SAILOR® 900 VSAT KU

A 1 meter antenna series catering for any need

Product Sheet

The innovative SAILOR 900 VSAT platform, which has become a benchmark for quality and high performance, keeps expanding with new solutions tailored to every need.

Focus on higher return links

While one-metre Ku-band antennas with 8W amplifier (BUC) configurations are now a de-facto standard for global Ku-band networks, the ever increasing demand for more bandwidth and higher data throughput also for the uplink to the satellite has triggered demand for antenna systems with higher RF power.

A competitive package

To meet the challenge, Cobham SATCOM has employed its proven engineering method to design and specify our 20W extended frequency BUC, with focus on performance and reliability. Cobham SATCOM has ensured that all environmental challenges are met. With this powerful BUC, the SAILOR 900 VSAT High Power can provide higher speed uplink even in regions with high temperatures.

Avoid blocking, improved line-of-sight to the satellite

Service Level Agreements (SLA) are a crucial aspect of maritime IT and communication solutions. In order to meet the demand for high SLAs, especially when there are obstructions on the ship that cannot be overcome by setting up blocking zones, satcom service providers sometimes install two antennas.

The SAILOR Ku-Band VSAT platform makes this easier and less costly as it can operate two antenna systems on a single modem without the need for an extra box to manage the connection to the VSAT modem. The two SAILOR 900 antennas controllers manage the connection between satellite and satellite router fully automatically and the switch-over happens in just 20 milliseconds.

Flexible and future-proof

New Ku-band and Ka-band high throughput satellites (HTS) are coming online. All SAILOR Ku-Band VSAT have been tested to work on HTS services, such as Intelsat's Epic^{NG}. Most of the SAILOR 900 VSAT variants are prepared for conversion from Ku- to Ka-band operation should the customer demand it.

For those who do not intend to convert to Ka-band at a later stage, we offer our latest addition to the SAILOR 900 series namely the SAILOR 900 Ku Optimised antennas, also in the 8W and 20W variants. With this solution, you will enjoy all the benefits of the well-known SAILOR technology platform at a competitive price that reflects your business needs.

Item Number	BUC	Product	Radome
407090B-00501	8W	SAILOR 900 VSAT Ku	Tuned for Ku & Ka band
407090E-00500	20W	SAILOR 900 VSAT Ku High Power	Tuned for Ku & Ka band
407090I-00500	8W	SAILOR 900 VSAT Ku Optimised	Tuned for Ku band 2020
407090J-00500	20W	SAILOR 900 VSAT Ku Optimised High Power	Tuned for Ku band 2020
40-300254	8W	SAILOR 900 VSAT Ku in Sea Tel 100 TV radome	Matching Sea Tel 100 TVRO
40-300255	8W	SAILOR 900 VSAT Ku in Sea Tel 120 TV radome	Matching Sea Tel 120 TVRO
40-300256	20W	SAILOR 900 VSAT HP in Sea Tel 100 TV radome	Matching Sea Tel 100 TVRO
40-300257	20W	SAILOR 900 VSAT HP in Sea Tel 120 radome	Matching Sea Tel 120 TVRO

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COBHAM

SPECIFICATIONS

Frequency band	Ku-Band optimised or Ku/Ka-Band convertible
Reflector size	103 cm / 40.6"
Certification	Compliant with CE (Maritime), ETSI
System power supply range	100 - 240 VAC, 50-60 Hz
Total system power consumption	480 W peak, 320 W typical

FREQUENCY BAND

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

ANTENNA CABLE & CONNECTORS

ACU to ADU cable	Coax cable (50 Ω) for Rx, Tx and DC power on a single cable
ADU cable connector	Female N-Connector (50 Ω)
ACU cable connector	Female N-Connector (50 Ω)

ABOVE DECK UNIT (ADU)

Antenna type, pedestal	3-axis (plus auto skew) stabilized tracking antenna with integrated GNSS supporting GPS, GLONASS and Beidou
Antenna type, reflector system	Reflector/sub-reflector, ring focus
Transmit Gain	41.6 dBi typ. @ 14.25 GHz (excl. radome)
Receive Gain	40.6 dBi typ. @ 11.70 GHz (excl. radome)
System G/T	19.9 dB/K typ. @ 12.75 GHz, at ≥30° elevation and clear sky (incl. radome)
BUC	8 W or 20 W, extended frequency, LO: 12.8 GHz
EIRP	50.1 dBW (8 W) or 54.3 dBW (20 W), incl. radome
LNB	2x multi-band LNBs
Polarisation	Linear X-Pol and Co-Pol
Tracking Receiver	Internal "all band/modulation type" and VSAT modem RSSI
Satellite acquisition	Automatic - with Gyro/GPS Compass input. Support for gyro free operation.
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°/S² and 15°/S²
ADU motion, linear	Linear accelerations +/-2.5 g max any direction
Vibration, operational	Sine: EN 60945 (8.7.2), DNV A, 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: Maritime survival. 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
With SAILOR SMART heater option:	
P/N: 407090-001	Operational: -55°C to +55°C / -67°F to +131°F Storage: -40°C to 85°C
Humidity	100%, condensing
Rain / IP class	EN 60945 Exposed / IP56
Wind	80 kt. operational 110 kt. survival
Ice, survival	25 mm / 1"
Solar radiation	1120 W/m2 to MIL-STD-810F 505.4
Compass safe distance	1.7 m / 67" to EN 60945
Maintenance, scheduled	None
Maintenance, unscheduled	All modules, motor, RF parts and belts are replaceable through service hatch
Built In Test	Power On Self-Test, Person Activated Self-Test and Continuous Monitoring w. error logging
Dimensions (over all)	Height: H 150 cm / 58.9" Diameter: Ø 130 cm / 51.3"
Weight (Ku/Ka convertible)	126.5 Kgs. / 279 lbs.
Weight (Ku Optimised)	137 Kgs. / 302 lbs.

ANTENNA CONTROL UNIT (ACU)

Dimensions	1U 19" Rack Mount HxWxD: 4.4 x 48 x 33 cm, HxWxD: 1.75" x 19" x 13"
Weight	4.2 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	EN 60945 Protected, 95% (non-condensing)
IP class	IP30
Compass safe distance	0.3 m / 12" to EN 60945
Interfaces	1 x Male 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) 1 x RS-422 Data (VSAT Modem Control) 1 x RS-232 Data (VSAT Modem Control) 1 x NMEA 0183 (RS-422) for Gyro/GPS Compass input 2 x Ethernet (User) 1 x Ethernet (Remote access, service, set-up etc.) 1 x AC Power Input 1 x Grounding bolt
Input power	100 - 240 VAC, 320 W typical, 480 W peak
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 Support

Modem protocols (ABS)	iDirect OpenAMIP and custom protocol Comtech ROSS Open Antenna Management (ROAM) ESS Satroaming Protocol STM SatLink Protocol
Modem types supported	iDirect iNFINITI 3000 / 5000 series iDirect Evolution X5 / X7 iDirect Velocity X7 / iQ200 Comtech CDM-570L / 625 / 840 Comtech CDM-570L with ROSS (ROAM) Gilat SkyEdge II / II-c / II PRO STM SatLink 2900 Inmarsat G5 Newtec 3100 / 3300 / 5000 / 6000 Newtec Dialog Viasat Linkway S2 Hughes HX-200 / HT2500 TSAT3000 Intersky 4G, Elbit

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