



C2SAT 2.4m C

Optional: Sizes starting from 1.2m

C2SAT introduces a new series of 4 axes military and commercial high performance Stabilised Antenna Systems for **Always On – Not Almost Always On** mobile broadband communication.

C2SAT's multiband VSAT features optional reflector sizes up to 2.4 m all frequency bands e.g. X-band fitting the same mechanical rig.

- **LP, RHCP and LHCP all-in-one**
- **No static balancing of axes**
- **Zenith Passage without X-pole losses**
- **Larger coverage at sea**



Why four axes in a 3 D world?

Four axes enable shorter geometric path and less rotation torque for each axis. Adding the fourth axis also solves the zenith paradox at high reflector elevations during dynamic conditions, i.e. when a vessel rolls back and forth and the satellite is seen alternatively from North and South.

All in one system

C2SAT's new worldwide-patented automatic stabilised antenna system provides real two-way broadband satellite communication, making full utilisation of the available bandwidth possible. The system permits always-on-services such as monitoring services, SCADA via web-clients, Wi-Fi, Internet, Voice over IP, GSM on board, ATM, Credit Card Validation and other bank services, video monitoring, video conferences, video telephony and Live Video transmission, E-mail, TV, or customer-tailored services, all simultaneously in one system. LP, RHCP and LHCP all-in-one integrated assembly for global services on any satellite constellation.

Reliability, precision and accuracy

By using four axes, not only stabilised, but also predicting the next position, the next movements in the near future, C2SAT is lifting reliability, precision and accuracy beyond all present limits. It is to be compared to a terrestrial Fixed Satellite Service installation. Different thinking combined with proven technology made it possible.

Get the bandwidth paid for

C2SAT's system makes it possible to increase the number of terminals in the off shore network, utilising the same satellite link. Since the traffic fees are based on a maximum bandwidth, it is interesting for every IT manager in any fleet to carefully examine a C2SAT solution. Interactive communication between vessels, oil & gas rigs, LNGs or FPSOs in a fleet, and the office ashore can considerably benefit from C2SAT's system.

C2SAT gradient tracking system identifies and finds any selected satellite within 6 seconds. DVB or DVB-S2 identification is optional.

C2SAT's system is patented.





Technical Specifications

C2SAT 2.4m C

Feature	Specification data
Stabilisation Type	4-axes gimbals AC servo low inertia belt drive
Reflector Diameters	Up to 2.4 m fitting the same mechanical rig
Frequency Rx	3.625 – 4.2 GHz
Frequency Tx	5.8 – 6.425 GHz
Crosspol Isolation (Linear) 2.4m	> 30 dB on axis
Sidelobes $100\lambda/D < \theta < 20^\circ$	29 – 25 log θ dBi
Standard 10W BUC included	DC power requirement 18 – 48V
Gain Midband Rx 2.4m Gain Midband Tx 2.4m	37 dB 41 dB
Rotational Speed	100 degrees / s (nominal)
Rotational Acceleration	100 degrees / s ² (nominal)
BUC Power	Up to 40W
Tracking Accuracy	± 0.1dB during dynamic conditions
Signal Polarisation	Linear / Circular
VSWR	1.3:1
Antenna Movement, azimuth	Continuous (slipping)
Ship Motion	± 30° per 8 s in pitch, roll and yaw (Dynamical limit)
Sensors Internal Drift	0.001 degrees/s (measured per hour)
Isolation Tx/Rx (without transmit reject filter)	30 dB (typical)
Filter Rejection	50 dB (typical)
IF Frequencies	L-band or 70/140 MHz (typical)
Gyro Interface	NMEA 0183
Standard C-band ±25 kHz LNB included	ITU region I, II or III (Extended C, Palapa or InSat optional)
Bandwidth Down Link	Up to 18 Mbps
Bandwidth Uplink	Up to 4 Mbps
LNB System	RHCP & LHCP reception simultaneously