Field Products

Honeywell

Experion® HS

Taking Operational Excellence to a New Level

Improve Operator Efficiency and Productivity with Experion HS

Experion® HS is a powerful software platform that incorporates innovative applications for human machine interface (HMI) applications and supervisory control and data acquisition (SCADA). Built upon the proven technologies of the Experion platform, Experion HS is an integrated and affordable SCADA solution for smaller unit operations.

Where Is Experion HS Used?

Experion HS is as robust as the Honeywell Experion Process Knowledge System (PKS) but is more focused on efficiently fulfilling the requirements of small- to medium-size applications. It is an easy and intuitive SCADA solution that can be used by plant managers, plant maintenance engineers, process engineers and operators in many industries including oil & gas, mining, metals & minerals, chemicals, life sciences, power, cement & glass, and food & beverage.

Implemented in a variety of unit process applications:

- Environmental chambers
- Dryers, autoclaves and freeze dryers
- Galvanizing plants, heat treatment furnaces and kilns
- Pharmaceutical ovens and fermenters
- Cement plants
- Polystirol plants
- Calcined clay plants
- Catalyst pilot plants
- Steam plants
- Extrusion units
- Food & beverage manufacturing units
- Turbine monitoring

In all these industries and applications, Experion HS will optimize the automation and control of your processes thanks to key features such as:

- Integration and connectivity with other devices
- Guaranteed data delivery
- Redundancy and recovery
- Speed of data throughput
- Diagnostic data
- System loading and maintainability

Experion HS for High Value

Built on the Proven Experion PKS Platform

RELIABLE

Experion HS incorporates high-performance, stable and secure software.

Experion HS combines the versatility of an entry-level HMI and SCADA solution with impressive Experion performance. It can be used with ruggedized computers that withstand environmental extremes, while a fully redundant server option ensures the highest availability. Features such as electronic signatures are specifically designed to meet the guidelines of 21 CFR Part 11 thus improving traceability and enhancing reliability within the plant. Experion HS also allows to fetch historical data (history backfill) from process controllers like HC900 in case of communication loss which thus satisfies requirements of Pharma applications.

FLEXIBLE

From a small system to a large multi-site system when integrated with Experion PKS, Experion HS successfully addresses a wide variety of application requirements.

Experion HS offers out-of-the-box functionality, which means that you simply configure the platform instead of building it from the ground up. Operations can begin soon after point and hardware configuration is complete, using a single computer for the server as well as the client (Station) if desired. Virtualization allows Experion stations to be deployed on thin clients and offers faster deployment of multi-node systems.

EFFICIENT

Experion HS offers improved operator effectiveness and provides increased profitability and productivity.

Profitability and productivity enhancements through Experion HS are achieved through plant-wide access to consistent information; reduced training costs; and decreased unplanned downtime costs. Experion history data is seamlessly available for use across every Experion Station for trend displays, reports, custom displays, applications, spreadsheets and ODBC-compliant databases. Operators will be able to work faster and more productively thanks to features such as:

- In-built support for Tabbed Displays (quickly switch between displays)
- Property grid (easily access relevant information)
- Improved copy/paste (copy point/parameter and paste into trend)
- Drag-and-drop trend configuration (quickly create ad hoc trends)

SCALABLE

Expand Experion HS as your operations expand and integrate easily using Honeywell's MatrikonOPC Server.

As your plant expands and your system requirements change over the lifecycle of the system, the Experion HS platform can expand with you. Starting with a standard 50-point database, the Experion HS platform can expand up to 16,050 points, supporting up to 15 Flex Stations. What's more, you can easily scale up and integrate with other third-party devices using OPC client and server interfaces. Experion HS supports "Composite Tags" which means one single tag can store multiple parameters (up to 9 for an analog loop) thus providing you more value for your money.

EASY TO USE

Ease of configuration and ease of use of Experion HS ensure projects can be implemented quickly and efficiently.

The easy to use alarm management solutions in Experion HS improve the operator's ability to minimize process interruptions. Experion HS provides many built-in reporting functions to help document or analyze process and system events, thus making it easy to use and implement. Easy to use scripting and recipe management reduces engineering time, thus saving money.

