BLACK

BRNKL

Insight where the action is.

BRNKL Black is the sensor hub that's ready for anywhere. Collect and capture data from a diverse range of onboard systems and devices, making it all meaningful. Whether analyzing engine and power system data from a high-speed enforcement boat, reviewing video recordings from a patrol vessel, or assessing human performance on a mission, BRNKL Black allows you to analyze and respond to events as they occur, with options to review data at a later date or seamlessly transmit it to your existing fleet platform.

Meet BRNKL Black.

The sensor hub that’s ready for anywhere.

BRNKL

Canada
Garde côtière Coast Guard
CG 158

Features

Sensor hub works with a range of onboard systems, networks, and communication paths.

Data logger captures and secures sensor data, including video.

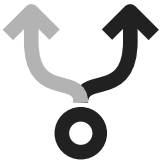
Edge processor analyzes and responds to activity, where and when it's happening.

Playback engine synchronizes and presents data visualizations and video.

Benefits

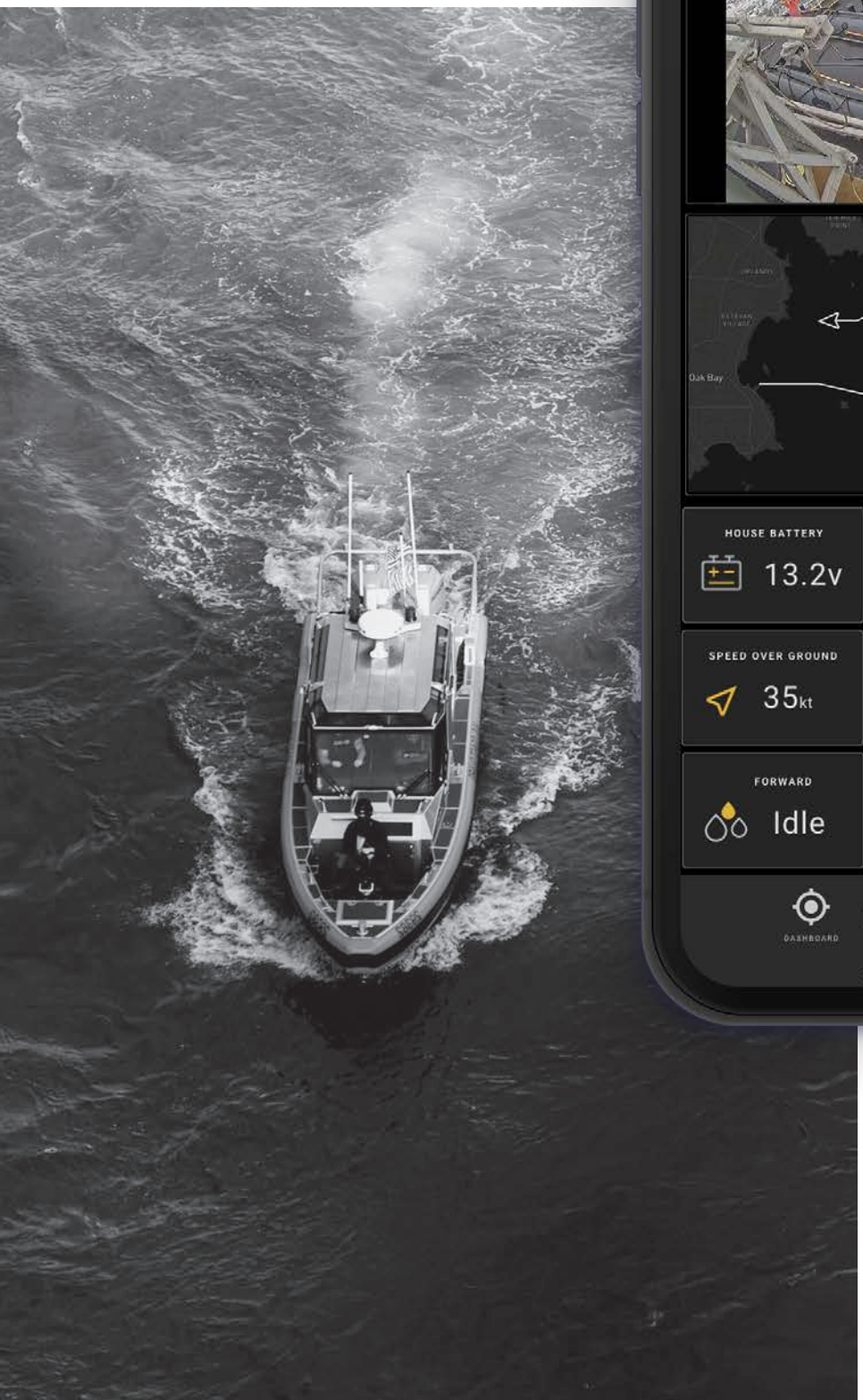
Mix and match systems and devices. Connect a wide range of onboard networks, protocols, and device interfaces to a single hub. Add your choice of cameras, sensors, and other devices. Bring together analog, digital, CANBus, ethernet, WiFi, USB, Z Wave, or RS-232 communication paths to one hub.

