ProfessionalPLUS Station Software Suite

- Global database architected for flexibility and scalability

- Powerful, graphical engineering capabilities

- Robust and secure plant operations

- Integrated system and device diagnostics

Configure, control and diagnose your plant with the ProfessionalPLUS Station.

Introduction

- Are you looking for a process control system that gives you a single point-of-entry database with access to a complete integrated system?

  - The ProfessionalPLUS object-oriented, global database gives you the power to access all your data—including from third- party applications.

The ProfessionalPLUS Station comes with a complete set of operating, diagnostic and engineering tools. From IEC 61131-3 graphical control strategy configuration and debugging, to graphics and history configuration, the ProfessionalPLUS Station has it all. User management is performed so you can set up your user privileges and system security from this one location.

You need one ProfessionalPLUS Station per DeltaV™ system. A ProfessionalPLUS Station is made up of the ProfessionalPLUS Station Software Suite and the DeltaV hardware to run it. This workstation contains the central DeltaV database.

Use the unique DeltaV Flexlock feature to securely lock operators into the DeltaV system, limiting user access to only the Windows applications that you choose, while also giving engineers the ability to access Windows applications, as needed.

Benefits

Global database, designed for flexibility and scalability. The ProfessionalPLUS Station includes a state-of-the-art, object- oriented database. This centralized database also provides a single point of entry for all DeltaV data. From history to OPC, to control strategy configuration, the DeltaV ProfessionalPLUS Station has it all. No data mapping is required for communications between a workstation and the controllers.
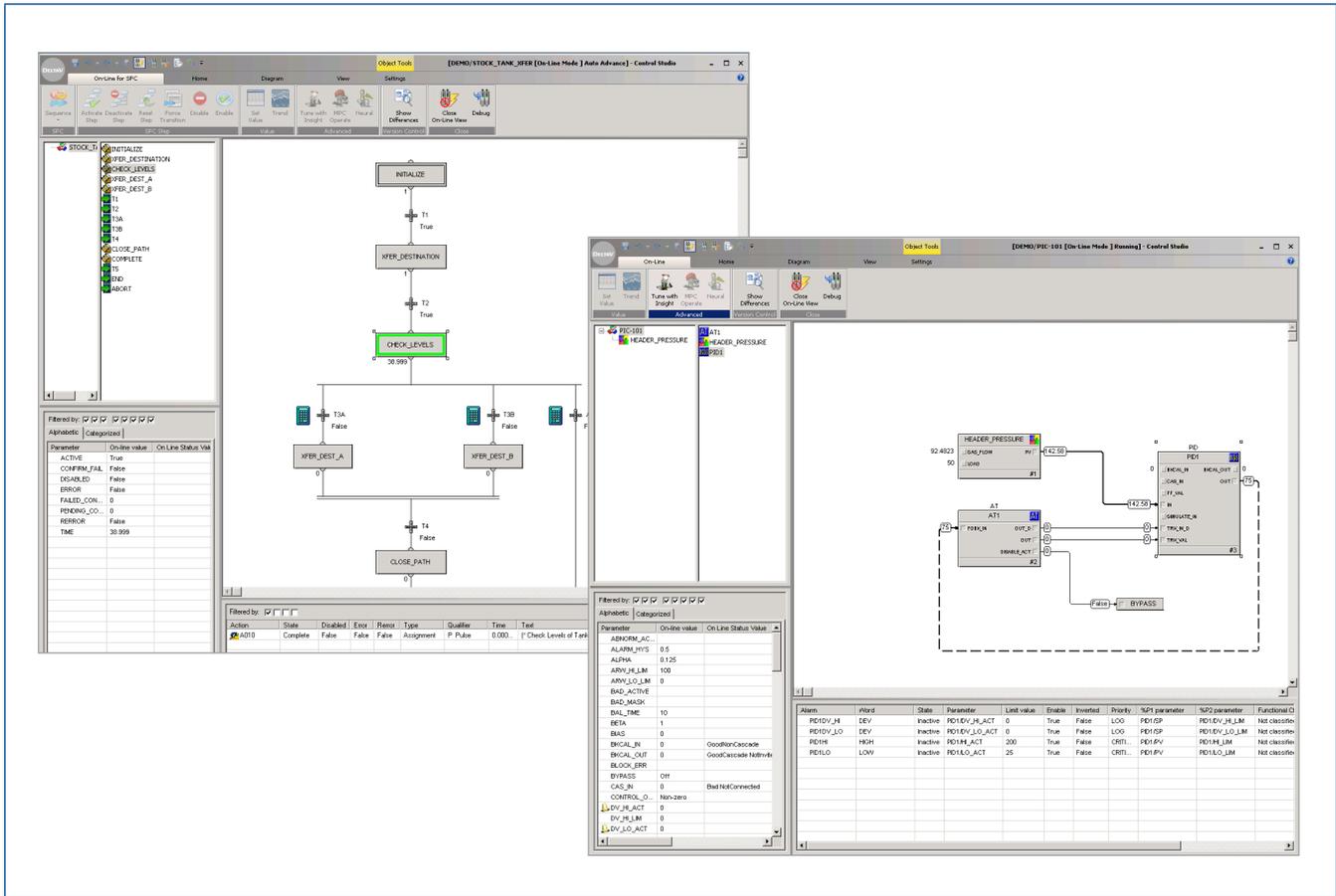
Graphical engineering capabilities. Engineer your system your way. Design your process control system in an environment similar to Microsoft® Windows. Use the high-resolution graphics and drag-and-drop features for total engineering capabilities.

