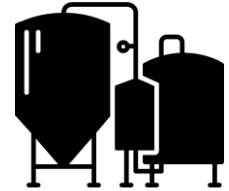


# Experion<sup>®</sup> Unit Operations Suite

## Solution Note

**Experion<sup>®</sup> Unit Operations Suite (UOS) leverages Experion<sup>®</sup> Batch Manager and the new ControlEdge™ Unit Operations Controller (UOC), to provide a solution optimized for pharmaceutical, specialty chemical, and food & beverage applications. Unit Operations Suite is your edge to a compact DCS.**



Honeywell brings its full batch automation power to a small, flexible form factor. Our new Unit Operations Controller (UOC) and our Virtual Unit Operations Controller (vUOC) extend the Experion control environments to a form factor that fits in even the smallest specialty chemical, pharmaceutical, or food and beverage plant. Whether you are running the plant, building the sequences, or worrying about the bottom line, Experion's Unit Operations Suite provides value to you.



**If you are running the plant, you get value from the following:**

From the simplest one-step sequences to the most complex class-based recipes, all can be optimally executed in the Experion controller. The user is not forced to segregate sequence control from continuous control as the UOC control environment can run both types of control simultaneously. You can choose to distribute control strategies without regard to the content in the controllers. For example, the sequence control for a mixer can coexist in the same controller as the continuous control for a distillation tower.



*ControlEdge is Honeywell's next generation family of controllers. These controllers complement the C300 and Series-C platform to provide a fully integrated automation solution to meet diverse customer needs.*

## FEATURES & BENEFITS

- Small, flexible form factor
- Sequences and recipes run in the controller
- Optimize availability, productivity and reliability
- Increase throughput by up to 3%
- Increased throughput by reducing batch execution times and latency between applications levels
- Sequence execution cycle time is configurable as fast as 50 milliseconds.
- Improve operator usability through display integration and interactive instructions
- Conform to ISA-88 recommended practices
- Reduce recipe maintenance through equipment independent master recipes
- Use for any single or multi-unit process to execute complete procedures without the need for a server level batch application
- Procedure Analyst for reporting and analysis
- SESP contract offerings
- Reduce costs and reduce system complexity

Take advantage of class-based development to build a sequence that can be deployed on multiple units. Do you have multiple trains making the same product? There's no problem. Just build the sequence once, and then deploy multiple instances on Equipment Classes for each train. Class-based control optimizes controller resources by dynamically creating procedural elements and removing them when they are no longer required.

Use our HMI Solution Pack to quickly build control modules and graphics that are optimized for easy operator interaction. By adding standard shapes to any graphic, the operator can visualize the current recipe state, control the sequence, and plan for upcoming events. The Unit Operations Suite maximizes operational awareness. When you are always aware of the control recipe progress and situation, planning manual activities and maximizing equipment utilization is easy.

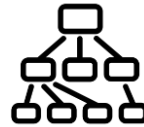


**If you are building the sequences or recipes, you get value from the following:**

The new Virtual UOC, I/O points, and reference block concepts have optimized LEAP™ for validated projects. Using Honeywell's I/O reference concept, class bound control modules can be bulk-built using the new Engineering Data Builder and then tested in the Virtual UOC (vUOC). Since the vUOC is a digital twin of the UOC, simulating values directly at the reference block is identical to simulating them in the physical controller. This gives you the assurance that running on the hardware version of the UOC will be the same as your simulation. Virtual to physical...no problem. Just shut down the vUOC, power up the physical UOC, and download your configuration. There is no need for complicated exports and imports or reconfigurations.

There is no need for different tools to generate sequence control configuration versus steady-

state control. Use Honeywell's Control Builder Application for control-related configuration.



Use visual programming to build the sequences, then let the operations use the same visualizations to run the plant. Using standard Sequential Function Chart (SFC) shapes to draw the sequence, it is simple to see and understand the sequence logic. Then, using standard visual tools, that same SFC diagram can be used to run the sequences from the standard operator station.

Follow ISA-88 step-transition-step logic to build your sequences. With visual programming blocks for steps, transitions, and parallel path synchronization blocks, it is a simple matter to conform to ISA-88 recommended practices. Using the recipe control module to sequence and control other sequences allows the user to create the ISA-88 hierarchy recommended for any sequence.

Use Honeywell's standard libraries or create your own libraries of templates to ease the development process. Do you have multiple production paths or want to use corporate standards? Honeywell's Unit Operations Suite allows for the development of reusable modules and libraries to allow you to build it once and use it many times.



Interact with operators by configuring a single output for messages and instructions. While other systems require special programming and custom user interfaces to allow the sequences to communicate to the operator, UOS streamlines the effort to the configuration of one step action.

*From the simplest one-step sequences to the most complex class-based recipes, all can be optimally executed in the Experion controller.*

*Rely on Honeywell's batch-optimized architecture to expand from a single controller to distributed controllers without networking or peer to peer communication concerns.*

Whether it's an informational message or actionable instruction, you use the same easy configuration. Single and double electronic signatures of message and instructions easily flow vertically into ERP systems to support Electronic Batch Record storage.

Whether you have redundant UOCs, redundant C300s, simplex ACE, or simplex vUOC, it makes no difference to the application configuration. In fact, you can decide later. Put the project in without redundancy and then add it later, *on process*. Make the sequences fully redundant without additional programming or licensing. We keep the sequence running even through hardware faults. Whether you are configuring the application or operating the system, the redundancy is transparent. No additional work needs to be done to the sequence to take advantage of redundancy. Batch redundancy is as easy as basic controller redundancy.



Configure the sequences using alias names for easy readability and maintenance. Applications can be enhanced to be easily read using an alias throughout the configuration. Using aliases makes it easy to build generic sequences as templates that are portable across complete sets of equipment classes. Again, build it once and use it often.

All information on the Experion system is available to sequences all the time, and with SCADA, OPC, and OPC UA interfaces the world opens up. Experion is based on the concept that any piece of data can be addressed by a simple parameter name space.

Easily build event handlers to respond to any possible condition. Account for unforeseen issues by configuring applications to respond to abnormal conditions and process the sequence accordingly.



### **If you are worried about the bottom line, you get value from the following:**

Rely on Honeywell's batch-optimized architecture to expand from a single controller to distributed controllers without networking or peer to peer communication concerns. While recipes can easily operate within a single UOC, sometimes it is desirable to distribute recipe elements across multiple controllers. While with other control systems this can pose problems to how the sequence is written, this is inherently designed in the Honeywell UOS architecture. Honeywell has made communication and control across multiple controllers something that the sequence developer does not have to worry about (it just works!).

Sequences / systems can be validated with the new UOS. If your manufacturing is in a regulated industry where validation is required, the UOS fits into those solutions. With electronic signatures and version-controlled systems, UOS can help you meet the standards of 21 CFR Part 11 and other regulatory agencies.

### **Conclusion**

UOS provides Honeywell batch automation in an industry-leading form factor. From the simplest sequence to the most complex recipes, all the power of Honeywell batch is available to monitor and control your batches. Even so, this automation fits in a small form factor that can fit in the tightest areas or in a Virtual Machine. UOC shows how even the mightiest control is available to the smallest processes. No matter your batch process or vertical industry, Honeywell Unit Operations Suite provides you value.



### For More Information

To learn more about Honeywell's Experion Unit Operations Suite, visit [honeywellprocess.com/UOS](http://honeywellprocess.com/UOS) or contact your Honeywell Account Manager, Distributor or System Integrator.

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