

On Deck Data System – CTD Profiling Logger

Conductivity – Temperature – Depth

On Deck Data System Components

- One Deck Data Hub per vessel
- Wireless TDO loggers
- Wireless CTD loggers
- Wireless DOT loggers
- Cellular & AWS Data Plan

Feature	Benefit
Precision Temperature	- Accurate up to $\pm 0.01^{\circ}\text{C}$ from -2 to 35°C
Pressure Sensor	- Depth measurement to 300 meters (option to 750 meters)
3-axis Accelerometer	- Resolve static orientation to 1°
Fast Response Time	- Under 10 seconds
Profiling Mode	- 1 sample per second to 1 sample per hour
Large Memory	- Never memory limited
User Replaceable Battery	- Uses commonly available AA batteries
Wireless Communications	- Hands free, automated IoT data collection

Description

The Conductivity, Temperature, Depth (CTD) Logger is a wireless data logger that contains an integrated conductivity sensor, temperature sensor, pressure sensor and 3-axis accelerometer. The small, rugged design allow the logger to be easily deployed on a variety of fishing gear.

The CTD features a fast response time and the ability to dynamically change the recording interval as gear is fished. The logger will record faster while equipment is being hauled to capture the profile of the water column and slower while the gear soaks. The on-board 3-axis accelerometer will capture the gear’s orientation to help determine if the gear was properly deployed.

When the gear is hauled, the latest data will be automatically downloaded wirelessly to Lowell Instruments’ Deck Data Hub. The Deck Data Hub will automatically display the data on the touch screen display and transmit the data to the cloud where it can be further processed and/or viewed by research scientists, fishermen and other third parties via Lowell Instruments’ API.



Specifications

	Range	Accuracy	Resolution	Time Constant	Measured or Derived
Conductivity	0 to 60 mS/cm	± 0.05 mS/cm	0.001 mS/cm	20 seconds	Measured
Salinity	TBD	TBD	TBD	TBD	Derived
Temperature	-2° to 35°C	± 0.1°C Typical (± 0.01°C optional)	0.001°C	1 second	Measured
Depth	300 Meters (optional 750 meters)	0.5% full scale (0.25% full scale optional)	0.001 m - 0.001 dBar	<1 second	Measured
Orientation	0 to 360 degrees	± 5 degrees from vertical	0.5°	n/a	Measured

Sensor Type

- Conductivity - NBOSI
- Temperature - Thermistor
- Depth - Ceramic Pressure Sensor
- Orientation - 3-axis Accelerometer

Environmental

- Depth Rating 300 meters option to 750 meters
- Operating Temperature: -2° to 35°C in water;
-20° to 50°C in air

Data Logger Electronics

- 128 MB non-removable, non-volatile memory
- Communications - BLE 5.0
- User Replaceable Battery
- Recommended: Lithium AA
Optional: Alkaline AA
- Battery Life - 12 months
- Internal Clock Accuracy - 1 minute per month

Operating Modes

- Fixed Mode: 1 sample per second to 1 sample per hour
- Profiling Mode: 1 Hz during profile; 1 minute to 1 hour when stable at depth
- Data Offload - Automatic hands-free download to the DDH

Mechanical

- Dimensions - 68 mm (2.7") diameter by 194 mm (7.6") length
- Weight - 272 grams (9.6 ounces)
- Construction - Rugged PVC Housing, Double O-ring Seal



Lowell Instruments, LLC
 82 Technology Park Drive
 East Falmouth MA 02536
 (508) 444-2616
info@lowellinstruments.com
www.lowellinstruments.com