LATTICE LINK™ EMS
AUTONOMY SOLUTIONS

Ocean Information Services
Autonomy for the Environment

Lattice Link™ Environmental Monitoring System (EMS)

Lattice EMS

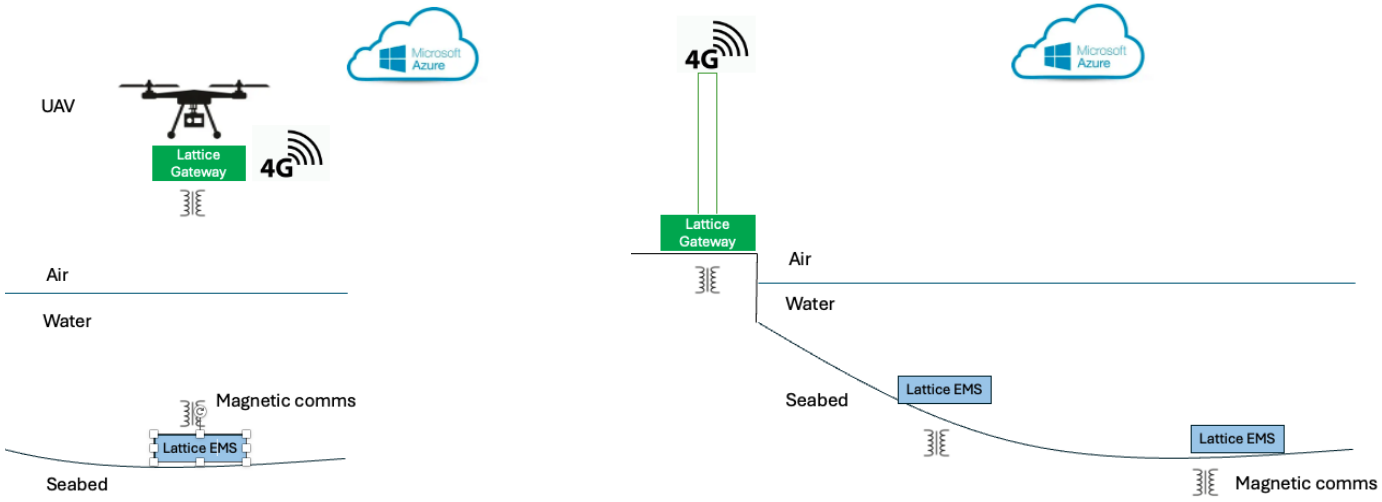
Lattice EMS is a reliable, long term solution for water quality information. Designed for Autonomous Operations, information is harvested wirelessly using Lattice Gateway, UAV or ROV.

Lattice EMS incorporates solid state pH and conductivity sensors with recalibration intervals of up to 5 years. Matched with 5 year battery life as standard, Lattice EMS is a cost-effective solution for long term monitoring.

Lattice EMS sets a new industry standard in long term environmental monitoring.

Features

- Solid state pH, conductivity and temperature sensors
- Optional dissolved oxygen, turbidity, pressure sensors
- AI-enabled edge processing
- Configurable as wide area IIoT network
- Real time monitoring with Lattice Gateway
- Information harvest in remote locations using UAV or ROV
- Low power consumption leading to a battery life of 5 years or more



Lattice EMS (a) UAV harvest (b) Lattice Gateway real time monitoirng

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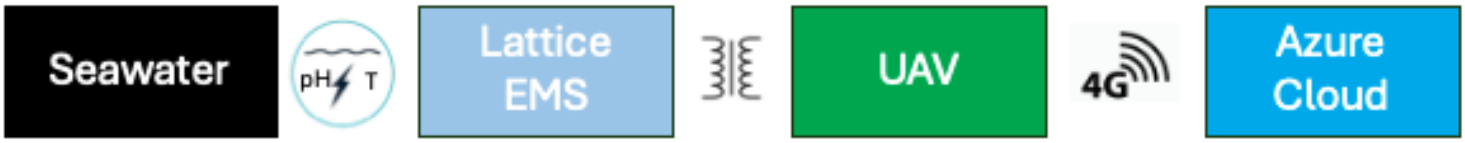
Lattice Link Environmental Monitoring System (EMS)

Lattice EMS reduces the risk and cost of water quality monitoring. It provides reliable, timely, long-term information on key water quality parameters. Designed for deployment by crewed vessel, USV or heavy lift UAV. Information is recovered in real time using Lattice Gateway installed on a nearby structure or on shore. Alternatively, if deployed in a remote shallow water location, information may be harvested by UAV; if in a remote deep water location, information is harvested by inspection class ROV deployed from CTV or USV.

Lattice BMS can be configures as wide area network to extend the reach and coverage.

Architecture



Specifications

pH sensor	Standard: Peak sensitivity 80 Ref V/(m/s);
Sampling Frequency Band	Standard: 120kHz - 150kHz; Custom: 40Hz to 400kHz
Edge processing	Standard: Click train identification
Wireless information transfer	Range: Standard - Up to 30m to ROV/UAV; Option up to 500m across seabed
Bandwidth	Standard: 50 bps
Battery	Primary Cell lithium-manganese dioxide (Li-MnO2) chemistry 5 year life; optionally extendable to 10 years
Depth rating:	Standard: 100m; Custom: 1500m; 3000m
Deployment skid	Fibre glass; Options: retaining spikes; airbag recovery :
Operating temperature	Operating 4°C to + 50°C, Storage –10°C to + 60°C
Working environment	Subsea/Underground/air
Weight	Standard: 25kg (in air)
Dimensions	Standard: 1000mm (L) x 830mm (B) x 800mm (H)

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