COMACT

Use cases

Smart Vision's gap control for optimized payback at log singulation

INTRODUCING SMART VISION: AI-POWERED PRODUCTION MONITORING

Smart Vision is a state-of-the-art, AI-powered monitoring system designed to revolutionize production line operations by delivering unparalleled precision in managing log singulation and gap control. Leveraging Comact's proven expertise, it delivers exceptional reliability and accuracy. It also requires minimal maintenance, making it a standout solution for optimizing efficiency.

Key features

AI-powered monitoring: continuously analyzes 100% of operations, delivering critical data to the PLC to optimize efficiency and accuracy

Versatile applications: suitable for monitoring, optimizing, and validating process flows across various use cases

Built on expertise: developed using the robust AI platform behind Comact's vision scanners, leveraging decades of industry knowledge

Real-time anomaly detection: quickly identifies production issues, triggering immediate alerts or line stoppage to minimize downtime

Why choose Smart Vision

Enhances production consistency by intelligently optimizing the gap based on both current and next logs' size, reducing gaps to a minimum compared with traditional systems

Ensures consistent detection regardless of log shape

Minimizes downtime by detecting and addressing anomalies early

Increases safety by detecting objects in danger zones and raising alerts to prevent accidents

Smart Vision is the ideal solution for facilities aiming to streamline operations, improve safety, and achieve peak performance with minimal upkeep.

How it works

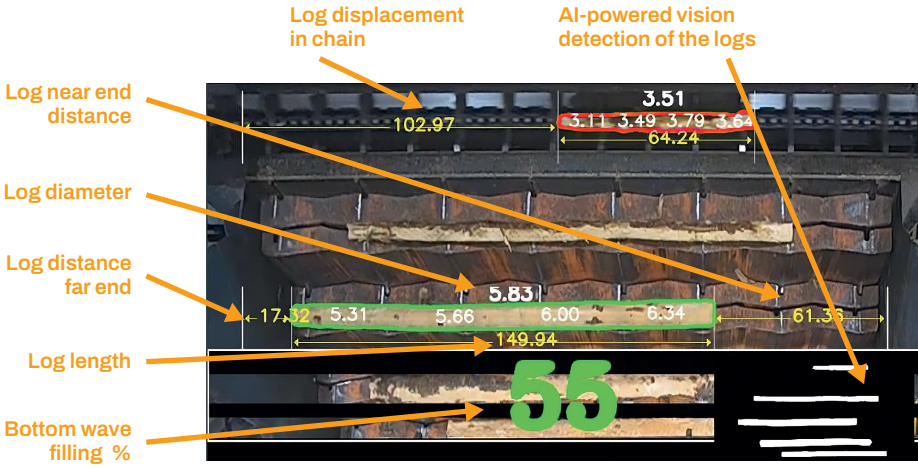
Manages deck accumulation and the log singulator's pocket, dynamically adjusting speed in real time for optimal flow efficiency

Measures log position and size in the log singulator with precision

Optimizes sawline feed rate by adjusting log gap on the fly based on the previous log's size

Detects off-standard logs before they reach the sawline, preventing processing issues

Detects issues such as double logs or sideways logs, sending alerts to the PLC which then determines the appropriate action to maintain smooth and efficient operations



Example of a log too short being rejected from the sawline by Smart Vision

Payback estimation across three implementations

Before adopting Smart Vision, all three mills relied on standard gap control systems that typically used a combination of photocells and lasers, a common industry practice.

Customers 1 and 2

By transitioning to AI-driven Smart Vision, these mills optimized gap control in real time, dynamically adjusting log spacing based on the previous log's size, ensuring a more precise and consistent flow through the line. Additionally, Smart Vision manages deck accumulation before the log singulator, improving flow efficiency and accumulation management for smoother operations.

- Customer 1 (southern yellow pine) reduced its average gap by 5.6 inches.
- Customer 2 (SPF) achieved an even greater reduction of 7.1 inches.
- Both mills saw lower standard deviation, leading to more consistent and stable gap management.
- Unlocks potential for increased revenue opportunities worth several hundred thousands of dollars—without extending production time.

	Customer 1	Customer 2
Type of mill	Dimension	Dimension
Sawline mode	Scan and set	Scan and set
Gap reduction using Smart Vision (in.)	5.63	7.11
New average gap (in.)	145.1	115.69
Production increase (%)	1.67	2.46
Average volume per log (FBM)	192.84	173.88
Potential for increased revenue at $400/MFBM	772,090	907,392
Potential for increased revenue at $500/MFBM	965,112	1,134,240

Customer 3

Customer 3 is a highly efficient stud mill operating in batch mode, already maintaining an impressively tight average gap of 50.1 inches. While room for improvement was limited, the Smart Vision gap control system still enabled them to steadily reduce their average gap by three quarters of an inch. This improvement not only delivered a rapid payback but also created opportunities for increased annual production.

