# DeltaV™

Version 15

***Winner in Six Categories***

# Shaping the Future of Automation

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EMERSON™

DeltaV™ has always helped operations run smoothly, reliably, and efficiently. DeltaV Version 15 goes a step further, equipping you with future-proof automation technologies that are easier to configure and maintain—while also propelling your performance to new levels. Expanded analytics provide even deeper insights into equipment and processes. Intuitive operator environments deliver actionable information, empowering operators to make smarter decisions—faster. And a flexible, scalable, and cybersecure DCS offers easy I/O integration and flexible subscription options that lower capital costs and accelerate modernization so you can grow a more sustainable operation at your own pace.

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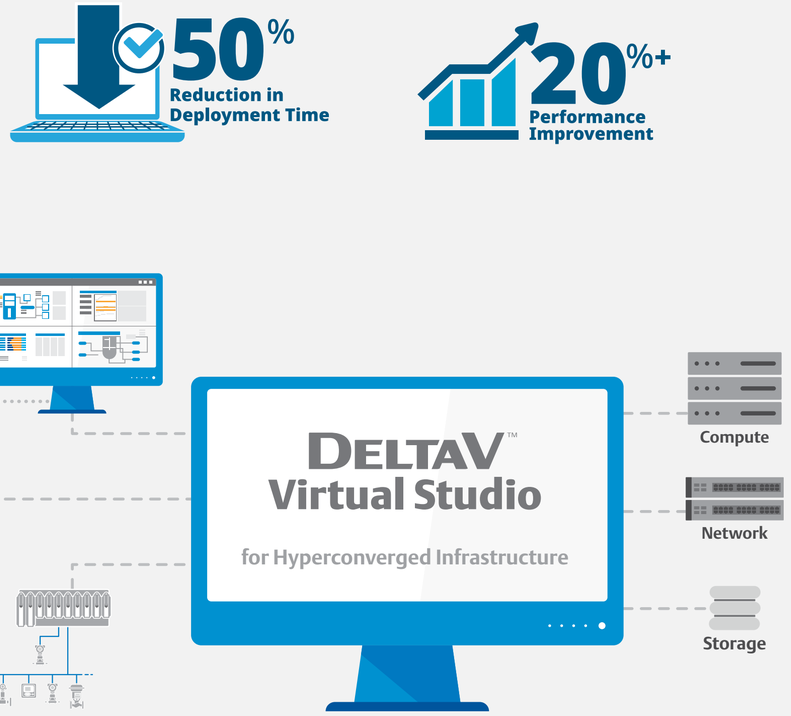
# REDUCE ENERGY USE AND HARDWARE FOOTPRINT WITH EASY, SCALABLE VIRTUALIZATION

## DeltaV Virtualization with Hyperconverged Infrastructure

DeltaV™ now offers Hyperconverged Infrastructure (HCI)-based virtualization, and is an automation-centered, fit-for-purpose solution designed to enhance user experience and improve infrastructure performance. Emerson's Virtual Studio with HCI is designed with scalability in mind, making it easy to setup, configure and maintain virtualized systems. This enables anyone, regardless of their expertise and available resources, to quickly and easily create a virtualization system in a very short time. Using virtualization, plants can reduce their footprint and energy usage to improve sustainability and efficiency.

- Easy automated configuration and setup with DeltaV Virtual Studio, and fully tested and supported hardware with HCI
- Hardware and software independence for reduced footprint
- Easy, scalable, and cost-effective with optimized performance
- Extended system life with easy upgrades
- Software-defined storage networks for high availability and automatic disaster recovery
- Future-proof architecture offers flexibility to run control and analytics in the system