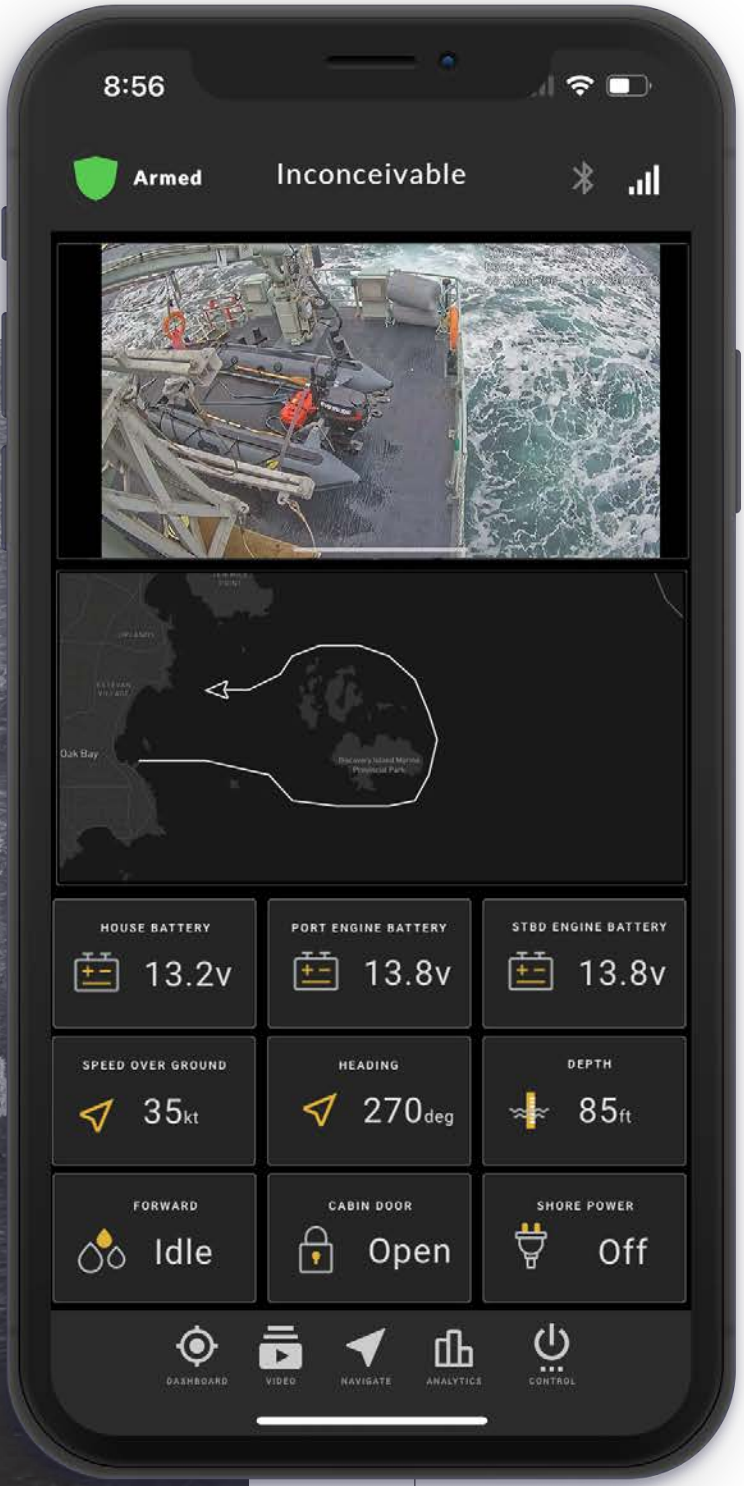
Capture and store data where it happens. Record, integrate, and secure onboard data and video. Store data locally on 4TB hard drive, send it to the cloud, or both.



Recognize and respond to events. Analyze activity where and when it happens. Define, recognize, and respond to events with automatic or remote device controls. Operate in connected or disconnected environments.

Discover, learn, and share. Review onboard activity and uncover useful insights using synchronized visualizations and video. Share live and recorded activity with other applications.