Implement using the pre-engineered library templates or customize them to fit your needs. Your process control system will be up and running in record time using DeltaV system engineering.

Robust and secure plant operation. Every DeltaV workstation has direct access to all operating information, from the current process values and operating displays, to having alarms with the proper alarm priority, timestamp and Alarm Help.

DELTAV™

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Built-in, reliable operations features such as prioritized alarms and user-security increase usability. Easily customize the standard operating desktop to fit your specific operational philosophies and work preferences.

Integrated system and device diagnostics. The DeltaV system offers an integrated approach to diagnostics with the look and feel of the Windows Explorer. No longer do you have to remember which diagnostics package to use or how to work each package—critical when the plant operation depends on immediate diagnosis of the situation.

Graphically view and debug executing control strategies.
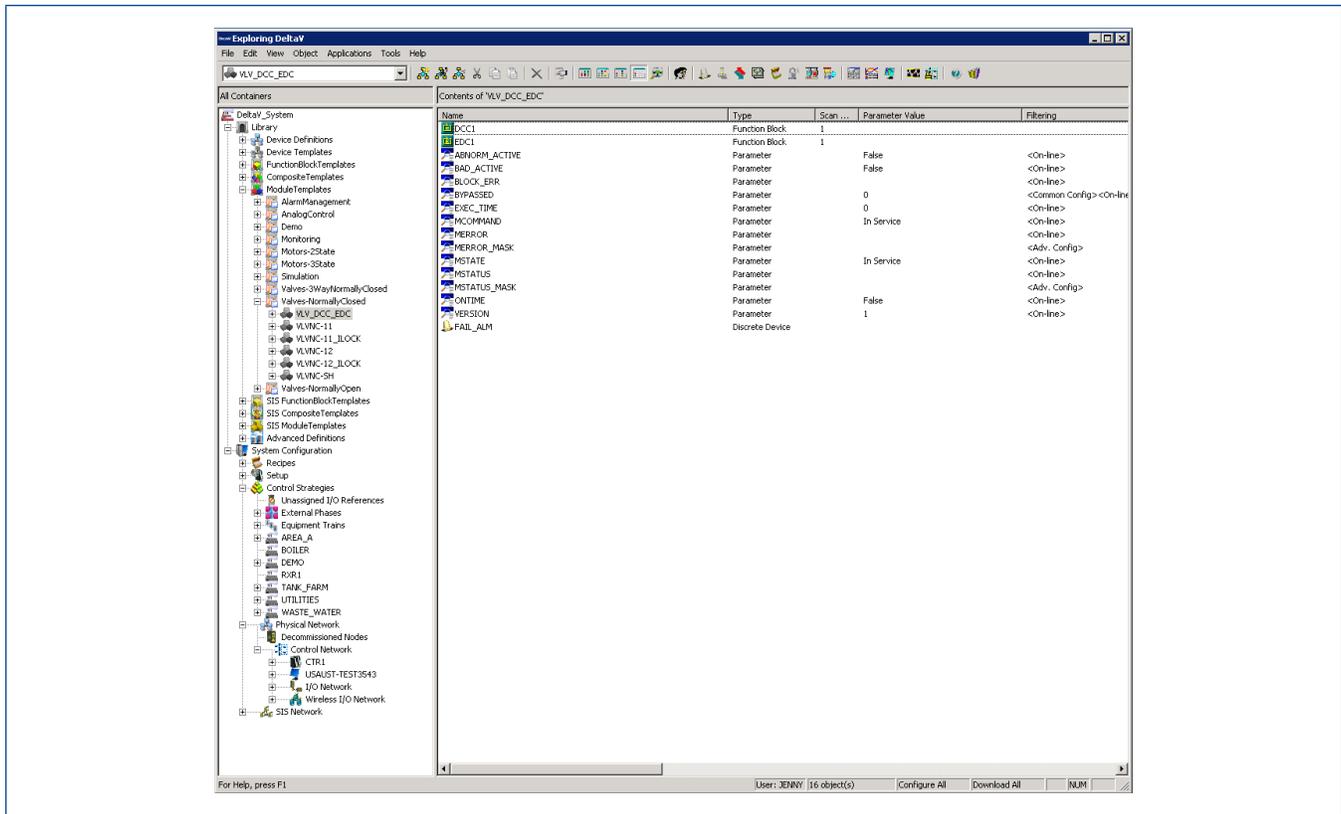
Product Description

