Experion Batch Introduction

• Unit Operations Controller (UOC)
  - Modular Control and IO Platform
• ISA S88 (Batch Standard) Alignment
• New and Innovative Batch Visualization
• Highly Scalable Solution
• Optimized Development, Simulation, Testing
• Flexible Mounting Options
What is ControlEdge?

New Family of Controllers
Multiple Form Factors

Rack Mount

DIN Rail Mount
Experion Unit Operations Controller

Control Environment from C300
Controller Redundancy
Built-in Firewall
Built-in Ethernet Interface
Multiple IO Module Types
Multiple Rack Options
Scalable to 2000 IO
Virtual Controller (vUOC)
Controller (CPM) & IO Rack Scanner (EPM)

Redundant Server

Operator Station

Operator Station

Unit Operations Controller (primary)

Ethernet/IP Skid

ControlEdge 900 IO Rack

Unit Operations Controller (secondary)

ControlEdge 900 IO Rack

Ring IO Network

ControlEdge 900 IO Rack

Ethernet/IP Field Station

Ethernet/IP Motor

ControlEdge 900 IO Rack

ControlEdge 900 IO Rack

Ethernet/IP Motor

ControlEdge 900 IO Rack

Ethernet/IP Drive

FTE Controller

IO Scanner

900 IO & Ethernet/IP
Controller (CPM) & IO Rack Scanner (EPM)
Ethernet/IP Support

- Universal AI
- DI 24VDC
- DO 24VDC
- DI 120VAC
- DO 120VAC

UOC Controller

Rack Mount I/O

Rockwell I/O (Future)

Turck BL20 & Excom I/O

Rockwell PLC (UDTs)

Smart MCCs
Universal IO HART Support & FDM Integration

- On-board HART Support for all 16 Universal IO Channels – No Extra Hardware
- Individual Embedded Hart Modem per channel

**FDM Integration**

- Fast & Accurate Commissioning of Field Devices
  - Pre-built templates from FDM
  - Easy device configuration, downloads and uploads

- Better Maintenance Decisions
  - Simplifies diagnostics
  - FDM highlights device specific faults
  - More productive (& fewer) site trips
  - No need to go into hazardous areas
Experion Batch
Batch Architecture & Execution – Old Paradigm

Automation Database
Recipe Database
Batch Server
Operator Station
Operator Station
Batch Operator Station

Procedure
consists of an ordered set of
Unit Procedure
consists of an ordered set of
Operation
consists of an ordered set of
Phase
Centralized Batch Server

- Configuration Database
- Recipe Database
- Batch Server
- Operator Station
- Operator Station
- Batch Operator Station
Distributed Batch Engine

Recipe & Configuration Database

Batch Server

Operator Station

Operator Station

Unit Controller

Unit Controller

Unit Controller

Recipe Controller
Unit Class
Unit Class ➔ Unit Instances
Control of Unit Instances
Unit Controllers ➦ Unit Instances

Recipe Control

Unit Control

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Batch Architecture & Execution

Recipe & Configuration Database
Recipe Database
Batch Server
Operator Station
Operator Station

UOC
UOC
UOC
vUOC
C300

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Don’t know *when* tasks are coming up

Inefficient operators

Don’t know when something is delayed

Production compromised

Troubleshooting is difficult

Loss of quality
Showing parallel operations in unit timeline

Unit lanes can show 3 parallel operations

Indication when more than 3 parallel operations
Tap to expand and see all
Show all active phases in unit

Optionally cycle parallel active operations & phases when collapsed

Now card expands to show all active operations & phases in unit
Unit Timeline and troubleshooting workflow

Unit Timeline
with indicator in Station

Procedure Explorer
Procedural Hierarchy & SFC

Point Detail

Unit Graphic

Parameters

Faceplate

Enable Operators

- Right Data Right Time
- Visual Analytics
- Workflow Optimized
- Tools
- Consistent Experience
- Mobile/Station MES/PCS
Architecture Built for Batch Control

• Experion Batch eliminates the need for a dedicated batch server, eliminating the need for upkeep and patching associated with Windows systems

• Bumpless redundancy - transparent to all users

• Patent pending visualization technology provides
  • Automatically constructed historical, current & look-ahead views that enable intuitive understanding
  • Insights to upcoming events and delays
  • Flexibility to conduct more tasks concurrently
Experion Batch Roadmap
Batch Roadmap – Released Sept 2017

**Control & IO**
- ControlEdge UOC Introduction
- IO Network Ring
- Virtual UOC
- UOC Redundancy in-chassis
- ISA Secure Level 1
- Ethernet/IP Support
- Modbus TCP Support

**Batch**
- Templates for Master Recipes
- SCM / RCM Default Settings
Batch Roadmap – Experion PKS R510

Control & IO
- Capacity Limit Increases
- UOC Rack to Rack Redundancy
- Controller Peer Support
- Additional IO Module Support
- ISA Secure Level 2

Batch
- Batch Timeline View
- Unit Timeline View
- Procedure Explorer
Batch Roadmap – Future

**Control & IO**
- Additional ControlEdge IO Modules
- PROFINET Support in UOC
- Connectivity to Rockwell 1756 IO
- Controller Memory Retention on Power Loss
- Experion Panel PC Support

**Batch**
- Experion Batch History and Reporting
- Integrated Batch Messaging
- Advanced Batch & Unit Timeline View
- Procedure Explorer
- Integrated Version Management of Graphics and Configuration
For More Information

http://honeywellprocess.com/batch

Experion® Batch combines Experion's distributed control, batch automation, and patent pending visualization technology for a solution optimized for Pharmaceutical, Specialty Chemical, Food & Beverage, and other batch applications. Increase operational efficiencies and throughput, bridge operator skills gaps, and ensure repeatable quality.

Contact us to learn more today!

Transforming Batch Operations with the New Experion® Batch
Honeywell is building a smarter, safer, and more sustainable world

THAT’S THE POWER OF CONNECTED
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Connected Plant · Connected Supply Chain · Connected Worker