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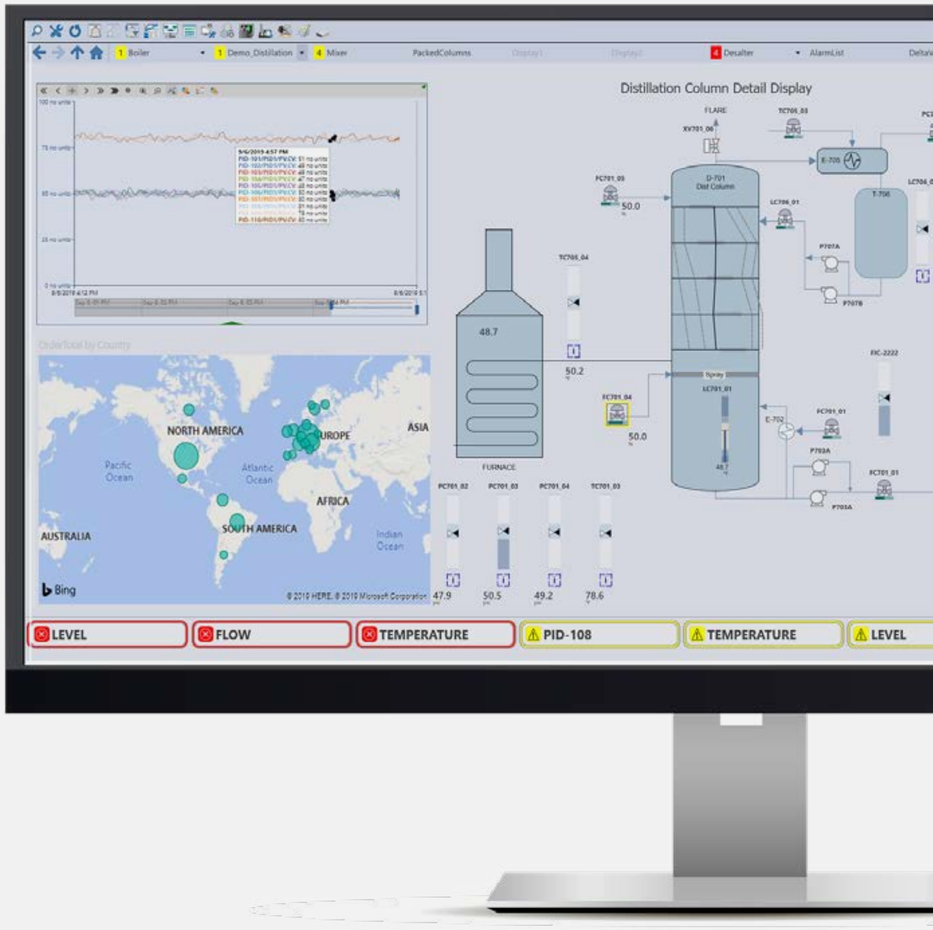
# GAIN EXPERT INSIGHTS THAT EMPOWER OPERATORS TO ACHIEVE TOP PERFORMANCE

## DeltaV Live

DeltaV Live is now faster, more robust, easier for operators to use, and will help to increase the performance of your plant and your personnel. Enhanced visualization of real-time data and alarms, intuitive navigation, improved trending capabilities, and other situational awareness enhancements allow operators to gain a greater span of insight, control, and effectiveness. With DeltaV Live, operators have greater situational awareness, enabling every operator to make smarter, faster decisions and achieve top performance.

- Enhancements to tools simplify the process and reduce engineering efforts for converting from DeltaV Operate to DeltaV Live.
- PV in the Alarm List: Users can now view the current value and units of the PV associated with standard alarms in the alarm list, which updates in real time.
- Out of the Box (OOB) Table Object: A new addition to the OOB DeltaV Live library, this table can display dynamic data from DeltaV and/or SQL data sources, with options for conditional formatting, sorting, filtering, paging, and color formatting.
- SFC Visualization: Operators can maintain situational awareness by viewing SFC logic from control modules, equipment modules, and phases on DeltaV Live displays without opening Control Studio. Operators can also drill down to view logic and associated parameters, open faceplates, see current values, and force or disable transitions.

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# UPGRADE YOUR CONTROL. PRESERVE YOUR I/O.