Key Capabilities

High-Performance, Stable and Secure Software

Experion HS combines the versatility of an entry-level HMI and SCADA solution with impressive Experion performance.

Complete Client/Server System Out-of-the-Box

Experion HS offers out-of-the-box functionality, which means that you simply configure the platform instead of building it from the ground up. Operations can begin soon after point and hardware configuration is complete, using a single computer for the server as well as the client (Station) if desired.

Experion Historian

This fully functional and efficient history engine provides extended historical data storage that is limited only by storage media size. Experion history data is seamlessly available for use across every Experion Station for trend displays, reports, custom displays, applications, spreadsheets and ODBC-compliant databases.

Operator Workflow Improvements

Operators will be able to work faster and more productively thanks to features such as:

- In-built support for Tabbed Displays (quickly switch between displays)
- Property grid (easily access relevant information)
- Improved copy/paste (copy point/parameter and paste into trend)
- Drag-and-drop trend configuration (quickly create ad hoc trends).

Virtualization

- Fully supported and documented in Experion HS R400
- Allows for Experion Stations to be deployed on thin clients
- Offers faster deployment of multi-node systems
- Provides excellent remote troubleshooting support
- Virtualization deployment is achieved in the Experion HS R410 using VMware vSphere 5.0 Update 1. For management nodes, vCenter Server 5.0 is required.

One Wireless

- Optimize your work process by having the information you need at your fingertips.

Powerful Trending Increases Operator Effectiveness

Experion HS trending enables operators to maintain appropriate situational awareness to keep the process within desired limits. Trends can be preconfigured or configured online as necessary by simply browsing the database and selecting the desired point and parameter (up to 32 pens per trend display).

Group Displays Provide Intuitive Operation

With standard group displays, you can configure panel board-like displays. Each group contains up to eight points using standard faceplates for analog and digital status points.

Integrated Alarm and Event Management

The innovative alarm management solutions in Experion HS improve the operator's ability to minimize process interruptions. Alarm and event analysis are based on research into technologies for improving the handling of process upset conditions.

Built-in Reporting

Experion HS provides many built-in reporting functions to help document or analyze process and system events. Standard report descriptions include:

- Alarm/Event Report, Alarm Duration Report, Integrated Excel Report, Free Format Report Writer, Point Attribute Report, Point Cross-Reference
- Batch Reporting—Enables integrated reporting of batches or lots of a production process run (typically thermal in nature) to be compiled and archived automatically.

Electronic Signatures Option

Experion HS provides enhanced capabilities to support the pharmaceutical industry and other U.S. Food and Drug Administration (FDA) regulated industries and their unique requirements related to regulations such as 21 CFR Part 11.

Scripting

The platform makes extensive use of the VBScript scripting language throughout the supervisory system. Users can create a script that will run when a display is active or scripts can also be attached to server objects like point parameters, alarm events, report completion and other events.

Recipe Management

With recipe management, you can create recipes and download them to nominated process units. Each recipe can have up to 30 items (database points with parameter selection) with recipes chained together to form larger recipes if required. Recipe items can be used to set ingredient targets, set alarm limits, set timers and place equipment into correct operating state. Items can be individually enabled for scaling. Alternatively, HC900 recipes (with up to 50 HC900 variables, not counted as points) can be created for HC900 controllers.

Operating System

Experion HS R410 includes support for Windows 7* Professional Edition (64-bit) English version Operating System for Experion servers and clients. Windows 7 SP1 is mandatory for the 64-bit OS support both for the Server and the Flex Station.

MS Office

R410 provides full support for Microsoft Office 2013 (32-bit) provides support for MS SQL Server 2008R2.

Point Count

Support for 16,050 points and up to 15 Flex stations thus allowing a user to expand its capabilities much beyond a small sized application.

RDM

R410 supports a stand-alone Redirection Manager (RDM). RDM provides high availability and reliability of OPC client connections to OPC servers.

MasterLogic

Enhancements to MasterLogic Server include support for DISOE; for 8050 PLC points; and for a 64-bit OS platform.