This case demonstrates that even highly efficient and consistent operations can still achieve further optimization with AI-driven gap control, unlocking additional potential for throughput and productivity.

By transitioning from typical gap control to AI-driven Smart Vision, these mills achieved significant efficiency gains and rapid ROI, demonstrating the system's proven value in real-world operations.

	Customer 3
Type of mill	Stud
Sawline mode	Mostly batch
Gap reduction using Smart Vision (in.)	0.74
New average gap (in.)	49.36
Production increase (%)	0.44
Average volume per log (FBM)	25.35
Potential for increased revenue at $400/MFBM	265,107
Potential for increased revenue at $500/MFBM	331,384

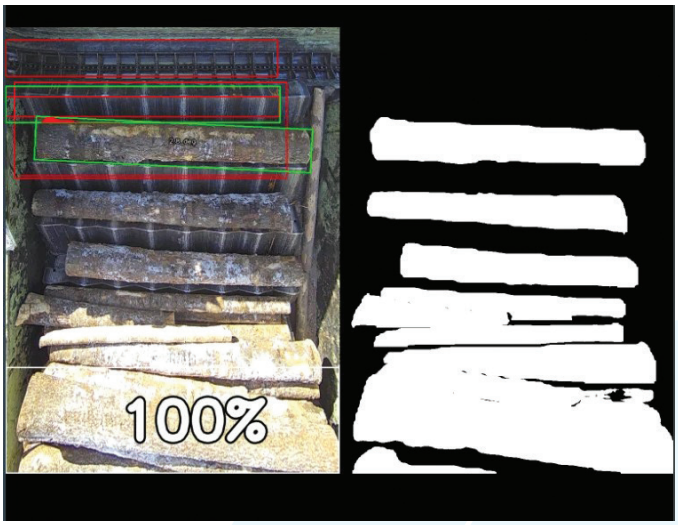
What about your mill?

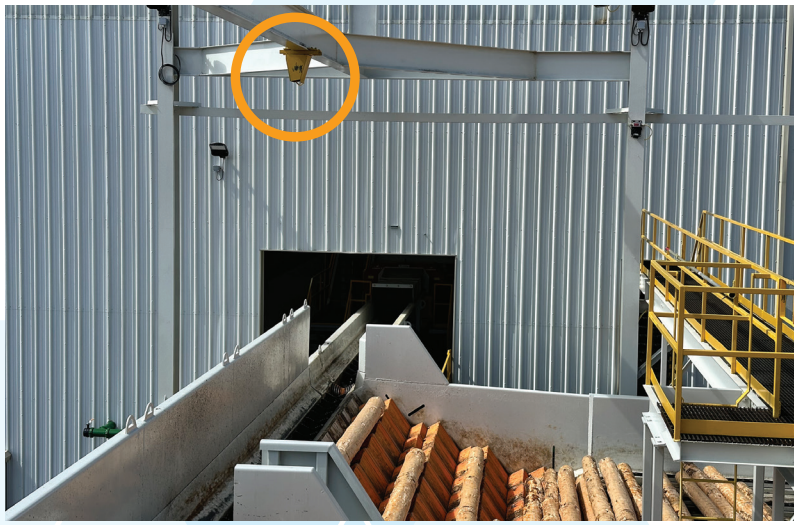
What is your average gap, and how much could a 1-, 2-, or even 5-inch reduction impact your bottom line? Contact us today to explore how Smart Vision can optimize your operations and unlock new revenue opportunities.

Built for the outdoors and tough conditions

Outdoor log singulators must withstand extreme weather conditions such as heavy rains, snowstorms, and fluctuating light levels, which can impact vision systems. Unlike other systems, Smart Vision's remains fully operational in these challenging environments thanks to its high-quality camera and advanced AI algorithms, ensuring reliable performance no matter the conditions.

Additionally, Smart Vision requires minimal maintenance as it does not need regular cleaning; debris have no impact on its detection capabilities, setting it apart from standard systems.





Reliable log detection and accurate sizing regardless of light variation and snow accumulation on logs

BE MORE CONFIDENT IN HITTING YOUR PRODUCTION TARGETS

Smart Vision is the most accurate solution for managing deck accumulation and maintaining a constant flow, ensuring optimal log singulation for efficient sawline feeding. With AI-driven precision, it helps you optimize throughput and maximize results.

Ready to take control of your production flow?
Contact us today to learn how **Smart Vision** can transform your operations!

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