



The leading **designer** and manufacturer of

**surface
drifters**

ClearSat-1 Surface Drifter



The ClearSat-1 surface drifter follows the upper 1 meter of the ocean to measure velocity and to provide a platform for oceanographic and meteorological measurements at the sea surface. The drifter is configured according to CODE (California Ocean Dynamic Experiment) specifications to minimize effects of wind and waves on buoy trajectory. The drifter hull rides vertically just below the surface suspended from floats at the ends of the spars making it almost invisible when viewed from the surface. Data are reported worldwide by satellite telemetry through the Argos system, which also accurately locates the drifter's position. Iridium SBD data communication is also available (GPS option required for self-location). Standard instrument suite reports sea surface temperature and battery condition. Options include salinity, air deployment packaging, and 1/2-hourly GPS positioning (accurate to 10 meters).



aluminum which is black-anodized for additional corrosion protection. Parts are assembled with stainless steel fittings and fasteners. Drifter sails are made of durable Cordura material which is polyethylene-backed to prevent fraying. Redundant o-ring seals ensure that the hull containing the microprocessor controller, transmitter and battery is watertight to greater than 1 atm. (>10 meters). Spring-loaded spars and a spring-mounted antenna ensure the drifter can be quickly assembled, or can self-launch when dropped from an aircraft or from the deck of a vessel in self-deployment packaging (optional). The articulating spars and antenna also permit quick disassembly and compact stowage when the spars and antenna are folded in against the hull.



The ClearSat-1 is engineered to be rugged, long-lasting and easy to use. The drifter hull and spars are constructed of saltwater-resistant 5061

Technical Specifications:

Hull	8.9 cm diameter, 100 cm length. 5061 aluminum, black anodizing. Wt 8 Kg.
Drogue	1 x 1 m cross-section, drogue center at 80 cm from surface. Cordura nylon.
Power supply	12 VDC 43 Ah alkaline battery pack. Long-lived, low temperature lithium battery pack is available (option).
RF Output:	1.0 +/- 0.3 Watts into 50 Ohms. (Kenwood YT2071 Argos PTT, included.. Argos bands S1 - S14, L1 - L3.Option to transmit at 0.5 Watts for longer service). 1.6 Watts into 50 Ohms (NAL Research 9601 Iridium SBD, option).
SST:	-5.0 to 45.0 +/- 0.1 C. 10-bit resolution with standard calibration: Extended low temperature range for ice monitoring.
Salinity	0 to 64 +/- 0.025 mmho/cm, -5 to 35 +/- 0.05 C, option.
GPS	Latitude, longitude +/- 0.00005 deg. Accurate; on-demand, "on-the-hour" positioning every 2, 1, 0.5, or 0.25 hour on. Schedule is set by GPS time mark.
Environmental	-50 to 30C storage; -5 to 45 C operation.

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For information about Argos data collection services (USA: clsamerica.com Non-US users: cls.fr)