Integrated Keyboard and Operator Entry Panel

R410 provides support for Integrated Keyboard (IKB) and Operator Entry Panel (OEP) keyboards.

**All other trademarks are owned by their respective companies.*

Proven and Reliable SCADA

Redundancy

R410 provides support for non-redundant to redundant server conversion. Certain prerequisites must be satisfied before this can occur. The user must have a valid redundant server license; the hardware and software configuration must be the same for the redundant pair; and the non-redundant server name must be used as base name for the redundant pair.

Station and Server

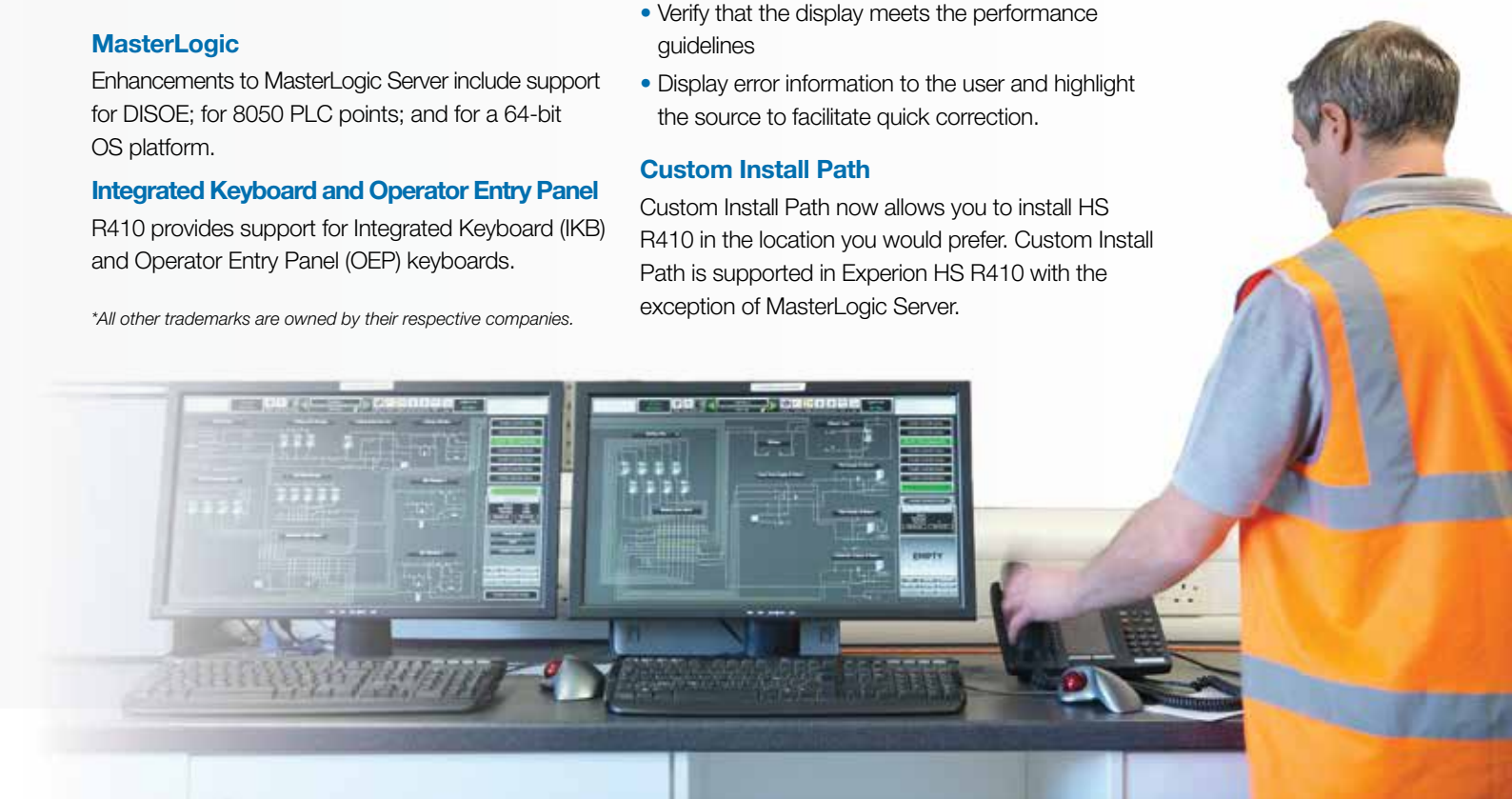
Station and Server enhancements in R410 include HMIWeb Display Builder enhancements. For example, it is now possible for HMIWeb Display Builder displays to be validated, and any error information reported to the user. Offline and online validation is possible:

