

# DELTA<sup>TM</sup>V

Version 16

## The Next Evolution in Process Automation



# The Most Powerful and Flexible Release Yet, Designed to Help Users Meet the Demands of Modern Operations

DeltaV™ version 16.LTS Distributed Control System (DCS) builds on decades of field-proven innovation to deliver the most robust and reliable release yet. Designed to meet the demands of modern operations, DeltaV combines a resilient architecture with the flexibility to evolve as your needs grow and change. With its trusted foundation and future-ready design, DeltaV ensures long-term performance, reduces risk, and gives you confidence that your automation system will continue to deliver — today and for years to come.



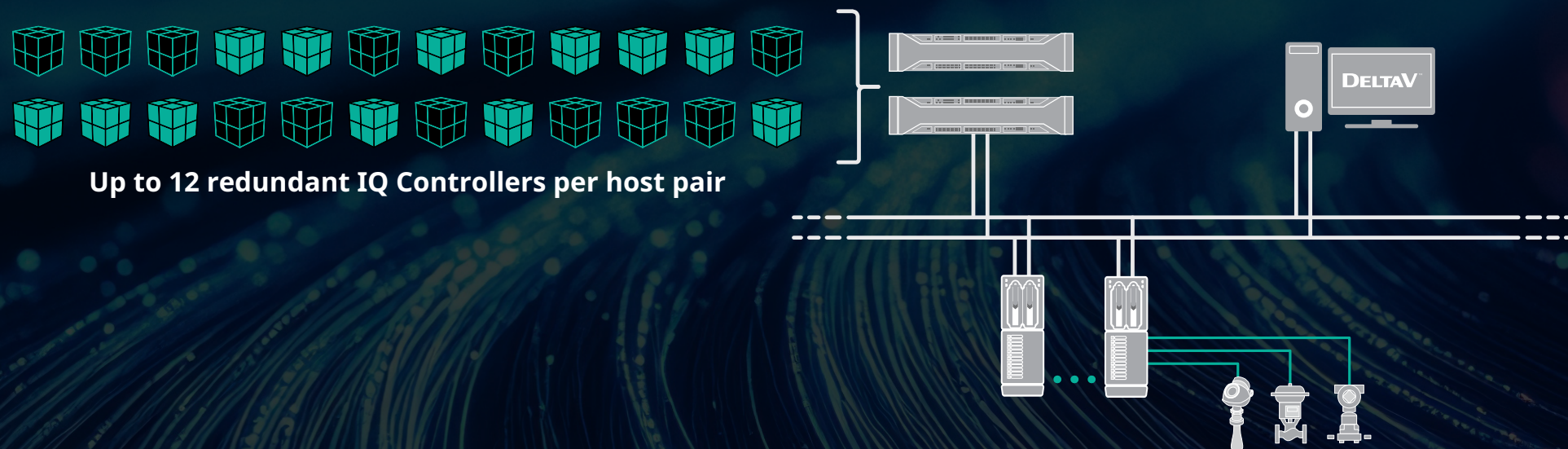
# MODULAR AND FLEXIBLE ARCHITECTURE

## Transform Automation with Software Defined Control

Introducing the **DeltaV IQ Controller** – the next evolution in process control technology. Designed to augment highly engineered, built-for-purpose industrial controllers, the IQ Controller brings greater flexibility, scalability, and efficiency to modern control systems.

By deploying control workloads within a server-based environment, the IQ Controller simplifies engineering, maintenance, and upgrades while significantly reducing footprint and increasing scalability.

With more control capacity than a traditional DeltaV controller, a single pair of servers can handle the control requirements of most large-scale facilities, transforming industrial automation like never before.



### Scalable

Easily add or remove controllers  
Up to 3,000 DSTs per controller

### Resilient

Redundant  
Additional security hardening

### Easy Engineering

Simplified wiring and infrastructure  
Seamless integration with existing systems

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*DeltaV IQ Controller redefines what's possible in automation by delivering greater flexibility, scalability, and efficiency for modern operations.*



## Reduce Upfront Investment and Complexity with Subscription-Based DeltaV System

**DeltaV Flex System** introduces a flexible, cost-effective way to deploy a full-featured DeltaV system. By combining term-based software licensing, product support, and extended hardware warranty for DeltaV control and I/O components, DeltaV Flex System significantly reduces initial capital investment.

