



Hexagon Belt Monitor

The next generation in conveyor belt monitoring

Hexagon Belt Monitor is an advanced radar-based belt volume, speed and alignment scanner designed to optimise material flow monitoring on conveyor belts in all bulk material handling industries. By leveraging cutting-edge radar technology, Belt Monitor provides real-time, precise, and reliable data on conveyor belt performance, enabling operators to make data-driven decisions that enhance productivity, reduce downtime, and ensure operational safety. Belt Monitor transforms conveyor monitoring by combining precision with real-time analytics. It empowers companies to reduce spillage, increase throughput, and ensure safer operations. Belt Monitor provides a modern, efficient, and scalable material flow monitoring solution for material handling operations.

Hexagon's solutions address the diverse needs of operations, from reducing energy consumption to improving safety protocols. With a focus on delivering fast ROI and aligning with ESG priorities, our systems deliver measurable results, ensuring your material handling operations are optimised for today and the future.

Unlike LiDAR or optical systems, radar technology maintains its precision and accuracy even in the most demanding environmental conditions. Its ability to penetrate dust, dense fog, extreme cold, and intense heat makes it an unmatched solution in mining, bulk logistics, and underground operations, where extreme dust, moisture, and temperature fluctuations are common. Hexagon's radar solutions ensure consistent performance and reliability where other systems struggle.

Features

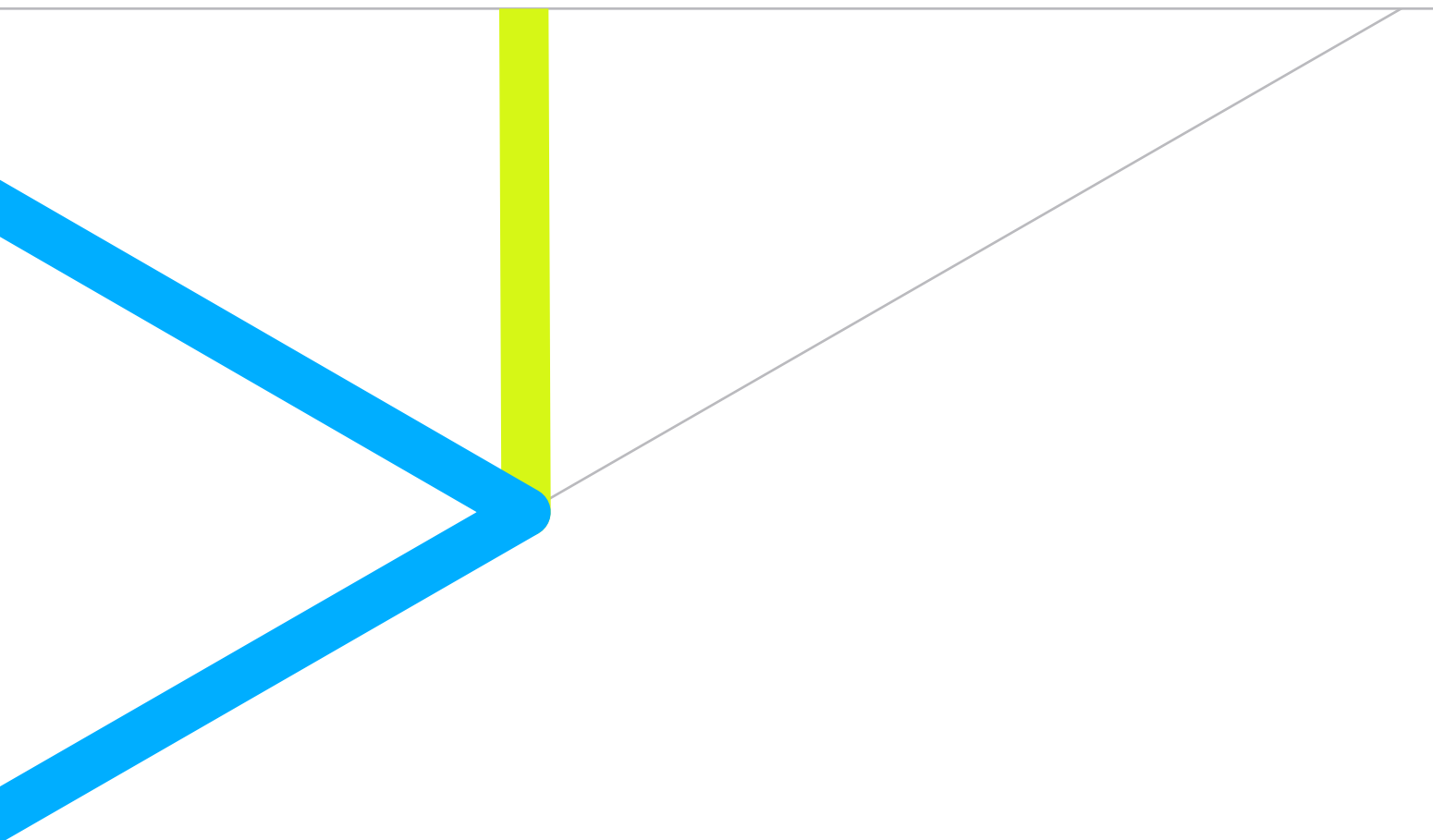
- **High-precision volumetric sensing:**
Measures bulk material volumes, speed and freeboard with high precision, even in harsh environments.
- **Contactless belt alignment tracking:**
Measures the position of the belt at a specific point and is the basis for intervention and optimisation.
- **Contact-free operation:**
Uses non-contact sensing with no maintenance required.
- **All-condition radar reliability:**
Operates reliably under all environmental conditions.
- **Simple commissioning setup:**
Includes self-commissioning instructions and a software wizard that is easy for maintenance technicians to follow.

