

TMBB - Command & Control System

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The TechWorks Marine Black Box (TMBB) is a versatile buoy control solution for real-time monitoring applications which is both flexible and expandable to accommodate a wide range of sensor inputs.

Features:

- Flexible input options
- Flexible telemetry options
- Flexible sampling
- Large on-board memory (up to 64Gb)
- Web based data interface
- Full platform monitoring and warning system

The TMBB is designed for real-time monitoring in oceanic coastal waters, bays and lakes as well as fixed land-based stations for measurement of a diverse range of parameters. The TMBB enclosure is designed for operation in harsh environments rated to IP68 / NEMA-6P and connectors graded to IP68/ 69K standards.

The TMBB supports a wide range of sensors and instrumentation including (but not limited to) wave sensors, current sensors, meteorological stations, water quality sensors and water sampling carousels. It can be connected to an external AIS offering the possibility of broadcasting VDL messages.

As a controller, the TMBB can be easily programmed to monitor critical health components within the data platform such as voltage, temperature, humidity, enclosure access etc. and generate an alarm when user-defined threshold limits are breached. Data can be transmitted in real-time to a base-station hosted either on the users network or on the TechWorks CoastEye webportal. Users are able to view, analyse and download data from this site, and communicate with the TMBB to change sampling intervals, telemetry options or conduct diagnostics.



Applications:

- Renewable Energy
- Coastal Monitoring
- Aquaculture
- Marine Engineering
- Oil and Gas
- Statutory Monitoring
- Ports and Harbours
- Research

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Enclosure	Locking 316 stainless steel *IP68/NEMA-6P rated
Dimensions	377 x 377 x 156 mm (standard) or custom
Weight	2.5 kg (approx.)
Connectors	SubConn circular *IP68/69K graded
Memory	2GB (standard) or custom up to 64GB
Telemetry	GSM/GPRS (standard) Radio (VHF) Wireless (HSDPA, WiFi, LTE) Satellite (Iridium)
Power	9 to 20 VDC, 100mW (10mW standby)
Inputs	4 Serial (RS232, RS422 or RS485) standard Expandable up to 16 Analogue and Digital I/O as options
Baud Rate	300 to 115200
Sampling	1 to 86,400 seconds (standard) or custom *Continuous, averaging or burst options
GPS	10m positional accuracy < 30 sec warm start fix < 1 sec hot-start fix

TechWorks Marine offer full support services for the TMBB system including technical support, system integrations, installations, maintenance, data management and reporting. Such services can be managed through a service contract or requested as needed.



Accessories:

- Battery bank
- Solar panel charger
- Wind power charger
- AIS system
- Pumped sampling well
- Inductive modem
- Acoustic modem
- Buoy platform
- Mooring and anchor
- Mounting brackets
- Spares kit

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