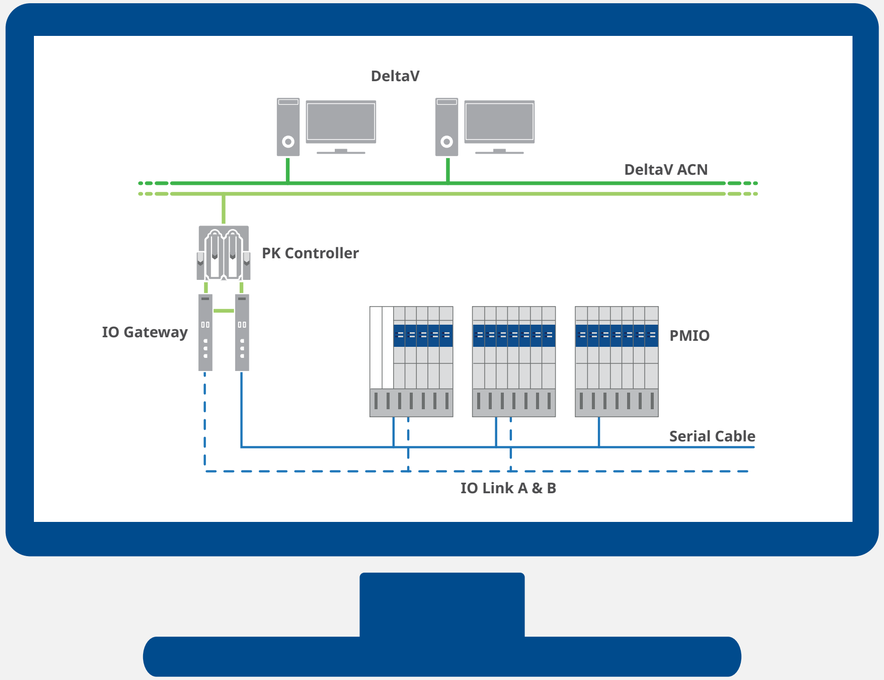
## DeltaV IO.CONNECT

Emerson's DeltaV IO.CONNECT provides an open architecture pathway that enables an easy and secure transition to DeltaV distributed control systems. IO.CONNECT was built to work with the revolutionary DeltaV PK Controller and is designed to help plants implement the modern, fully-supported control system of their choice without the need to completely overhaul the automation equipment infrastructure. Now, their automation system will always be available, current, and up to date.

- Open architecture pathway; software interface that accelerates modernization, improves efficiency, and offers a low-risk and simplified path to becoming a smart digital plant.
- Driven by DeltaV; simplifies data integration, extends flexibility, improves operations and lowers total cost of ownership.
- Enables manufacturers to keep existing I/O wiring, terminations and automation infrastructure in place; they can cutover card by card, channel by channel at their own pace, paying only for what they need.
- Support for IO.CONNECT is available through the Emerson Guardian Support program; IO.CONNECT is provisioned as a subscription component of Guardian Support.
- Supported with DeltaV Version 14 and Version 15.
- Future-proofs automation systems against obsolescence in the future.

Accelerate new system transition by over 90% and rapidly resume production by preserving existing I/O and leaving wiring intact.

IO.CONNECT offers up to 40% reduction of your capital spend over your current legacy automation system.

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# INCREASE SPEED-TO-MARKET WITH REAL-TIME PAT

## DeltaV Spectral Process Analytical Technology (PAT)

DeltaV Spectral PAT now offers a simplified closed-loop process architecture and delivers greater stability and performance by bringing spectral waveform data directly into the control system to perform real-time analytics. By implementing in-line, continuous, closed-loop process verification and control with an automated, real-time quality release, manufacturers build a foundation for better regulatory management, reduce human error or intervention, and optimize facility performance and throughput. Spectral PAT helps businesses stay competitive, capture greater ROI and deliver quality treatments to market faster by moving plants towards fully automated production.

- Performs chemometric model calculations within real-time control module execution.
- Provides quality predictions based on spectroscopic analyzer measurements and chemometric models executing in a modeling engine embedded into a standard DeltaV function block.
- MVA blocks running MVA models created with Aspen Unscrambler.
- Both the MVA and the previously released SIMCA®-Q Spectral PAT function blocks can be licensed for use on both online production systems and Multi-Node Simulate and DeltaV Discovery systems.
- DeltaV Spectral PAT function block is a separate installer, applied after v15.LTS is installed. Customers can choose to run the MVA, or the SIMCA-Q function block or both on the same DeltaV system.
- Easy to deploy, validate, and maintain.