Its modular design scales easily from pilot plants to enterprise-wide systems, allowing you to start small and expand as your application needs grow, all while staying current with the latest DeltaV innovations.



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***Full DeltaV Power, New Flex Way***

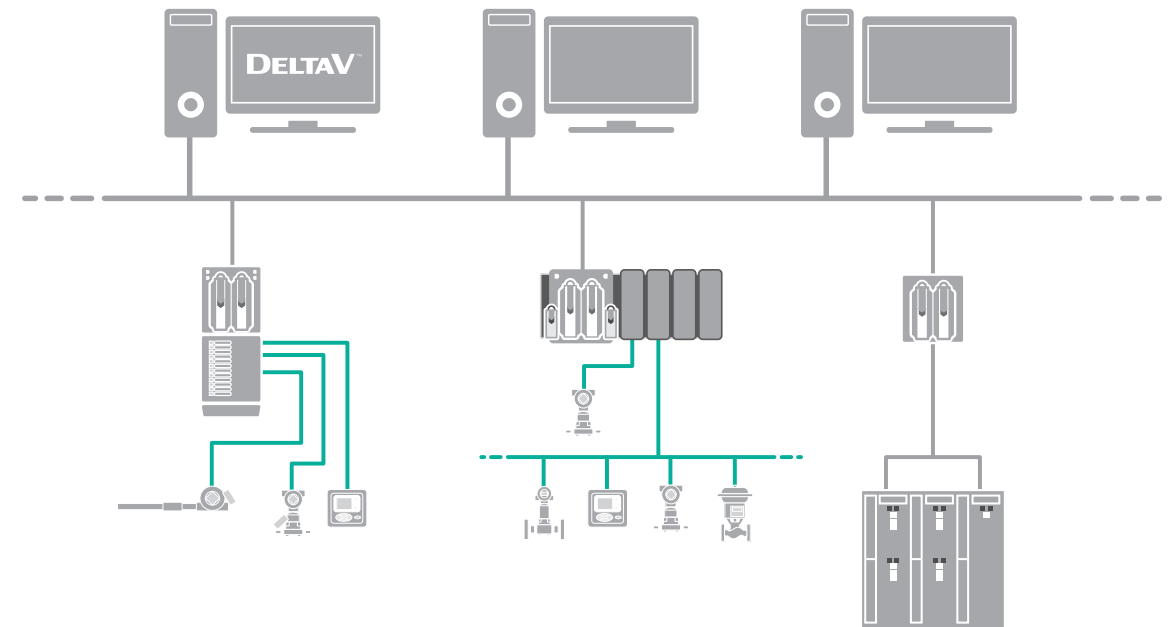
# SEAMLESS DATA AND I/O CONNECTIVITY

## Integrate Intelligence from Next-Generation Field Networks

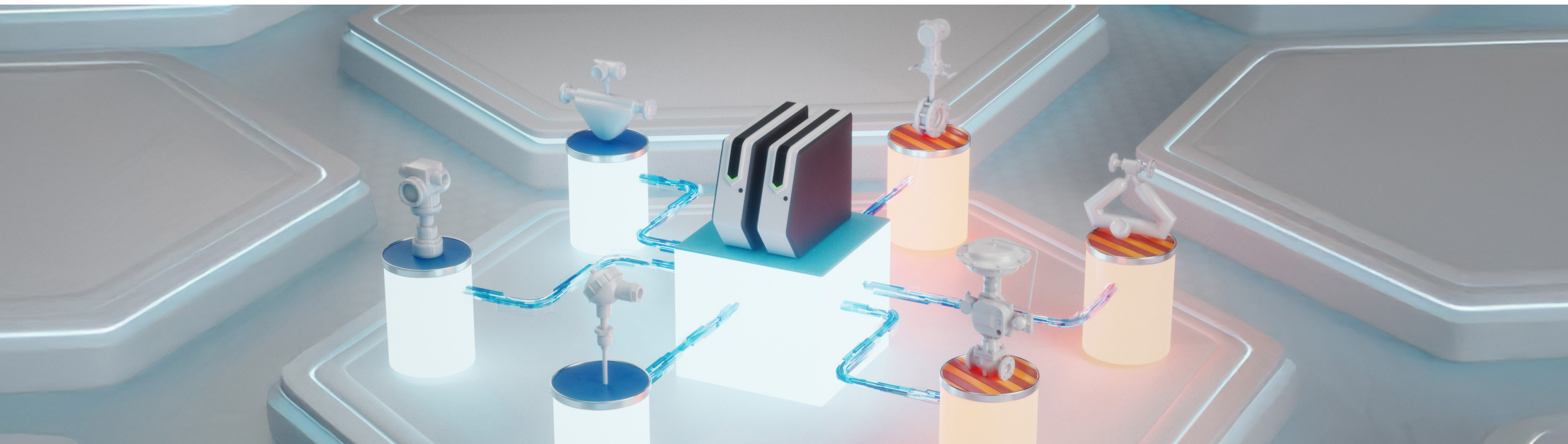
DeltaV v16.LTS brings powerful enhancements to industrial Ethernet protocol support, enabling broader connectivity, easier integration, and greater system resilience. With **PROFINET and Ethernet-APL** support on the DeltaV system, benefit from simplified device configuration using GSDML files and seamless integration with next-generation field devices.

OPC UA and Modbus TCP capabilities have also been enhanced. Users can now read and write string data, such as Batch IDs and Recipe names, from both physical and virtual EIOCs and Application Stations to third-party systems, improving interoperability. Additionally, the EIOC and PK Controller now support the full Modbus register range, aligning with Modbus Organization standards.

With native support for PROFINET, Modbus TCP, OPC UA server, and EtherNet/IP, every PK Controller simplifies system architecture and ensures robust, multi-protocol communication across your plant.



