

# CSMTS | Critical System Monitoring & Tracking System



## COMMERCIAL DIVE SYSTEM PRODUCTS

### Key Features:

- IOGP 478 and IMCA D 052 compliant
- Standard fit on all new build IHC self-propelled hyperbaric lifeboats
- 'Easy to install' upgrade package to all existing self-propelled hyperbaric lifeboat types
- Critical mission data recording & transmission as per industry requirements
- Continual 'hot standby' mode & periodic 'health check' interrogation
- Purchase and rental options available



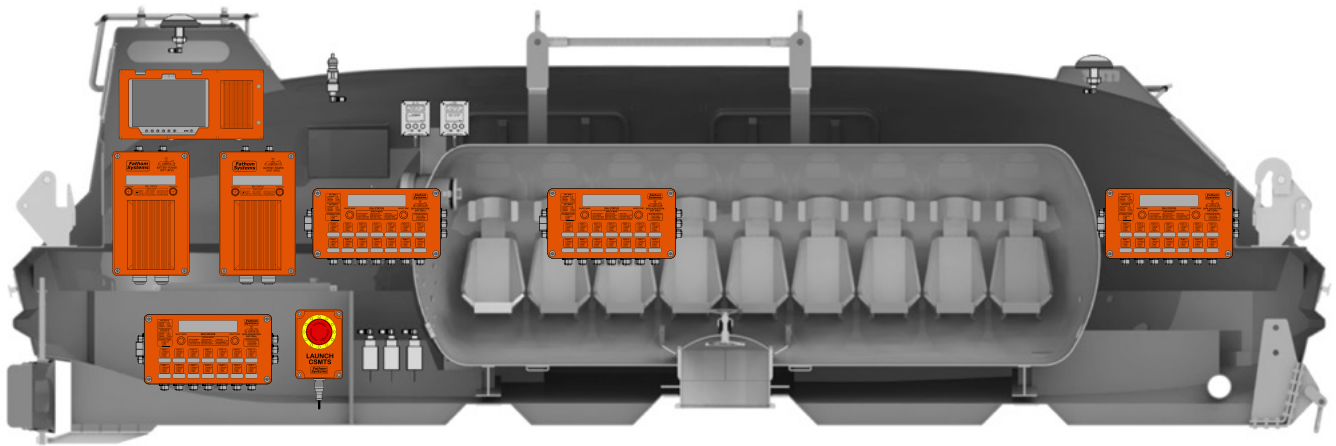
### Product Overview:

#### What is CSMTS

The CSMTS – is a stand-alone data acquisition, recording, communications and transmission product developed by Fathom Systems to meet and exceed the current guidelines and requirements for the safe operation of self-propelled hyperbaric lifeboats (SPHL) in the event of an evacuation from the host Dive Support Vessel (DSV). The product is a multi-unit system that is an industry wide requirement as stipulated in IOGP Report 478 and IMCA D 052.

#### System Capability

The system transmits critical sensor and mission data from the SPHL to shore via the low level 'Iridium®' satellite comms network. A terrestrial server system managed by Fathom Systems receives the data which is then distributed via the Internet to allow remote monitoring and incident management of the SPHL from any location, on or off-shore, globally. The DSV Operator has access to all data from servers via the Internet connection and a 'Client-side' application allows bi-directional data transfer between incident rooms and the SPHL.



## General

- Wide variety of sensor interface options
- Highly customisable to suit client requirements
- Designed for rapid installation
- Contact FSL for expanded I/O capability list

## 2 x BPU – Battery Power Unit

- Independent battery backed power supply
- Hosted by existing SPHL dual power supplies
- Two units fitted per system

## Primary & Secondary Iridium® & GPS Antenna

- A combined unit c/w integrated transmitters & receivers mounted on the topside of the SPHL.
- Providing live GPS coordinates of the SPHL
- Calculated heading information

## HMI & Software

- Toughpad c/w pre-installed Fathom Systems control, monitoring and logging software
- SPHL identification & details of occupants (crew and divers)
- Time stamped recording of any hyperbaric evacuation
- Display and logging of data from all system sensors

## Comms Interface

- Dual independent GPS antenna
- Dual independent iridium antenna
- Distributed Worldwide redundant server system

## Optional

- Biomedical chamber monitoring
- Black box audio voice recorder
- O<sub>2</sub> & CO<sub>2</sub> gas analyser

## DAU1 – SAT Panel Area Data Acquisition Unit

- Chamber digital depth sensor (depth & rate of change)
- Climate control system temperatures
- SAT system battery voltages
- Optional Fathom Systems O<sub>2</sub> & CO<sub>2</sub> gas analyser digital interface
- Crew breathing air bottle pressure
- Existing O<sub>2</sub> & CO<sub>2</sub> interface (4-20mA)

## DAU2 – Engine / Machinery Area Data Acquisition Unit

- Fuel gauge interface
- Engine cooling system temperature
- Engine battery status
- Engine tachometer
- Water inlet and outlet temperatures

## DAU3 – Forward Space Acquisition Unit

- On-board O<sub>2</sub> and HeO<sub>2</sub> gas storage bottle pressures
- Standby generator status
- Pitch, roll & heave accelerometer sensor
- Fire-fighting system low pressure sensor

## DAU4 – Chamber Internal Data Acquisition Unit

- Chamber internal temperature sensor
- Chamber internal humidity sensor
- ppO<sub>2</sub> fuel cell & indicator
- Optional biomedical sensor inputs (up to 4)

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