

# cNODE<sup>®</sup> Modem MiniS



The cNODE Modem MiniS is designed for the Point 2 Point transfer of data between two cNODE's or to a surface vessel equipped with any HiPAP<sup>®</sup> and  $\mu$ PAP<sup>®</sup> systems. The data telemetry operates on CYMBAL digital protocols, Kongsberg field proven robust proprietary link.

One cNODE Modem MiniS can address several other cNODE Modems during operation using the Kongsberg Link User Protocol. The data telemetry operates on CYMBAL, Kongsberg's field proven and robust proprietary link. Data rates of up to 6 kb/s are available. The cNODE Modem MiniS is simple to configure with the TTC Light software.

## Specifications

<b>Product</b>	cNODE Modem MiniS
<b>Country of origin</b>	Norge
<b>Manufacturer</b>	Kongsberg Discovery
<b>Material</b>	Coated anodized aluminium

## Featuring

- Transparent Modem function
- High speed telemetry capabilities
- Modem interface: RS-232/485/422
- Cymbal channels (560+)
- SSBL and LBL positioning
- Range measurements between transponders
- 4000 metre depth rated
- 34-180 has 180° omnidirectional beam
- 34-40V has 40° narrow beam
- External Power; 24 VDC (20 - 28V), 1A / 24 W maximum
- 34-40V has 40° narrow beam
- Coated anodised aluminium housing
- Internal rechargeable Li-Ion battery
- External on/off function
- Internal tilt sensor  $\pm 90^\circ$
- Pressure relief valve (safety device)
- Operating temperature -5 °C to +55 °C
- Frequency band 21-31 kHz
- External connector for configuration and software update
- Transmitting power; High, Low, Min (6 dB steps)

## Technical specification

Model	cNODE® Modem MiniS 34-180	cNODE® Modem MiniS 34-40V
<b>Km item number</b>	425260	417930
<b>Dimensions (Length X Diameter)</b>	306 x 105 mm	321 x 105 mm
<b>Weight in air / water</b>	4 kg / 2.1kg	4.6 kg / 2.1 kg
<b>Max. Depth rating</b>	4000 m	4000 m
<b>Typical range capability</b>	1000 m	4000 m
<b>Beam width</b>	180°	40° vertical
<b>Source level - high</b>	182 dB	197 dB
<b>Trigger level</b>	< 85 dB	< 80 dB

## Modem

<b>Frequency band</b>	21 - 31 kHz
<b>Acoustic speed, cymbal</b>	Up to 6,0 kbit/s, selectable for adaption to acoustic channel conditions
<b>Data interface</b>	RS-232, RS-485 or RS-422 (isolated / non-isolated)
<b>Configuration software</b>	TTC Light software
<b>Active control during operation</b>	Kongsberg Link User Protocol

## Power

<b>Internal battery</b>	Lithium-Ion, Quiescent battery lifetime 30 days
<b>External power</b>	24 VDC (20 - 28 V), 1A / 24 W (Charging during operation)
<b>Transmitting power (max)</b>	100 W
<b>Standby power</b>	<100 mW
<b>External connectors</b>	Seacon