*DeltaV's end-to-end connectivity: from operator to field.*

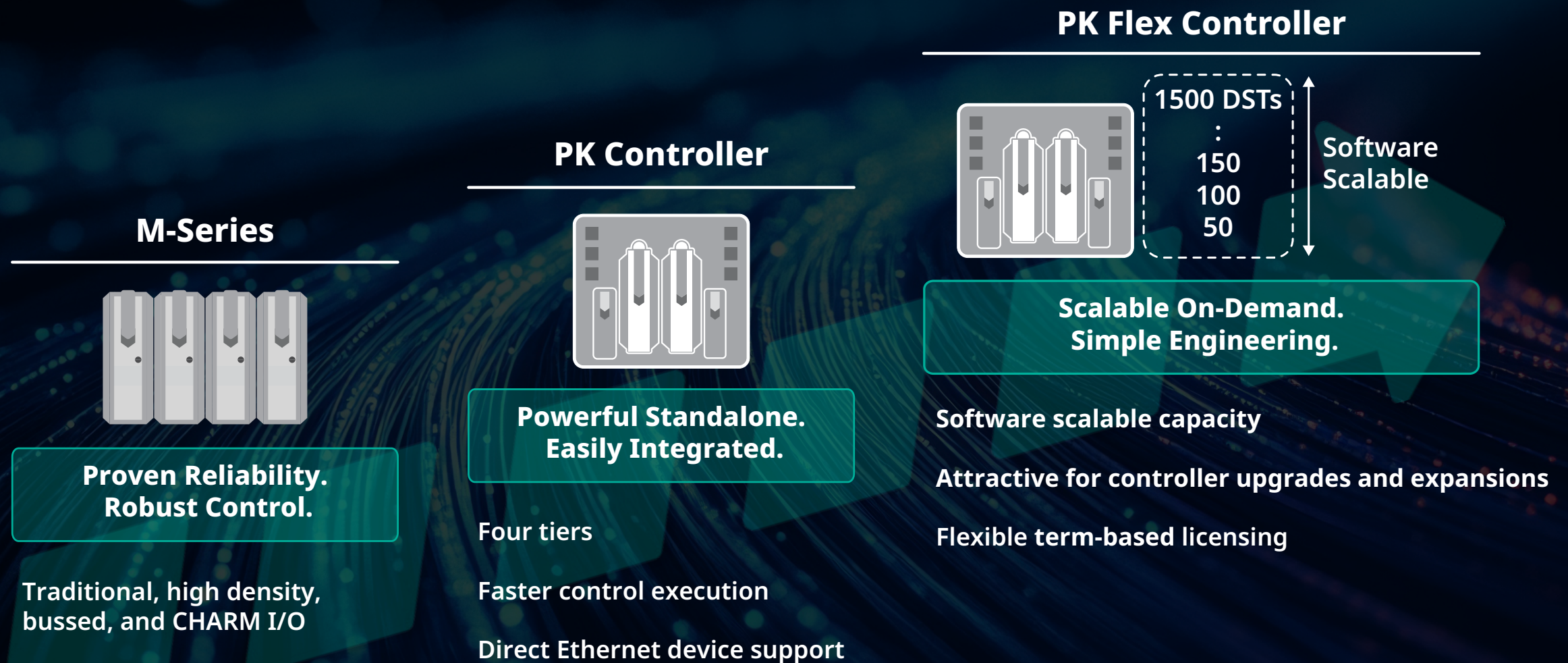


## Expanded Controller Portfolio Enhances System Flexibility

DeltaV offers a controller portfolio designed to meet a wide range of operational needs while delivering greater system reliability. Each controller supports a variety of deployment scenarios and scalability requirements.

The new **DeltaV PK Flex Controller** delivers unprecedented flexibility with software-scalable capacity up to 1,500 DSTs. To help