

Impact Recorders

SpotSee's impact and environmental recorders continually monitor and record the shock, vibration and environmental conditions experienced by structures, facilities and equipment during transit, storage and operation. These products record the direction, amplitude, and duration of impacts and internal temperature. Optional sensors record temperature, humidity, atmospheric pressure, tilt and roll. A cellular enabled tracking module is available to pinpoint the location of mishandling or exposure to unfavorable conditions.



SpotBot GL

Delivers tri-axial impact, location, temperature and humidity condition monitoring through cellular and WiFi connectivity. Unacceptable impact events and temperature conditions are visualized through the SpoSpotSee Cloud.



ShockLog Cellular GL

The ShockLog® Cellular GL Impact Recording and Tracking System combines an advanced shock and vibration data logger (the ShockLog 298) with real-time tracking. When a programmed impact level is exceeded, a detailed event curve will be recorded, and the ShockLog Cellular GL module will send a real-time alert letting you know when and where a potentially damaging impact has occurred during the journey. This allows you to act before the shipment is received or plan repairs before final installation of the asset in the field.



ShockLog 298

Records the complete shock curve of up to 870 impact events. Reports peak values (x, y, z), internal temperature and summary data. Options to report external temperature, humidity, tilt, roll, pressure, and GPS coordinates. Software tools provide post-journey data analysis.



ShockLog 248

Records the complete shock curve of the first and 14th most significant impacts. Reports peak values (x, y, z), internal temperature and summary data. Options to report external temperature and humidity. Software tools provide post-journey data analysis.



g-View

A low-cost option ideal for monitoring impact excursions (x, y, z) and internal temperature.

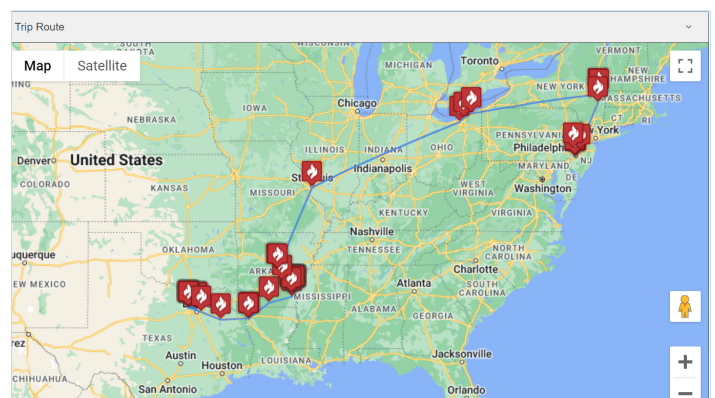
Impact Recorders

Benefits

- Helps identify optimal modes of transportation, routes, packaging, storage options, and operational conditions through full-journey profiling
- Deters improper handling and operation
- Alerts recipients and operators to inspect goods and equipment for potential damage
- Isolates when and where unacceptable conditions occur and aids in the identification of accountable parties
- Allows for corrective action in cases of potential impact, vibration, tilt, roll, temperature, humidity, and pressure extremes
- Pinpoints potential areas for improvement in operational or logistics processes
- Confirms acceptable conditions during equipment operation, shipping and handling, and storage

Shared Features

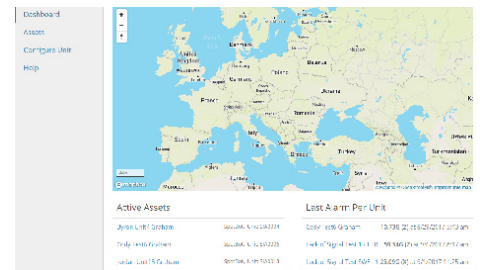
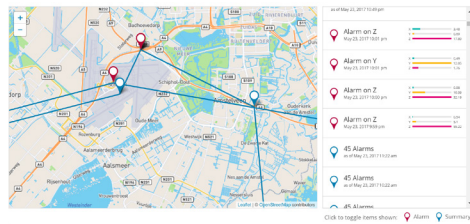
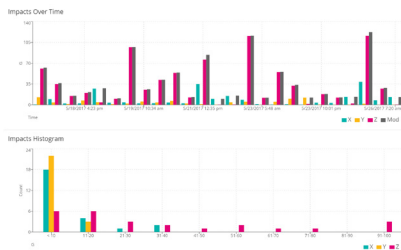
- Self-contained unit design, free of cables and wires
- User-definable alarm levels
- LED lights for visual notification on most devices



The SpotSee Cloud is where trip data is aggregated in real-time. The cloud features visualizations for multiple units. The graphs are easy to read and include data such as specifics of impact with locations, impacts over time, histogram, and temperature.

