

LUMA 250LP

Ultra-efficient optical modem

The Hydromea LUMA 250LP optical modem combines outstanding performance and energy efficiency 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 250LP is very energy efficient, which makes it ideal for battery-powered applications. It can be configured to enter a sleep mode after a specified time of inactivity, and optically woken up from sleep by another modem when the link is re-established.

The software-configurable serial cable interface can be set to RS232 or RS485, which makes the LUMA 250LP the ideal drop-in replacement for cabled connections in many existing systems.

Features

- Ultra-compact and low weight, ideal for small ROVs/AUVs
- Four transmission power levels: 2 - 5 W
- Wide supply voltage range
- Ultra-low power sleep mode with optical wake-up
- Encryption of data link, ad-hoc networking (optional, on request)

Applications

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



Specifications*

Dimensions	100 x 50 x 30 mm
Weight in air	250 g
Weight in water	50 g
Data rate:	250 Kbit/sec (up to 600 kbps at reduced range)
Software features	Error detection, FEC, auto-wakeup (upgradeable for additional features)
Range	up to 7 m
Supply voltage	12 - 36 V
Power consumption:	
- sleep mode	< 10 mW
- active, receiving	0.5 W
- transmitting	2 - 5 W (typ.)
Beam pattern	120 deg. cone
Interface:	RS232 / RS485
Depth rating	6000 m
Connector	SubConn MCIL6M or as requested

* Preliminary specifications - may change without notice