

A low power compact monitoring system tailored towards the monitoring needs of small scale fisheries.

Compact form factor

The Black Box Lite system has been specifically designed to be capable of either being located in a dry area of a vessel or within a watertight container to make it appropriate for small scale vessels.

Measuring 170(L) x 130(W) x 50(H) mm with a wall mount makes this system ideal for achieving the monitoring goals of a variety of small scale fisheries.



Digital connectivity

Support for analog in (2x), digital in (4x), RS-232 & RS-485 serial ports and CAN port enables support for connecting a wide variety of sensor types, including all those used as standard within REM systems.

Built-in PoE

Contains 2 built-in Power over Ethernet (PoE) ports enabling cameras to be connected directly to the control unit. The built-in PoE ports supply the cameras with both power and data connection through the same cable, minimizing cabling requirements.

Built-in GPS

The built-in GPS with G-sensor ensures reliable positioning recording and time synchronization.

Built-in 4G/LTE and WIFI

Wireless 4G/LTE and WIFI modules, give the optimal conditions for wireless transfer of data to shore for quick analysis possibilities plus unique live access to the system (while in range), to facilitate system configuration and remote diagnostics.

Secure storage

As standard within Anchor Lab remote electronic systems, the Black Box Lite contains an internal operating system drive. Additionally, it contains a primary storage SSD drive plus a swappable microSD drive for backup and/or manual retrieval of data. All data stored by the Black Box Lite is stored in encrypted formats.

Battery extension

In-built super capacitors act as an UPS for the system enabling it to shutdown gracefully in the event of a loss of power. A battery expansion is planned for the Black Box Lite system to enable it to be self-contained from vessel system and opening to possibility to have it as a portable setup.



Anchor Lab

Copenhagen



Firmware

The Black Box Lite system is based upon a custom Linux build to leverage its low power capabilities. The firmware of the Black Box Lite system incorporates all of the primary features of Anchor Lab's Black Box Video system, including a robust data capture and storage strategy, live view capabilities, video on-demand, automatic system updates, and diagnostic checks & reporting.

Camera configuration

The Black Box Lite system supports IP cameras, that use the powerful H.264 and H.265 video encoding to minimize storage usage. Resolution, video frame rate, and image quality, as well as advanced camera settings (including privacy masks and people blurring) can be defined for each camera individually.

Supported sensors

All sensors compatible with the Black Box Video system function seamlessly through the available connectivity ports. These supported sensors comprise inductive proximity (winch), hydraulic pressure, current draw, ultrasonic range, on/off relay, knife valves, depth (echo sounder), weather station, motor effect and fuel rate sensors. Additionally, the system facilitates integration with crane and platform scales, as well as camera base motion and object detection.

Intractability

The Black Box Lite system includes HDMI connectivity. However, it can also be used without a connected screen using the incorporated LEDs to convey the system's operational status. An accompanying App will be developed to interact with the system in the near future.