SpotSee Cloud Features

- Access to data from wherever you are with a secure web portal
- Impact Alarms with g-level and direction
- Real-time reporting and tracking of incidents
- Easy to read graphs
- Temperature Alarming for two temperature thresholds with location of excursion
- Impacts-over-time visualization of each asset
- Histogram the asset's impacts
- Time-temperature graph

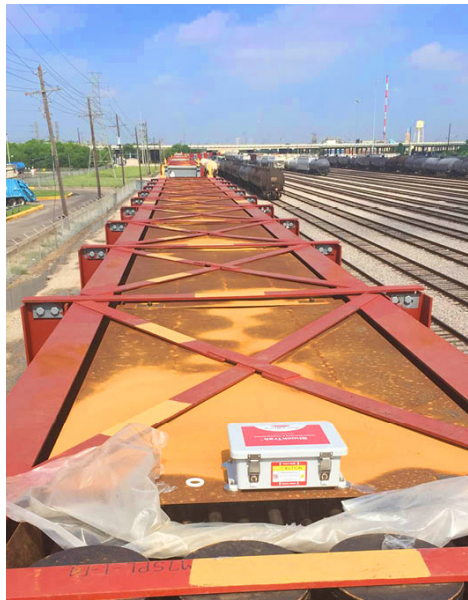
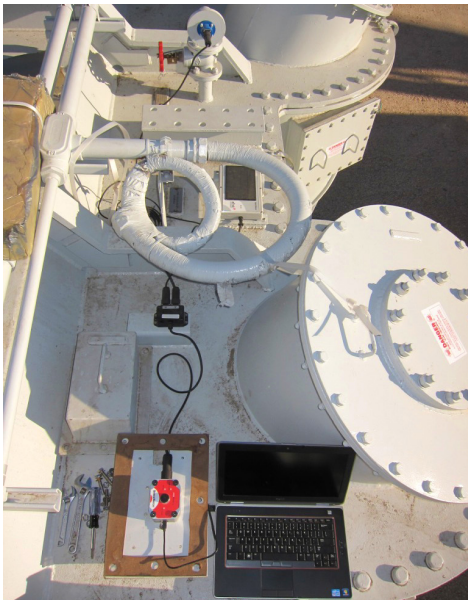


Real-time Reporting

The SpotSee cloud tracks location and impacts in real-time. This information is sent to the cloud at predetermined intervals so you always know the status of your asset.

Detailed Impact Alarm Data

See all your asset alarms including location, time, impact g-level, and direction of impact. The data visualizes impacts over time so you can easily spot the higher outliers. The histogram is a quick view of the units impacts grouped by g-level so you know quickly if there are any potentially damaging impacts.



Feature Comparison Guide

	ShockLog Cellular GL	SpotBot 4G+	SpotBot GL
Environmental Monitoring	Location (Impact, Temperature, Humidity, Tilt and Roll via ShockLog 298)	Location, Impact, Temperature, and Humidity	Location, Impact, Temperature, and Humidity
Amplitude Scale	0-200G (via ShockLog 298)	3-100G	3-100G
Frequency Filter	Programmable (10, 40, 50, 90, 120, 250Hz)	200Hz	200Hz
Battery Life	Up to 45 months	Up to 4.5 years	Up to 4.5 years
Alert	LED, notifications via SpotSee Cloud & e-mail	LED, notifications via SpotSee Cloud & e-mail	LED, notifications via SpotSee Cloud & e-mail
Data Transfer/Communication	USB, Wi-Fi, Cellular	Wi-Fi, Cellular	Wi-Fi, Cellular
Ingress Protection	IP67	IP67	IP67
Location	Wi-Fi sniffing, Cellular	Wi-Fi sniffing, Cellular, GPS	Wi-Fi sniffing, Cellular, GPS

	ShockLog 298	ShockLog 248	g-View
Selection Criteria	Complete journey profiling Expandability for future requirements Vibration (gRMS) monitoring	Full-journey profiling impact recorder at a low price point	Low-cost threshold monitor; simple software with export to Excel
Recorder Type	Event & time slot (max peak)	Event & time slot (max peak)	Event threshold
Standard Measurements	Triaxial acceleration, gRMS vibration, max peak, and internal temperature	Triaxial acceleration and max peak and internal temperature	Triaxial over threshold and internal temperature
Number of Events	Up to 870	Up to 15 (1st plus 14 most significant)	Up to 100 per axis
Amplitude Scale	User programmable: 1g, 3g, 10g, 30g, 100g or 200g	Fixed scale: 10g, 30g or 100g	Fixed scale: 10g or 25g
Frequency Filter	User programmable: 10Hz, 40Hz, 50Hz, 90Hz, 120Hz, 250Hz	Fixed value: 40Hz, 90Hz, 250Hz	Fixed value: 25Hz or 40Hz
Battery Life	Up to 18 months. Two AA size 3.6V lithium batteries recommended	Up to 12 months. One AA size 3.6V lithium battery recommended	Up to 6 months. Single AA alkaline
Expandability	Temperature/Humidity, Temperature/Humidity/Pressure/ Tilt and Roll, GPS Coordinates	Temperature/Humidity	N/A
Alert	LED- running, warning, and alarm	LED- running and alarm	LED- alarm
Data Transfer/Communication	USB & i-Button interface Optional RF interface	USB & i-Button interface	i-Button interface
Ingress Protection	IP67	IP67	IP65