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engineers
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Through-Water Communication Technology [High speed subsea Ethernet link]

Developed in conjunction with a leading oil & gas technology company, and drawing on a patented process, the **Subsea Communication System (SSC)** creates a transparent, point to point Ethernet link through water, akin to **sub-sea wifi**.

Achieving data rates of up to 20MbS⁻¹ the SSC is extremely simple to use, plug-and-play technology that is suited to a wide range of sub-sea applications where physical connection is not possible or is difficult to achieve. These include data harvesting from sub-sea sensors and AUVs, non-invasive comms links, contactless connectors, short range voice comms, and many more that have yet to be identified.

The SSC is highly compact and very low power, and is available as a board set or in a range of sub-sea housings to suit specific applications. Coupled with Martech's IP addressable processor the SSC can be configured for a wide range of subsea control and instrumentation tasks.

Features

- Σ Up to 20Mbits per second
- Σ Highly compact
- Σ Low power
- Σ Integrated error correction
- Σ Covert (non-acoustic)
- Σ Multi-drop
- Σ Transparent Ethernet link
- Σ Zero set up or configuration
- Σ Antenna from 15cm x 15cm (6" x 6")

Applications

- Σ Sensor data retrieval
- Σ AUV docking
- Σ Sub to sub voice comms
- Σ Contactless connector
- Σ Diver intercom

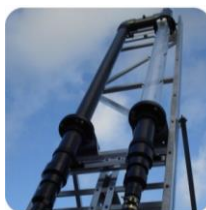
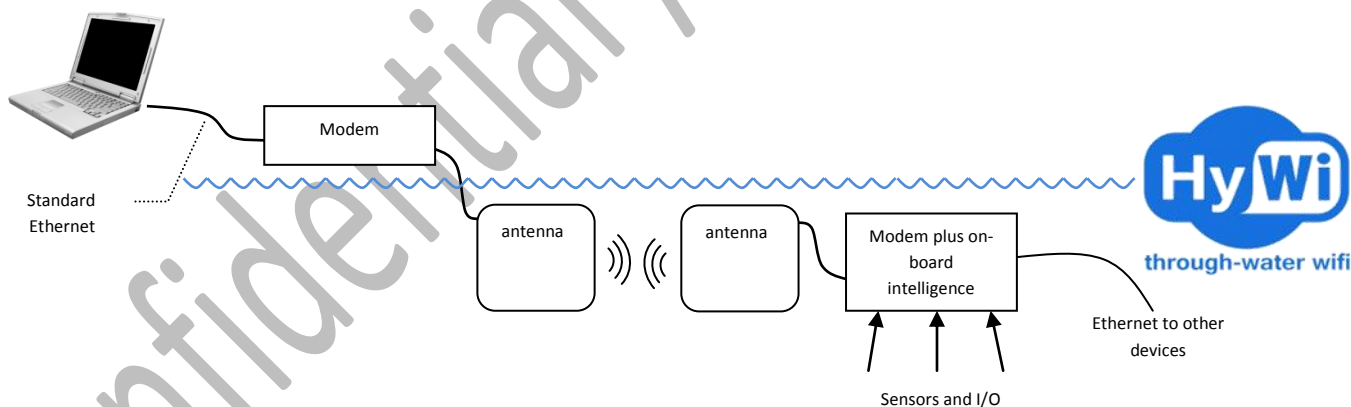
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Technical specification [preliminary]

Data rate	Up to 20MbS ⁻¹ max over short ranges subject to antenna size and installation 5MbS ⁻¹ at up to 0.5m tested.
Interface	Standard IEEE 802.3 protocol (bidirectional point to point Ethernet network connection)
Dimensions	Board set – smaller than 150mm x 90mm x 50mm (custom packages available) Antenna - titanium plate - from 150mm x 150mm x 1mm (plus insulating mount)
Weight	Board set – <0.5kg Antenna – <2kg (subject to installation)
Power	24 to 48V dc, approx. 25W per side
Options	Additional on-board intelligence with IP addressable I/O including power switching, sensor inputs and data logging (custom designed to your specific requirements)
	Submersible pressure housings down to 6000m depth rating

The above preliminary specification is subject to change without prior notice and is provided for information only. On-going work includes the development of variants for longer range applications – please contact CodaOctopus Martech for further details.



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