

LUMA X

High-speed, long range wireless optical modem

The Hydromea LUMA X 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 is very energy efficient, which makes it ideal for battery-powered applications.

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

Features

- High data rate
- Long range
- Complete bi-directional transceiver
- Ultra-compact and low weight, ideal for small ROVs/AUVs
- Wide supply voltage range
- Encryption of data link, ad-hoc networking (optional, on request)

Applications

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



Specifications*

Dimensions	Length: 100 mm Diameter: 60 mm
Weight in air	475 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	2 W
- transmitting	2 - 17 W (typ.)
Beam pattern	120 deg. cone
Interface:	Ethernet RS232 / RS485
Depth rating	6000 m
Connector	SubConn Ethernet Circular 8 pins

* Preliminary specifications - may change without notice