The ProfessionalPLUS Station Software Suite is designed so that you can engineer and operate the DeltaV system from a single workstation. Engineering, operations, maintenance, and diagnostic functions are included in this suite.

The DeltaV system can be easily expanded to accommodate additional operating, diagnostic and/or engineering users. These additional stations can be either remotely or directly connected to the DeltaV system. Refer to the "Related Products" section of this document for more information.

The high-performance ProfessionalPLUS Station Software Suite was developed following the Microsoft paradigm. Features such as windows, graphics, drag-and-drop, and cut-and-paste enable you to concentrate on your control strategies and not on the application.

Add and distribute engineering clients on other DeltaV workstations throughout the system as appropriate. The database and engineering clients are a client-server pair.

You have access to any system information by tag name – from anywhere in the system – because the ProfessionalPLUS Station transparently ensures that all nodes are cognizant of all other nodes and that all nodes know where tags are physically located.
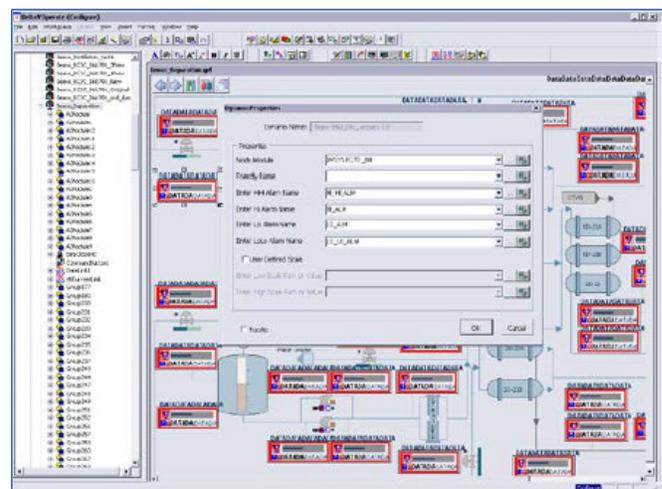
The DeltaV Explorer centralizes all system configuration tasks, including alarm, control and smart device configuration.

The database is scalable, facilitating small and large projects and allowing you to expand readily as your needs grow. The database is open, allowing you to perform data import and export for bulk data entry or to use your favorite tools during system configuration.

Engineer your system your way. Use our pre-engineered library of control templates and devices, or customize them to fit your needs. Configuring your DeltaV system allows you to get your process automation system up and running in record time.

Included with the ProfessionalPLUS Station is a complete library of graphic elements associated with the library control modules and devices. Predefined functionality also includes Human Centered Design (HCD) display components. These components provide integrated alarm, status and operating information, predefined based on industry best practices and display human factors that follow the Center for Operator Performance (COP) recommendations and ISA 101.1 standards, geared specifically for Level 1, Level 2 and Level 3 or 4 displays.