meet your operational needs, it provides on-demand functionality and term-based licensing, ideal for controller upgrades, system expansions, and projects that demand adaptability and performance.

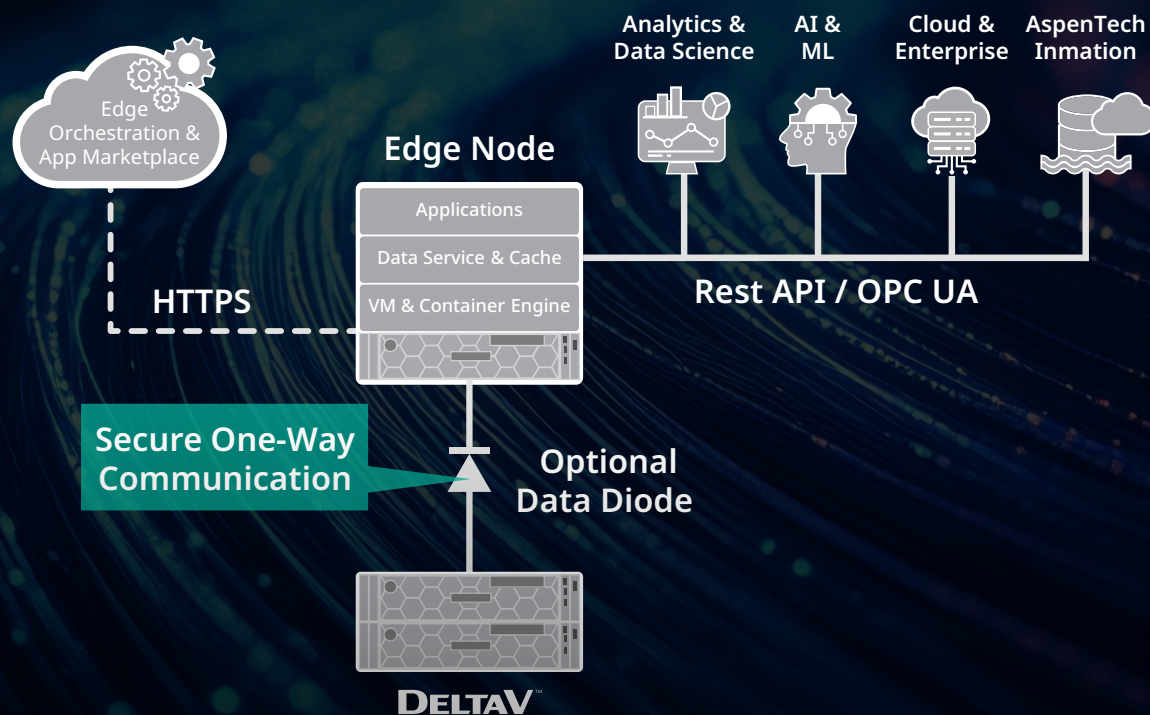
Together, the trusted M-series controller, the high-performance PK Controller, and the newly launched PK Flex Controller deliver a comprehensive, scalable solution. This allows you to tailor your control strategy and application, ensuring long-term flexibility and performance.



