PROJECT PROFILE
Conveyor Control System
Hampton Products International

Client background

Hampton Products operates out of Lake Forest CA and is a manufacturer and supplier of hardware, lighting, and security products. They serve key clients such as Walmart at a large scale and need to be able to respond quickly and accurately to large order placements.

Project background

In 2007, EA upgraded Hampton's original conveyor control system which consisted of one PLC and three PCs with a simplified and redundant PC-based control system that leveraged remote IO and barcode readers.

Ten years later, the system continued to run reliably with little downtime but the control system vendor had discontinued the software and would be ending support. Since Hampton was also migrating to a new warehouse management system, they contracted EA to upgrade the entire conveyor control system to a modern platform that would integrate with the WMS.

EA solution

EA presented a solution to replace the Think & Do PC-based system with a Modicon M340 PLC with a Citect HMI. The biggest challenge within the project was designing a hardware and software platform to handle a high-volume of high-speed SQL transactions and rotary encoder input while remaining compatible with the existing remote I/O.

First, EA executed a design project and tested several solutions. A combination of M340 PLC, Schneider's OFS server, and Ignition SQL Bridge Module provided the most robust solution. Engineers reduced startup risk by designing, configuring, and testing the system on Hampton's offline test platform before implementing it on-site. The system now runs at full capacity and provides a flexible and easy to support solution.

Project Manager

Paul Rahmanian

Project Technical Lead

Adrian Leon

Key Insights:
- Integration between Citect SCADA, M340 PLC, remote IO, and Microsoft Dynamics 365 Database
- High-volume SQL transactions into a PLC

Key Technologies:
- Citect SCADA
- Modicon M340 PLC
- Ignition SQL Bridge Module
- Schneider OFS module

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