Process control elements, from feed-forward and cascade control loops to powerful motor control algorithms are predefined in the library. Deployment is simple—drag and drop to view control and graphic elements.
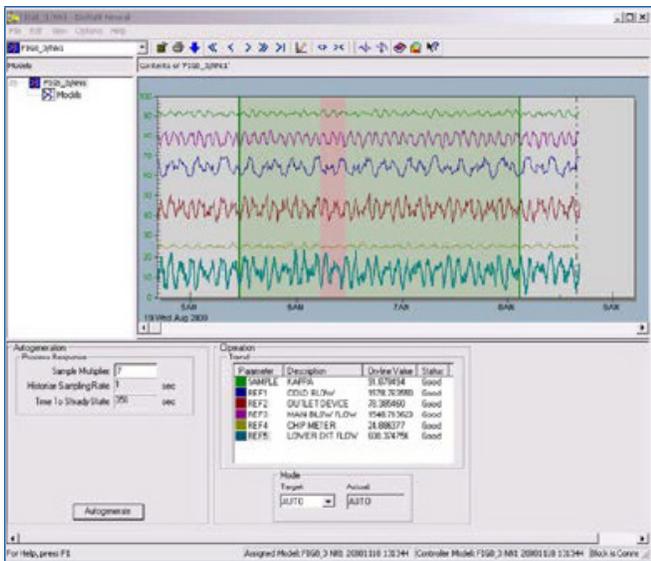

Integrated, Comprehensive Graphics configuration.

With the DeltaV system, there are no behind-the-scenes translation programs that convert your graphical control strategy into a different structure. This allows you to easily view and troubleshoot your strategies with the same tools used to configure. Simply select "on-line" for a control module and view its actual execution in the same graphical representation used to edit.
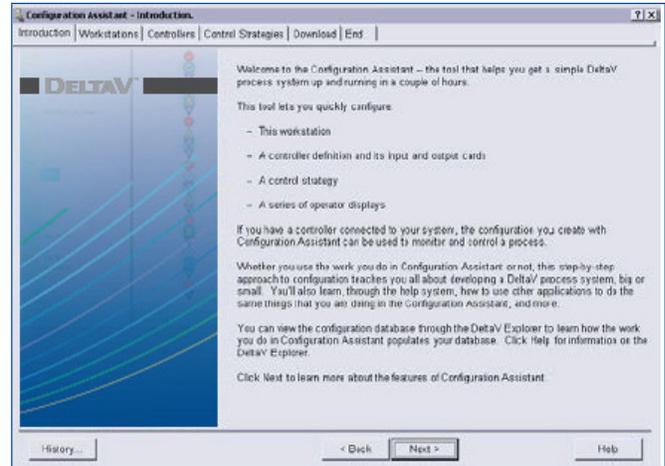
No matter where the control strategy is executing - DeltaV controller, workstation or FOUNDATION™ Fieldbus device, you use the same configuration, on-line view and modification capabilities.

The DeltaV system is not only easy to configure for standard control strategies such as loops and motors, but also places a new ease-of-use standard for embedded advanced control functionality such as neural networks and model predictive control. There are many advanced control options to choose from in the DeltaV system.

DeltaV Neural provides easy-to-use tools for developing and training neural network models.

Users new to the DeltaV system can easily get started with the DeltaV Configuration Assistant. This application walks you through an overview of the configuration steps to help familiarize you with the layout and location of configuration.
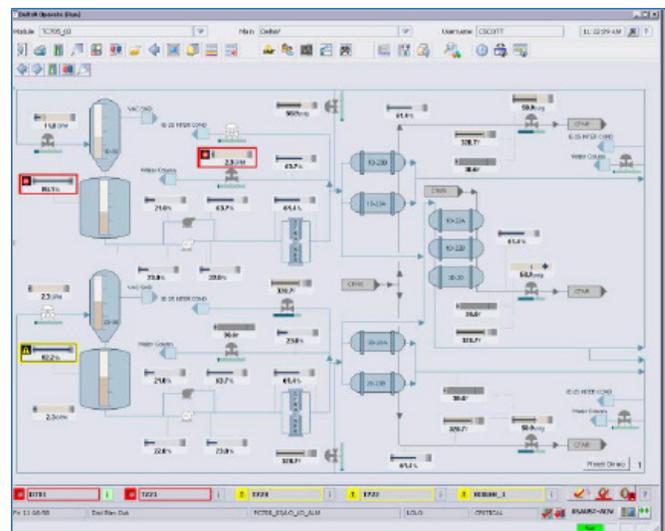

DeltaV Configuration Assistant introduces you to DeltaV configuration – step by steps.

