Further building on DeltaV™ control system’s ease of use, version 13 (v13) delivers new capabilities designed to help users improve their plant’s efficiency and performance. Built by the experts, v13 minimizes the need for specialized expertise so that users can engineer and operate in an environment that is easy to use and understand.

The control system should contribute to a correct operator action every time, especially during alarm floods. Risks are reduced when there is clear visibility and accountability for changes made to operational alarms. And the control system plays a central role in achieving effective alarm management.

DeltaV Alarm Mosaic for Alarm Floods

*Improve response to alarm floods*

DeltaV Alarm Mosaic provides a dynamic visualization of active alarms to help reduce the risk of operators being overwhelmed by a flood of alarms. This configuration-free view presents alarms holistically as recognizable patterns and automatically identifies alarms with common characteristics. In addition, it identifies control actions that may have precipitated the flood.

Alarm Mosaic’s alarm activation-history view uses events captured in the DeltaV Event Chronicle to visualize prior alarm floods, providing valuable information for shift-transition reviews, operator training, and incident investigations.
DeltaV™ Distributed Control System – Version 13 Update

**Suppressed-Alarm Ownership Management**

*Improve operator responsiveness to alarms*

Because accountability for suppressed alarms and for unapproved alarm settings is critical to safe operation, the v13 system allows separation of temporary operator alarm shelving from removal-from-service of an alarm for maintenance. Reasons for shelving and removal-from-service are captured in the system and recorded in the event history. Separate shelved and out-of-service alarm lists can be provided to operators and maintenance personnel. Shelved alarm lists show remaining time to reactivation and provide an unshelve all feature to support shift transitions.

**Built-in alarm audit reports** - Allow automatic comparison of the properties of operational alarms to settings in either the system’s configuration database or to an external master alarm database.

**Per-Alarm Priority Adjustment from Detailed Display** - Based on user input from Emerson’s User Driven Enhancement Program (UDEP), the v13 system allows each alarm’s priority to be individually adjusted by logic and, if enabled by a master workstation setting, by authorized operators from detail displays. This allows users to execute advanced alarming strategies.

**Advanced Continuous Historian Enhancements**

*Large historian with seamless site PI historian integration*

Updates to the Advanced Continuous Historian increase the performance and simplify the architecture and licensing of the Advanced Continuous Historian.

**Batch Analytics Integration**

*Integration improves alarm quality predictions on DeltaV displays*

Batch Analytics offers improved integration with DeltaV to provide operations personnel better information to monitor and correct in-process batch issues.

**DeltaV Continuous Historian Write Interface**

*Model processes more accurately*

Users now can use a programmatic collection of non-DeltaV data in the DeltaV Continuous Historian. This update enables more accurate process modeling for DeltaV Batch Analytics users.

**Integrate Faster and More Easily**

**Smart Device Connection Simplified by S-Series Ethernet I/O Card**

**Improve integration efficiency**

**Supported Industrial Ethernet Protocols** - The S-Series Ethernet I/O Card provides direct connection to Ethernet I/O networks and brings data directly into the DeltaV DCS using any of three protocols:

- Modbus TCP/IP Interface
- Ethernet/IP Communications
- IEC 61850 MMS

**DeltaV Operate Enhancements**

*Improve operation performance*

DeltaV Operate provides robust plant operations with a powerful operator interface, constant visibility, and integrated historical trending. V13 updates include:

- Improve operator situational awareness with historical trends embedded into operator displays.
- Additional support for 1080P resolution makes it easy to deploy displays on a variety of monitor sizes, including large screens for overview displays.
- Standard support for dimly lit control rooms with the new Dark Grey Theme.
- Operators can dynamically change the text size on their displays to adjust for different viewing distances.
**Native Data-Import Method and Native Control** - The Ethernet I/O Card (EIOC) connects natively to the DeltaV system. There are no third party applications needed for configuration of the EIOC. Interface drivers are added via a drop down menu in DeltaV Explorer, and the I/O connected to the EIOC is available to control modules that run in the EIOC and to modules running inside other controllers. DeltaV Operate graphics display the information available in the modules residing in the EIOC, and the DeltaV Historian collects the module history. Support and automatic updates are received through your Foundation Support.

**Redundant Ethernet I/O Card** - An Ethernet I/O Card can be made redundant simply by adding a second Ethernet I/O Card on the dual Universal carrier. The configuration changes automatically and you receive confirmation of the change. In case of a redundancy switchover, the operator is given clear notification at the operator display. Manual switchover can be controlled in DeltaV Diagnostics.

**Network Segregation and Data Capacity** - Up to 60 Ethernet I/O Cards can be added to the DeltaV I/O Network, allowing a great degree of freedom when segregating networks. In addition, each Ethernet I/O Card can have up to 32,000 data values spread over a maximum of 256 physical devices, each one with up to 256 logical devices.

