



Mobile Machine Anti-Collision System

Active Asset and Personnel Protection

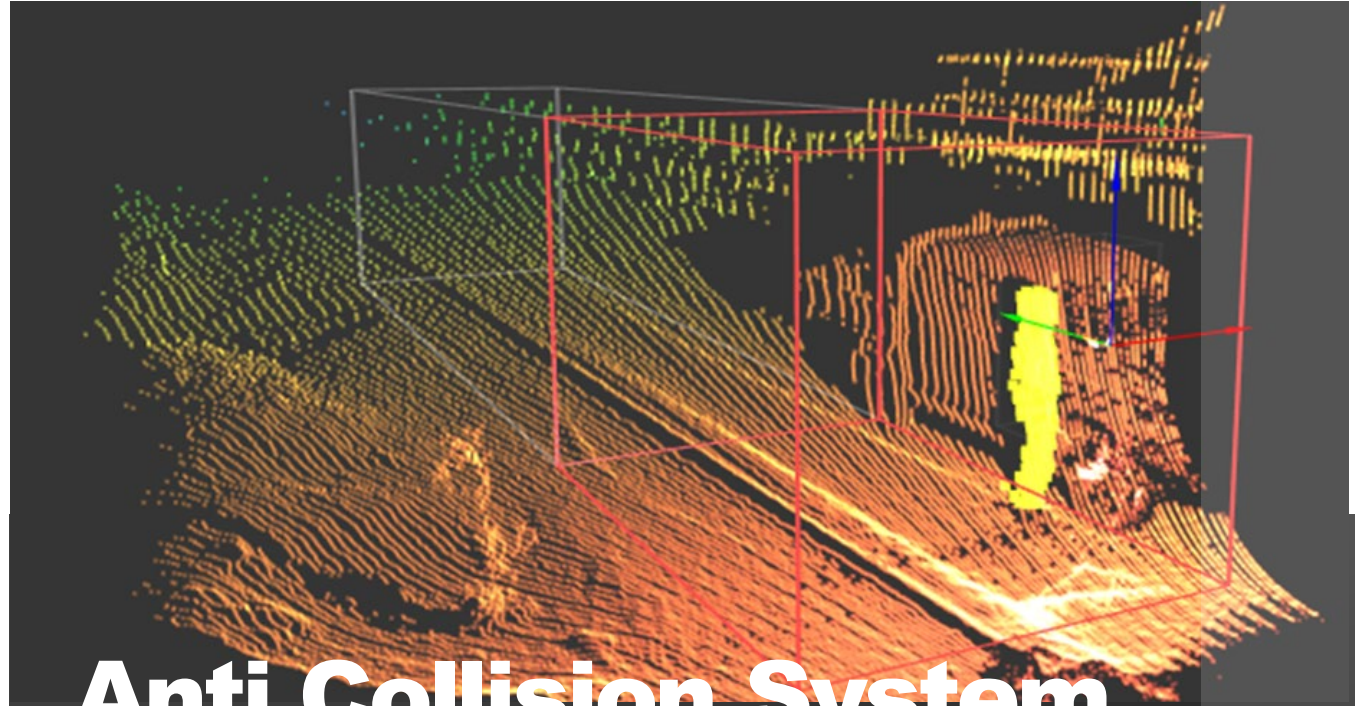
About Us

BEC has a long history of developing and supporting innovative solutions, tailored for the mining and materials handling sectors.

These include:

- Berth Monitoring System (BMS)
- Laser Gap Detection System (LGAP).
- Laser Partially Dumped Ore Car (LPDOC).
- Ship loader Hatch Detection and Profiling.
- Stockpile profiling system (SPS)

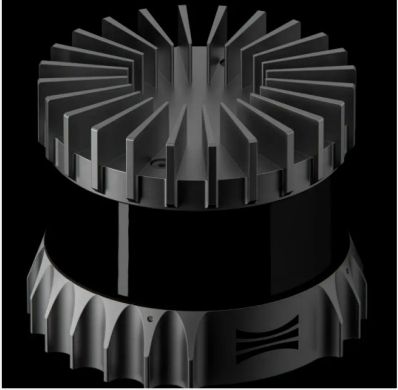
And now....



Anti Collision System

The system provides real time object detection and alarming to the control system to prevent the collision between the machine and objects (including people) obstructing the direction of travel.