Your ProfessionalPLUS can also be used to remotely connect up to two DeltaV Remote Clients to your DeltaV system using thin-client technology.

Now hand over the ProfessionalPLUS Station to your operators to monitor, troubleshoot, and maintain your process.

DeltaV Live and DeltaV Operate provide powerful graphic environments for process operation, with built-in features for easy and direct information access. Whether you are viewing the highest- priority alarm, the next display, related historical information or detailed tag information, operator navigation is consistent and intuitive.

Predefined displays provide a consistent operator interface.

Standard displays, faceplates, detail displays and operations layouts for both single and dual monitors provide a consistent operating philosophy. With DeltaV Live and DeltaV Operate, you have the option to use the standard library, or create your own to meet your specific needs.

Each workstation manages its own alarms and data access. This includes alarm information such as when the alarm occurred, whether the alarm is suppressed and even access to the specific help for an alarm. With a DeltaV system, there is no additional server PC, or other intermediary required to be able to operate your plant.

Individual users can have specific privileges that determine which functions (e.g., operate and tune) they are allowed to perform and which parameters they are allowed to change. These user privileges can have a defined span of control, enabling the privileges to be tailored to certain plant areas.

Each Operator can be limited to certain plant areas for viewing and operating. This security feature can also be defined for an individual station. Use the DeltaV exclusive Flexlock to ensure that operators remain dedicated to monitoring, troubleshooting, and maintaining the process according to plant operating philosophies.

Use the unique DeltaV Flexlock feature to ensure that operators remain dedicated to monitoring, troubleshooting, and maintaining the process according to plant operating philosophies. Operators are locked in to their system responsibilities so nothing can preempt their duties.

In a DeltaV system, communications between nodes is totally transparent. You don't need to know the details associated with the request/response and exception reporting mechanisms embedded in every DeltaV node to take advantage of DeltaV communications. Workstation applications have automatic access to all tags in your process.

Tag information is transparently delivered throughout the DeltaV system so that all parts are aware of the others and can simply ask for tag information by name, not by some cryptic address or physical location.

DeltaV Diagnostics lets you quickly know the status of your control system and intelligent field devices. Diagnostics information is included not only for your DeltaV Workstations, Control Network, Controller, and I/O, but also includes support for AS-i, DeviceNet, Profibus DP, HART and FOUNDATION Fieldbus intelligent devices.

Taking advantage of smart field devices, DeltaV Diagnostics lets you look at information from internal device diagnostics to communications statistics–all from your desktop.

The included Continuous Historian can collect history locally on this workstation. You can have additional Continuous Historians on other workstations. You can view continuous, event, or batch historical data, regardless of the DeltaV workstation collecting the data. This allows you to centralize or decentralize your historical collection.

Emerson Automation Solutions is the industry leader in scalable, plant-aware process automation systems. Our state-of-the-art, totally integrated applications give you the power to do more.

The following software applications are included in the ProfessionalPLUS Station Software Suite.

For detailed information about the following applications, refer to the appropriate product data sheet:
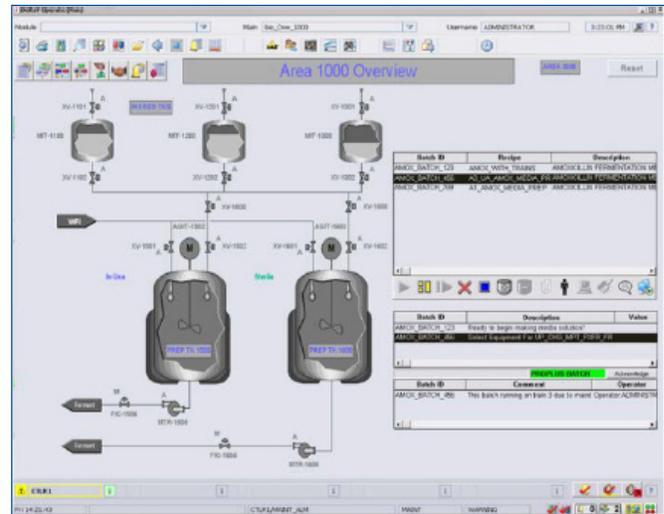
- **Alarm Help.** Provides Operators with in-context access to approved alarm response procedures and control engineers with native system configuration capability to administer alarm rationalization data per ISA-18.2 - Management of alarm systems for the process industries.