Validate offline (without connecting to Experion Server) to:

- Verify that file references in the display are correct
- Verify that the display meets the performance guidelines
- Display error information to the user and highlight the source to facilitate quick correction.

Custom Install Path

Custom Install Path now allows you to install HS R410 in the location you would prefer. Custom Install Path is supported in Experion HS R410 with the exception of MasterLogic Server.



Connect and Integrate with Third-Party Devices

Experion HS enables seamless integration, configuration and data exchange with dedicated controllers:

SIS (Safety Instrumented System):

- Safety Manager.
- FSC.
- Applications: Fire & Gas, Emergency Shutdown, Burner Management.

PLC (Programmable Logic Controller):

- MasterLogic 200/200R.
- Allen Bradley.
- Supports a large variety of applications, typically using mostly discrete and some analog I/O.

Process Control:

- HC900 and other Honeywell Process Solutions' field products.
- Supports a wide range of applications, typically including analog control loops supported with digital I/O.

Experion HS also supports the extensive use of open, non-proprietary communication protocols:

Comprehensive OPC Suite:

- OPC Data Access server for up to three client connections.
- OPC Client interface.
- OPC Display Data client.
- OPC HDA server for up to three client connections.

Open Standards:

- ODBC driver.
- Access real-time, history and event values using ODBC compliant applications.
- Excel Data Exchange data access for up to three users.
- Easy capture of real-time and historical information in Microsoft Excel.

Standard Communication Protocols:

- Modbus (RTU & TCP).
- DNP3 Protocol.
- IEC870 Protocol.

Safety Manager Integration

The Honeywell Safety Manager and FSC interface centralizes process safety information and data from multiple locations within a plant.

MasterLogic 200/200R Integration

Experion HS includes, as standard, Honeywell MasterLogic 200/200R controller integration, providing considerable engineering savings, integrated system diagnostics and clock synchronization with the MasterLogic controller.

HC900 Integration

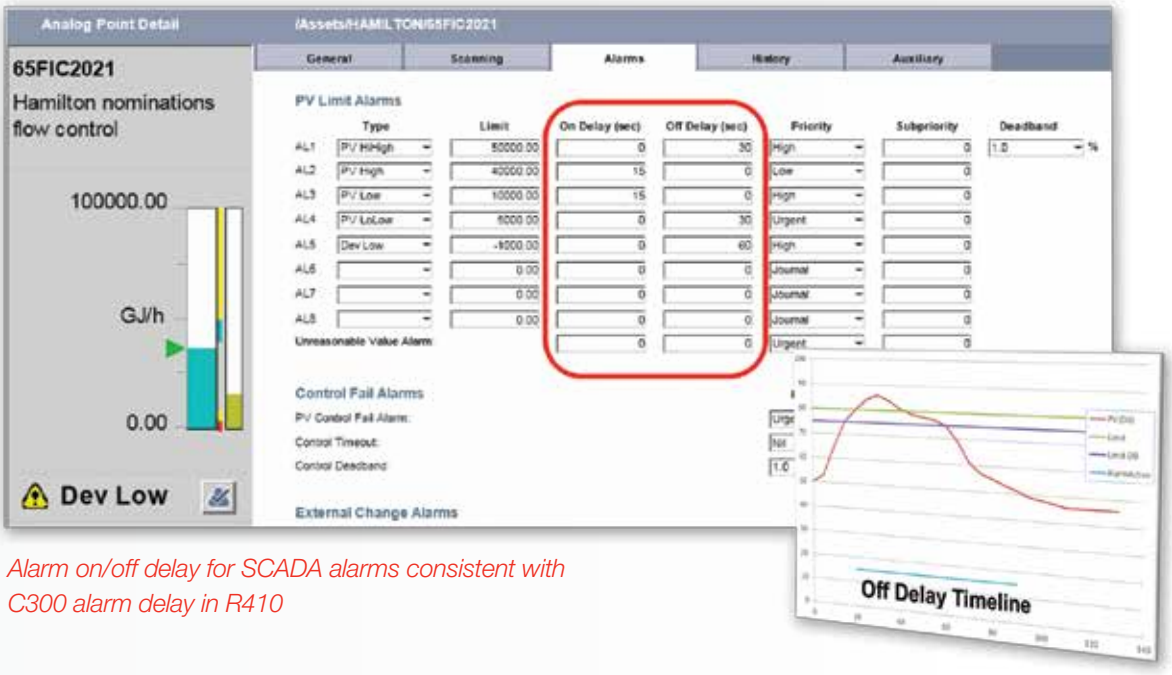
The platform provides, as standard, integration for the HC900 controller set point programmer and recipe/profile management using the Honeywell Universal Modbus driver. A programmer trend display and a tabular segment display allow easy program supervision by operators.

