

# TWO-CHANNEL LOGGER

MEASURE MORE,  
DEPLOY LONGER,  
DOWNLOAD FASTER



The RBRduo<sup>3</sup> instruments can integrate almost any two sensors from RBR, offering high accuracy, flexible schedules, USB-C download, Wi-Fi communication, and twist activation. Variants with pressure, temperature, conductivity, radiometer, PAR, and turbidity sensors are also available in titanium housing for deep applications (I deep), designed to endure harsh conditions.

## FEATURES

|  |   |  |  |   |  |
|--|---|--|--|---|--|
| <br>Wi-Fi enabled | <br>Twist activation | <br>240M readings | <br>Up to 32Hz sampling | <br>USB-C download | <br>Realtime communications |
|--|---|--|--|---|--|

## Available sensors

- |                                  |   |                   |
|----------------------------------|---|-------------------|
| ▶ Conductivity (C)               | ▶ Photosynthetically active radiation (PAR) | ▶ ORP             |
| ▶ Temperature (T)                | ▶ Radiometer (rad)                          | ▶ pH              |
| ▶ Pressure (D)                   | ▶ Turbidity (Tu)                            | ▶ Voltage         |
| ▶ Dissolved oxygen (DO)          | ▶ Chlorophyll-a (chl-a)                     | ▶ CO <sub>2</sub> |
| ▶ Optical dissolved oxygen (ODO) | ▶ Fluorescence (Fl)                         |                   |

## Examples

- |                             |                                       |
|-----------------------------|---------------------------------------|
| ▶ RBRduo <sup>3</sup> T.D   | temperature, pressure                 |
| ▶ RBRduo <sup>3</sup> C.T   | conductivity, temperature             |
| ▶ RBRduo <sup>3</sup> T.ODO | temperature, optical dissolved oxygen |

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The RBRduo<sup>3</sup> instruments facilitate optimal measurement schedules, whether moored, towed, or profiling. Large storage capacity and reliable battery power facilitate long deployments with higher sampling rates. Downloads are quick with USB-C. A dedicated holder makes it simple to replace desiccant before each deployment. The calibration coefficients are stored with the instrument, and only one software tool, Ruskin, is required to operate it. Datasets can be read directly in Matlab, or exported to Excel, OceanDataView®, or text files.

### Specifications

#### Physical

|                                 |  |
|---------------------------------|--|
| Storage                         | 240M readings  |
| Power <sup>1</sup>              | 8 AA cells   |
| External power                  | 4.5 to 30V   |
| Communication                   | USB-C or RS-232/485                                  |
| Wi-Fi connectivity <sup>2</sup> | <750m instruments                                    |
| Clock drift                     | ±60 seconds/year                                     |
| Housing                         | Plastic or titanium                                  |
| Diameter                        | 63.3mm (plastic), 60.3mm (Ti)                        |
| Length                          | Configuration dependent                              |
| Weight                          | Configuration dependent                              |
| Max depth rating                | Up to 10000m<br>(configuration dependent)            |
| Sampling rate                   | 2Hz; options up to 32Hz<br>(configuration dependent) |

<sup>1</sup> Lithium thionyl chloride batteries are only recommended for the RBRduo<sup>3</sup> C.T and RBRduo<sup>3</sup> T.D. Use alkaline or lithium iron batteries for all other configurations.

<sup>2</sup> Option available for titanium up to 2000m.

#### Options

- ▶ External data and power connection via connectorised end-caps
- ▶ |fast8, |fast16, or |fast32 variants for profiling
- ▶ |tide16, |wave16 variants with wave burst and tidal averaging
- ▶ |deep variants in titanium housing for depths up to 10000m

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#### Conductivity

|                   |                      |
|-------------------|----------------------|
| Range             | 0-85mS/cm            |
| Initial accuracy  | ±0.003mS/cm          |
| Resolution        | <0.001mS/cm          |
| Typical stability | ±0.010mS/cm per year |

#### Temperature

|                   |                           |
|-------------------|---------------------------|
| Range*            | -5°C to 35°C              |
| Initial accuracy  | ±0.002°C                  |
| Resolution        | <0.00005°C                |
| Typical stability | ±0.002°C / year           |
| Time constant     | <0.1s  fast, <1s standard |

\* A wider temperature range is available upon request. Contact RBR for more information.

#### Pressure

|                   |                                       |
|-------------------|---------------------------------------|
| Range*            |                                       |
| Plastic           | 20 / 50 / 100 / 200 / 500 / 750dbar   |
| Ti                | 1000 / 2000 / 4000 / 6000 / 10000dbar |
| Initial accuracy  | ±0.05% full scale                     |
| Resolution        | <0.001% full scale                    |
| Typical stability | ±0.05% full scale per year            |
| Time constant     | <10ms                                 |

\* Recommended depth for wave measurements is less than 50m.

