

Modernization of Foxboro I/A Series® Systems to the DeltaV™ System



Introduction

The Foxboro I/A Series® system, as introduced in 1987 was claimed to be ahead of its time. Fast forward to the current generation of automation technologies and Emerson is the clear choice to move your business forward for decades to come. Aging I/A Series systems need to be modernized and Emerson is committed to making your transition to a DeltaV™ system, smooth, low risk and cost effective. From early modernization planning to long term lifecycle care, Emerson has provided industry leading solutions and service to complete more than 130 projects replacing Foxboro I/A Series systems. Partner with us for your transformation to a digital architecture, resulting in improved business performance and competitive edge.

Why Choose Emerson As Your Automation Partner?

Modernization projects are different. They require knowledge of both old and new technology and have fewer degrees of freedom than greenfield projects, i.e. space, time, and budget. The transition project will impact operations, often must be done during short shutdown windows and has the potential to put production at risk.

This puts a premium on risk reduction, flexibility, and capital efficiency.

Emerson is the lowest risk option

With over 6000 transitions to DeltaV from all types of legacy systems, Emerson has the experience to solve any challenge. Utilizing established processes, our subject matter experts will assess the state of your automation, quantify operational benefits, and justify, plan, and execute your project. Emerson has over 5000 project resources worldwide along with dedicated Modernization Teams to ensure your project is executed flawlessly, on schedule, with minimum production impact.

Emerson's technology can help

DeltaV technology provides unprecedented flexibility to work within the constraints of brownfield projects. Electronic marshalling can be installed almost anywhere, can be highly distributed, and with over 40 I/O wiring options it can handle all the signal types existing in your facility.

The PK controller has the capacity to handle all the basic process control functions PLUS advanced control, sequences, state-based control, and batch logic. It can also be deployed in smaller, standalone applications, and with built-in Ethernet-based connectivity, it can easily integrate data from 3rd party devices like PLCs and drives and can easily provide data to enterprise applications.

Brownfield Solutions

On top of this, Emerson has a vast catalog of solutions specifically designed to aid in modernizations. The FlexConnect Solutions portfolio speeds up cutover and avoids re-termination of field wires. Emerson's Alliance Program includes a portfolio of tested gateways that help phase the transition to DeltaV. And for the software transition, Emerson has a world-class set of tools to enable a modern, maintainable, functional implementation of the control strategy while retaining important intellectual property from the legacy system.

Maximize capital efficiency

With robust processes, tools and with the right technology, Emerson can deliver modernization projects that are low risk and make best use of your capital. We can help manage scope, reduce or eliminate engineering and design work, reduce space requirements, and ultimately deliver the value you should expect from the world's leading distributed control system.

Solutions for Legacy Foxboro I/A Series Systems

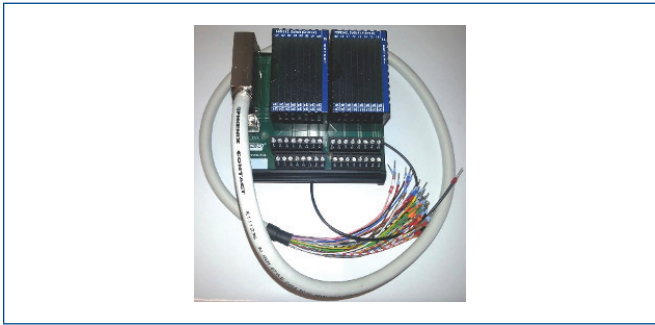
Reduce Downtime by Up To 75% with FlexConnect®:

When downtime must be kept to a minimum, FlexConnect solutions allow existing field terminations to remain. This saves time and reduces the cost of rewiring. Solutions are available for both FBM 100 series and 200 series I/O.

For FBM 100 series, the nosecones are retained along with the existing field I/O terminations. An adapter is connected to the nosecone and the signals are routed to DeltaV I/O modules via cables which will typically be pre-wired at the factory for the shortest possible cutover.



For FBM 200 series, field signals on termination assemblies are retained and the existing cable is replaced with a custom cable to route the signals to DeltaV I/O modules.



Retain Valuable Intellectual Property While Improving Control Performance with Tool Based Database and Display Analysis

Striking a balance between complete reverse engineering and starting design from scratch is achieved by taking a Forward Engineering approach which is enabled by using analysis tools, purpose built for the legacy platform. For Foxboro I/A Series Systems, a tool-set is available for both the control database and FoxView displays. Parsers extract the raw data and sophisticated algorithms produce reports from detailed I/O lists to an assessment of complexity, class-based versus custom code and much more. These outputs are designed to allow engineers to assess reusable code, such as base level loops, motors, valves etc. and complex logic structures which might be

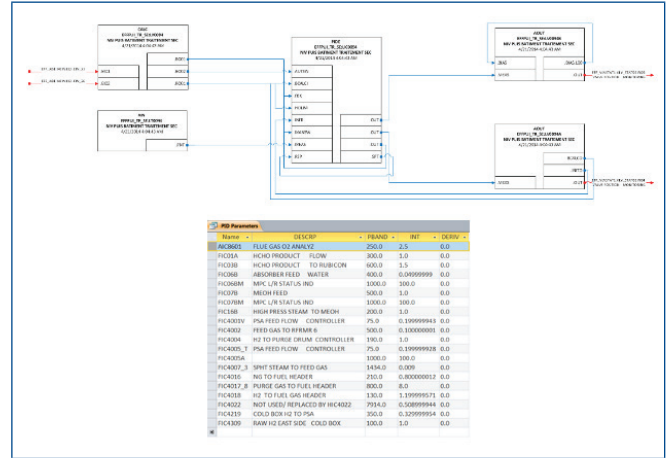
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improved by redesign in a modern system. For example, the use of equipment modules can make operation, visualization and troubleshooting much easier than “spaghetti” function block code. Tools are transforming some traditional manual workflows into digital workflows which increases project efficiency, ensures the required functionality is achieved with a modern design and reduces the risk of errors or a flawed implementation. For your business, this translates to a faster ramp-up to full production, improved controls, confident operators and maintenance staff.



Integration capabilities

Your new DeltaV system has all the capabilities needed to integrate an enterprise historian, business systems, specialty plant floor systems etc. During phased migrations where process units may temporarily be operating on new and legacy systems, shared data can be achieved in many ways from simple serial, OPC or a wide variety of protocols supported in the DeltaV system.

For more information visit

www.emerson.com/modernization or contact your local sales office

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