Configuration Software Suite

Simple, automatic system configuration
Intuitive user interface
Library of graphical, modular control strategies
Built from the ground up for FOUNDATION™ Fieldbus
Single, global configuration database

Introduction
Manage all relevant aspects of your system configuration including hardware configuration, history, OPC, batch control strategies and control strategies in workstations, controllers and even field devices using the DeltaV™ Configuration Studio software suite.

Multiple users can concurrently configure the system and access the global configuration database from DeltaV workstations.

Based on a graphical, modular approach to system configuration, Configuration Studio allows you to create and maintain control strategies as small, modular components (modules) in the DeltaV system.

Using standard tools such as cut, copy, paste, and drag-and-drop make it easy to configure your system.

Benefits

Simple, automatic system configuration. The DeltaV Configuration Software Suite puts you in control of the configuration process. Standard product design and pre-engineered, out-of-the-box solutions make Configuration Software Suite inherently easy to learn, use, or even customize.

User interface based on Microsoft’s Explorer & Ribbon. You will immediately know how to use the Configuration Software Suite because of its Windows-based, cut, copy, paste, and drag-and-drop features. The DeltaV Ribbon for Control and Recipe Studio allows seamless transitions from the office to control room. They shorten your learning curve, allowing you to do more.

Library of graphical, modular control strategies. Use pre-built modules and graphics symbols in your configuration or customize them to fit your process. Graphical configuration can simplify your initial engineering effort and makes maintenance simple.
Built from the ground up for Fieldbus. DeltaV Configuration Software Suite uses FOUNDATION™ fieldbus function blocks, so you can run control where it makes the most sense: in the fieldbus device or in the DeltaV controller.

DeltaV controllers, I/O and FOUNDATION™ fieldbus devices are designed to be auto-sensed when connected to the control network and automatically added to your configuration. Traditional labor-intensive configuration is a thing of the past!

DeltaV software also provides easy configuration of PROFIBUS DP, DeviceNet, AS-i bus and Ethernet I/O.

Single, global configuration database. This all-inclusive database enables you to coordinate all configuration activities. Forget about data mapping between separate databases or referencing your process and engineering information by arcane registers or numbers. Now it’s all in one dynamic database—on the ProfessionalPlus Station.

Product Description

The Configuration Software Suite includes all the applications you need to engineer your DeltaV system. Additional applications are available for advanced control applications such as asset management, batch and auto-tuning.

Modular, Reusable Control Strategies

The DeltaV system uses modular control strategies to enable you to configure your system. These modules become reusable configurations for your process equipment. (A module is defined as one or more field devices and their related control logic.)

Each module has a unique control tag. A module contains its history and display definition, in addition to its control strategy. Modules are communicated within the system by their names, not their physical addresses. A module can be operated and debugged without affecting other modules.

Top-down or Bottom-up

The DeltaV modules allow you to design your system from the top down and implement as you go. With minimal effort, you can specify loops and field devices, then quickly complete the configuration.

You can implement portions of the system on the fly, as process design and control requirements become available. You can finish what you know and leave other sections to complete later. Work-in-progress flags ensure that no items are left incomplete. Fully design your system first. You can implement the configuration from the bottom up, starting with I/O and finishing with control strategies and displays.

Complete control strategy configuration in Control Studio.

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You can modify existing strategies independent of the running process. When you are ready, you can install just the changes to the running system without affecting other control modules executing in the controller.

**The Tools to Do It—Easily**

Configuration Software Suite puts you in control of powerful applications to configure your system.

**DeltaV Explorer.** This is the primary navigation tool for system configuration. It presents the complete system in a single view and allows direct access to any item. Similar in appearance to the Windows Explorer, it lets you define system components (such as areas, nodes, modules, and alarms) and view the overall structure and layout of your system.

The DeltaV Explorer also provides a fast way to add control modules to your database. When creating your control strategy, you can simply drag and drop control modules from the template library into a plant area. While you’re still in the DeltaV Explorer, you can edit the module attributes to fit your application.

The DeltaV Explorer uses the built-in auto-sense capability to build your configuration as you plug in the system hardware, Foundation™ fieldbus devices, and controllers. This simplifies the engineering process. The DeltaV system is predominately configured in place through interactive dialogs within the DeltaV Explorer.