Key Features



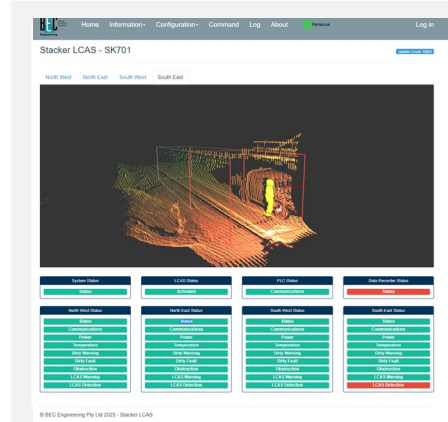
High Accuracy

Utilizes industry leading 3D lidar scanners producing high definition and accuracy point cloud.



Reliable

Proven under the harshest conditions to operate 24/7 with no intervention.



Full Visualisation

A real-time web-based user interface provides continual feedback, configuration and diagnostics.



Integration

Integrates seamlessly with standard PLC and SCADA systems via industry standard protocols.



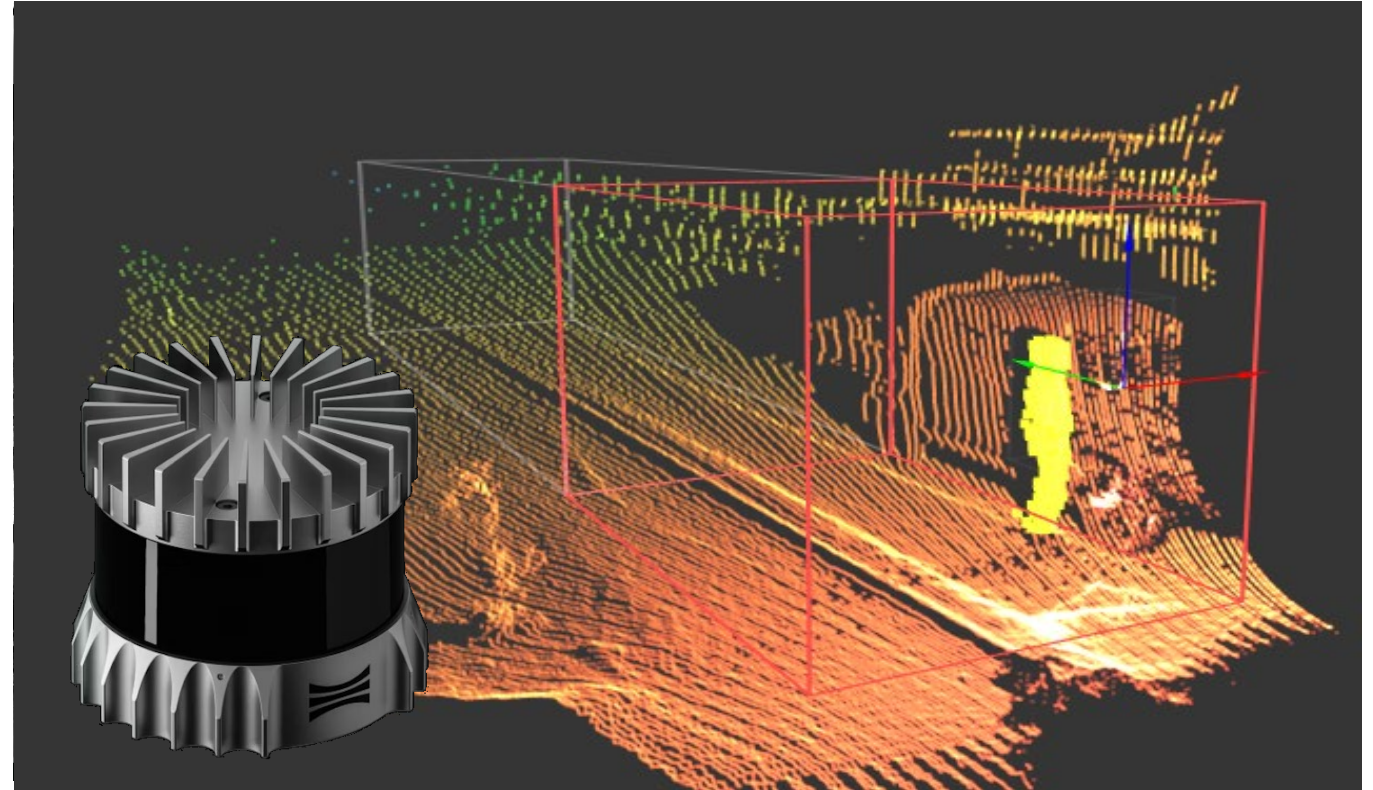
Support

Ongoing remote technical support available.

Technology

System incorporates the latest Ouster Lidar sensors:

- Ultra-Wide 128 Channel High Resolution scanning in 360 degrees providing complete coverage of area in front of the machine.
- Operates in harsh environments (IP68).
- Small, compact unit weighing less than 500 grams.
- Ethernet based communications transmitting over 500,000 points per second.

