

CASE STUDY

Vision Inspection System Supports Medical Device Label Compliance for Global Manufacturer

SEGMENT

Integration

DIVISION

Sensors Incorporated

CUSTOMER

Medical Device
Manufacturing
United States

This large-scale medical device manufacturer has partnered with Tavoron's Sensors Incorporated division for more than 40 years. During this time, we've provided a broad range of automation components and services from sensors and cables to advanced vision systems and onsite programming.

THE CHALLENGE

When the FDA introduced new regulations requiring medical device labels to include specific traceability data, the customer faced pressure to adapt quickly. The labels not only needed to be applied accurately, but they also had to be verified by automated inspection systems to ensure legibility and compliance.

Early attempts to integrate off-the-shelf components internally proved difficult. With tight compliance deadlines and multiple departments including manufacturing, quality, and marketing involved, the customer needed a partner who could own the solution from both a technical and coordination standpoint.

THE SOLUTION

Tavoron's Sensors Incorporated team designed a complete vision inspection system tailored to meet the customer's unique regulatory and operational needs.

The solution included:

- Cognex Insight Camera
- CCS square LED ring light
- Moritex lens and Cognex/Murr cabling
- Custom stainless-steel mounting bracket to preserve fixed alignment
- Electrical schematics and STEP mechanical models to assist internal teams

To streamline implementation and support future maintenance, our engineers built the program using the customer's preferred template, allowing in-house engineers to follow and troubleshoot the logic with ease.

IMPLEMENTATION

This was a true cross-functional effort involving vision engineers, controls (PI&CS), mechanical engineering, quality, and marketing teams. While standardizing label content and system design across multiple manufacturing lines proved challenging, especially as different teams were involved in each implementation, we delivered repeatable systems through hands-on training and consistent documentation.

OVERVIEW

Technology

- Cognex Insight camera
- CCS LED ring lighting
- Moritex lens
- Cognex and Murr cabling
- Custom-fabricated stainless-steel bracket
- Electrical and mechanical CAD deliverables

Services

- Vision system design and programming
- Engineering support
- Documentation and modeling
- Onsite consultation and troubleshooting

Return on Investment

- Compliance with federal labeling regulations
- Reduced quality issues from misprinted labels
- Standardized system now deployed on 50+ lines
- Streamlined implementation across multiple departments

THE RESULTS

The vision system enabled the customer to meet FDA labeling compliance requirements and reject improperly printed labels in real time improving quality assurance and reducing rework.

- Achieved full FDA compliance for medical device labeling

- Improved quality control through automated label inspection
- Scaled across 50+ production lines over six years and counting
- Positive feedback on engineering documentation and deliverables

CUSTOMER FEEDBACK



“The level of support and documentation we received made a huge difference. It wasn’t just a vision system, it was a complete, well-engineered solution that our teams could understand, implement, and scales.”

— Senior Engineer,
Global Medical Device Manufacturer



LOOKING AHEAD

Since the first implementation, the customer has continued to standardize new production lines with our vision system, proving the lasting value of our scalable, supportable approach to compliance automation.

EXPLORE VISION SYSTEMS

Looking for a partner to help you navigate regulatory changes with confidence? Talk to a vision expert at Sensors Incorporated: sensorsincorporated.com



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