## Power Enterprise Operational Performance through Secure IT/OT Collaboration

**DeltaV Edge Environment** unlocks OT data easily and securely and makes it immediately usable across the enterprise. It uses simplified, secure architecture with a single outbound, read-only connection from DeltaV to the Edge node, which protects the control system and reduces network complexity. Data arrives with full context, preserved, including the DeltaV hierarchy, process values, alarms and events, and batch and recipe information. This allows your teams to analyze the data without rebuilding the hierarchy and context. Open access through REST API and OPC UA allows this contextualized data to connect to Power BI, enterprise systems, cloud platforms, as well as AI, analytics and other applications. Each DeltaV Edge system supports up to 300,000 parameters, which provides room to scale data access and analytics across the enterprise.

Through the **Application Marketplace**, you can discover, deploy, and manage Emerson, partner, and open-source containerized apps on the Edge node, keeping them close to the data and simple to maintain with built-in orchestration for updates and diagnostics.



*DeltaV Edge Environment Architecture.*



**DeltaV Edge Explorer**

### DeltaV Edge Explorer

gives users fast, structured access to configuration, alarm & events, and process history for investigation, reporting, and data science.



**DeltaV Live Enterprise View**

### DeltaV Live Enterprise View

allows operator-grade visualization at the enterprise level. Navigate DeltaV Live graphics, see process context, and make informed decisions without touching the control system.

***DeltaV Live Enterprise View allows secure, read-only access to process displays outside of the control room.***



# INSIGHT-CENTRIC APPLICATIONS AND OPTIMIZED OPERATOR EXPERIENCE

## Deliver an Expanded, Cohesive View of Operations

**DeltaV Live Enterprise View** allows stakeholders to view process displays outside of the control room with secure, read-only access, powered by DeltaV Edge Environment. This functionality extends displays to the enterprise without requiring any intermediate conversion or graphic touch-up work.

**Version Control for DeltaV Live** delivers a modern, intuitive solution fully integrated with Graphics Studio. It enables tracking and manages changes while easily viewing and comparing version history.

