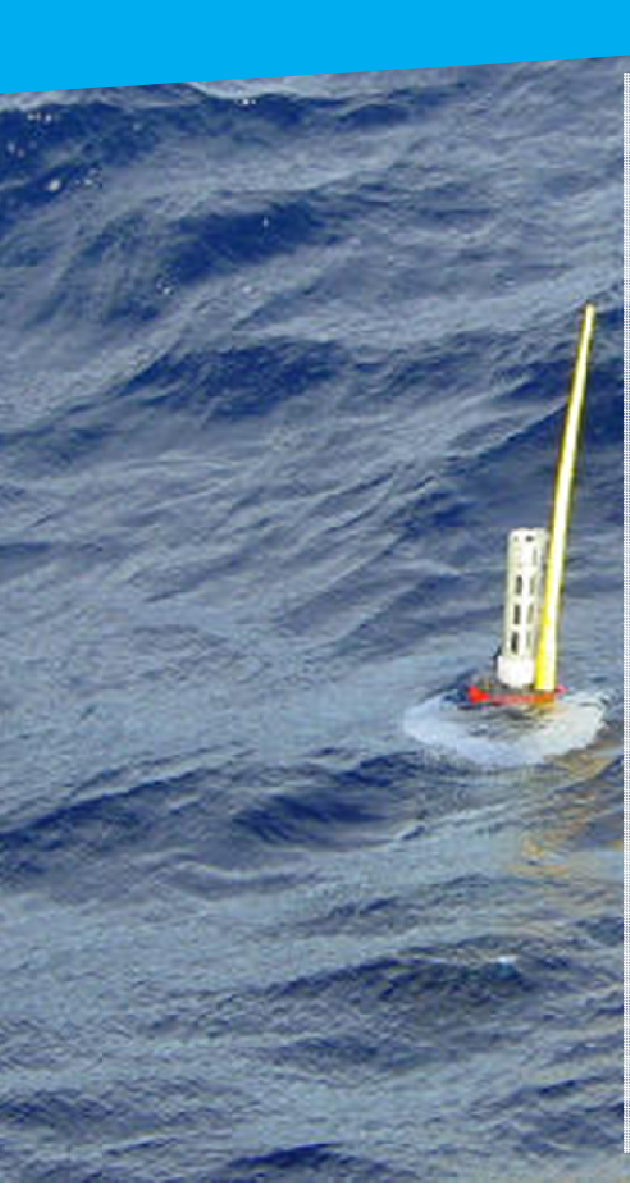
PROVOR I

Autonomous oceanographic ARGO profiling float
Salinity -Temperature - Depth
Iridium transmission

Profiling floats



PROVOR I is an efficient and reliable autonomous profiling float designed to acquire CTD profiles from 2000m to the surface.

PROVOR I has been matched for long mission duration and high resolution profile : up to 300 cycles (2000 meters 400 points, 10 days) or up to 2000 CTD points in the profile.

PROVOR I is proposed with GPS receiver and transmission through IRIDIUM constellation by using SBD or RUDICS mode. The two ways communication system enables : data and positioning collection, remote control facilities. Firmware is design to transmit in shifted mode non transmitted profiles.

Particular PROVOR's features enable to deploy this float in the global ocean without pre-ballasting. It has been developed in industrial partnership with IFREMER.

- **PROVOR I** is PROVOR with Iridium SBD transmission
- **PROVOR IR** is PROVOR with Iridium Rudics transmission
- Option Ice for Ice detection (ISA algorithm) and profile transmission in shifted mode.

Main features

- Sea Bird sensors proven metrology
- High sampling rate up to 2000 pts
- Up to 300 cycles @ 2000 metres and 1000 pts .
- Down to 2000 m depth
- Self-ballasted float
- Two ways Iridium communication with remote control
- Easy connectivity with Bluetoooth module

More than 1000 PROVOR have been produced in several versions:
PROVOR CTS3 for ARGO core mission with CTD
PROVOR DO and DO-I with dissolved oxygen acquisition
PROVOR CTS4 for BioGeoChemical application

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Profiling floats

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TECHNICAL SPECIFICATIONS			
Types	• PROVOR I SBD transmission • PROVOR IR Rudics transmission • Option ICE to memorize ICE surface by using ISA algorithm and memorize and transmit profile in shifted time		
Seabird Electronics SBE 41 CP	**Salinity**	**Temperature**	**Pressure**
Range	0 to 40 PSU	-5° C to 35° C	0 dbars to 2100 dBars
Initial accuracy	± 0.003 PSU	± 0.002° C	± 2.4 dBar
Drift	< 0.01 PSU / 5 years	< 0.002° C / 5 years	< 5 dBar / 5 years
ENERGY	High power lithium battery cells		
MECHANICAL FEATURES	Overall Length 225 cm with antenna Hull Length 170 cm / Hull Diameter 17.3 cm Max Diameter 35 cm (damping collar) Weight 34 kg Hull anodized aluminum casing		
BUOYANCY CONTROL	Principle Oil ballast with high pressure pump Positioning accuracy ± 30m (98.4 ft.)		
NUMBER OF PROFILES *«COMPUTATION»*	> 300 cycles with 110pts, 10 days /CTD in spot sampling / 2000 meters > 250 cycles with 1000 pts, 10 days / CTD in continuous pumping / 2000 meters		
OPERATING CONDITIONS	Operating temperature -2°C to +35°C Operating life up to 7 years at sea Power supply Lithium cells Operating depth up to 2000 dbars		
USER INTERFACE	a/ Mission programming, float checking, etc. Terminal Personal Computer BT link b/ Fan tail ready Remove magnet launches float c/ Remote control functions through Iridium two ways communi-cations : recovery		
TELEMETRY	IRIDIUM system by Data Transmission and remote control. Mission parameters modification possible after launching SBD 300 Bytes or Rudics nke optimized protocol. Resolution of message transmitted: • Salinity 0.001 PSU • Temperature 0.001°C • Pressure 0.1 dbar Max number of samples in the column : 2000 pts		
STORAGE CONDITIONS	Temperature -20° C to +70° C (-4° F to +158° F) Maximum storage time before use: 1 year Storage at low temperature is recomended		

^ PROVOR Ix

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