- **Configuration Software Suite.** Makes it easy to create Control Strategies and System Graphics to get your plant up and running quickly and efficiently.

- **Control Studio On-line.** Graphically monitor and troubleshoot running control strategies.

- **DeltaV Continuous Historian.** A 250-parameter DeltaV Continuous Historian is included with every DeltaV workstation. This provides the ability for up to 250 analog, discrete, and text parameters and their status to be captured and stored for future analysis. For DeltaV v12.3.1 and newer, three scale-up licenses are available that enable up to 3,250 parameters of DeltaV Continuous Historian capacity on any non-Application Station node, including the operator workstation:
  - **VE22UPS042OP1 –** DeltaV Continuous Historian, Enable 1,250 Parameters
  - **VE22UPS042OP2 –** DeltaV Continuous Historian, Scaleup,from 1,250 to 2,250 Parameters
  - **VE22UPS042OP3 –** DeltaV Continuous Historian, Scaleup from 2,250 to 3,250 Parameters

■ **DeltaV Live - Standard Tier.** DeltaV Live is Emerson's modern, built-for-purpose operations experience that was introduced with DeltaV v14.3. It is the first distributed control system operator interface to natively support HTML5 graphics. Graphics Studio, the modern and intuitive engineering environment for DeltaV Live, allows users to easily create displays, operator station layouts, all without requiring complex scripting.

Please refer to the DeltaV Live product data sheet **here** for more details.

Powerful Operator Graphics configuration.

■ **DeltaV Operate.** High performance operator graphics, trends and alarms offered in standard operating layouts and utilizing system-wide built-in security.

■ **DeltaV Reporter.** View, analyze and report historical process and alarm and event data from the DeltaV Continuous Historian and the Event Chronicle in your copy of Microsoft Excel.

Diagnose the DeltaV system and intelligent devices.

■ **Diagnostics.** Facilitates checking the overall health of your system and quickly resolving system hardware, software, and configuration issues.

■ **DeltaV Event Chronicle.** Captures process, system and user alarms and events and stores them in a Microsoft SQL Server database.

■ **Flexlock.** Creates dual desktops on a single workstation to ensure that operators remain dedicated to monitoring, troubleshooting, and maintaining the process according to plant operating philosophies while also giving engineers the ability to access restricted areas as needed.

■ **History View Suite.** Monitor your plant's continuous and event data—historically and in real time.

View Historical charts with Process History View.

Products included with appropriate system licenses

When the appropriate system licenses are included in your DeltaV system, the following applications are provided:

- **DeltaV Live.** HTML5 based high performance operator graphics, hierarchical navigation, trends and alarms offered in standard operating layouts and utilizing system-wide built-in security.

- **AMS Device Manager Client SC for Device Status.** Provides the ability to view the status of HART and FOUNDATION Fieldbus devices (license from AMS Suite: Intelligent Device Manager required for configuration capability).

- **Campaign Manager Operator Interface.** The interface used by the operator to create and control campaign execution.

- **DeltaV Neural.** Easily configure virtual sensors that are executed in the DeltaV neural net function blocks.

- **DeltaV Predict and PredictPro.** Model Predictive Control (MPC) which runs in DeltaV to provide multivariable control and optimization for small and large applications. Includes off-line model identification and simulation, plus on-line MPC with operator interface.

- **Recipe Exchange.** An open, programmatic interface to the DeltaV recipe management system. Recipe Exchange is based on an XML schema that provides the ability to programmatically import and export DeltaV recipes.

- **Recipe Studio.** Powerful yet simple to use application for graphically configuring recipes (with formulas) for successful batch production.

- **DeltaV Operate for Batch.** Batch Controls allow you to operate your batches from the same DeltaV Operate environment used to monitor and control your process.

Integrated batch operation.

