

IRONMAN HUD DIVER'S DISPLAY

Model: IRNHUD

FEATURES

- Clip and fit to Open Circuit or Closed Circuit DSVs
- Depth timer, dive computer & compass
- Stealth Mode on LED and display, backed up by lens cap for covert ops
- Military decompression algorithms incl. DCIEM
- Supports up to two wireless cylinder pressure gauges
- Optional PPO2 monitoring from Open Safety sensor pod
- Dive logs stored every second in UDF 4.0
- Dive lab and Subsurface dive log analysis
- Robust and secure
- Rechargeable battery: duration 1 year store, 64 hours diving
- Icon menus familiar to any smart phone user
- USB-C charging and downloads
- Functional Safety to IEC EN 61508:2010 to SIL 2



DESCRIPTION

The Ironman Diver's Display is a simple to use, robust and reliable, dive computer developed specifically for military service. Fully featured with compass, rebreather monitoring, and dive computer with 15 decompression algorithms, selected by an icon driven menu that can then be locked down by the diver supervisor.

The decompression algorithms available include DCIEM, Buhlmann-16, unified decompression algorithms, with a choice of conservatism and gradient factors. CNS is also tracked.

The Ironman HUD is the only dive computer ever to meet a functional safety standard: in this case, the "Gold Standard" IEC 61508. All software is in SPARK Ada, the critical systems language used for the European Joint Forces Fighter, nuclear reactor control, & UK air traffic control.

Dive logs are stored in UDF 4.0, an XML format that can be imported into Divelab provided with the Ironman HUD and Subsurface, available as free of charge open source. Logs record each second of the dive, with 4GB of storage in the HUD sufficient for a lifetime of diving.

The HUD display mounts securely onto Open Safety DSVs and ALVBOV combined DSV and bail out regulator. The Ironman HUD can be attached or detached in a second using the quick release latch that is supplied with each unit, for attaching to Open Circuit regulators or to rebreather DSVs.

USER INTERFACE

The user interface is familiar to any smart phone user: it is icon driven, using the Next and Select buttons on the side of the HUD. All parameters can be identified and selected easily, by navigating through the menus using the Next and Select buttons on the HUD.

A PIN activated software lock allows the dive supervisor to setup the HUD and then issue it to divers, knowing that all dive settings are secured.

Menus on surface



Press SELECT

Equipment Menu selected



Press NEXT

Pick Localisation



Press SELECT

Pick the parameter to change

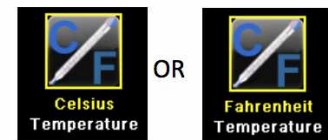


Depth units



Press SELECT

Temperature units

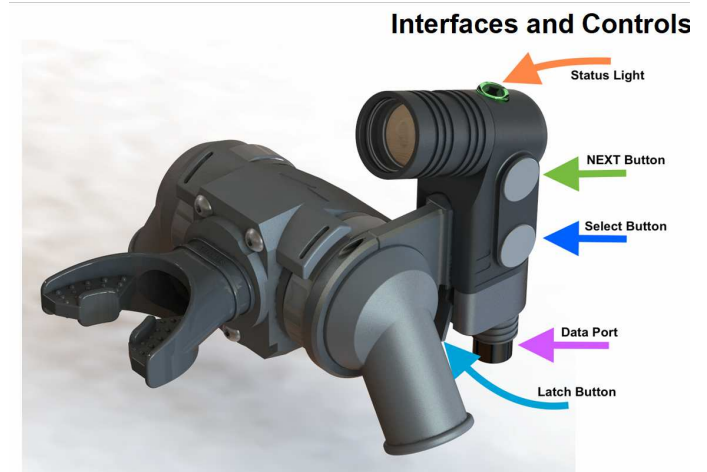


Press SELECT

External interfaces are:

- USB-C for charging and data transfer
- Bluetooth for data transfer.
- Safety CAN bus. The data port is Safety-Bus, a CAN Bus standard for high integrity applications. The Safety-Bus is a five pin wet mate connector that can be plugged directly into PPO2 monitors, or an eCCR controller.
- LF Through Water Comms to tank senders (pressure sensors that can replace submersible pressure gauges).
- Status LED, for hazard / no hazard. This is disabled when in stealth mode.