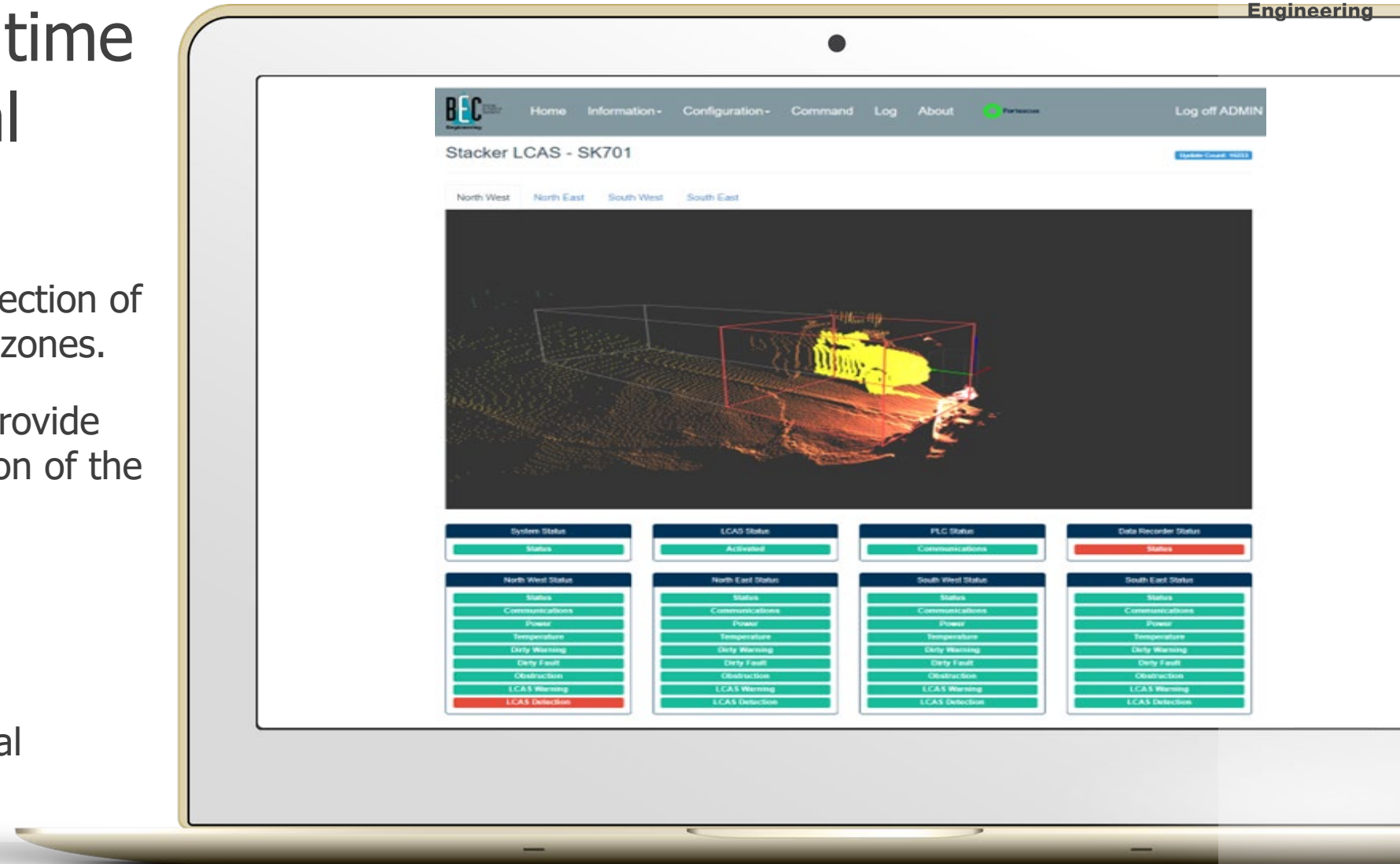


Ouster Lidars have been proven in mapping and scanning applications around the globe.

Web-Based Visualisation

ACS provides real- time display of all critical data.

