LOGISTIC

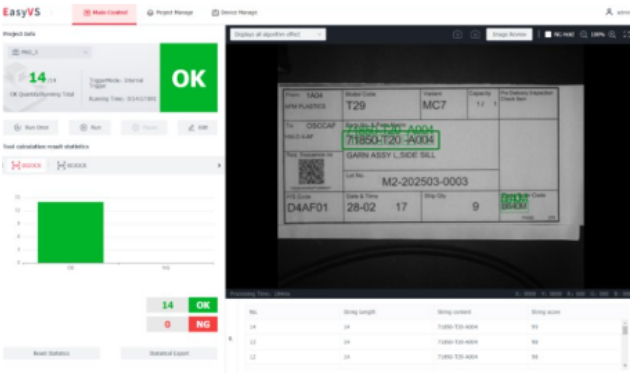
improving OCR Accuracry for Printed Label Quality Control

Problem Identified

The manufacturer was facing inconsistencies in reading printed label sheets during the inspection process. The main challenges included unstable Optical Character Recognition (OCR) performance, especially when labels were not positioned consistently. In some cases, the reading was split into multiple parts due to software limitations, causing incomplete data capture.

Additionally, any deviation from the designated inspection region resulted in a “No Good” (NG) status, leading to rechecks and slower production throughput. These issues risked quality control accuracy and increased operational delays.

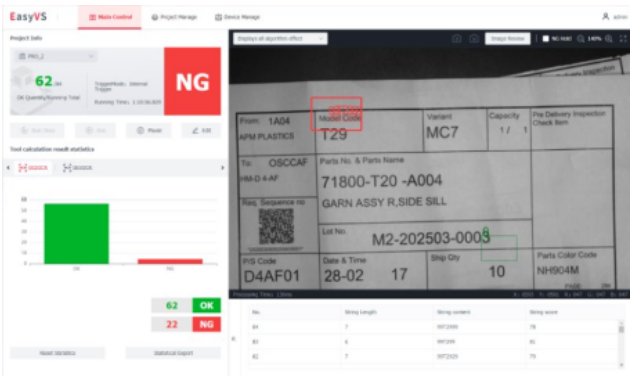
Solution Provided



An OCR inspection system was implemented to automate and enhance the label-reading process. The system was designed to capture printed label data accurately within two designated regions per scan, ensuring higher precision. Recommendations were also given to maintain consistent label placement for optimal recognition.

This approach provided faster, and more reliable readings compared to manual inspection, reduced human error, and offered immediate NG detection for out-of-region prints. The solution combined advanced OCR algorithms with targeted positioning

Results & Summary



After implementing the optimized OCR solution, the system achieved consistent and reliable text recognition across multiple samples, significantly reducing “NG” occurrences caused by off-region printing. The improved accuracy led to smoother quality control operations and reduced inspection rework. Measurable improvements were observed in inspection pass rates and overall process stability.

This case demonstrates how targeted OCR calibration in manufacturing can enhance inspection efficiency, minimize defects, and maintain product labeling standards.