

YOUR CORRUGATED ADVANTAGE





The Challenge

As economic uncertainty increases, box plants are urgently seeking effective strategies to cut costs, streamline operations, and mitigate risks. A significant and unpredictable expense for box plants is the impact of unplanned downtime.

Unplanned downtime is frequently characterized by unexpected and costly interruptions due to machinery failures, human errors, or issues in the supply chain. Its unpredictable nature makes it significantly more expensive, costing businesses 35% more per minute compared to planned interruptions. According to research by Aberdeen, companies on average lose approximately \$260,000 per hour due to downtime. Unplanned downtime poses a critical financial strain and should be a top concern for box plants worldwide.

The Industry 4.0 Solution

Auxiliary industries like agriculture, oil and gas, aerospace, and automotive embrace Industry 4.0 technologies, including the Industrial Internet of Things (IIoT), reducing maintenance costs by approximately 30 percent and eliminating equipment breakdowns by up to 70 percent. With advancements in artificial intelligence (AI), these industries are also adopting this technology to achieve unprecedented efficiency and control over their operations.

Recognizing the success of Industry 4.0 technologies across other industries, SUN Automation Group® created Helios, the only OEM-agnostic IIoT solution built specifically for the corrugated industry. Leveraging 40 years of industry-specific knowledge, combined with advanced machine learning technology, the primary function of Helios is to eliminate unplanned downtime, thereby saving box plants hundreds of thousands of dollars annually.

Identifying the Right Data

Collecting machine data is the first step. The next critical step is interpreting the data in a way that is truly useful for box plants. Standard IIoT systems present vast amounts of data indiscriminately, resulting in reporting that is cluttered with insignificant and distracting information.

This is what differentiates Helios from other IIoT solutions. Helios is meticulously designed to identify the “right” data, effectively distinguishing and discarding the “noisy” data that do not specifically influence corrugated machine performance. By honing in on the specific operational, tooling, and mechanical needs unique to the corrugated industry, Helios delivers measurable results immediately, quickly reducing downtime and increasing profitability for box plants.

Helios Continues to Learn Your Operation

Through Helios’ user-friendly interface, operators continuously refine Helios to fit their individual processes. As a result, Helios is constantly improving in its ability to detect important anomalies, leading to larger and larger cost savings over time.

In addition, with a Helios subscription, box plants gain access to SUN’s dedicated Helios team, who can provide deeper data analysis and further tailor the system to optimize performance and ensure seamless integration into existing operations.

The Helios team is continuously enhancing the precision and user-friendliness of Helios, while also expanding its customization capabilities, ensuring Helios is optimally tuned to the unique needs of every customer and plant.



Helios In Action

1



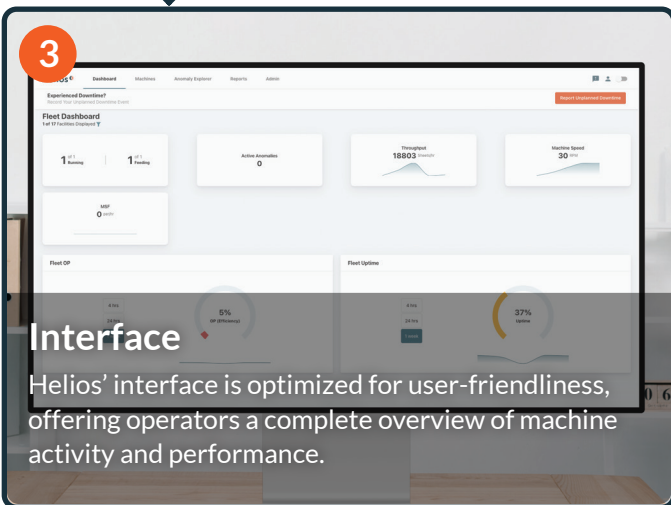
Set-Up
Helios is already included with all applicable SUN equipment. As an OEM-agnostic software, Helios seamlessly integrates into your existing ERP.

2




Hardware & Sensors
If needed, the Helios team will install sensors on your equipment to capture machine performance metrics with 100% accuracy.

3



Interface
Helios' interface is optimized for user-friendliness, offering operators a complete overview of machine activity and performance.

4



Anomaly Detection
Helios detects anomalies in real-time, immediately notifying the operator to enable swift intervention.

5



Machine Learning Improvements
Helios learns more about your machinery and production line over time, continuously creating more accurate anomaly-detection algorithms.

6



Full Plant Integration
Helios is implemented across all end-of-line converting machinery, including Rotary Die Cutters, Flexo-Folder Gluers, Printers, and Feeders.

Make Your Data Work For You

At a Plant-Wide Level, Helios:

Boosts Plant Productivity

Helios enhances plant productivity by systematically analyzing production bottlenecks and providing intelligent solutions to resolve them. Through continuous monitoring and AI-driven insights, it identifies potential challenges and areas for improvement, leading to better resource utilization and more efficient operations.

Minimizes Unplanned Downtime

Helios keeps machines running smoothly by utilizing predictive maintenance algorithms and proactive parts ordering, thereby reducing downtime. Machinery can be maintained before critical failures occur, and necessary parts are available exactly when needed, resulting in reduced unplanned stoppages and more predictable operational flow.

Maximizes Output

Helios allows for optimal asset utilization through improved maintenance and failure prediction. Understanding the exact time to change key parts and providing real-time notifications of potential anomalies enables the maintenance team to work proactively rather than reactively, ensuring machinery consistently operates at peak efficiency.



At an Operator Level, Helios:

Prevents Machine Failures

Helios predicts and prevents machine failures through real-time monitoring and intelligent analysis. It detects subtle anomalies that might be imperceptible to human operators and takes corrective actions or alerts the maintenance team. This proactive approach prevents costly disruptions and ensures consistent product quality.

Improves Operator Performance

Helios enables operators to identify areas of inefficiency, receive tailored training, and boost their performance. Through visually representing setup times and identifying specific areas of slowdown, Helios provides targeted feedback, helping operators fine-tune their practices.

Embedded Machine Learning

✓ Access to Helios API (unlimited)

✓ Real-time visualization and analytics, unlimited (machine-dependent)

✓ Maintenance Predictions

✓ Historical analytics with reporting for offline analysis Events Reporting (unlimited tags)

✓ Comparative analysis of multiple measures

✓ Anomaly Detection

✓ Events Reporting

✓ Automatic parts order and service fulfillment (with subscription)

✓ Advanced predictive analytics with real-time prediction of component failures & required maintenance

✓ Machine State Modeling

\$20,000 PER PLANT/YEAR*

*SUN offers an enhanced service package for an additional \$5,000 per year, which includes Steady Analytics Monitoring to further optimize machine performance.

Is Helios Right For You?

Here are the top questions to consider:

- 1 Is your plant losing crucial revenue due to unplanned downtime?
- 2 Has your current maintenance strategy effectively minimized downtime in your operations?
- 3 Is immediate detection and response to machine anomalies critical to your operations?
- 4 Are you interested in integrating AI and machine learning technologies to enhance operational efficiency?

Experienced Downtime?
Your Unplanned Downtime Event

Dashboard

Facilities Displayed ▾

1 of 1 Running | 1 of 1 Feeding

Active Anomalies
0

Throughput
18803 Sheets/hr

MSF
0 per/hr

OP

4 hrs | 24 hrs | **1 week**

5%
OP (Efficiency)

Fleet Uptime

4 hrs | 24 hrs | **1 week**

Ready to Learn More?

visit www.sunautomation.com/helios



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