Benefits

- **Better reconciliation and production control:**
Provides live material flow data, communicated directly to control systems or SCADA platforms.
- **Improved conveyor utilisation:**
Supports efficient load management to help prevent overloading or underutilisation of conveyor systems.
- **Lower maintenance demand:**
A non-contact system not subject to wear and tear, supporting long-term reliability and minimal maintenance.
- **Reduced downtime and energy waste:**
By identifying bottlenecks and inconsistencies in material flow, Belt Monitor helps optimise conveyor usage, save energy, and reduce wear-related costs.
- **Faster deployment:**
Can be commissioned in a single shift.

Included tools

Tools	Key capabilities
Volume	<ul style="list-style-type: none"> • Increase productivity by running belts at volumetric capacity • Improve inventory management (m³) and alignment with surveyor data • Feed control by monitoring material distribution • Increase process knowledge based on reliable data • Improving blending operations by providing material distribution
Speed	<ul style="list-style-type: none"> • Enables precise volume flow calculation as speed of material is measured. In contrast to belt speed encoders and drive speed information Hexagon Belt Monitor considers material slippage • Measure speed can be used for detecting belt slippage (when compared with drive encoder speed) • Measures speed of material or empty belt
Align (belt)	<ul style="list-style-type: none"> • Avoid crash stops due to misalignment • Monitor real-time belt alignment to take preventative measures • Avoid belt travelling over roller edges • Preventative correction of belt alignment (Auto-Align feature in combination with partners) • Avoid belt scraping structural parts • Avoid heat generation and potential combustion (due to misalignment)
Align (freeboard)	<ul style="list-style-type: none"> • Avoid unequal belt load • Avoid overfilling • Reduce unused capacity • Preventative correction of material alignment (Auto-Align feature in combination with partners)



About Hexagon:

Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, and sustainability in everything from manufacturing and construction to mining and autonomous systems. Hexagon's Mining Division connects measurement and autonomy across surface and underground operations, pushing the boundaries of autonomous technology and data insights to help customers optimise resources and move material safely.

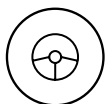
This offering includes solutions to support:



**Evaluation,
Planning
& Design**



Drill & Blast



Load & Haul



**Survey &
Monitoring**



Processing



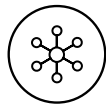
Reclamation



Safety



**Autonomous
Operations**



Insights

Connect with us

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