

Product Information Note

Experion LX System Overview



Lower costs, increased quality and flexibility while maintaining focus on compliance and safety have become essential requirements for many manufacturing plants. While automation plays an important role in meeting business needs, the ideal solution provides the agility required without sacrificing reliability or lifecycle costs. Honeywell's Experion LX, inspired by the award-winning Experion Process Knowledge System (PKS), provides an ideal solution for small to medium-sized systems.

Experion LX integrates state-of-the-art DCS technologies with advanced applications that address manufacturing operations and all related operations across the enterprise. Experion LX provides manufacturing sites with the reliability, flexibility and ease-of-use of a distributed control system (DCS); it also embeds applications to improve process performance, business agility, asset monitoring, and people effectiveness. With highly flexible options for both hardware and software along with the innovative design of Series 8 I/O modules and cabinets make Experion LX a cost effective solution from small to medium systems. With out-of-the-box functionality and flexibility, Experion LX requires less implementation cost and ongoing maintenance than systems designed for very complicated operations.

Experion LX is the perfect flexible platform for sites with small to medium complexity. Any size installation benefits from access to a robust historian, controller-based batch sequencing, advanced control, and reporting capabilities. The solution can scale from one engineering station, one operator station and one controller to multiple operator stations, redundancy and batch management. In addition, the system provides reliable communication with third-party devices and drives.

Fault Tolerant Ethernet Improves Industrial Plant Performance

Fault Tolerant Ethernet (FTE) is a high-performance, low-cost networking solution for industrial plants using commercial off the shelf (COTS) components.

FTE provides the backbone for communication between engineering and direct stations, the C300 controller, and other devices on the network. FTE reduces commissioning and maintenance costs and increases system availability by providing the performance, determinism and security required for industrial control applications.

Control Execution Environment Provides Reliable Execution and Scheduling

The Control Execution Environment (CEE) is the foundation for Experion LX controllers, providing a deterministic and reliable execution and scheduling environment in Honeywell control platforms, including the:

- C300 Process Controller
- C300 Simulation Environment

Control strategies are easily built integrated and monitored using the Control Builder engineering tool. Control Builder also serves as a central tool for configuring process alarms, events, and historization that is essential to operators.

Control Platforms Accommodate All Control Strategies

The C300 controller provides integrated regulatory, fast logic, sequential and batch control applications. Remote, as well as local I/O families with direct connection to the C300 controller are available to accommodate a variety of connectivity requirements.

Model-Based Control Reduces Maintenance Costs

Honeywell integrates an advanced, single input, single output model-based control algorithm in the C300 controller that reduces valve maintenance costs, increases the process stability by up to 30 percent and eliminates PID tuning requirements. Honeywell's patented Profit[®] Loop algorithm achieves optimal control by using a model of the process dynamics to predict effects of control moves on the controlled variable.

By anticipating future changes, Profit Loop knows exactly how much to move the process to meet desired control objectives. This innovative model-based technology increases control performance and process stability while reducing maintenance costs by as much as \$100,000 per year on critical loops. Profit Loop technology can be applied to any regulatory control strategy where PID control is used. This efficient technology allows customers to use Profit Loop on every loop in the plant or mill, without additional license fees nor does it reduce performance in their C300 Process Controllers.

Distributed System Architecture for Easy Scalability

Honeywell's innovative Distributed System Architecture (DSA) enables one to integrate multiple Experion LX Engineering Stations into a single operational system without extra engineering configuration efforts. All the points, alarms and displays defined in another Engineering Station can be accessed by any user as if they are in the same system. A low cost yet high performance solution is available for possible expansion of a plant where separate Experion LX systems are located in different places.

Direct Station Secures System Availability

Direct Stations can directly access process data, alarms and messages from the C300 controller. With no loss of viewing critical data and alarms if an engineering station fails, an operator can control and monitor the process adequately.

View Data from Multiple Systems from a Single Operator Interface

Honeywell's patented HMIWeb technology merges process, application and business data seamlessly from the secure Experion Station environment or directly from standard Internet technologies, such as HTML and XML.

The HMIWeb user interface is the most open, secure, and user-friendly control system interface available, enabling information from multiple systems to be viewed on a single operator interface display. This not only facilitates remote operation, but supports integration of foreign data sources and the various tiers of mission-critical plant systems.

Features

Experion LX provides the determinism, data integrity and configuration advantages inherent in a true DCS architecture:

- Single global database
- Pre-built composite tag structures

- Pre-built displays
- Pre-built condition handlers
- DSA support

Experion LX architecture is specifically designed to meet customer needs and includes:

Experion LX Engineering Station

- HMI including 300 pre-built displays

Experion LX Direct Station

- Access process data, alarms and messages directly from C300

Global DCS Database

- SCADA support

Easy Simulation without Hardware

- SIM-C300

Control Engineering Tools

- Reusable templates
- Bulk build

Batch Support

- S88 Sequence Function Charts (SFC)
- Condition handlers
- Operator SFCs
- Recipes
- Fast cut-off pulse card

Series 8 I/O

- HART and non-HART options

Support Honeywell Advanced Solutions

- Uniformance® PHD
- Profit Suite
- Digital Video Manager
- eServer
- Alarm management

Delivering on Honeywell's DCS Tradition

Honeywell has a long history of pioneering new and innovative process automation solutions. Honeywell revolutionized the process industry with the first distributed control system and continues that leadership. Experion LX goes beyond control system functionality with integrated applications that increase efficiency and safety, and enable operators to work more effectively.

Honeywell has led the way in providing customers with cost-effective hardware and complete access to process information with open-system services and ongoing support of prior generation automation systems.

Experion LX delivers the integrated benefits of a DCS with the flexibility of system size for projects of virtually any size. Experion LX offers improved lifecycle costs over alternative solutions due to the innovative design of Series 8 I/O modules and cabinets, many COTS options validated by Honeywell, easier engineering and maintenance, and flexibility that come with the system.

Experion LX enables customers to boost performance and agility, achieve reliability targets, improve quality and drive down costs.

Through authorized Honeywell Experion LX System Integrators (SI), end-users can choose a local partner to provide project implementation and ongoing application support. SI companies have the strength of Honeywell behind them with a local presence and years of domain expertise. Honeywell provides training, support and ongoing technical assistance to our system integrators to ensure success and customer satisfaction.

For More Information

To learn more about Honeywell's Experion LX visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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