Experion LX – Purpose-built DCS
Honeywell’s New DCS

Experion LX

Purpose-Built On Honeywell’s Reliable DCS Platform

Delivered Through Authorized Partners
Experion LX: Proven Technology

Purpose Built DCS

- Specialty chemicals
- Industrial power
- Bio-fuels / alternate energy

- Food & beverage
- Water
- Metals

Derived from Experion PKS with Many Leading Technologies
Innovation that Unlocks Your Business Potential

Modern Platform
- Flexible, scalable, modern technology

Safety
- Avoid process incidents

Reliability
- Maximize asset availability

Efficiency
- Easy to use from implementation to operations

Continuous Evolution
- Purpose built from Honeywell’s core technology of Experion PKS

Leading Technology for
- Industrial Power, Batch Chemicals, Bio-fuels, F&B, Metals, Water
Introducing Experion LX
Leading Technology
Experion LX
Technology Reuse from Experion PKS

- Proven
- Reliable
- Robust
- Safe
Complete DCS and SCADA

Full integration of subsystems or migration of 3rd party PLC / DCS to a complete DCS solution with Experion LX
Scalable and Expandable

Scalable and expandable...a perfect fit
Scalable and Expandable

Connect up to 5 Experion LX Systems Together Using DSA

Scalable and expandable...a perfect fit
# Experion LX Overview – Comparison

<table>
<thead>
<tr>
<th>STATIONS</th>
<th>Experion LS (Small)</th>
<th>Experion LX (Medium)</th>
<th>Experion PKS (Very large)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty &amp; Type</td>
<td>10 Flex</td>
<td>15 Direct or Flex</td>
<td>60 Flex</td>
</tr>
<tr>
<td># of Displays per Station</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Station on Server</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>Tags – Process</td>
<td>2,000</td>
<td>10,000</td>
<td>25,000</td>
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<tr>
<td>Tags – SCADA</td>
<td>8,050</td>
<td>50,000</td>
<td>300,000</td>
</tr>
</tbody>
</table>

**Purpose-Built DCS for delivery by Honeywell Authorized Channel Partners**
C300 Controller and Series 8 I/O

Power Supply System
- Redundant / non redundant
- Power supplies & power control module

C300 Controller

Series 8 I/O
- Redundant / Simplex
- LLAI, AI & AI HART
- AO, AO HART
- DI, DI SOE, Pulse, DO

Module
- Slanted for heat removal

IOTA
- I/O termination assembly

Terminals
- Integrated
- Removable
- Easy to wire

High Efficiency Footprint, Easy Access & Maintenance
Cabinet Layout

Field Wiring
- Simple wiring, bottom to top, one direction
  - Saves Time
- Difficult wiring with multiple directions

Heat Dissipation
- Efficient air flow reducing any hot spots
  - High Reliability
- Air flow blocked, many hot spots

Reduces Your Time to Wire & Maintain
Series 8

Designed for easy assembly

- Modules mount to back panel or DIN rail
- Modules plug onto IOTA and connect with prefab cable
- Integral power distribution for modules and field devices
- Product certification can be mounted in customer cabinets
- No special mounting hardware, power rails or cabinet infrastructure, just IOMs, IOTAs, power, I/O link cable
C300 Controller

Powerful, fast, robust control

Executes Honeywell’s field proven, deterministic, Control Execution Environment (CEE) process, logic, sequences, batch and scheduling

Redundant or single

Redundant I/O links to Series 8 I/O modules (80 modules)

Fault tolerant Ethernet
  • Supervisory
  • Peer to peer
  • 3rd party devices
Experion LX Architecture
Patented Fault Tolerant Ethernet

- Redundant physical device
- Single logic network
- Auto path selection by FTE node
- Single point and multi-point fault-tolerant
Configuration / Monitoring

- Flexible configuration environment
- Control loop configuration, modify online
- Graphical modular configuration, real-time monitoring and debugging environment
- S88 modular batch automation
- Hierarchical classification management
- Builds common global database for all system nodes (Controller & HMI)
• Graphical building with extensive function block library
• Visual identification of active interlocks and outputs
• Operator instructions
• Embedded links to documentation
• Advanced loop control
  – Model based control in C300
  – Much less sensitive to measurement noise and simpler tuning than PID
  – Adapts to a wide range of process dynamics and material variability
Typical Sequential Control Module

- Graphical building of phase logic
- Visual identification of active steps and transitions
- Can display to the operator
- Embedded links to documentation
- Parallel execution of steps and branching support
- Recipe parameter changes via alias table
Experion Batch Automation

- S88 batch model compliance
- Recipe management
- Recipe execution
- Equipment definition
- Equipment arbitration
- Controller integration
- Recipe simulation
- Security / access control
- Unified operating environment

**Batch execution in C300:**
- Faster – increased production
- Reliability – reduced scrap
Experion Batch Automation

- No batch server
- No server to controller batch instructions
- Robust / reliable
- Reduced batch cycle time for higher production

Batch lives here
HMIWeb Display Builder

- Creates custom display pages
- Creates files in .htm format that can be viewed in Station or via Internet Explorer using eServer

- Shape Library Icon
- Dockable Tool Bars
- Script Editor Icon
- Property Sheet
- Point Browser
- Object Explorer
- New Trend Object
- Standard Dynamic Objects
Alarm Summary Display

- Alarms and their severity listed clearly for a defined asset (unit process, equipment, etc.).
- Columns can be customized to suit operator requirements.
- Filters can be applied to columns.
- Location Pane shows alarm location summary and # of alarms.
- Alarms and their severity listed clearly for a defined asset (unit process, equipment, etc.).
Trending Displays

- Easy configuration
- Event integration
- Max 32 curves

Icons represent each type of event at time of occurrence.

Pen legend may be shown or hidden for larger graph. Operators may add pens on-line, un-check pens for declutter or highlight (bold) a selected pen.

Use the splitter bar to show as much event data as necessary.

Time range selections.
Distributed System Architecture (DSA)

Central Control Room – Add / Maintain Subsystems

DSA enables multiple systems to share data, alarms, messages, and history without the need for duplicate configuration on any system

- Configured using existing displays
- Global name space for access to all point information
- Supports redundant networks and servers
Secures the PCN. No load on the controllers from casual information users

Engineer-focused analysis at their desktops

Enables long-term (years) of storage

Integration platform for multiple control systems

Secure and Scalable History

Auto Point Synchronization

Self-configuring point database

Timely automated updates

Flexible and customizable
• Secure view only of system displays from desktop using your browser
  – Access to real-time and historical values
  – Browse reports, trends and custom displays
• Focus is low cost of ownership
• Standard Access – ‘unlimited’ casual user license
• Premium Access – up to 38 concurrent premium users per eServer
Key Benefits

- **Purpose-built**
- **Easy to use**
  - Modern tools / advanced functionality
  - Batch in C300: faster throughput, higher yields
  - Bulk build and edit for quick implementation saving you time
  - Series 8 design: easy to install and wire, saving implementation time
- **Proven and reliable**
  - C300 controller is field proven
  - Direct station – no loss of view / no loss of control
  - FTE – multiple paths to maintain communications
  - Optional redundancy at all levels
  - Safe operations built in – alarm mgt, procedural operations
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