

General Manufacturing

Hanwha Vision: Creating Smarter, Safer & More Productive Plant Floors



By investing in the right AI-enabled video surveillance solutions, manufacturers can take big leaps toward improving plant floor productivity, workplace safety, compliance reporting, and supply chain efficiency.

Reducing Downtime: With Proactive Equipment Health Monitoring

Unplanned downtime is a killer for any manufacturer. It disrupts productivity and reduces profitability. In worst case scenarios, it can negatively impact brand reputation, total product availability or product availability timelines.

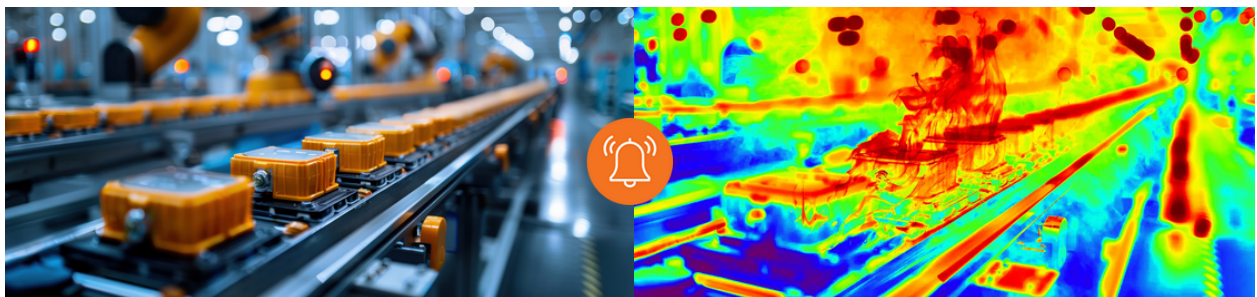
According to the International Society of Automation, unplanned downtime can cost manufacturing plants 5-20% of their annual productivity.



Today's advanced AI-enabled video surveillance solutions can play a vital role in limiting unplanned downtime.

For critical plant equipment - like broaching, drilling, laser cutting and welding machines, or conveyor belts – AI radiometric thermal cameras are an ideal solution to ensure safe operating temperature limits are not exceeded.

Temperature changes are often the earliest warning sign of current or future equipment problems. If overheating occurs, production supervisors are immediately alerted and can use the insights to perform the necessary preventive maintenance tasks before a more costly breakdown occurs, and/or leads to unplanned downtime.



In addition, this information can help maintenance professionals determine the optimal proactive equipment maintenance procedures. For example, when to schedule component and system checks, number of operation hours between fluid interval changes (lubricants, greases), and more.

Other areas of the plant floor where AI-enabled video surveillance solutions can optimize factory uptime is by identifying workload stresses for assembly workers and even manufacturing robots.

While it's easy to imagine robots working perfectly all the time, that isn't always the case.

According to a report in the International Journal of Performability Engineering, robot system failure occurs approximately 12% of the year on average. There are varying issues that can cause failure. However, many of them can be reduced through proactive monitoring that identifies warning signs at the earliest stages.

By analyzing continuous data from sensors, AI-enabled video surveillance solutions can help prevent specific robots from being overloaded, reducing wear and tear on their mechanical parts, and the risk of failure or downtime.

A Safer Factory Floor

Properly positioned AI surveillance cameras enable manufacturers to identify real-time workplace hazards such as slip-and-fall incidents, improper lifting of heavy materials, poor handling of hazardous materials, or employees neglecting to wear Personal Protective Equipment (PPE).



Another key area where safety can be improved with the right AI video surveillance solutions is improper or unsafe forklift operations, which is one of the leading causes of workplace injuries and death.

Improper or unsafe forklift operations is one of the leading causes of workplace injuries and death. In many countries, it's estimated that forklifts are involved in more than 5% of workplace-related serious injuries and more than 10% of workplace-related deaths.

Today, there are increasingly sophisticated and precise AI applications being developed and incorporated into intelligent surveillance cameras. This type of integrated solution can help manufacturers to better protect employees, and dramatically reduce forklift-caused accidents, compliance infractions, and costly legal expenses.