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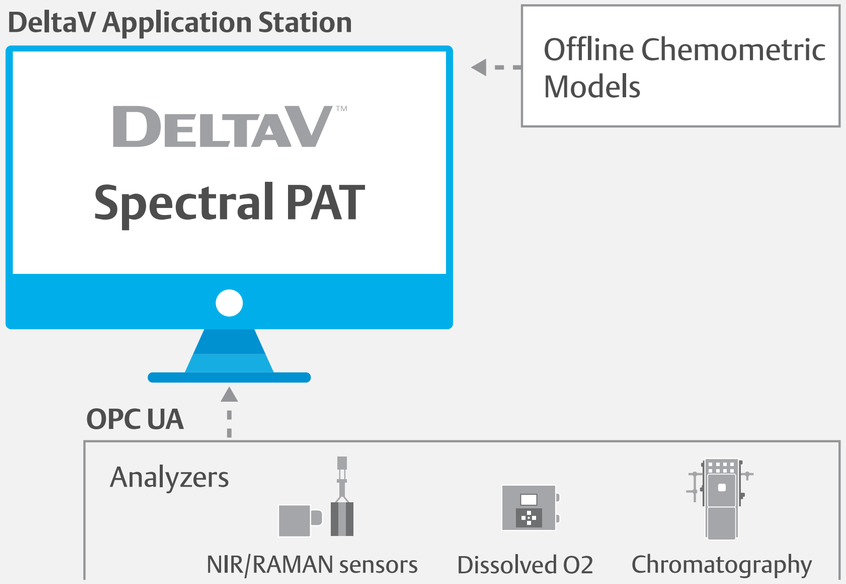


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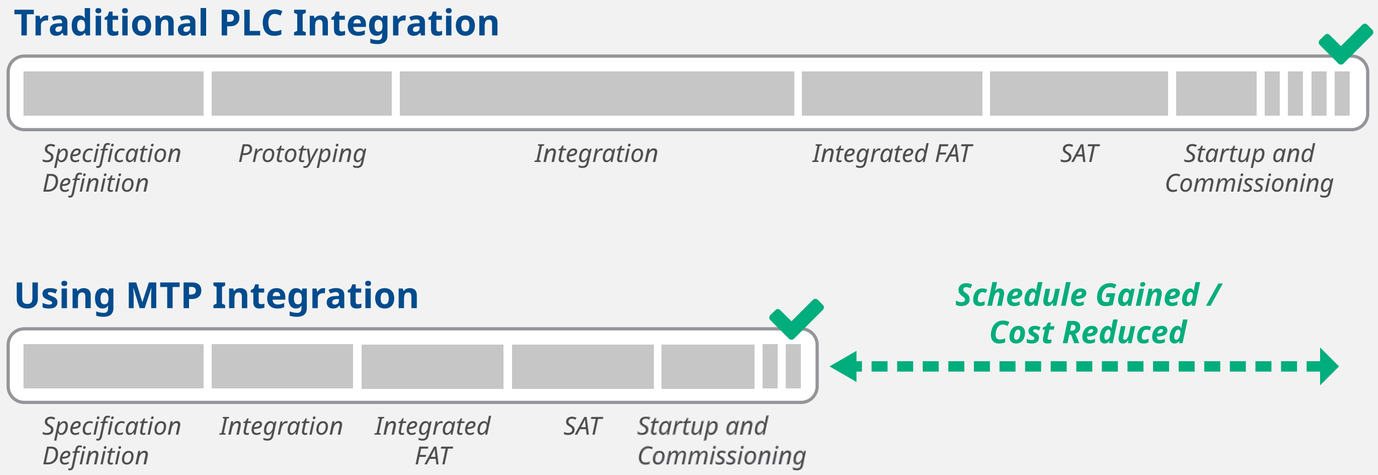
# REDUCE COST AND COMPLEXITY OF INTEGRATING OEM SKIDS

## Module Type Package

Module Type Package (MTP) standard is now incorporated in the DeltaV automation system to reduce the cost and complexity of integrating OEM skids with DeltaV, and minimizes the requirement for end users and system integrators to invest in additional engineering or special integration tools. The MTP Merge Utility in DeltaV securely imports the MTP configuration file associated with the OEM skid, and automatically creates the configuration in DeltaV within minutes. This eliminates thousands of hours associated with the design, implementation, and testing of custom, vendor-specific integration engineering.

- Easy Module Type Package (MTP) file integration.
- Eliminate complex and expensive manual equipment integration operations.
- Automated generation of OPC UA device interface, optimized signal mapping, and landing modules.
- Seamless integration with Emerson's PAC Systems PLCs and AMS Asset Monitor.
- Time-based licensing for optimized cost and greater flexibility.

