

# MiniPOS/NAV



The CDL MiniPOS/NAV system combines CDL's MiniPOS2 inertial navigation product with RDI's DVL technology in a single housing which ensures ease of calibration and integrity of the calibration data. A combined pressure housing provides size and weight savings which makes the system easier to integrate into modern ROV spreads.

DVL aided inertial navigation allows the drift rate inherent in pure inertial navigation systems to be greatly reduced and allows the system to navigate accurately over long distances with no external position input. CDL can provide specially designed computer software which allows integration of acoustic range via USBL or LBL to allow the MiniPOS/NAV to output high update rate, high accuracy, smoothed positional information which can be used to greatly improve a wide range of subsea survey tasks.

MiniPOS/NAV uses a high grade Ring Laser Gyrocompass (RLG) which can also be aided on the surface by GPS. Two grades of RLG sensor can be fitted to allow medium or high grade positioning accuracy.

System outputs include: Heading, Pitch, Roll, Depth, X, Y and Z angular velocities, X, Y and Z linear accelerations, Heave, Surge and Sway as well as full positional information in a variety of coordinate systems.

CDL can provide the MiniPOS/NAV preconfigured and calibrated, ready to install on client's ROV and AUV systems.



## Features:

- DVL, GPS, depth input
- WGS84 output
- Heading, pitch, roll, o/p
- ROV and AUV navigator
- Packaged with DVL
- 6,000m depth option

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## Product Specification:

### IMU Specification:

	Standard T16 IMU	High Performance T24 IMU
Free Inertial Drift	Under 5 nautical miles/ hour	Under 1 nautical miles/ hour
GPS and log aiding	10m CEP	10m CEP (Circular error probability)
EM log only	0.5 nautical miles/ hour	0.2 nautical miles/ hour
DVL Aiding	20 metres/ hour CEP	3 metres/ hour CEP
Heading accuracy	0.169 degrees**	±0.028 degrees**
Pitch and Roll	0.028 degrees*	0.028 degrees*
Angular random walk	0.02 degrees/root hour	0.002 degrees/root hour
Bias Repeatability	0.1 degrees/hour*	0.005 degrees/ hour*
Scale factor repeatability	75 ppm	10 ppm
Settling Time	30 minutes	30 minutes
Heave, surge, sway	5% or 5cm	5% or 5cm

### Telemetry Interface:

Bi-Directional RS422 or RS232

Up to 4 x 115kbaud 50/100Hz inertial data with a fixed format

Up to 4 x 115kbaud, up to 50Hz ascii data with a variety of user-selectable formats

Inputs for GPS, DVL and depth

### Depth Rating:

3,000 metres (Standard)

4,000 metres (Optional)

6,000 metres (Optional)

### Power Requirements:

Consumption Between 20 and 35W (Depends on configuration)

Supply Voltage (AC and DC available as standard)

AC 100-260Vac

DC 18-30Vdc

### Weights and Dimensions:

Subsea Unit 200mm dia x 431mm high (8.0" dia x 17" high)

Weight dry 21.5kg (47.4 lbs)

Weight in Water 9kg (19.8 lbs)

\* RMS

\*\* RMS sec (latitude)

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