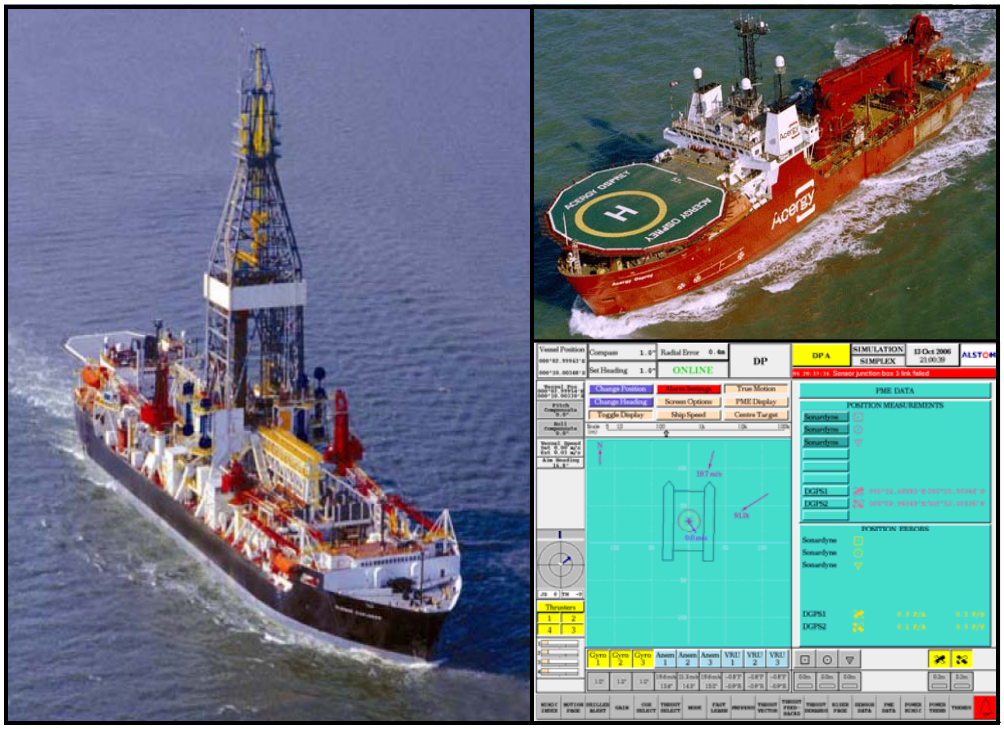
Solutions - Service - Support

Dynamic Positioning Inertial Position Reference Sensor (D-PINS)™



Zupt delivers operationally aware inertial technologies to improve the productivity associated with high cost operations for oil and gas exploration and field development. These capabilities are offered and supported worldwide.

Dynamic Positioning - Inertial Position Reference Sensor (D-PINS)™

D-PINS™ is an aided inertial position reference sensor specifically designed to provide reliable position inputs to any DP desk through short term outages of either DGPS or Acoustics.

D-PINS™ removes the position jitter from ultra-short baseline acoustic positioning systems (USBL) in deep water significantly reducing rig or construction vessel time when moving onto location.

D-PINS™ easily installs into existing configurations. The system takes standard DGPS and Acoustic telegrams from existing systems and blends this data with a navigation grade inertial measurement unit to deliver a position telegram into an open position reference slot within the DP desk.

The system can run offline to allow operator familiarity while logging both DGPS, Acoustic and D-PINS data for comparison. Once operators are fully trained on the system D-PINS can be brought on line like any other position reference sensor.

Part Numbers: DP Inertial Position Reference Sensor D-PINS™

D-PINS™ is a fully integrated system including:

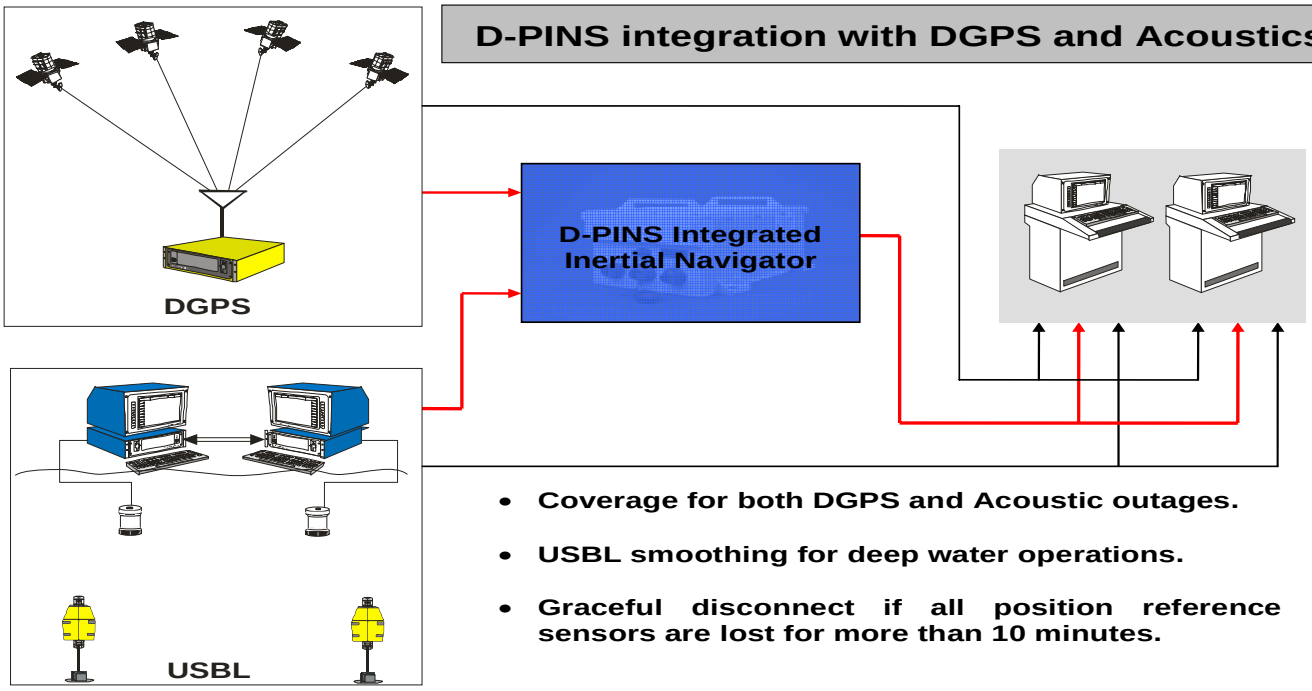
- High-performance inertial sensors
- Simple user interface
- Data fusion software
- I-O hardware interfacing multiple aiding sensors
- Rack mounted hardware and interconnecting cables
- Position, attitude, velocity output at up to 5Hz
- Data logging capability
- Audit trail for operator history logging

D-PINS™ delivers the same precision as conventional DGPS or acoustic positioning systems as well as very precise heading and attitude data.

The position out will degrade if no input from either DGPS or acoustics are available. Without any external references the position will drift from the last known position as follows:

> 2 minutes - between 1m to 2m
> 5 minutes - between 5m to 8m
> 10 minutes - >10m

D-PINS integration with DGPS and Acoustics



- **Coverage for both DGPS and Acoustic outages.**
- **USBL smoothing for deep water operations.**
- **Graceful disconnect if all position reference sensors are lost for more than 10 minutes.**

www.zupt.com

Zupt, LLC
10963 Cutten Rd, A102
Houston, TX 77066
Tel: +1 (832) 295 7280
Email: sales@zupt.com

Version 07-01A June 2007