Dive logs can be downloaded via either the USB-C port or over Bluetooth. A powerful log viewer and dive analyser is supplied on a USB stick with each HUD. Converters to the popular Subsurface log viewer are also provided.

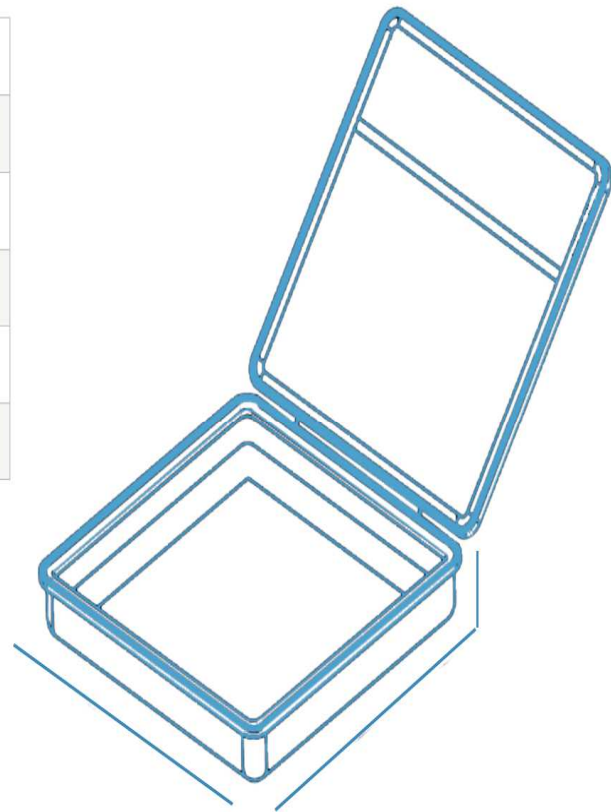
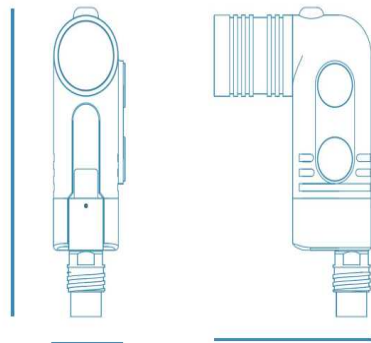


SPECIFICATION

Parameter	Value
Screen Resolution	320 x 240
Display Type	QVGA
Battery Type	Rechargeable Safe Lithium ATEX compliant
Battery Life	64 hours (Medium Brightness)
Battery Replacement	5 years (or 500 charge cycles)
Number of Gases	5 oc / 5cc
Rebreather Connectivity	n/a
Dive Log	8000 hours
Depth Rating	300m (985ft)
Country of Origin	Scotland UK

DIMENSIONS

Computer	
W x D x H (mm)	35 x 85.8 x 44
Weight (g)	74g (SA Model) / 148g (P2 Model)
Ballistic Nylon Case	
W x D x H (mm)	240 x 240 x 60
Weight (g)	313g (SA Model) / 334g (P2 Model)



PACK CONTAINS

The Ironman HUD is supplied in a compact transport case containing:

1. Ironman HUD Diver's Display
2. USB Power Bank
3. OSEL Bracket to DSV
4. User Manual
5. Charging Adapter
6. Oxygen Sensor Pod and Hose
7. 3 Oxygen Sensors
8. Silicone Oil (2ml)

When Ironman HUD accessories are ordered at the same time, these are supplied in separate packaging.

ORDERING INFORMATION

Model	Description
IRONMAN-HUD	Ironman HUD Diver's Dive computer & Display
IRONMAN-PO2	PPO2 Monitor that communicates with the Ironman HUD, connects to any Open Safety rebreather. Requires Ironman-HUD for display.
ICONFIG-eCCR	Integrated package of Ironman HUD and eCCR control pod, for operating any rebreather in the Open Safety Incursion family in eCCR mode.