Options

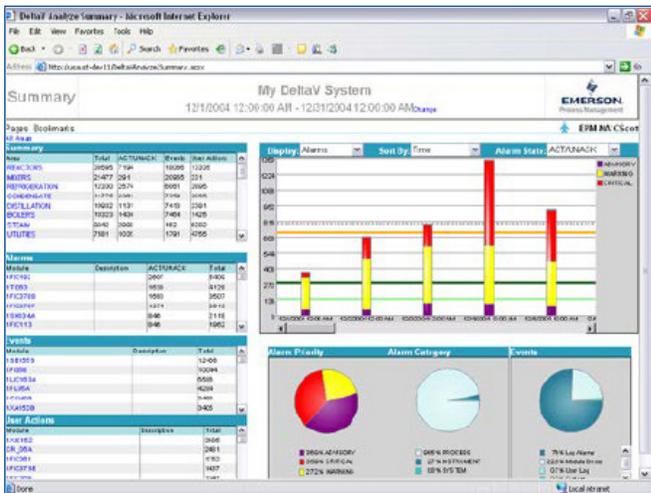To enhance your ProfessionalPLUS Station, the following options may be added:

- **AMS Device Manager Server Plus.** Provides the engineering interface to device calibration and configuration software for HART and FOUNDATION Fieldbus devices. Includes the AMS Device Manager Client SC for this workstation (licensed by AMS Suite: Intelligent Device Manager).

- **AMS SNAP-ON Product Options.** Choose from a variety of AMS configuration options. Refer to to **www.assetweb.com** for the list of AMS SNAP-ON product options.

- **Configuration Audit Trail.** A powerful tool that tracks changes and manages revision information for any item in the DeltaV configuration database, including Safety Instrumented System (SIS) items.

- **DeltaV Connect.** Integrate the DeltaV operator interface to a variety of different control systems (refer to the Product Data sheets for systems offered).

- **DeltaV Excel Add-in***. OPC Data Access client application providing read/write access to DeltaV realtime information in your copy of Microsoft Excel.

- **DeltaV Analyze.** Provides web-based analysis of alarms and events in either the Event Chronicle or Plant Event Historian.

- **DeltaV Live.** Premium Tier has additional features for both the Runtime and Configuration environments (refer to the DeltaV Live product data sheet).

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

- **DeltaV InSight Basic.** Basic control performance monitoring and on-demand loop tuning application available for a single DeltaV workstation. This option is only applicable when DeltaV InSight is not included on your system.
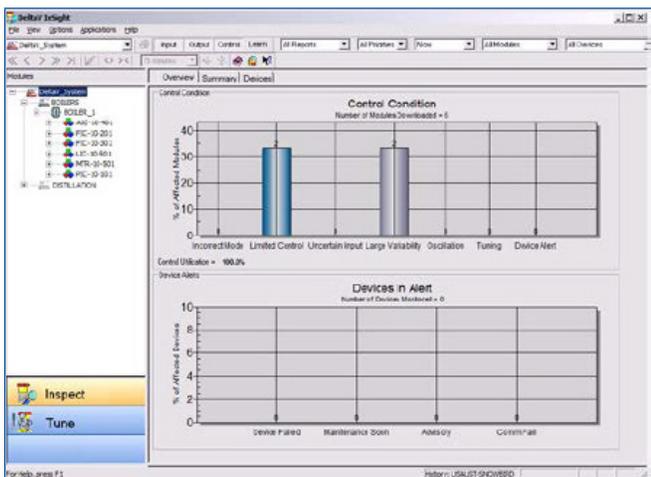
- **DeltaV Remote Access Service for the ProfessionalPLUS.** Enables communications to a remote DeltaV Workstation.

- **OPC Data Server*.** Provides up to 250 real-time process values to OPC clients on your plant network.

- **OPC Events Server.** Provide DeltaV alarms and events to third-party applications.

- **OPC History Server.** Exposes all DeltaV historical data using the industry standard OPC Historical Data Access interface.

- **OPC UA.** Provides access to the OPC Classic Servers (DA,A&E and HDA) in the Professional Plus using the OPC UA specification.

- **OPC Mirror.** Transfers thousands of values back and forth between your DeltaV system and other OPC-compliant systems.

*The OPC Data Server and the DeltaV Excel Add-in cannot run simultaneously on the ProfessionalPLUS.

Quickly detect alarm patterns with DeltaV Analyze.

Quickly detect alarm patterns with DeltaV Analyze.