8:56
Armed
Inconceivable
Oak Bay
HOUSE BATTERY
13.2v
PORT ENGINE BATTERY
13.8v
STBD ENGINE BATTERY
13.8v
SPEED OVER GROUND
35kt
HEADING
270deg
DEPTH
85ft
FORWARD
Idle
CABIN DOOR
Open
SHORE POWER
Off
DASHBOARD
VIDEO
NAVIGATE
ANALYTICS
CONTROL

case study:

Orca-class

+ Advanced maritime monitoring.

BRNKL Black was seamlessly integrated with the vessel's Integrated Platform Control System (IPCS). The system connected directly to source devices to monitor engine performance, shore power status, tank levels, bilge activity, fire alarms, and throttle position. Additionally, strategically placed cameras recorded activities on the bridge, in the engine room, and on the quarter-deck, enhancing operational security and situational awareness. The implementation of BRNKL Black enabled real-time performance monitoring, event recording, and remote alerts for any critical events, significantly boosting the vessel's operational efficiency and security capabilities.

use case:

Royal Canadian Navy

+ See how going green measures up.

BRNKL Black was utilized to assess the feasibility of electric propulsion systems for the Royal Canadian Navy. The project focused on monitoring and analyzing data from electric and combustion engines to determine if electric motors could meet the Navy's operational use cases. Key performance parameters such as battery state, power output, and overall motor health were evaluated, providing valuable insights into the potential of electric technologies in naval operations.

case study:

Special Forces

+ Whole body vibration analysis.

BRNKL Black was utilized to fuse vessel and biometric data for a Special Operations Forces organization, aiming to understand the physical impacts on military personnel aboard high-speed boats. This study combined physiological data from wearable biometric sensors, tracking sudden body and head accelerations, with measurements from vessel-mounted accelerometers at various points on the boat. The integration of these data sets in real time with the BRNKL Black provided crucial insights into the physical effects of different operational maneuvers, enhancing our understanding of crew safety and vessel performance.

use case:

Arctic surveillance

+ Enhanced situational awareness.

BRNKL Black was utilized to enhance situational awareness in the Arctic, a project initiated by the Department of National Defence and the Canadian Armed Forces. This effort focused on the remote monitoring of fixed assets in harsh Arctic conditions, incorporating live video streaming, motion detection, and advanced radar technology for intruder detection using the BRNKL Black as the central hub. The system's capabilities also included detecting and classifying land-based threats, monitoring power systems at remote communication sites, and providing early warnings of power system issues.

use case:

Defence research

+ Validating new technologies.

BRNKL Black was utilized in collaboration with Defence Research and Development Canada (DRDC) to test various wireless communication methods in an engine room, assessing their performance under real-world conditions. This project aimed to validate the efficacy of different wireless sensor technologies by collecting and comparing sensor data. BRNKL Black was instrumental in monitoring whether the data was affected or dropped under various engine room conditions, providing crucial insights into the reliability of these communication methods in demanding environments.

Technical specifications

General

Physical dimensions: 178mm x 169mm x 61mm
Weight: 835g
Temperature: -20°C to +75°C
Power consumption: 500mA average; 2A max @ 12VDC
Antenna ports: GPS & WiFi
Mounting: Flange
Internal battery: 3000mAh
IP rating: IP67
Status indicators: Power, Communications, Data

Connections

Power Input: 9-60VDC
Analog/digital selectable inputs: 7 wired (9-60VDC)
Outputs: 2 wired (1.5A max)
Ethernet port: 1 wired
NMEA 2000 port: 1 wired
J1939 port: 1 wired
WiFi: Wireless
Serial Port: 1 wired (RS232)
Antenna Ports: 2 SMA ports (GPS and WiFi/Bluetooth)

Sensors

GPS receiver: GPS/QZSS, Galileo, GLONASS, BeiDou (4 Concurrent GNSS)
Accelerometer: +/-16g; 16384 LSB/g
Gyroscope: +/-125 deg/sec; 262.4 LSB/deg/sec

Storage

Internal: 1TB or 4TB
Cloud: Optional

BRNKL Interface

Mobile devices: iOS app or browser; Android app or browser
Other devices: Browser
Browser compatibility: Chrome, Safari, Firefox, Edge
Local connection: WiFi, Ethernet

Camera Integration*

*Cameras sold separately

Supported protocols: RTSP
Application interface: ONVIF Profile S, ONVIF Profile T
Recommended brands: Axis, HIKVision, Current Scientific, FLIR, Raymarine

Included Accessories

Installation Guide, power and I/O cable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