

# NEMO

Connected. Protected. Empowered.



## SIMPLE, RELIABLE, AFFORDABLE, SOLAR POWERED VMS FOR SSF

NEMO is the solar-powered transmitter from the first all-in-one system specifically designed by CLS for monitoring and protecting small-scale fisheries. NEMO offers global hybrid connectivity, using mobile/IoT networks in coastal areas and automatically switching to satellite communication when the vessel moves outside the range of terrestrial networks. Services range from basic delivery of data collected and processed in CLS' data center to data integration with client's fisheries monitoring centre and access to CLS' web platform for data visualization, alert management and customized analytics.

### BENEFITS

- CE certified
- Solar panel
- Rugged, waterproof design (IP67)
- Fitted with a HMI
- Anti spoofing capabilities
- Easy to use: Plug-and-Fish
- Tamper-proof
- Smart Reporting
- Unique Identifier

### FEATURES & FUNCTIONALITIES

#### Tracking your fishing trip

- Global coverage
- Automatic data collection of vessel movements
- Continuous on-board storage for data integrity
- Store and forward reporting
- Adjustable settings (GNSS updates, reporting frequency)
- Geofencing with different reporting strategy per zone

#### Connecting with your people

- Multi-operator GSM & cellular IoT network for high frequency reporting near the shore
- Satellite communication for service continuity and global coverage
- Cost-effective sea-to-shore reporting strategy
- Secure encrypted messages
- Bluetooth connection with smart devices
- Wired connection using mini-USB port

#### Protecting your fishing communities

- Assistance button
- Buzzer for zone boundaries crossing
- Alerts on events
- Sealing system and intrusion sensor



**Marine Electronics & Satellite Communications**

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# Physical and environmental characteristics\*

PHYSICAL	
<b>Dimensions (L x l x H)</b>	222 mm x 127 mm x 105 mm
<b>Weight</b>	0,873 kg
<b>Mounting</b>	Base attached with five screws of 5 mm Optional: base / transceiver seal Fixed or detachable
POWER	
<b>Battery</b>	3.7 V, 5.2 Ah - Lithium Ion
<b>Operating time</b>	Minimum 2 weeks. Maximum few months (mainly depending on climate conditions and configurations)
<b>Charging time</b>	Less than 12 hours with mini USB cable
<b>Charging</b>	Solar panel or mini USB (800 mA)
ENVIRONMENTAL	
<b>Operating temperature</b>	-20 to +50°C
<b>Storage temperature</b>	-25 to +70°C
<b>Charging temperature</b>	+0 to +45°C
<b>Waterproof</b>	IP67
<b>Compliance</b>	EN 60945/RED (mechanical, environmental and EMC/Radio) CE
OPERATIONAL	
<b>Operating modes</b>	Nominal, low battery, power save, assistance, geofencing and stationary
<b>LEDs</b>	Power supply, failure display, assistance
<b>Audible alarm/buzzer</b>	95 dB at 10 cm
<b>Button</b>	Request for assistance button
<b>Programming/settings</b>	Via Bluetooth, mini USB port and over-the-air (cellular)
<b>Reporting interval</b>	Configurable from 5 minutes to 24 hours
<b>Internal memory</b>	32-Mbit Flash Memory (i.e. 6 months of data with an acquisition frequency of 5 min)
<b>Speed accuracy</b>	0.1 knot
<b>Positioning accuracy</b>	10 m at 95%
<b>Geofencing</b>	100 zones with 100 points each
COMMUNICATION	
<b>Cellular</b>	2G, 4G LTEM, 4G NB-IOT
<b>Satellite</b>	ARGOS 2, KINEIS
<b>Bluetooth</b>	Bluetooth Low Energy
<b>USB</b>	Mini USB
Positioning system	
<b>CNSS</b>	GPS, GLONASS, BeiDou, Galileo, QZSS.

\*All characteristics are subject to change without prior notice.



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