HC900 History Backfill

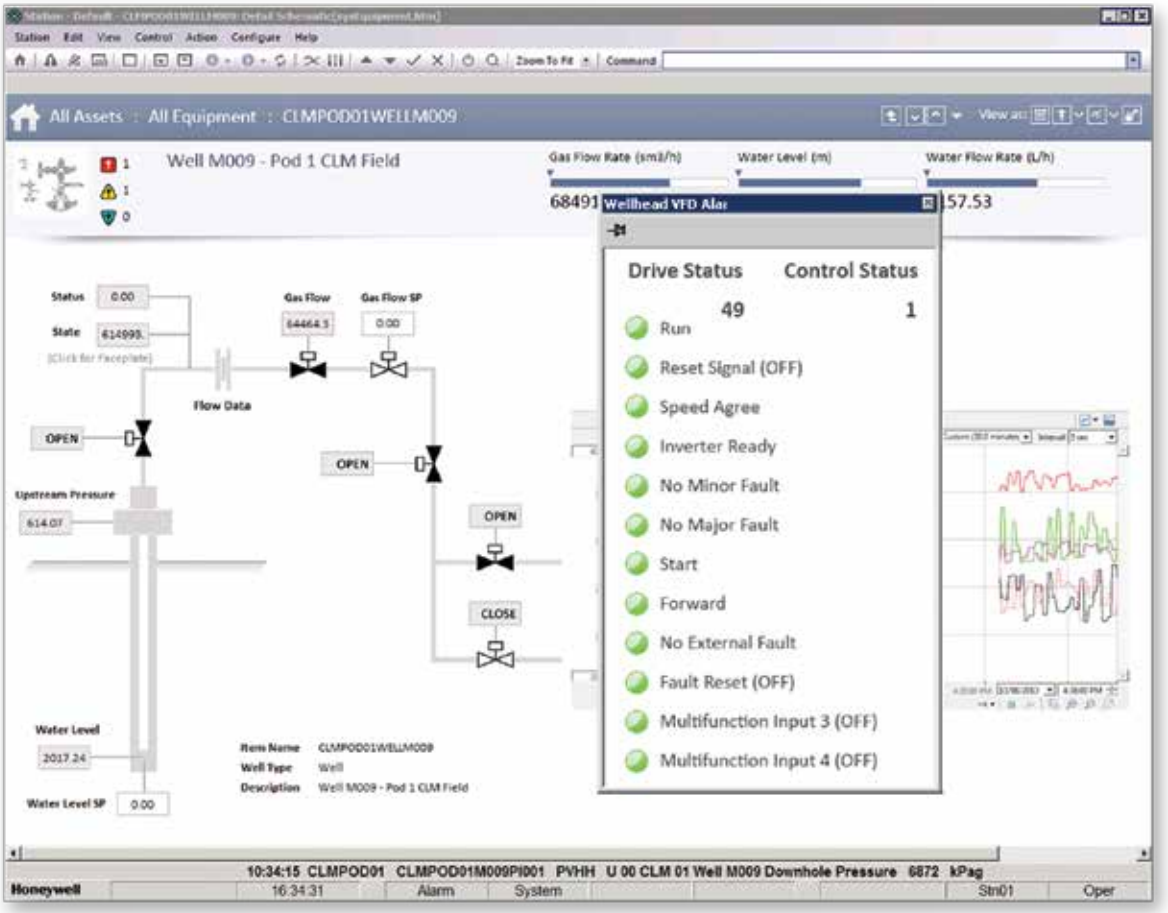
R410 supports the latest enhancements to HC 900. For example, the addressing range now allows access to 32k addresses using a single virtual controller. HC900 controller is a process controller connected to Experion HS using the Universal Modbus interface.

