



PlantCruise by Experion[®]

Purpose-built DCS
for today's emerging markets



A Proven DCS.

PlantCruise by Experion® is based on Honeywell's award-winning Experion Process Knowledge System (PKS) and built to efficiently meet the automation requirements of various industrial operations. It leverages Honeywell's track record as a recognized leader in process automation.

This Distributed Control System (DCS) brings the best of proven Experion PKS technology to help optimize industrial performance in emerging markets around the world.

Distributed Control Technology That's Right for You.

In industries such as specialty chemicals, biofuels, power generation, pharmaceuticals, mining/minerals/metals, water/wastewater and food & beverage, companies are seeking a robust DCS solution for control of continuous and batch processes. They need to reduce costs while meeting more stringent regulations and increased sustainability objectives.

Although distributed control technology offers numerous advantages over a Programmable Logic Controller (PLC), conventional DCS systems can be too large and expensive for certain applications.

PlantCruise by Experion brings the best of Experion PKS technology to help optimize industrial performance. With this scalable and cost-effective control system, your operation will have greater agility to respond to new customer demands and changing product requirements. It is a powerful, yet practical solution offering advanced optimization and batch control technology usually found in larger DCS platforms — but at a more affordable price.



A solution that fits your needs

PlantCruise by Experion offers a host of innovative technologies that are vital to improved plant performance and better business results in an increasingly competitive environment. These technologies can be implemented in a way that fits the needs of your industrial site.

- Tightly integrated DCS and Supervisory Control and Data Acquisition (SCADA) solution
- Based on Honeywell's Experion C300 controller for robust and versatile control
- C300 simulation for proving out control strategies
- Honeywell's patented, high-performance Fault Tolerant Ethernet (FTE) control network
- Honeywell's patented, revolutionary Profit® Loop algorithm for predictive control
- Unique I/O module design for compact footprint, and efficient installation and maintenance
- Improve accuracy and reduce installation footprint by up to 54% with new TC/RTD module design
- Improve efficiency and reduce configuration time by up to 30% with Honeywell's enhanced Control Builder and newly styled Human-Machine Interface (HMI)
- Easy assembly requiring no special mounting hardware, power rails or cabinet infrastructure for module installation
- Powerful reporting tool for debugging and system maintenance
- Support for industry-standard PROFIBUS® devices
- Optional redundancy at all levels: server, network, C300 controller and Series 8 I/O modules
- Smart device integration through industry-standard protocols such as HART®, FOUNDATION™ fieldbus, PROFIBUS and Modbus®
- Asset management using Honeywell's integrated Field Device Manager (FDM) software
- Controller-based, S88-compliant modular batch control for high throughput and reliability of batch processing
- Enhanced batch functionality with Class-based Recipes, Recipe Builder and Batch Summary Display
- Enhanced SCADA features with Pan and Zoom Displays, Equipment Templates, etc.
- Extensive integration of PLCs, DCSs, Remote Terminal Units (RTUs), drives, safety systems and weigh scales through rich SCADA capability and Matrikon OPC servers
- Honeywell's flexible Distributed Server Architecture (DSA) for integration of processes across multiple units, control rooms or geographically separated locations for optimum flexibility and system maintenance
- Virtualization solutions intended to improve performance and reliability in the industrial automation domain
- Qualification and Version Control System (QVCS)/E-signature support for improved lifecycle management and change control process verification with embedded regulatory (21 CFR Part 11) compliance

Why PlantCruise by Experion?

- Maximize plant uptime
- Improve operational reliability
- Optimize process efficiency
- Boost performance and agility
- Enhance operator effectiveness
- Integrate third-party devices and drives
- Reduce total cost of ownership
- Ensure easy upgrades and future expansion

A Purpose-built DCS.

PlantCruise by Experion enables industrial organizations to realize the performance advantages of a true distributed control solution at a much lower cost than alternative approaches. This purpose-built DCS can be tailored to fit your specific control applications — regardless of their scope — and can be extended at any time to include personnel and assets, and even to integrate entire business operations.

