WATER LEVEL · TIDE AND WAVE LOGGER

# RBRvirtuoso³ D | wave16

Autonomous pressure logger for tide and wave measurements

The RBRvirtuoso³ D is a single-channel standard logger fitted with a piezoresistive pressure sensor. With the **|tide16** or **|wave16** feature it records tidal averages and pressure bursts at up to 16 Hz, from which the surface wave time series is reconstructed. Memory for 240 million readings, 8 AA cells and the Ruskin software make long deployments simple.




**±0.05% FS**
Initial pressure accuracy

**2 to 16 Hz**
Wave burst sampling rate

**512–32,768**
Samples per wave burst

**240 M**
Readings stored

## KEY FEATURES

**01** **Tide mode:** samples at a set rate and averages them over a set duration to filter out waves.

**02** **Wave mode:** bursts of 512 to 32,768 samples at 2, 4, 8 or 16 Hz; tide is computed automatically from each burst.

**03** **Long deployments:** 240 M readings, 8 AA cells or external power 4.5 to 30 V.

**04** **Communication:** USB-C download; optional Wi-Fi, connector end-cap with RS-232/485 and power.

**05** **Deployment planning:** Ruskin estimates the wave periods that can be measured from the water depth and the logger altitude.

## APPLICATIONS

- Tide measurement for hydrographic surveys
- Wave climate on coastal and harbour sites
- Boat wake and infragravity wave studies
- Water level in rivers, lakes and reservoirs

## ORDERING

**RBRvirtuoso³ D** · pressure, plastic (POM) housing

**| tide16 / | wave16** · tide / waves up to 16 Hz

**Options** · Wi-Fi, RS-485 connector end-cap, titanium | deep

## TECHNICAL SPECIFICATIONS

| PRESSURE | |
|---|---|
| **Range** | 20 / 50 / 100 / 200 / 500 / 750 dbar (plastic) · 1,000 to 10,000 dbar (titanium) |
| **Initial accuracy** | ±0.05% full scale |
| **Resolution** | < 0.001% full scale |
| **Typical stability** | ±0.05% full scale per year |
| **Time constant** | < 10 ms |


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RBRVIRTUOSO³ D | WAVE16

# Technical specifications

| TIDE AND WAVE SAMPLING | |
|---|---|
| **Tide mode** | speed, averaging duration and interval set by the user (e.g. 1 min of 8 Hz samples every 5 min) |
| **Wave mode** | rate 2, 4, 8 or 16 Hz · burst length 512, 1,024 … 32,768 samples (powers of 2) · tide computed from each burst |
| **Longest wave period** | burst length / sampling frequency |
| **Wave depth** | recommended depth for wave measurements less than 50 m |
| **Other modes** | continuous, averaging |

| PHYSICAL | |
|---|---|
| **Storage** | 240 M readings |
| **Power** | 8 AA cells · external power 4.5 to 30 V |
| **Communication** | USB-C or RS-232/485 · Wi-Fi optional |
| **Clock drift** | ±60 s per year |
| **Housing** | plastic or titanium (\| deep) |
| **Diameter** | 63.3 mm (plastic), 60.3 mm (titanium) |
| **Depth rating** | up to 10,000 m, configuration dependent |
| **Software** | Ruskin (configuration, download, tide and wave processing) |

Sources: RBR datasheet RBRvirtuoso³ (0005574revG, 11/2023) and Ruskin user guide for standard loggers (0006105revH). Lithium thionyl chloride cells are recommended only for the RBRvirtuoso³ T and D. Contact EquipOcean for the configuration suited to your site.


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