



## Experion<sup>®</sup> LX

Proven DCS for a wide range  
of industrial applications



# Tried-and-True Technology.

Experion LX is an extension of Honeywell's award-winning Experion Process Knowledge System (PKS) built to effectively meet process automation requirements in a wide range of industries. It leverages Honeywell's track record as a recognized leader in process control technology.

This flexible automation solution brings the best of proven Experion PKS technology, providing functionality usually found in larger Distributed Control System (DCS) platforms at lower total cost of ownership.

## Reasons to Choose Experion LX

- Increase operational uptime
- Improve plant reliability
- Optimize process efficiency
- Enable flexible performance
- Improve operator effectiveness
- Integrate third-party solutions
- Lower total ownership costs
- Ease expansions and future upgrades

# The control performance you require

Experion LX offers an array of best-in-class features that are essential for improved productivity and better economic performance in a highly competitive business environment:

- 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
- Extensive integration of PLCs, DCSs, Remote Terminal Units (RTUs), drives, safety systems and weigh scales through the rich Supervisory Control and Data Acquisition (SCADA) capability of Experion LX by Experion 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) to improve lifecycle management and change control process verification with embedded regulatory (21 CFR Part 11) compliance

## **Distributed Control Technology Sized to Your Needs**

In the specialty chemicals, biofuels, power generation, MMM, pharmaceutical, water/wastewater and food & beverage industries, companies need to automate plants with reliability and flexibility than Programmable Logic Controllers (PLCs) are able to offer. In addition, many DCS systems are simply too big and costly for some users.

Honeywell's streamlined DCS — Experion® LX — helps organizations worldwide answer these demands. It is built to efficiently solve the automation challenges of differently sized industrial operations.

# DCS with a Purpose.

With Experion LX, industrial firms can enjoy true DCS performance without the high cost associated with other solutions. This system is built with a clear purpose: simple configuration to handle your unique control applications — no matter their size — and ease of expansion to cover additional personnel and assets, or even integrate entire business operations.

Honeywell's Experion LX solution gives industrial facilities the option to utilize advanced DCS capabilities according to their individual needs.

## Assurance of Greater Robustness

Honeywell designed Experion LX to be inherently more robust than traditional PLC-based systems. It employs proven components from 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 Experion LX 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 Experion LX 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<sup>®</sup>) 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.

## Expand on your own terms

With Experion LX, you'll have the assurance of a secure path forward to the latest plant automation technology. Just choose the level of automation that is appropriate for your business today. Then, you can expand the control system — on your terms — as your needs change.

## Applications for Experion LX

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

## Scalable Solution with Industry-leading Features

- **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 Experion LX by Experion through the Network Application Programming Interface (API), Server API, Open Database Connectivity (ODBC) Data Exchange, Server Automation Object, etc.



# Simple Use and Configuration

Each industry and operating facility has unique requirements for a DCS and SCADA system. Honeywell developed Experion LX to suit the needs of diverse customers worldwide. This system is both simple to use and configure, allowing you to take your automation performance to the next level without unnecessarily impacting your existing operations or work practices.

- **Controller-based Batch:** Experion LX 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 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.

## Solve Your Unique Operating Challenges

Your industrial facility can't risk adopting the wrong automation solution. Your challenges are unique, and thus you need a control system that helps meet your specific operational and business objectives.

By implementing Experion LX, Honeywell customers can benefit from faster engineering, increased uptime and lower lifecycle costs, while fully empowering the limited resources of a smaller operation.

**Less Engineering Time:** Experion LX 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, Experion LX 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).

**Faster and Better Decisions:** Experion LX 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.

## Count on Knowledgeable Service and Support

Honeywell backs up Experion LX with knowledgeable support throughout the life of the system. Our fully trained, experienced and authorized channel partners can implement and support projects from small to large, and whether new or an expansion. And you can count on expert local service to be available when you need it.

Experion LX users also have full access to Honeywell's Global Technical Assistance Center (GTAC) for product support and consulting. Our professionals assist in resolving issues in a timely manner and help maintain your system in top order.



# 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 Experion LX give you access to experts close by who know your operation and can work with you as your needs grow and change.

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## **For More Information**

To learn more about Honeywell's Experion LX, visit [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

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