With Honeywell's PlantCruise by Experion solution, industrial facilities are free to implement the capabilities of an advanced DCS based on their specific requirements.

Best-in-class Features in a Scalable Package

- **Built-in Function Blocks:** Designed to suit DCS requirements unique to various industry applications. Example includes function blocks specific to power plant applications such as Drum Level Compensation Block and Drive Control Modules. The Experion C300 controller also supports Custom Algorithm Blocks (CABs), which are similar in purpose and structure to standard function blocks but have user-defined algorithms and data structures, allowing control strategies to be refined based on particular requirements.
- **Pre-built Templates:** Solution pack with a wide range of templates ideal for general control applications. These include: Split Range Proportional-Integral-Derivative (PID), Standard Flow-based Dosing, Standard Motor Operated Valve (MOV) Control, and Split Range Control with bi-directional feed forward.
- **Rich Function Libraries:** Easily create control strategies with the single, integrated Control Builder tool for function blocks supporting Continuous Control Modules, Sequential Control Modules, Batch Recipe Control Modules and Model-based Control.
- **Application Development Toolkit:** Develop custom applications that communicate with PlantCruise by Experion through the Network Application Programming Interface (API), Server API, Open Database Connectivity (ODBC) Data Exchange, Server Automation Object, etc.

Expand at Your Own Pace

By installing PlantCruise by Experion, you gain the confidence of a secure path forward for your process automation system. Simply decide what level of automation makes the most sense for your business today. PlantCruise by Experion allows you to expand, at your own pace, as your business grows.

Engineered for Greater Robustness

PlantCruise by Experion was engineered from the ground-up to be more robust than traditional PLC-based systems. It takes advantage of proven components inherent to the full Experion PKS solution.

- **Fault Tolerant Ethernet (FTE):** Honeywell's FTE is a reliable, industrial-grade network providing multiple communication paths between nodes, thus eliminating all single points of failure. FTE is dedicated to the control mission, delivering not only fault-tolerance but also the performance, determinism, and security required for industrial control applications. It leverages commercial Ethernet technology to lower the cost of the entire network infrastructure.
- **C300 Controller:** The Experion C300 controller is key to optimal process control with PlantCruise by Experion. It supports a variety of control functions, including continuous and batch processes, as well as integration with field devices using Honeywell's Series 8 I/O. The C300 controller operates Honeywell's deterministic Control Execution Environment (CEE) software, which executes control strategies on a consistent and predictable schedule.
- **Direct Station:** This powerful operator station functions as a client to the PlantCruise by Experion Engineering Server, and at the same time, allows direct access to the C300 controller for process data, alarms and messages. As such, you are never in question about the ability to safely monitor and control the process.
- **Safe Operations:** In collaboration with the Abnormal Situation Management (ASM®) Consortium, Honeywell has developed safe operator functions like Procedural Operations for integrated interactive instructions to reduce incidents related to improper execution of operating procedures. It has also created alarm handling and display layouts to improve overall operator response to abnormal conditions.

PlantCruise by Experion Applications

- Chemicals processing
- Power generation
- Industrial boilers
- Bio-fuels and bio-chemical
- Incinerators
- Plastics and rubber
- Paints and coatings
- Fertilizers and pesticides
- Pharmaceutical
- Food & beverage
- Water/wastewater
- Metal, mining & material

Easy to Use and Configure.

PlantCruise by Experion not only provides the most advanced DCS and SCADA functionality on the market, but it is also simplifies the use and configuration of these capabilities. That means you can elevate your automation performance without disrupting your existing operations or changing your normal work practices.

