R2 no crane is needed, saving thousands of dollars in installation costs. It comes in a standard 4.5W XCVR or a high-power 9W XCVR variant..

### Super light, super rugged

SAILOR 60 GX-R2 is built to withstand the toughest sea conditions and still deliver high bandwidth connectivity on the Inmarsat Fleet Xpress™ services. 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 Inmarsat Global Xpress, as SAILOR 60 GX-R2 can maintain a satellite link even in extreme conditions.

### Ready for the future

Together, SAILOR GX-R2 and SAILOR FleetBroadband (FBB) make Inmarsat Fleet Xpress™. This combination of high

throughput Ka-band/GX and reliable L-band/FBB provide a step-change in vessel and fleet operation by enabling access to a new wave of IT applications that support efficiency and reliability of equipment and processes on board.

### A simple revolution in VSAT deployment

Just like its predecessor, SAILOR 60 GX-R2 is delivered ready to install, with the included SAILOR GX Modem Unit (GMU) ensuring quality and reliability throughout the system. Installation is easy, thanks to a wealth of features and design details unique to the SAILOR VSAT technology platform. For instance, it features a single cable between antenna and below deck equipment for RF, power and data, while Automatic Azimuth Calibration and Automatic Cable

Calibration enable unique 'one touch commissioning'. It also features Dynamic Motor Brakes inside the antenna, removing the requirement for mechanical brake straps whilst ensuring the antenna is kept in balance in no-power situations, at sea or during transport.

### Streamlining remote access and diagnostics

Just like all other SAILOR Ku and Ka-band systems, the SAILOR 60 GX-R2 is easy to manage; ensuring the best possible support is available 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.



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## SYSTEM SPECIFICATIONS

Frequency band	Ka-Band (Inmarsat GX)
Reflector size	65 cm
Type Approvals	Inmarsat
Certification	Compliant with CE (Maritime), ETSI, FCC
System power supply range	100 - 240 VAC, 50-60 Hz
Total system power consumption	135W typical, 240W peak
Vibration, operational	EN60945, DNV 2.4-A, MIL-STD-167-1
Vibration, survival	Sine: EN60945 (8.7.2) dwell, MIL-STD-167-1 (5.1.3.3.5) dwell. EN60721-3-6 class 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	17.7 to 20.2 GHz
Tx	27.5 to 30.0 GHz

## ANTENNA CABLE

ACU to ADU cable	Single 50 Ω coax cable for Rx, Tx and antenna power. 50 Ω N-Connector
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## 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	43.6 dBi typ. @ 29.5 GHz (incl. radome)
Receive Gain	40.4 dBi typ. @ 19.7 GHz (incl. radome)
LNB	Inmarsat GX-R2 transceiver
System G/T	17.2 dB/K typ. @ 19.7 GHz, ≥10° elevation and clear sky (incl. radome)
GX-R2 transceiver output power	4.5 Watt or 9.0 Watt
EIRP	4.5 W: ≥50.2 dBW (incl. radome) 9.0 W: ≥53.2 dBW (incl. radome)
Tracking receiver	Internal "all band/modulation type" including e.g. power, DVB-S2, GSC and modem RSSI
Polarisation	Circular (RHCP, LHCP), Co-Pol and X-Pol
Elevation range	-28° to +120°
Cross elevation	±42°
Azimuth range	Unlimited (Rotary Joint)
Ship motion, angular	Roll ±25° (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
Satellite acquisition	Automatic - with or without Gyro/GPS Compass input
Humidity	100%, condensing
Rain / IP class	EN60945 Exposed / IPx6

Wind	80 knots operational, 110 knots survival
Ice, survival	25 mm / 1"
Solar radiation	1120 W/m2 to MIL-STD-810F 505.4
Compass safe distance	1.0 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
Dimensions	Height: H 91 cm / 36" Diameter: Ø 82 cm / 32"
Weight	37 Kg / 82 lbs

## ANTENNA CONTROL UNIT (ACU)

Dimensions, Rack Mount	1U 19" rack mount HxWxD: 4.4 x 48 x 33 cm HxWxD: 1.75" x 19" x 13"
Weight, Rack Mount	4.5 kgs. / 10 lbs.
Humidity	EN60945 protected, 95% (non-condensing)
IP Class	IP30
Compass safe distance	0.3 m / 12" in to EN60945
Interfaces	1 x N-Connector for antenna RF Cable (50 Ω) with automatic cable loss compensation 2 x F-Connectors (75 Ω) for Rx and Tx to modem 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 and external GPS 1 x RJ-45 Ethernet (modem control) 4 x RJ-45 Ethernet (service and user) 1 x AC power input 1 x Grounding bolt
Input power	100 - 240 VAC, 135 W typical, 240 W 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
Temperature control	Built-in fan
Blocking zones	Programmable, 8 zones with azimuth and elevation Real-time blocking map recorder
Remote access and management	HTTPS, SSH, SNMP Traps, Syslog, CLI, Diagnostic, Statistic

## GX MODEM UNIT (GMU)

Modem type	SAILOR Global Xpress Modem Unit
Dimensions	1U 19" Rack Mount HxWxD: 4.4 x 48 x 33 cm
Weight	3.5 kgs.
Humidity	EN60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	0.4 metres to EN60945

For further information please contact:

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