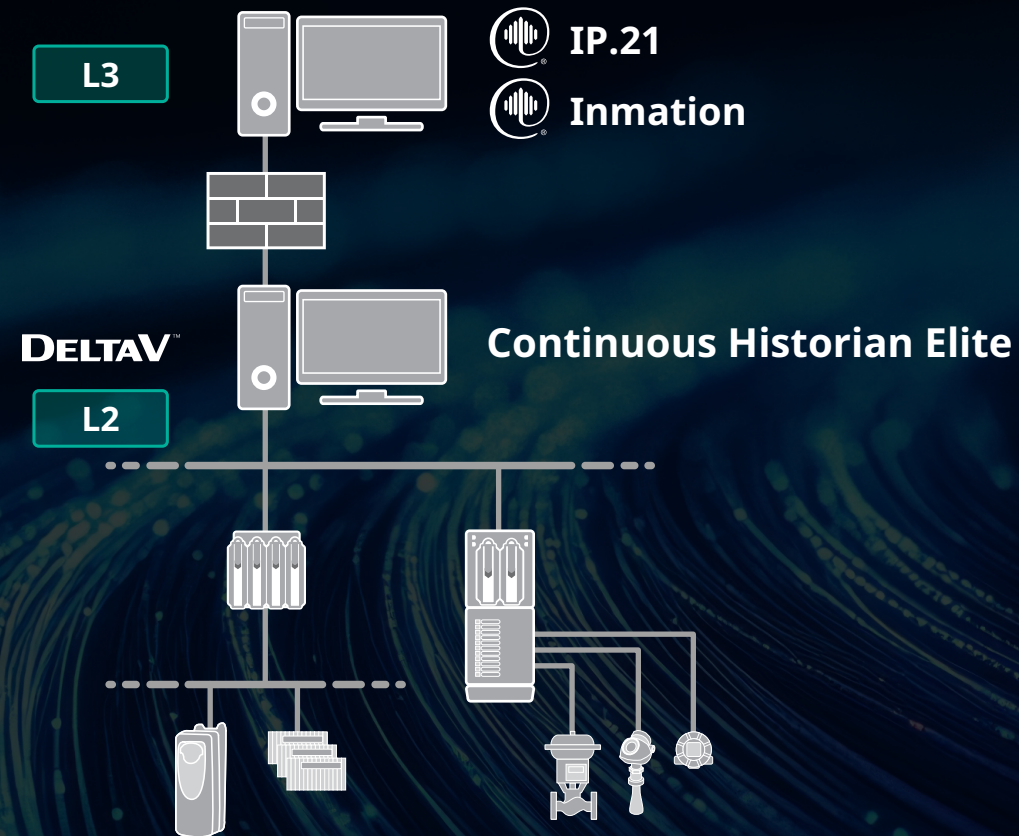
Web Application Integration is also available through **Web Displays**. The Web Display allows online content to be viewed as a unique, dedicated display – behaving just like any other graphic, including inclusion in display sets and participation in hierarchical navigation. This enables a variety of use cases, such as integration with web-based front ends like Aspen DMC3™. Security is preserved, as all sites must be explicitly added to an Allow List before they can be accessed.



# Insight-Driven Decision Support and Optimized Operations

## Highly Scalable and Flexible Storage of Continuous Process Data

The latest addition to the historian product suite, **DeltaV Continuous Historian Elite**, embeds Aspen InfoPlus.21® technology into the DeltaV DCS. It provides highly scalable and flexible storage of continuous process data for a single DCS and integrates seamlessly with a standalone site IP.21 server. DeltaV Continuous Historian Elite is fully integrated into DeltaV engineering and operations environments and connects to aspenONE Process Explorer™ and DeltaV clients for advanced visualization and analysis.



### Scalable

Highly scalable historian for up to 60,000 parameters with status

High-performance scan rate of 10,000 parameters/sec

### Easy Engineering

Seamless integration with DeltaV engineering and operations environments

Advanced alarm management with shelving, unshelving, and exclusion lists

### AspenTech Integration

Powered by AspenTech IP.21 for enterprise analytics and compliance

Easy connectivity to standalone IP.21 server via Replication Interface

## Dynamic Simulation Enhancements

In **DeltaV Simulate**, the Virtual Machine (VM) Controller platform has been enhanced to allow for Save and Restore (snapshot) functionality for both BPCS and SIS. With pause, save, restore and resume functionalities being available for various VM Controllers such as vPK, vM-Series, vS-Series, vEIOC and vSZ/CSLS, the VM Controller based simulate platform can be used for offline development and testing, as well as operator training purposes.

