



- ▼ Number of samples: up to 48 cartridge sample chain
- ▼ Depth rating: 6,000 m
- ▼ Technology transfer from the National Oceanography Centre to McLane Research Laboratories, Inc.
- ▼ For more information about this sampler see the [RoCSI](#) pages at mclanelabs.com.

Selected References:

- ▼ National Oceanography Centre annual report, p. 24-25; p.36.
- ▼ 3400 m depth deployment in AutoSub6000 on the iMirabilis expedition for EU Horizon 2020 project iAtlantic.
- ▼ Surface RoCSI measures DNA from microbes across the western N Atlantic (Bermuda and along the US coast) - ISME Journal article.
- ▼ 12 August 2022: RRS James Cook JC237- both submersible (in Autosub 5, with NERC Project CLASS and EU project (iAtlantic) and benchtop (part of EU Horizon 2020project AtlantECO).

Patents: Robidart, J, J Wyatt, R Brown (2021) Autosampler device and method for autosampling. UK Patent Application 2105092.7

Robotic Cartridge Sampling Instrument

Application:

The Robotic Cartridge Sampling Instrument (RoCSI), is a biomolecular sampler that performs in situ sample collection and preservation onto 0.22 µm or 0.45 µm Sterivex[™] filter cartridges. RoCSI features high sample count capabilities in a compact, 6,000 m rated instrument.

Cartridges are stored on a continuous sample chain and are rotated into position for sampling or injecting preservative. The compact size and user-defined sample capacity make the RoCSI ideal for vehicle integration, mooring systems, buoy installations, bottom landers and ship-board applications.

Features:

Suitable for collecting genetic material, environmental DNA (eDNA), fine particulates and sampling for biosecurity monitoring. Supervised sampling (pressure and flow rate) is programmed to process samples. Automated cleaning of the intake fluid path for contamination mitigation. Compact size for deployment in AUVs or ROVs.

RoCSI Specifications:

Dimensions:	53 cm L x 17 cm W x 18 cm H (20.86 in L x 6.7 in W x 7.08 in H)
Weight in air:	15.5 kg (34 lbs)
Weight in seawater:	10 kg (22 lbs)
Depth rating:	6,000 m
Bulkhead connectors:	Subconn Micro-Circular Series, CRE Marine W-Series
Communications:	USB to a Windows [®] interface or RS-232 (for adaptive sampling)
Power supply:	12 Vdc /2 A nominal; 25 Vdc max 0.4-0.7 A current at 12 Vdc
Electronics Housing:	Titanium
Pump:	Peristaltic pump

Specifications subject to change without notice • 09/25 • www.mclanelabs.com