LUMA X UV

High-speed, long range wireless optical modem

The Hydromea LUMA X-UV optical modem combines long range with high data rate in a very compact form factor. Optical communication offers superior data rates, low latency and lower power requirements compared to acoustic modems. This makes it the perfect choice for applications such as data download from submerged sensor platforms (landers), as well as wireless interfacing between ROVs/AUVs and deep-sea infrastructure.

The LUMA X-UV is very energy efficient, which makes it ideal for battery-powered applications and by working in the UV spectrum it is very resilient to ambient light.

The software-configurable cable interface can be set to Ethernet, RS232 or RS485, which makes the LUMA X-UV the ideal drop-in replacement for cabled connections in many existing systems.

Features

- High data rate
- Complete bi-directional transceiver
- Ultra-compact and low weight, ideal for small ROVs/AUVs
- Wide supply voltage range
- Ad-hoc networking (optional, on request)
- High ambient light resilience

Applications

- Wireless readout of landers and subsea infrastructure with ROV/AUV
- Low-power high-speed communication
- Wireless HD video streaming for AUVs/ROVs
- Subsea networks at deep sea sites

Specifications*

Dimensions	Length: 126 mm Length with connector: 178 mm Diameter: 60 mm
Weight in air	530 g
Weight in water	125 g
Data rates:	up to 10 Mbit/sec
Software features	Error detection, FEC, auto-wakeup (upgradeable for additional features)
Range	up to 50 m
Supply voltage	12 - 36 V
Power consumption - active, receiving - transmitting	 2 W 2 - 17 W (typ.)
Beam pattern	60 deg. cone
Interface	Ethernet RS232 / RS485
Depth rating	6000 m 12000 m (on request)
Connector	SubConn Circular 8 pins DBH8MTI

* Preliminary specifications - may change without notice