VertiCAM

Real-Time, Contactless Verticality Verification for Monopile Installation

Zupt's VertiCAM is an in-air, contactless LiDAR, camera, and inertial system designed to monitor the verticality of tubular structures such as monopiles, piles, conductors, and wind turbine foundations during installation. Installed on a vessel, the system uses two "nodes", each including a LiDAR, HD camera, and an inertial measurement unit. Mounted up to 50 meters from the structure, VertiCAM captures pitch, roll, and heading data in real time, allowing teams to assess and adjust orientation without pausing hammering or attaching sensors to the monopile.

With its rugged design and intuitive interface, VertiCAM allows installation teams to view heading and inclination from the deck or bridge while recording each installation. It can be used alone or integrated with Zupt's iRTS pile run monitoring system to provide immediate feedback and maintain project tolerances.

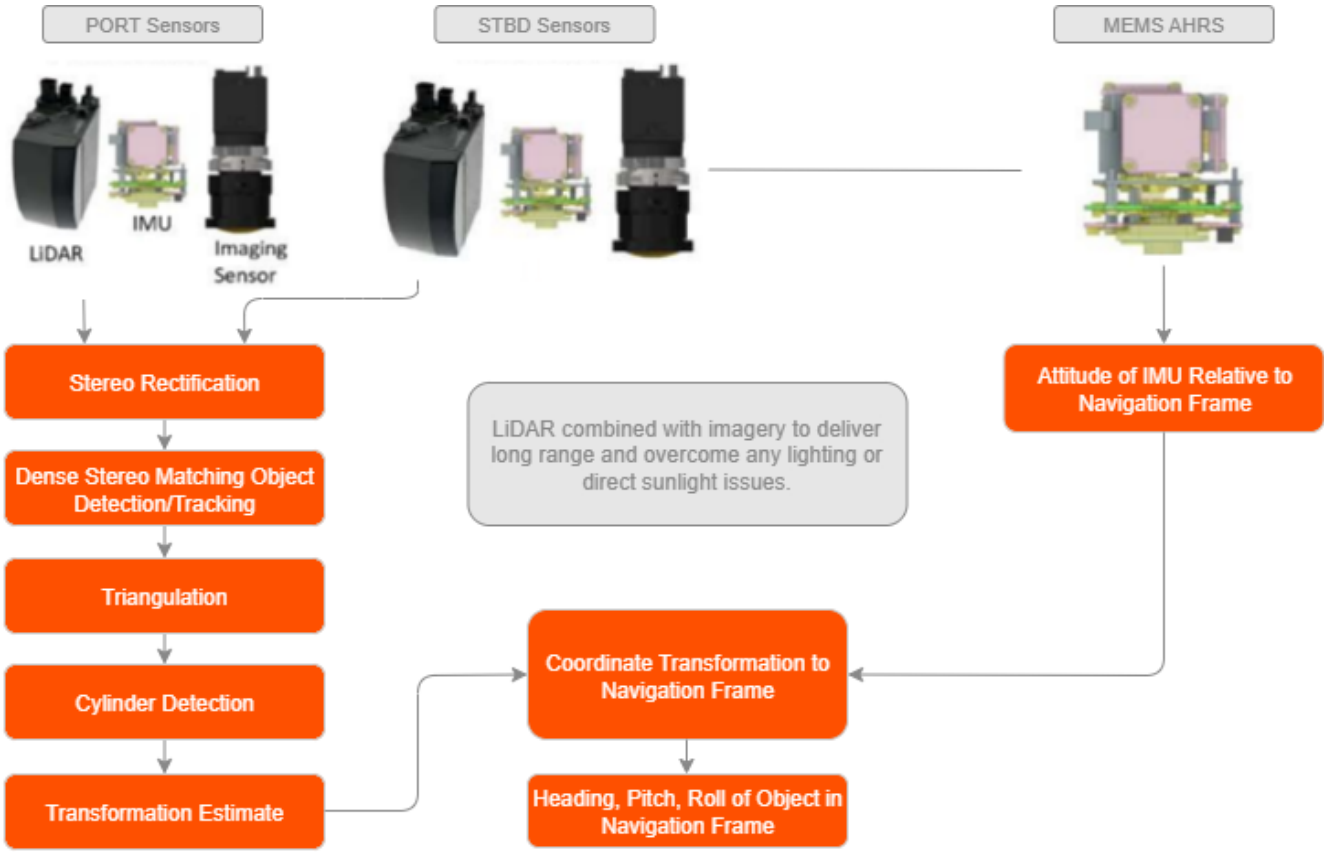
As offshore wind projects grow in scale and complexity, VertiCAM provides fast and reliable verticality feedback, reducing rework and improving outcomes. Its dual redundant sensors deliver consistent performance even in low visibility, making it a dependable solution for modern renewable energy operations.

Accurate position and verticality data

delivered in real time.

Key Features:

- Real-time data display of position and inclination
- Designed for simple operation by deck or vessel personnel
- Supports visual documentation of each installation
- Rugged design for offshore environments



Product Specs:

Exterior Sensor Housings - IP67/IP68 Housed

Pitch and Roll Required (Accuracy) - Target 0.05°, Minimum 0.1°

Pitch and Roll Required (Resolution) - Target 0.01°, Minimum 0.05°

Heading Accuracy - <1° *If structure Features Are Present

Pitch and Roll Range - +/- 20°

Maximum Vessel Motion - +/- 10° Pitch/Roll, +/- 3m Heave, 5°/s Rate of Rotation

Max Offset From Pile to Sensors - 20m Imagery, 50m LiDAR

Pile Dimensional Control Information - Diameter +/-3mm, Ovality 5%