Envigilant™ Systems

Unlocking the Value of Your Manufacturing Data

Manufacturing challenges

Advancements in manufacturing technology have allowed companies to reduce process times and material wastage while increasing product quality and profitability. However, greater system complexity and the ability to produce items to exact tolerances requires close monitoring of each manufacturing step in order to avoid stoppages or quality issues that might occur at any point in the process.

Manufacturers need a better way to understand how well their complex manufacturing cells are performing by turning the masses of sensor-derived data into meaningful insights using data analytics and visualization tools right on the factory floor. If manufacturers could be alerted to process trends and out-of-band abnormalities before an event occurred, predictive maintenance or other appropriate interventions could avoid more costly repairs and lost production.

The solution is at the edge

Traditional data mining solutions typically require all collected data be sent to a proprietary service or enterprise Cloud for storage, processing and analytics. Not only can this result in high WAN traffic costs, but the added latency of Cloud-based solutions is insufficiently responsive for highly complex processes that need almost real-time analytics.

An Envigilant Systems integrated edge computing solution not only ensures efficient process response and real-time insights, it also guarantees the customers ownership of data, easy data exchange and full project management of the engineering and services teams.
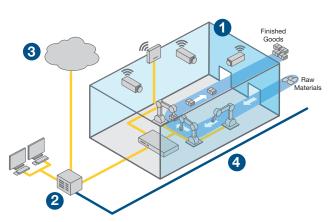
For a free consultation, visit www.envigilantsystems.com

The Envigilant Systems Solution

Utilizing our 30+ year expertise building secure, reliable networks, Envigilant Systems provides resilient, edge-based industrial IoT solutions tailored to meet demanding requirements. The edge solutions provided by Envigilant Systems differs from what others offers – by delivering true edge computing instead of simple gateway devices – the bring the processing power to where it's needed and making it available to process engineers and manufacturing floor personnel.

For manufacturing customers, the Envigilant Systems team will work closely with process engineering teams to fully understand the manufacturing processes and current data architecture and specific requirements for the customized solution. The Envigilant Systems design group will develop, engineer, test and deploy the solution both in an engineering lab and onsite at the cell's final production location.

For example:

1. Manufacturing cell. All machines, sensors and cameras are connected over a secure, industrial grade wired and wireless data network.

2. Envigilant Edge Compute Platform (ECP) featuring scalable compute and storage resources for private cloud hosting of analytics and visualization tools.

3. Secure connection facility data center or cloud.

4. Facility operations network.

Envigilant Systems manufacturing solutions deliver maximum production output by minimizing process interruptions from unexpected process deviations or mechanical events. The solutions reduce stoppages and material wastage, which increases profitability production lines and factories as a whole. Additionally, sensor data can be collected to provide our customer's data scientists with new insights and opportunities for further process improvements.