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# DEPLOY SECURE ARCHITECTURE WITH CONFIDENCE

## Cybersecurity

DeltaV Version 15 maintains protection from cybersecurity threats by being one of the only systems to have a top-to-bottom cybersecurity certification. DeltaV™ is ISASecure SSA Level 1 certified, demonstrating our adherence to the IEC 62443 standard by an accredited third party that Emerson developers are trained to write secure code and the system as a whole is hardened against emerging cyber threats.

- Newly-released Integrated Patch Management (IPM) for DeltaV makes patching easy, cost-effective, and cybersecure out of the box; IPM will migrate with DeltaV system to Version 15 and beyond.
- Emerson is announcing the upcoming release of the Emerson NextGen Smart Firewall, renewing its commitment to providing cybersecurity protection at all levels.
- Continued support for Trellix (McAfee) cybersecurity products.

ISASecure® *SSA Certification – IEC 62443*

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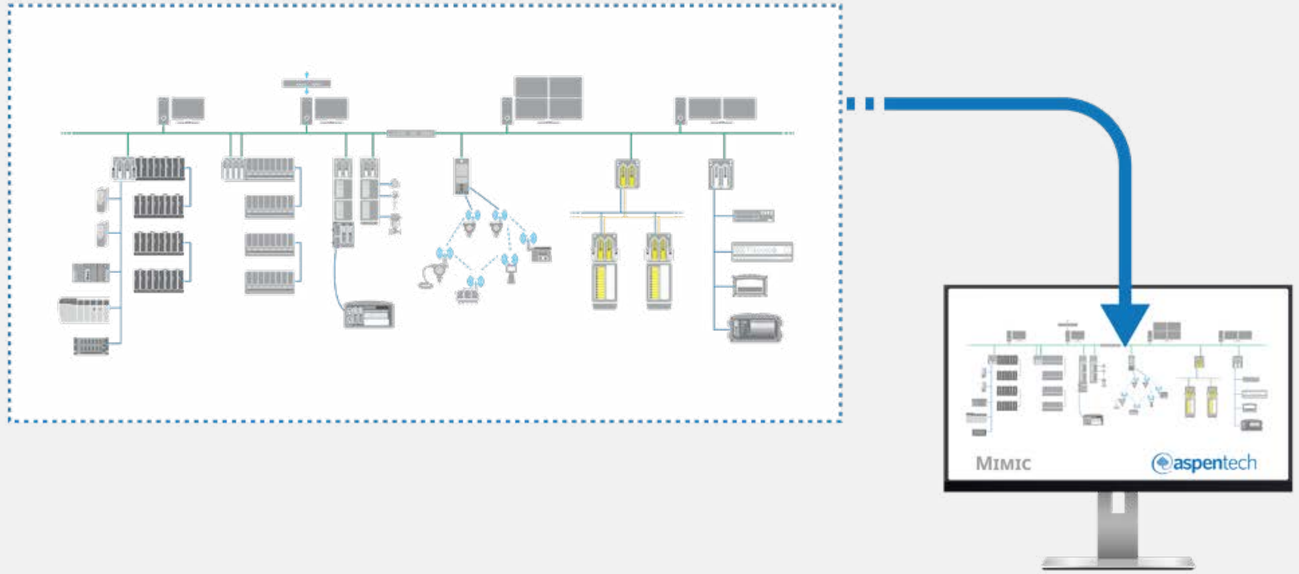
# ACHIEVE EASIER, FASTER SIMULATION WITH MORE I/O COVERAGE

## DeltaV Simulate

DeltaV Simulate provides a multi-purpose control simulation platform that enables personnel to easily test and validate logic while minimizing project risk. And now, simulation capability has been extended to cover even more I/O types. This provides an extensive, easier, and faster DeltaV deployment without requiring configuration modification for control modules in Virtual Machine Controllers and allows DeltaV projects to run engineering checkout, virtual FAT, and solution demos—reducing engineering time and efforts, and system footprint.

- Extensive, easier and faster DeltaV deployment; no configuration modification for control modules in Virtual Machine Controllers needed.
- DeltaV projects can run engineering checkout, virtual FAT, and solution demos.
- Reduces engineering time and efforts, and system footprint.
- Easier validation for Life Sciences; run validation based on Digital Twin.