**Configuration Assistant.** This tool provides information and configuration guidance for new and occasional users of the DeltaV system. The configuration assistant guides you through system fundamentals while you configure the system. For the first-time user, this is a great tool to get your system up and running quickly and to learn the basics of the DeltaV system. The Configuration Assistant will guide you through your configuration and DeltaV structure, reacquainting you with DeltaV concepts.

**Control Studio.** This application lets you graphically create and modify individual modules and templates that make up your control strategies. Control Studio treats each module as a separate entity—allowing you to focus on a specific module without affecting other modules that may be running in the same controller.

Using Control Studio, you graphically build a control module by dragging items from a palette to the module diagram. You then “wire the items together” to create an algorithm for the module. All DeltaV system communication is based on the module’s name, so module-to-module communication across controllers is transparent to your configuration.

Based on the Microsoft Office user interface, you obtain a seamless transition between the office and the configuration environments. Using the Control Studio Ribbon, you mirror all your Office application experiences that shorten the learning curve to allow you to do more.
Control Studio is a powerful, visual tool for creating control strategies.

**DeltaV I/O Studio**\(^1\). Starting in DeltaV v14, DeltaV I/O Studio will be available with the Configuration Software Suite. This application allows you to fully define I/O details (both CHARMs configuration and device information) even before the physical design is completed, fully decoupling software and hardware design.

DeltaV I/O Studio is fully integrated with DeltaV Explorer and lets you define configuration templates for both CHARMs properties and HART device properties. These templates can easily be applied to devices and can reduce configuration time considerably. Templates associated with HART devices can even be applied automatically while the device is being auto-sensed.

Using DeltaV I/O Studio, you can pre-define the settings for DeltaV Device Commissioner loop tests, allowing ”one click” commissioning for HART devices. The traditional commissioning process is a thing of the past!

**DeltaV Device Commissioner**\(^1\). DeltaV v14 introduces the DeltaV Device Commissioner application. DeltaV Device Commissioner allows you to manage your work flow for commissioning HART devices, or you can simply initiate a ”one click” commissioning process based on the templates defined in I/O Studio and User Configurations defined in AMS Device Manager. The use of AMS Device Manager for bulk device configuration requires proper AMS licenses.

**DeltaV User Manager.** DeltaV software includes a powerful, yet flexible system security structure that is completely user modifiable to match your operating philosophy. System-wide security parameters define each piece of data, enabling you to assign different level of privileges for each users based on the tasks to be performed.

DeltaV User Manager is integrated with standard Windows security. All user passwords are maintained as a part of standard Windows security. In the DeltaV User Manager, you define valid system users and their privileges and DeltaV updates Windows security regarding new and modified users. You can define groups of users, such as operators or supervisors, and assign them DeltaV privileges. One group may be able to change only operating parameters, while another also may be able to change selected tuning parameters. You can also limit a user’s privileges to particular areas of the plant.

\(^1\) DeltaV I/O Studio and DeltaV Device Commissioner applications are not included in the initial release of DeltaV v14 and they will become available some months after the initial release.

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Ordering Information

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Related Products

- **Control Studio On-line.** Displays your control strategies while they’re running—whether they are running in DeltaV or fieldbus devices.

- **Operator Display Products.** Create high-resolution, real-time process graphics for the Operator Interface using graphics, text, data, and animation tools. Refer to the DeltaV Operate and DeltaV Live product data sheets for further details.

- **DeltaV Insight.** Control performance monitoring and loop tuning application embedded in DeltaV. Identifies control problems and improves control performance with automatic process learning, loop diagnostics, on-demand and adaptive tuning, and automatic report generation.

- **Recipe Studio.** Configures unique recipes and creates the steps for successful batch production.

- **AMS Device Manager.** Help to reduce commissioning and maintenance expenses while improving reliability.

Prerequisites

- One ProfessionalPLUS Station in a DeltaV system.

- Control Studio Online license (VE2161) is required over and above VE2162 in order to view or debug running control strategies.

- AMS Device Manager license is required for bulk configuration of HART devices initiated from DeltaV Device Commissioner.