

EXPERION PKS OVERVIEW

The Most Advanced, Open and Secure Control System Today



In the 1970s, Honeywell pioneered the Distributed Control System (DCS), which revolutionized plant-wide operations. Honeywell once again redefined industrial automation with Experion® PKS (*Process Knowledge System*), the first enterprise-wide solution designed to unify people with process, business requirements and asset management.



Integrating People and Process for Better Performance

Experion PKS is designed to merge traditionally disparate functions and systems across the manufacturing enterprise, and captures the knowledge of plant personnel and their workflows to deliver sustainable efficiencies. This union streamlines information flow to the right place, at the right time—to the right people. Abnormal Situation Management (ASM) Consortium principles embedded in Experion result in better overall collaboration and performance of plant personnel, thus improving safety, efficiency and agility. A common and consistent HMI over the entire integrated offering provides the essential foundation for improving operator effectiveness.

Today's Experion PKS represents the most advanced, open and secure control system for a variety of needs—from the smallest applications to the largest systems in the world.

Unified Architecture

Experion PKS allows integration of all process control, safety systems, and advanced application software under one unified architecture. A single, integrated platform encompasses continuous, sequence and batch control, as well as safety, security, electrical, SCADA and asset management. With Distributed System Architecture (DSA), users experience a single integrated solution instead of several independent systems, while retaining the ability to autonomously manage each system. Fault Tolerant Ethernet (FTE) ensures the performance, determinism and security required for industrial control applications. Experion allows you to securely add advanced applications as needed but with greater, ongoing benefits and lower cost than point solutions tied together.

Human-Machine Interface

A common and consistent HMI across everything improves operator effectiveness, ties your entire facility together, and enables your people to succeed. Experion provides seamless data visibility through a pre-built operator environment. Capabilities such as video event detection, comprehensive built-in alarm management, a large number of standard displays, and the ability to connect separate plants or units seamlessly together, gives your teams the most powerful tools available for collaboration and real-time decision-making. Experion is the only process control system with ASM Consortium principles built into its design. Knowledge capture through automation of procedural operations as well as advanced alarming capability allows people to better prevent and respond to abnormal situations.

Profit Controller, embedded in the primary and supervisory controllers, optimizes performance, production and cost.

Profit Suite, Profit Loop, and Asset Manager reduce instrument and maintenance costs by up to 30%.



An Experion Orion Console provides effective operations with ergonomic design and clear status assessments, operating limits, and targets at a glance.

Project Implementation

LEAP,[™] the first approach to revolutionize automation project lean execution, enhances our project implementation services with our most innovative, enabling technologies to revolutionize project execution—Universal I/O Cabinets, virtualization, cloud engineering, and auto-device commissioning. LEAP separates physical from functional design, allowing parallel workflows, using standardized designs, and enabling engineering to be done from anywhere in the world. A large capital project can realize up to 30% capital savings in automation infrastructure projects, and flexibility for up to a 25% improvement in schedule.

Automated Device Commissioning

1 MINUTE

Transmitter commissioning time reduced from 2 hours to 1 minute



6X

Balanced cabinet commissioning 6 times faster



4 HOURS

Every mistake avoided saves 4 hours of troubleshooting



Any of the following technologies can be offered individually or together for the full solution benefits.

Universal Channel Technology:

Universal I/O enables instant remote configuration of channel types, standardized input/output cabinets, reduction or elimination of marshalling cabinets and reduction in equipment needed for both process and safety I/O. Additionally, Universal I/O can future-proof small projects and plant cabinets as well without the rest of the LEAP solution.

Virtualization:

Our Experion Virtualization Solutions remove the dependency between functional and physical supervisory designs, enabling standardized server cabinets, reduced hardware requirements and corresponding savings in space, power, cooling and weight. Our Virtualization Premium Platform brings Fault Tolerance to the market for the first time, providing better hardware protection for mission critical applications through instantaneous, non-disruptive failover.

Virtual Engineering:

Our Virtual Engineering Platform, VEP, enables engineering in a secure, centrally hosted cloud environment allowing project execution and testing anywhere in the world, delivering improvements in collaboration and travel savings.

Automated Device Commissioning:

Auto Device Commissioning automatically binds control configuration engineered in our secure cloud to field devices connected to any Universal I/O channel.

More than 3,000 projects are completed in our secure cloud per year.