- Pharma customers (and other high value customers) demanded support to upload historical data into HS, after a network outage or fault has prevented the continuous collection of historical information.
- In essence the HC900 controller now collects its minimal set of plant history information AND HS now can upload (or backfill) this historical data should the EBI history information have not been collected due to:
  - Network outage
  - Experion HS server failure/offline
  - Other breakdowns

At all other times, the Experion HS history database remains the master. Backfills ONLY occur when plant data is missing



Alarm on/off delay for SCADA alarms consistent with C300 alarm delay in R410



Dynamic scanning with flexible communication to make best use of available bandwidth

More Extensive Capabilities

Efficient Engineering Environment

HMIWeb Display Builder

Experion HMIWeb technology supports innovative object-based graphics for implementing custom displays online.

Quick Builder Database Tool

Quick Builder allows users to configure points, controllers, Flex Stations and printers for the SCADA application while the system is online.

Alarm Pager Option

When important information needs to reach people outside the control room or site, the Alarm Pager uses paging, SMS, e-mail or SNMP traps to escalate operational and system alarms.

Point Control Scheduler Option

This tool allows you to schedule supervisory control actions at specified times.

Honeywell Digital Video Manager

DVM is a scalable, digital CCTV video solution that sets new standards in cost-effectiveness, flexibility and performance. Combined with Experion HS, operators can view and control video as well as monitor and control the plant or mill from a single user interface, greatly improving productivity.

Experion eServer

Experion eServer is an integrated, view-only solution in a single, scalable package that offers secure access to multiple casual users.

Information Management

Experion HS supports collaboration across the entire business enterprise with Honeywell's information management products. Honeywell's Uniformance PHD consolidates data sources from small to medium sized systems located throughout 'islands of automation.'

Honeywell Field Device Manager

FDM is an award winning solution for managing smart devices. With complete command and control of HART and Profibus smart instruments throughout the plant, FDM saves time and helps improve overall asset effectiveness.

Leveraging Experion PKS Architecture

Using Distributed System Architecture (DSA), Experion PKS systems can access Experion HS data, history and alarms. This provides simple operational oversight from an Experion PKS system while still enabling an Experion HS system to have local autonomy.

Run-time Only System

Experion HS offers a run-time only system, which does not contain any engineering tools. It presumes that someone (perhaps an OEM) engineered your Experion HS configuration on a standard system. Use of the run-time only system can lead to significant cost savings.

Development/Demo System

A special packaging of Experion HS is provided which is intended to be used as an off-process system for configuration development of system demonstration.

Extended Windows Support

Honeywell provides extended support for the Microsoft Windows 7 operating system, protecting your investment and providing a migration path into the future.

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 industry. Honeywell helps industrial customers improve business performance by providing world-class automation technology and services. Honeywell's control systems are employed in the most demanding industrial applications to help improve process safety, reliability and efficiency. Our global expertise ensures you have world-class technology best suited to meet your specific needs.

For More Information

To learn more about Honeywell's Experion HS, visit www.honeywellprocess.com or contact your Honeywell account manager.

Honeywell Process Solutions

Honeywell

512 Virginia Drive
Fort Washington, PA 19034 USA

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB

17 Changi Business Park Central 1
Singapore 486073

www.honeywellprocess.com

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