- **Controller-based Batch:** PlantCruise by Experion allows multiple batch recipes to execute completely in the C300 controller. This type of batch system offers a higher level of performance than a typical server-based system. The absence of a separate batch server removes associated costs and security/maintenance issues, and eliminates communication latency. Common engineering and operating tools for batch also provide a single, consistent platform for batch development and execution in compliance with S88 industry standards. Batch recipes can be entirely executed in the C300 controller in a reliable environment, eliminating the thousands of communication tasks between the server and controller in a typical batch operation — ultimately increasing production throughput and reliability.
- **Loop Control:** Honeywell's Profit Loop incorporates the best elements of traditional PID algorithms and model-based advanced control and optimization technologies to address all loop control needs. It enables greater profitability, reliability and safety with the lowest ownership cost. Profit Loop increases process stability by up to 30% to significantly reduce valve travel and maintenance, and delivers advanced control performance that is robust in nature.
- **Virtualization:** Honeywell is the only supplier offering complete virtualization technologies specifically designed for customers in the process industries. Our complete solution drives down total cost-of-ownership through reduced computer hardware requirements, extended design freeze dates, fewer disruptive operating system and hardware changes, reduced hardware refreshes, easier overall system management, and greater availability and reliability of critical assets.
- **QVCS:** Honeywell's QVCS streamlines system qualification by identifying and enforcing a user-defined development lifecycle that tracks changes in procedures and electronically completes the approval process through electronic signatures — simplifying the change control system. This approach allows engineers to follow a predefined change control procedure that is not only compliant with FDA regulations (21 CFR Part 11), but also less difficult to maintain and manage.

Meet Your Unique Operational Demands

Different industries and plants have different operational demands. That is why Honeywell designed PlantCruise by Experion to meet the diverse needs of its customers worldwide.

By implementing this flexible system, your plant can benefit from faster engineering, increased uptime and lower lifecycle costs, while fully empowering the limited resources of a smaller operation.

Reduced engineering effort: PlantCruise by Experion helps users reduce the time spent getting their system ready for first production by utilizing features such as drag-and-drop configuration, prebuilt algorithms, a global database and integrated tag configuration

(define tag, alarms, history and displays in one place). The system also includes a complete Honeywell HMIWeb solution pack to develop ASM-compliant displays with more than 300 preconfigured displays and over 2,000 objects. In addition, PlantCruise by Experion comes with common engineering tools for continuous, sequence and batch control; control template support; bulk build/bulk edit capabilities; automatic loop tuning; control strategy simulation; and equipment templates for the entire SCADA configuration (points, HMI, trends, relationships and key parameters).

Improved decision-making: PlantCruise by Experion makes it easier for operators to run the plant by giving them the information they need to make timely decisions without cluttering their view of the process. Features include: configuration changes without stopping production; run-time view of control strategy and sequence status; advanced operator alarm management tools (e.g., alarm shelving, alarm tracker, alarm paging, dynamic alarm suppression); and integrated workflow for operators, including a common view and efficient navigation of all plant data along with fingertip access to operator instructions and procedures.

Rely on Expert Service and Support

Choose PlantCruise by Experion and know that Honeywell stands behind you over the life of your investment. Our channel partners are fully trained, authorized and experienced to implement and support your project — whether small or large, new or an expansion. You can rely on readily available local service when you need it.

In addition, PlantCruise by Experion users have full access to Honeywell's Global Technical Assistance Center (GTAC) for product support and consulting. Our experts can help you resolve issues in a timely manner and keep your system running at peak performance.



Honeywell – A Partner You Can Trust

Around the world, Honeywell is recognized as a quality brand with a long history of working with the process industries. We help industrial customers improve their business performance by providing world-class automation technology and services.

Honeywell's control systems are employed in the most demanding industrial applications to improve process safety, reliability and efficiency. Our global expertise ensures you have advanced technology best suited to meet your specific objectives. And, our local, authorized channel partners for PlantCruise by Experion give you access to experts close by who know your operation and can work with you as your needs grow and change.

Experion® and Profit® are registered trademarks of Honeywell International Inc.

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For More Information

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

Honeywell Process Solutions

Honeywell

512 Virginia Drive
Fort Washington, PA 19034 USA

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB

17 Changi Business Park Central 1
Singapore 486073

www.honeywellprocess.com

BR-15-11-ENG
March 2015
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