Experion PKS is supported by an unsurpassed project execution and service team with a global network of more than 6,000 engineers and designers.



Connectivity and Open Systems

Along with tight integration and improved project execution comes a truly open system, connecting equipment to leverage data and turn it into actionable information. The new capabilities below illustrate Honeywell's advancements in the IIoT realm and open system integration.



- Auto Device Commissioning further optimizes LEAP lean project execution by enabling late binding of devices with loop configuration created in the cloud. The result reduces loop commissioning from hours to minutes.
- Automated skid integration applies our LEAP lean project solution to PLC integration—with easy automatic detection and configuration of Ethernet IP controllers in Experion's SCADA system.
- Experion for Electrical System Control and Management allows you to integrate your ECMS with your process control system, with one control system with one HMI.
- Field Device Manager provides efficient smart instrument management.
- Experion Profit Controller in C300 and ACE moves multivariable predictive control out of the Microsoft® operating system and into the Experion Control Execution Environment. With this Advanced Process Control running on the C300, there is also the option for full controller redundancy.
- Experion supports all wireless standards with our OneWireless™ Network. OneWireless is a multiprotocol wireless I/O network connecting ISA100 Wireless, WirelessHART and Wi-Fi devices all in one end-to-end redundant, cyber secure network. OneWireless delivers performance even when scaling to thousands of I/O.

Mobility

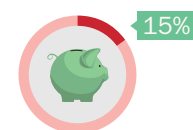
Data needs to not only be interpreted and organized; it must reach the right people, bring together a range of input, and enable collaboration to make better decisions. While wireless brings data into the control room, mobility enables remote collaboration and decision making. Honeywell has several solutions, including our Pulse mobile app, to allow remote access to real-time plant performance.

Integrated Safety and Security

Honeywell's holistic approach improves business performance by reducing the risk of incidents, faults and failures that can threaten people, assets and the environment, and disrupt normal operations. Experion provides the only truly integrated safety and security solution, supporting complete operational integration through a single dashboard, while providing safety network segregation options for greater protection.

Honeywell Industrial Cyber Security Solutions further extend the built-in security of Experion systems and help protect the availability, safety, and reliability of industrial facilities and critical infrastructure. Leveraging advanced technology and industry leading process control and cyber security expertise, we deliver proven, complete solutions designed for the specific needs of industrial environments.

Experion PKS Results



Improved Project Effectiveness



Reduced Operator-Related Incidents



Reduced Lifecycle Management Costs



Why Choose Honeywell?

Honeywell provides the confidence of a trusted provider with the largest installed base of integrated systems, the greatest longevity in the industry, and bar-raising continuous innovation. Honeywell serves virtually every major process industry—including refining, chemicals, oil and gas, metals and mining, pulp and paper, and pharmaceuticals. Experion is used by the smallest purpose-built applications to the largest megaprojects and multi-site architectures. Additionally, we help customers cost-effectively manage their control and safety infrastructure in the face of constantly evolving technology.

Why Honeywell?



20 Million I/O Channels
in operation around
the world



6,000+ Engineers and
Designers in projects
and services



40 years of continuous
evolution and modernizing
intellectual property



3,000+ Projects
completed in our
secure cloud per year

Global Experience with Local Support

Honeywell can tap into over 12,000 process solution employees located in approximately 125 countries. Honeywell's Global Technical Assistance Center (TAC) helps customers avoid revenue loss through faster problem resolution, with remote diagnostics to help proactively manage automation systems. No matter where you are in the world, or what language you speak, Honeywell delivers comprehensive services to maintain operating performance and maximize ongoing value.

Unified and Comprehensive Solutions

Experion is modular, flexible, scalable, and extendable. Starting with our base platform, additional systems and applications (*including security, digital video, advanced process control, and fire and gas systems*) can be added easily for a completely integrated, open system.

Continuous Innovation

Honeywell continues to evolve and innovate to bring significant advances in automation technology, while also providing a smooth migration path to today's technology when the time is right. Honeywell continually guards customer investments by providing easy upgrade paths to the latest control system technology. In addition, we have a wealth of experience in migrating legacy control and safety systems, no matter who the manufacturer. We offer true on-process, virtualized and step-by-step migrations. Honeywell has continued to support products for over 40 years while helping companies transition to modern technology.





For more information

To learn more about Honeywell's Experion PKS, visit www.honeywellprocess.com/Experion or contact your Honeywell account manager.

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