LUMA 100

Ultra-efficient wireless optical node

The Hydromea LUMA 100 optical node 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. It also serves as an ideal replacement of electrical wet mate connectors for data tranfer, making the job of an ROV pilot much easier and faster. This makes it the perfect choice for wireless interfacing between ROVs/AUVs and deep sea instruments.

It is extremely 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 100 the ideal drop-in replacement for cabled connections in many existing systems.

Features

- Ultra-low power sleep mode with optical wake-up and ultra-low power at peak rates
- Wide beam to establish connection easily
- Ultra-compact and low weight, ideal for even smaller ROVs/AUVs
- Wide supply voltage range
- Ambient light capable (indirect daylight)

Applications

- Wireless readout of landers and subsea instruments with ROV/AUV
- Low power communication for battery-powered underwater devices

Specifications*

Dimensions	100 x 50 x 30 mm 3.9 x 2 x 1.2 inch
Weight in air	250 g / 8.82 oz
Weight in water	50 g / 1.76 oz
Data rate:	Optical link: 115 Kbit/s Cable interface: 9.6 - 512 Kbit/s
Software features	Error detection, FEC, auto-wakeup (upgradeable for additional features)
Range	up to 2 m / 6.6ft
Supply voltage	12 - 36 V
Power consumption: - sleep mode - active, receiving - transmitting	 < 10 mW 0.5 W 1-2 W (typ.)
Beam pattern	120 deg. cone
Interface:	RS232 / RS485
Depth rating	6000 m / 19600 ft
Connector	SubConn MCIL6M

*Subject to change without notice