

SAILOR® 60 GX

Maritime broadband on Inmarsat Global Xpress® with the smallest and lightest antenna available

2015 Product Sheet

COBHAM

The most important thing we build is trust

SAILOR 60 GX is the smallest, lightest and most advanced antenna for the new Inmarsat Fleet Xpress maritime broadband service. Its unique composite/aluminium design keeps weight down while the well-proven SAILOR VSAT technology streamlines the deployment process and maximises operational uptime.

Though SAILOR 60 GX 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 due to space available or difficulties and costs associated with the installation of larger, heavier antennas.

Super light, super rugged

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

Enter the HTS era

Together, SAILOR GX and the legendary SAILOR FleetBroadband make Inmarsat Fleet Xpress. This combination of high throughput Ka-band/GX and reliable L-band/FB 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. The GX part of Fleet Xpress delivers high throughput connectivity, while SAILOR 60 GX ensures that it is always available on board so vessels can operate smarter through harnessing the power of connected maritime IT and technology.

A simple revolution in VSAT deployment

SAILOR 60 GX is delivered ready to install, with the included SAILOR GX Modem Unit (GMU) and SAILOR Antenna Control Unit (ACU) 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 VSAT systems, the SAILOR 60 GX is incredibly 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.



SYSTEM SPECIFICATIONS

Frequency band	Ka-Band (Inmarsat GX)
Reflector size	65 cm / 25.5 inch
Type Approvals	Inmarsat
Certification	Compliant with CE (Maritime), ETSI, FCC
System power supply range	ADU+ACU 20 - 32 VDC, GMU 90 - 264 VAC
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
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ANTENNA CONNECTORS

ADU	Female N-Connector (50 Ω)
ACU	Female N-Connector (50 Ω)
ACU to ADU cable requirements	RF loss at 1950 MHz < 20dB, 4450 MHz < 35 dB. DC resistance: < 0.9 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 (excl. radome)
Receive Gain	40.4 dBi typ. @ 19.7 GHz (excl. 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 Inmarsat GX BUC
EIRP	50.4 dBW typ. @ 29.5 GHz
LNB	Inmarsat GX approved LNB
Tracking Receiver	Internal "all band/modulation type" including e.g. power, DVB-S2, GSC and modem RSSI
Polarisation	Circular Cross-Pol (Inmarsat GX, 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°/S²
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 inch
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 log
Power OFF	Automatic safe mode
Dimensions (over all)	Height: H 91 cm / 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 DC Power Input 1 x Grounding bolt
Input power	20 - 32 VDC, 240 W peak, 135 W typical
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

GX MODEM UNIT (GMU)

GMU Dimensions	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.
Modem type	iDirect/Inmarsat GX Core Module based
Interfaces	2 x F-Connectors (75 Ω) for Rx / Tx to ACU 1 x LAN connector for control and user data - Routes through ACU 1 x RS-422 Data (Modem Control) 1 x RS-232 Data (Modem Control) 1 x RS-232 Modem console 1 x Universal AC input 1 x Grounding bolt
Input power	90 - 264 VAC, 90 W peak, 30 W typical
Modem interface (control)	OpenAMIP, RS422 & RS232
Display	Web MMI, ON/OFF switch and Power LED
Temperature control	Built-in fan and heater

BDU (ACU + GMU)

Humidity	EN60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	0.1 m to EN60945

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