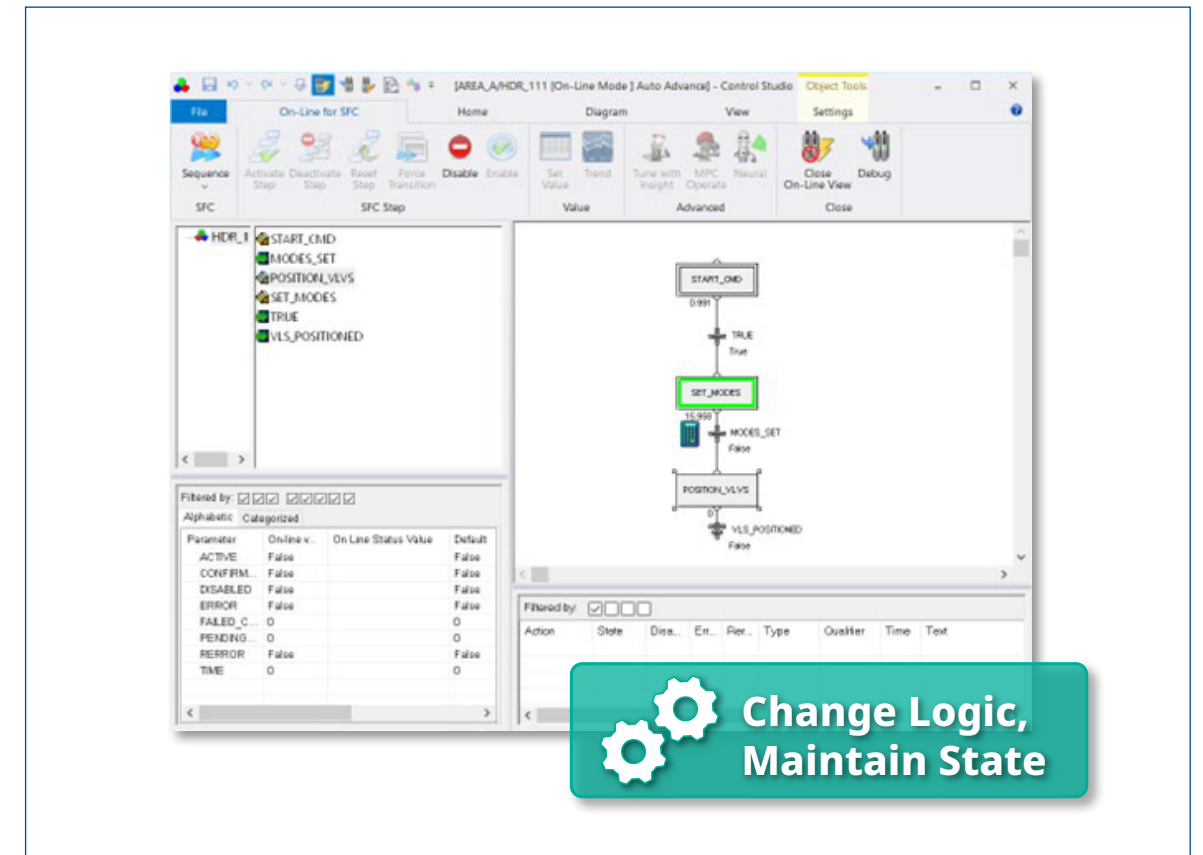
- Module reassignments not needed
- Simulate Convert is not required
- Avoid control or I/O configuration changes
- Continues to support DST Simulation
- Continued ease of adding and removing VM controllers



Pause, save, restore and resume functionalities available in DeltaV Simulate.

## State Based Control Enhancements

Operators often use sequenced logic to bring equipment into a desired operational state. At times, the configuration of that logic may need to be modified while the sequence is already in progress. To support this, DeltaV v16.LTS introduces a new option for the download behavior of Control and Equipment Module Sequential Function Charts (SFCs). With this enhancement, users can preserve the operational state of a running module during a download. Engineers can make changes to sequential logic, save, and download, while the sequence remains in the same step and continues executing with the updated logic applied. This behavior is optional for each CM and EM, ensuring that existing configurations are unaffected unless explicitly enabled for the module.



Download changes while maintaining operational state.

*DeltaV v16.LTS maintains its  
ISASecure SSA Level 1 certification,  
demonstrating Emerson's adherence  
to IEC 62443 standards.*

## SECURE BY DESIGN

Both DeltaV DCS and SIS are hardened against emerging cyber threats with development teams trained in secure coding practices to ensure long-term protection and resilience.

- **Integrated Patch Management (IPM):** Delivers easy, cost-effective, and cyber-secure patching out of the box; IPM seamlessly integrates with the DeltaV system to v16.LTS.
- **NextGen Smart Firewall:** The recent High Availability release reinforces Emerson's commitment to providing robust cybersecurity protection at every level.
- **Anti-Virus and Allowlisting:** Continued support for Trellix Anti-Virus and Allowlist cybersecurity products ensures trusted protection for critical systems.



*NextGen Smart Firewall*



## LEARN MORE

[www.emerson.com/deltav16](http://www.emerson.com/deltav16)

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