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# REDUCED COST AND GAIN GREATER FLEXIBILITY

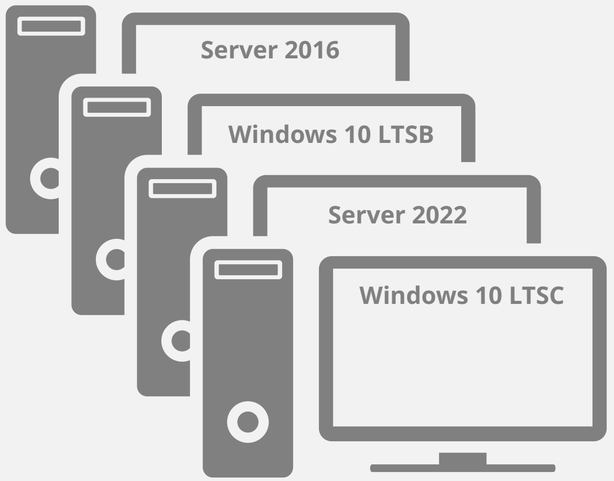
## Multiple Operating Systems (O/S) Support

Multiple Operating System Support allows more O/S options to run on a single network, on the same DeltaV system, enabling greater flexibility and reducing costs:

- Purchase new computer hardware for v15.LTS without spending time to downgrade the operating system to match the existing installation.
- Eliminates the need for and reduces the cost of extra inventory and last-time purchase of computers that support existing operating system.
- Upgrade kits will be available for purchase.

V15.LTS supported O/S:

- Windows 10 IoT Enterprise LTSB 2016
- Windows 10 IoT Enterprise LTSC 2021
- Windows Server 2016
- Windows Server IoT 2022

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# OTHER FEATURES

## TAKE NOTE OF THESE OTHER IMPORTANT FEATURES

### Electronic Signatures

Electronic signatures have been revised to include a separate comment field for verification prompts and prevent modification of a confirmed comment.

- New events within the chronicle reflect separate time stamps for the confirmation and verification as part of the latest draft guidance to 21 CFR part 11 in the current environment of electronic systems used in clinical investigations; all prompts (including SIS) that can be configured for verification in DeltaV Live, Control Studio, DeltaV Explorer, Alarm Mosaic, Batch History View Batch Application Manager and Campaign Manager have been updated with this feature.

### DeltaV M-series Zone 2 Remote I/O New Design, Added Functionality, Easier PLC Migrations

The next generation M-series RIU2 brings a fresh new design and replaces the original RIU in DeltaV v13 and later. New functionality adds support for Series 2 Plus high-density cards making PLC-5 migrations easier than ever before. Other benefits include:

**Shared remote I/O.** DeltaV M-series Zone 2 Remote I/O can be shared amongst several DeltaV controllers for a wider range of applications and increased installation flexibility.

**Easy plug-and-play installation.** DeltaV M-series Zone 2 Remote I/O automatically identifies itself to the control network, saving the usual no-value engineering work that other automation systems require. Additionally, I/O cards are recognized as inserted into the Remote I/O subsystem.

**Easy to use.** Like the traditional I/O in your DeltaV system, the DeltaV controller manages all activities for your Zone 2 Remote I/O. The I/O cards supported by the Remote I/O subsystem are the same as those used on M-series controllers — saving you spares.

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### Parallel Redundancy Protocol (PRP) for the PK Controller

The near-instantaneous network switchover of the connected industrial Ethernet device network provided through the introduction of PRP available in the EIOC is now available in the PK Controller. PRP is a network protocol standard for Ethernet that provides seamless fallover against failure of any network component. PRP is an optional feature that can be enabled at the port level and is available with all the industrial Ethernet protocol clients supported in the PK.

**Emerson Industrial and Panel PCs**

Emerson is now offering new Industrial PCs (IPCs) and panel PCs qualified and tested to work with DeltaV technology.

- Panel PCs:
  - Windows 10 IoT Enterprise LTSC 2019 O/S
  - Supported on DeltaV v14.FP2 and later for use as Standalone PK Controller deployments as well as integrated systems
- IPCs:
  - Windows 10 IoT Enterprise LTSB 2016 O/S
  - Supported on DeltaV v13.3.1 and later

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