

# SAILOR® 800 VSAT

Small Antenna. Big Performance.

2013 Product Sheet

# COBHAM

The most important thing we build is trust

**The SAILOR 800 VSAT is a standardized high-performance 3-axis stabilized Ku-band antenna system with an 83 cm reflector dish. It provides the same or better radio performance than a typical 1m antenna.**

**These claims are supported by industry 3rd party testing, which has shown that SAILOR 800 VSAT provides the best performance for an antenna in the 80cm class.**

## Quick and Easy

Just like the larger, top-selling SAILOR 900 VSAT, it is quick and easy to deploy – but with a 20% smaller form factor SAILOR 800 VSAT can be used on vessels that otherwise would not consider VSAT because of the size and weight of suitable antennas.

## A Top Performer

The focus of the new SAILOR 800 VSAT is on RF performance, G/T, which is >18 dB/K – a value equal to or higher than most other 1m maritime VSAT antennae performance claims – yet it's much smaller and lighter. This performance makes the new 83cm antenna suitable for vessels that would normally specify a 1m antenna.

The unique, class-leading performance of SAILOR 800 VSAT also opens up a world of high quality, reliable communications for a wider number of vessels including workboats, fishing vessels, inland waterways and yachts, whilst providing installation flexibility for vessels of all types and size.

## Tried and Tested

If you know SAILOR 900 VSAT, you already know SAILOR 800 VSAT. It uses the same tried & tested features including antenna controller, software, electronics, web MMI, modem and network compatibility to provide reliability and stunning performance.

## Lower Cost and Increased up Time

The new SAILOR 800 leaves the factory fully tested and configured, with all RF equipment pre-configured and installed. This reduces the time needed on board for installation, resulting in lower start-up costs for users, whilst the SAILOR build quality ensures reliability and increased up time.

## Smaller Form Factor

Customers who would previously have specified a 1m antenna or who may have considered VSAT too 'big' for their vessel, can now install a SAILOR 800 VSAT and enjoy the benefits of a 20% smaller form factor with the performance of a much larger antenna.

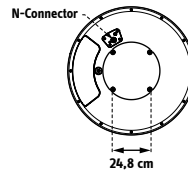
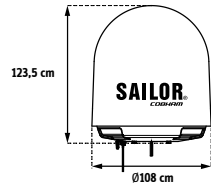
## Two Antennas – One Modem

The SAILOR VSAT range enables you to operate two antenna systems on a single modem without the need for extra hardware to manage the feature; the integrated SAILOR VSAT antenna controllers manage the connection between satellite and modem. This simple dual antenna configuration ensures your vessel has a satellite connection even when there are obstructions in the way.



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## SPECIFICATIONS

Frequency band	Ku (VSAT)
Reflector size	83 cm / 32.7"
Certification	CE (Maritime), ETSI, Eutelsat
System power supply range	20 - 32 VDC (Start up voltage: 22 VDC guaranteed)
Total system power consumption	330 W peak, 140 W typical

## FREQUENCY BAND

Rx	10.70 to 12.75 GHz
Tx	13.75 to 14.50 GHz (extended)

## ANTENNA CABLE

ACU to ADU cable	Single 50 Ω coax for Rx, Tx, ACU-ADU modem, 10 MHz reference and DC Power
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## ANTENNA CONNECTORS

ADU	Female N-Connector (50 Ω)
ACU	Female N-Connector (50 Ω)

## ABOVE DECK UNIT (ADU)

Antenna type, pedestal	3-axis (plus auto skew) stabilised tracking antenna with integrated GPS
Antenna type, reflector system	Reflector/sub-reflector, ring focus
Transmit Gain	40.6 dBi typ. @ 14.25 GHz (excl. radome)
Receive Gain	38.8 dBi typ. @ 11.70 GHz (excl. radome)
System G/T	18.2 dB/K typ. @ 12.75 GHz, at ≥30° elevation and clear sky (incl. radome)
BUC output power	6 W
EIRP	≥48.1dBW (incl. radome)
LNB	2 units multi-band LNB's (band selection by ACU)
Tracking Receiver	Internal "all band/modulation type" DVB-S2, 300 KHz narrowband receiver and modem RSSI
Polarisation	Linear Cross or Co-Pol (selected by ACU)
Elevation Range	-25° to +125°
Azimuth Range	Unlimited (Rotary Joint)
Ship motion, angular	Roll +/-30°, Pitch +/-15°, Yaw +/-10°
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 - w. Gyro/GPS Compass input Prepared for gyro free operation support
Vibration, operational	Sine: IEC 60945 (8.7.2), DNV A, MIL-STD-167-1 (5.1.3.3.5). Random: Cobham Maritime 1.1 g rms
Vibration, survival	Sine: IEC 60945 (8.7.2) dwell, MIL-STD-167-1 (5.1.3.3.5) dwell. Random: Maritime survival. IEC 60721-3-6 class 6 M3 modified by IEC EN 60721-4-6
Shock	MIL-STD-810F 516.5 (Proc. II), IEC EN 60721-4-6
Temperature (ambient)	Operational: -25 C to 55 C Storage: -40 C to 85 C
Humidity	100%, condensing
Rain / IP class	IEC 60945 Exposed / IPx6
Wind	80 kt. operational 110 kt. survival
Ice, survival	25 mm / 1"
Solar radiation	1120 W/m <sup>2</sup> to MIL-STD-810F 505.4
Compass safe distance	1 m / 40" to IEC EN 90 645
Maintenance, scheduled	None (Tamb > 10 °C)
Maintenance, unscheduled	All electronic, electromechanical modules and belts are replaceable through service hatch
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 123.5 cm / 48.6" Diameter: Ø 108 cm / 42.5"
Weight	125 kgs. / 275 lbs.

## ANTENNA CONTROL UNIT (ACU)

Dimensions	1U 19" ACU HxWxD: 4.4 x 48 x 33 cm HxWxD: 1.75" x 19" x 13"
Weight	4.5 kgs. / 10 lbs.
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	IEC 945 Protected, 95% (non-condensing)
IP class	IP20
Compass safe distance	0.1 m / 4" to IEC 60945
Interfaces	1 x N-Connector for antenna RF Cable (50 Ohm) w. automatic cable loss compensation 2 x F-Connectors (75 Ω) for Rx / Tx to VSAT Modem 1 x Ethernet Data (VSAT Modem Control) 1 x RS-422 Data (VSAT Modem Control) 1 x RS-232 Data (VSAT Modem Control) 1 x NMEA 0183 (RS-422) and prepared for NMEA 2000 for Gyro/GPS Compass input 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, 330 W peak, 140 W typical
Modem protocols (ABS)	iDirect OpenAMIP and custom protocol Comtech ROSS Open Antenna Management (ROAM) ESS Satroaming STM SatLink
Display	OLED (red) display, 5 pushbuttons, 3 discrete indicator LEDs and ON/OFF switch
No transmit zones	Programmable, 8 zones with azimuth and elevation

## VSAT MODEM

Modem types supported	iDirect iINFINITI 5000 series iDirect Evolution X5 Comtech CDM-570L/625L Comtech CDM-570L with ROSS (ROAM) Generic VSAT Modem Gilat SkyEdge II STM SatLink 2900 Intersky 4G, Elbit
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