Ordering Information

The ProfessionalPLUS Workstation licenses are based on the DST size of your system. As shown in the table below, there are two types of ProfessionalPLUS licenses. The ProfessionalPLUS type is for systems running version 12.3 and newer, and includes DeltaV Live Standard functionality for v14.LTS and newer versions. The ProfessionalPLUS Premium license type is for systems running version 14.3 and newer, and includes DeltaV Live Premium functionality.

The Standard tier includes all the functionality equivalent to DeltaV Operate Runtime and Configure, with some enhancements and additions.

Users can choose to have the ProfessionalPlus Premium tier license but only use the Standard tier for the operator workstations, or vice versa. To take advantage of the DeltaV Live Premium tier, you will need the ProfessionalPLUS Premium Workstation Software license, which provides DeltaV Live graphics configuration (engineering) functionality for the entire system and DeltaV Live Operations (runtime) functionality for the ProfessionalPLUS node.

The Standard-to-Premium ProfessionalPLUS Workstation software license can be used to upgrade existing ProfessionalPLUS Workstation licenses to the Premium tier. For more information on DeltaV Live functionality please refer to the DeltaV Live product data sheet **here**.

In addition to the ProfessionalPLUS Software selection, a user-key (a.k.a. dongle) type must be selected based on the version of DeltaV software that will be used. DeltaV software versions 12.x, 13.x, v14.FP1, v14.FP2 and v14.FP3 must use the HASP type of dongle. DeltaV v14.LTS MultiOS should use the LDK type of dongle. DeltaV v15.LTS and newer can use the LDK type of dongle or the softkey option. The softkey provides the user-key without the need for a physical dongle.

Description	Model Number
ProfessionalPLUS Workstation Software for v12.3 or newer, xxxx DST	VE2101Sxxxx-1
ProfessionalPLUS Premium Workstation Software, xxxx DST	VE2101PSxxxx
Standard-to-Premium ProfessionalPLUS Workstation Software, xxxx DST	VE21USPSxxxx

*Where xxxx represents the DeltaV system DST size. The DST size varies from 100 to 30,000 DSTs.

Description	Model Number
DeltaV System HASP Dongle, for use with ProfessionalPLUS or ProfessionalPLUS Premium base license and DeltaV systems running v12.x, v13.x, v14.FP1, v14.FP2, v14.FP3	VE2121HASP
DeltaV System LDK Dongle, for use with ProfessionalPLUS or ProfessionalPLUS Premium base license and DeltaV systems running v14.LTS MultiOS, v15.LTS or newer	VE2121LDK
DeltaV System Softkey for use with ProfessionalPLUS or ProfessionalPLUS Premium base license and DeltaV systems running v15.LTS or newer	VE2121SOFT

Related Products

Related Software Products

- **Application Station Software Suite.** Integrate a DeltaV system with third-party systems and applications on a DeltaV workstation. Includes a scalable DeltaV Continuous Historian and DeltaV OPC Data Access server.

- **Base Station.** Centralized DeltaV applications, where the combination of applications included are user selected on a DeltaV workstation.

- **DeltaV Remote Access Service.** Enables communications to a remote DeltaV workstation.

- **DeltaV Remote Client.** Remotely connect to your DeltaV system using thin-client technology.

- **Maintenance Station Software Suite.** Centralized system and device maintenance, including device calibration, device and hardware alerts and diagnostics on a DeltaV workstation.

- **Operator Station Software Suite.** Centralized operations and diagnostics on a DeltaV workstation.

- **Professional Station Software Suite.** Centralized operations, engineering and diagnostics on a DeltaV workstation.

- **DeltaV Engineering Seat Software Suite.** Access to engineering tools on-demand from a DeltaV workstation or Remote Client session.

- **OPC UA.** The different OPC UA servers and clients in the DeltaV system allows data reads and writes to and from 3rd party application in an easy, reliable and secure way.

Related Hardware Products

- **DeltaV Workstation Hardware.** Select from a variety of PC and server hardware, tested and preloaded with DeltaV software.

Prerequisites

- This software suite must be loaded onto a DeltaV workstation. A variety of hardware is available to meet your specific requirements. Refer to the DeltaV Workstation Hardware Product Data Sheet.

- Use of the DeltaV Reporter or DeltaV Excel Add-in products require a copy of Microsoft Excel (not included).

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