For example, our Hanwha Vision team recently introduced a Smart Factory solution set that combines our proven video surveillance technologies with proprietary software and AI analytics to monitor every part of a forklift's operations.

If a driver is going over the pre-designated safe forklift speed limits, he/she will receive an instant notification and warning to slow down. These alerts are logged and sent to security professionals who are monitoring the factory or plant floor either onsite, or from a remote location, enabling them to always have immediate access to this important safety information.



When a forklift is parked in the wrong location, similar alarms will be triggered. Also, valuable Proximity Detection notifications ensure that there is always a safe distance maintained between a person and a forklift, between multiple forklifts, or a forklift and a piece of equipment or structure, like tall columned shelving stacks.

Improved Compliance & Reporting

Maintaining and reporting on compliance with crucial maintenance, operating, and sustainability-related regulations, is essential for successful manufacturers. However, it's often a time-consuming process.

By providing detailed logs and reports of monitored environments, AI-driven surveillance systems can help companies enhance their compliance efforts and simplify compliance reporting efforts. The real-time alerts help document every access attempt or unsafe action, like personnel not wearing proper personal protective equipment (PPE).

Automated reports, with this level of transparency and accountability, enable manufacturers to accurately assess their team's overall compliance with industry and safety regulations, and reduce time and money spent on compliance reporting efforts.

They can also help validate the effectiveness of current training efforts, or identify areas for which further training are needed.

Logistics Solutions: Simplifying Parcel Shipping & Tracking

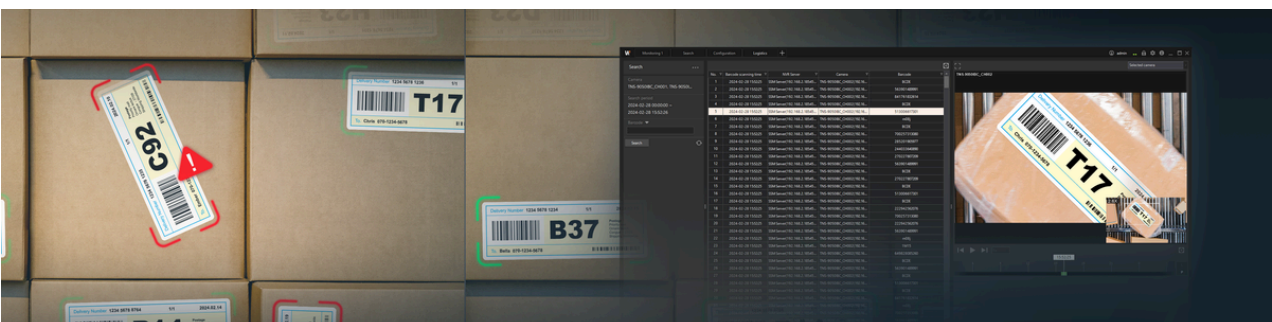
We all know that shipping and delivery errors occur for many reasons.

Packages can be lost, damaged, delayed, or stolen. They may be addressed to the wrong customer, or packed with incorrect and/or missing items. Any of these issues can create negative attention for a brand - and, more often than not, will produce very uncomfortable customer experiences.

Manufacturers like Hanwha Vision, have been creating new options to support advanced logistics automation, integration, and reporting.

These integrated AI-powered surveillance solutions cover every part of inbound and outbound package delivery, including receiving, handling, shipping, and tracking. They quickly match videos with work history, enabling operators to respond effectively to customer claims for errors, omissions, or damage throughout the packing process.

Edge-based AI cameras can oversee the safety of dock loading and unloading, helping operators to minimize hazards and easily document and report on compliance with all safety and industry regulations.



CLOSE:

For manufacturers, making every second count is essential. Lost productivity kills profitability. Poor safety practices and outdated security technologies invite danger in the form of intruders and bad actors who may steal your valuable equipment, pose threats to employee safety, and/or disrupt your operations in other unforeseen ways.

By partnering with Hanwha Vision and taking advantage of its cutting-edge AI-powered surveillance technologies, manufacturers can better protect their people and facilities, ensure compliance with demanding regulations, and maximize productivity across their operations.

Learn how Hanwha Vision can give your team the competitive edge you need. [HanwhaVision.com](https://www.hanwhavision.com)

