

SOLUTION

- MELSEC-Q Series PLC
- GX Works2 Software
- GT27 HMI

ADVANTAGES

- Unified HMI (machine control and vision control)
- Easy to expand, customize and modify
- Expandable for future needs
- Intuitive operator interface

BENEFITS

- Increased performance and robustness
- Decreased engineering time/system
- Increased reliability



“The Mitsubishi Electric platform has taken the kmV product offerings to the next level. We are able to maintain various pricing points with one single source control platform. Additionally switching between machine control & vision control is seamless and clean.”

– Ryan Kralka, kmV iSight Systems

Background

Located in Rockford, Illinois, kmV is a manufacturer and installer of automated vision inspection equipment for blow mold, preform and injection mold-container manufacturers, as well as the food, beverage, pharmaceutical, packaging, personal care, automotive and household products industries. kmV has been building turnkey bottle inspection equipment for more than a decade with more than 65 years of collective experience. kmV is proud of their detailed application assessment process and partnership with their customers.

Challenge

kmV wanted a new control platform for their products that reduced software engineering and introduced visual display control in-line with the vision control system more seamlessly.

The previous solution was a dual interface system (one interface functioning as the machine HMI and an external touch panel PC to interface, control and program the machine vision aspects of each system). kmV needed a platform to mesh with their various product price points, the ability for structured programming, future expandability, integration with their precision conveyance offerings, and multiple levels of product offerings.

Solution

kmV's various systems employ Mitsubishi Electric Programmable Logic Controllers (PLCs), Variable Frequency Drives (VFDs) and Human Machine Interfaces (HMIs). kmV chose the Mitsubishi Electric platform because of the extensive selection of products and the ability to maintain kmV's pricing strategy throughout its product line. Additionally, the Mitsubishi Electric platform features an integrated automation and control system designed for future expandability. kmV also required robust integration with industrial PCs for seamless control of the machine's vision inspection parameters.

Results

With Mitsubishi Electric's flexible MELSEC-Q Series modular PLC, GX Works2 configuration and programming software and the GOT2000 Series GT27 HMI, kmV successfully revised their machine's controls and interface platforms. kmV iSight currently builds each system with the Mitsubishi Electric platform, resulting in 40 fewer engineering hours. This is a direct result of using the structured programming capabilities available in the GX-Works2 PLC programming software package.

kmV also used Mitsubishi Electric function blocks extensively to encapsulate functionality, allowing for a reusable/resalable structure. The Mitsubishi Electric GT27 HMI offers an intuitive visualization interface that offers effortless switching between the machine's vision interface and control systems.

The Mitsubishi Electric platform offers seamless integration with other kmV equipment, such as precision conveyance and container handling equipment as well as provides portable programming to save countless hours of potential re-engineering.