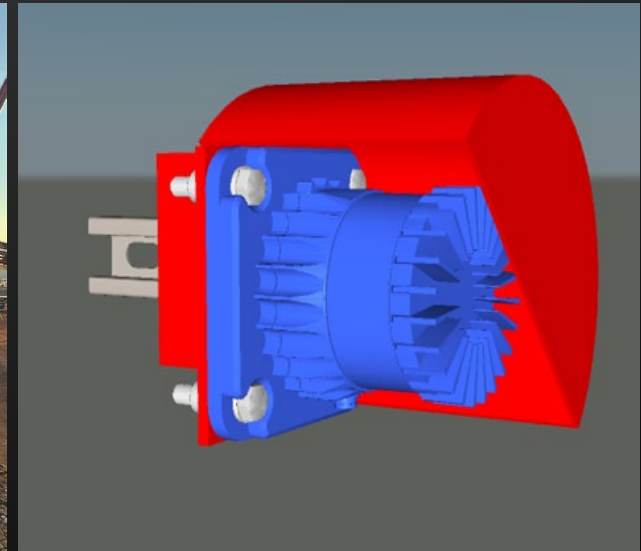
- Realtime visualizations and detection of objects within configurable 3D zones.
- Interfaces to machine PLC to provide critical alarms to stop the motion of the machine.
- Status and alerts.
- Configuration and diagnostics.
- Browser based UI. No additional software to install.



Turn-Key Installation

BEC can provide a complete turnkey solution, including:

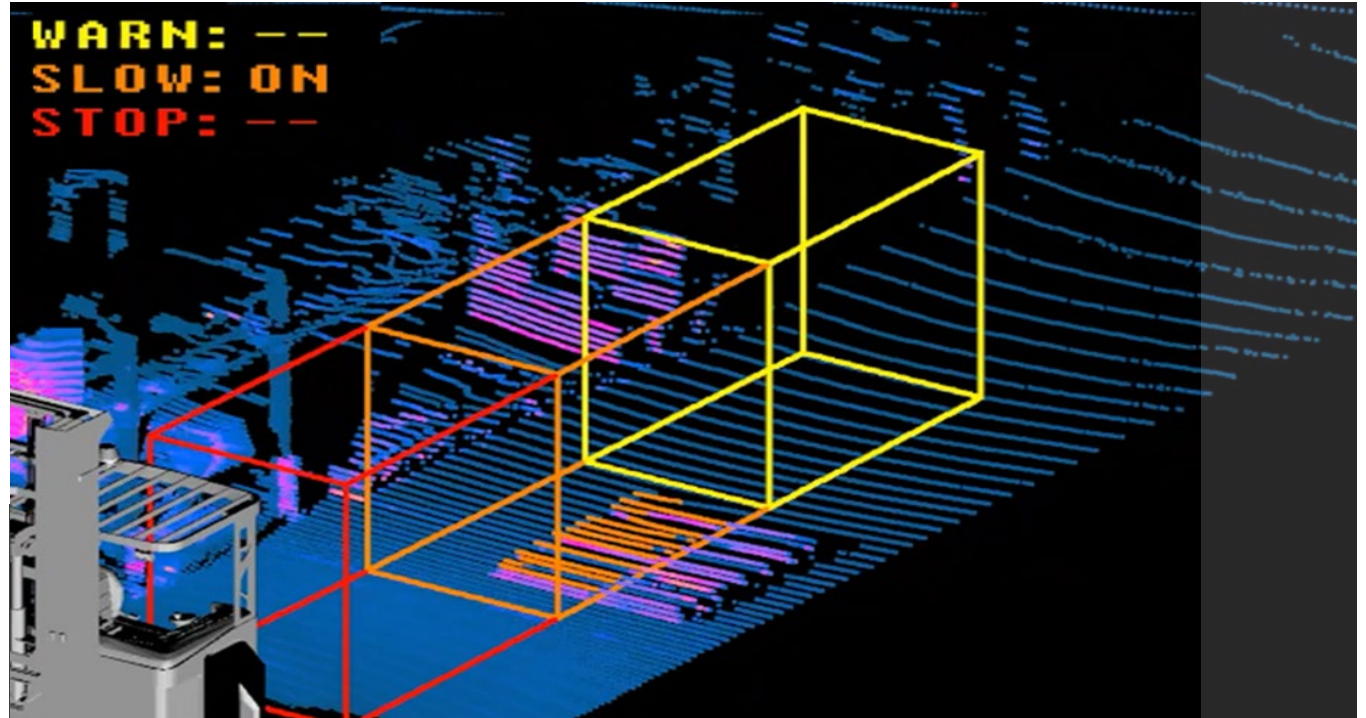
- Full system supply, including mechanical frame and supports.
- Electrical Design and Drafting to Company standards.
- Control Systems Programming.
- Mechanical and Electrical Installation.
- Commissioning and Acceptance.
- Remote Support.



Historical Data Recorder

Installation of the optional central data server provides a repository for each machines ACS data which provides:

- Continuously recording of all scan data from each system
- Multi-user streaming of scan data require only a HTML 5 compliant web browser.
- Time based playback of should an event occur.
- Use industry standard SQL Database
- One time installation and no client licensing.



Each machine system data can be logged to a central server for offline analysis and playback of incidents



BEC Engineering Pty Ltd

Thank You

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