**Virtual Ethernet I/O Card Provides Engineering Power**

DeltaV Virtual Ethernet I/O Cards provide both the ability to communicate directly to Ethernet I/O networks and the ability to simulate Ethernet I/O Cards in a DeltaV development/training system.

**Configuration and Simulation** - During control system development and checkout, Virtual Ethernet I/O Cards enable customers to simulate process I/O while working from a host computer. This simulated data appears the same as real data in a DeltaV system and requires no changes to graphics or control configurations. Virtual Ethernet I/O Cards also eliminate I/O hardware during FAT. This same configuration can be moved to the Ethernet I/O Cards or Virtual Ethernet I/O Cards located in the on-line DeltaV system.

**Wireless I/O Card (WIOC) Improvements**

**Increased flexibility, support of late I/O binding**

Emerson has added support for HART-IP to support applications like SteamLogic to detect failed steam traps.

New Smart HART DI and DO function blocks in Control Studio will allow you to configure wireless on/off valve signals in the same way as wired on/off valve signals. Following our late I/O binding concept, you can now switch between wired and wireless on/off valves.

**Reduced Footprint with High-Density Redundant Cards**

**Reduce footprint and costs for redundant traditional I/O**

New High-Density Redundant Cards are available as 16-channel Analog I/O Cards and 32-channel Discrete I/O Cards. These cards enable customers to significantly reduce the system footprint. The Discrete I/O Cards also offer a termination fault detection feature, sensing faults in attached FTA boards.

**CHARM I/O Configuration and Label Printing**

**Streamline commissioning**

v13 enhancements streamline commissioning of CHARacterization Modules (CHARMs) by providing an efficient user interface in which to view and edit configuration as well print CHARM labels.

**New 120 VAC DI Isolated Plus CHARM**

**Enable direct connection**

The new CHARM allows direct connection to two-wire 120 VAC-based proximity sensors or to long, non-shielded AC voltage carrying multi-core field cable signals.

**New Function Blocks**

**Increase engineering efficiency and controller performance**

Three new function blocks reduce the amount of blocks you need to manage and maintain. The Analog Tracking (AC) and Discrete Control Conditions (DCC), enables a common interlocking strategy. The Enhanced Device Control (EDC) is an enhanced version of the device control block, which has added functionality to work directly with the new DCC block.

**DeltaV InSight – EnTech Toolkit Option**

This option improves process control performance using advanced control loop analysis and tuning technology.
Increase Security Across the System

DeltaV version 13 has new and enhanced security features that help with security audits, enable the Microsoft® Windows® firewall, and integrate the Emerson Smart Firewall into DeltaV.

Security Administration Center

Stronger security protects your investments

The DeltaV Security Administration Center helps users manage security, and it provides information to make workstation security audits easier.

- Manage the DeltaV built-in accounts: enable/disable the accounts and manage their passwords.
- Manage Windows and DeltaV services: list and audit the services status on the workstation.
- Audit the DeltaV Essential Files: list and audit the files in the DeltaV directories.
- Enable and manage the Microsoft® Windows® Firewall: enhance the security of workstations communicating with applications external to the DeltaV system.

Network Management Center:
The new DeltaV Network Management Center manages the DeltaV Smart Switch and the Emerson Smart Firewall when they are installed in the network between the DeltaV workstations and the plant networks.

Help secure the 2.5 network: use the DeltaV Smart Switch to lock down the network between the DeltaV workstations and the Emerson Smart Firewall or other perimeter firewall.

The network created between the third NIC on the DeltaV workstations and the perimeter firewall is also part of a DeltaV system. This network is designated as the DeltaV 2.5 network as it resides between the level 2 and level 3 networks. This network provides the connection between the DeltaV workstations and external networks and can contain devices such as printers and the backup and restore server. In v13.3 the DeltaV Smart Switch and the Emerson Smart Firewall can be installed in this network and managed from a DeltaV workstation.

Integrate Smart Firewall alarm conditions: act on and manage alarms from the Emerson Smart Firewall on the DeltaV Operator Workstations.

User Defined Usability Enhancements

Customer defined improvements

Some DeltaV enhancements are suggested, defined, and prioritized by our customers through the UDEP program. The v13 projects that were generated by UDEP greatly improve the DeltaV usability:

- Easy function block expression editing
- DeltaV diagnostics enhancement
- All action statements on the same tab in the SFC editor dialog box
- DeltaV user manager export
- Easy module deletion
- FHX import messages for phase composites
- Enhancement for DeltaV batch “Edit Formulas” window
- Capability to change module alarm priorities in the online mode
- Security-key functionality for Build Recipes
- Printing enhancements for engineering tools

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For complete product information, visit www.EmersonProcess.com/DeltaV