CONTROLEDGE™ HC900
A Solution for Process Control and Safety Related Applications

Process Measurement
and Control

A solid and secure investment for the future

High performance—enhances quality
Easiest to use and engineer—improves productivity
Low total cost of ownership—maximizes profitability

The Honeywell ControlEdge™ HC900 Process and Safety System has a modular, scalable design that meets the control and safety requirements of a wide range of applications ranging from process PLCs to DCS.

A single flexible system for process control and safety with faster start-up time, common engineering tools, reduced training, simplified maintenance and lowest cost of ownership.

Wide-ranging applications

The ControlEdge HC900 Process and Safety System reduces hardware, software, training and support requirements, and is ideal for diverse industries such as:

• Chemicals, including specialty and fine chemicals, plastics and rubber
• Pharmaceuticals and cosmetics
• Power (excluding nuclear)
• Cement and glass
• Pulp and paper
• Mining and metals
• Water and waste water
• Food and beverage
• Oil & Gas, Refining
• Metro Rail
• HVAC
• Data Centers

Applications in which ControlEdge HC900 is proving invaluable include the following:

Safety:
• Burner Management Systems (e.g. furnaces, boilers, pre-heaters, kilns, ovens, reactors,calciners, dryers, thermal oxidizers, melters, incinerators, process heaters, vaporizers)
• Combustion control
• Pipeline control
• Spill prevention
• Terminal automation
• Emergency shutdown
• Pressure and flow applications
• Heat Treatment

Critical control:
• Electronics and semiconductors
• Cement
• Glass
• Textiles

Easiest to use and engineer—improves productivity

The modular, scalable ControlEdge HC900 Controller is available in three rack sizes, with upto 12 racks per CPU, and three CPU performance levels to handle a wide range of automation requirements. ControlEdge HC900 supports up to 4,608 I/O points.

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 solution for smaller unit operations. Experion HS enables seamless integration, configuration and data exchange with the ControlEdge HC900 system.

When paired with Experion HS, ControlEdge HC900 can meet FDA 21 CFR part 11 requirements for pharmaceuticals, food and beverage industry that need a proven and reliable solution capable of advanced controller security and protection methods, change management and automated electronic record keeping.

ControlEdge HC900 also has pharma specific function blocks which significantly simplify your engineering efforts.

ControlEdge HC900 allows you to perform easy engineering

- HC Designer Configuration Software available in English and Chinese Mandarin
- Process-specific function blocks reduce configuration time and your operational costs
- Powerful Accutune III auto-tuning algorithms enable control loops to be quickly and easily tuned
- Simple intuitive tools, advanced monitoring and debugging tools which are easy to use and engineer
- Product enhancements made easy with free web-based downloads at zero annual maintenance fee
- Easily integrated by Honeywell trained local channel partners with global product support
- Universal analog inputs reduce inventory cost
- SIL Universal IO (UIO) with 1ms SOE, Line Monitoring, Voting & Validation allows easy adaptation to late engineering changes
- Modular and scalable (4608 IO's and upto 12 racks per CPU)
- Version control, logic replication and library creation which simplify change management and engineering efforts

Integrated solution with other Honeywell products
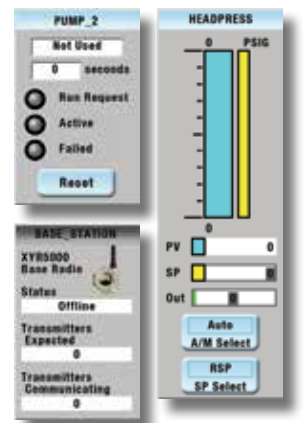
ControlEdge HC900 OPC Server from MatrikonOPC

The ControlEdge HC900 OPC Server from MatrikonOPC provides secure and reliable real-time data access between all Controller series and any OPC-enabled applications such as Historians, HMIs, SCADA etc. It enables 3rd party connectivity – which is key to successful phased migration and integration. It enables the easy and cost-efficient management of openly connected systems – crucial in today's highly competitive industrial environment. And by using standardized MatrikonOPC components you can build stronger, more secure architectures.

Furthermore, the ControlEdge HC900 OPC Server is OPC certified. OPC certification is the process of ensuring that applications meet the standards specified by the OPC Foundation. OPC certification requires extensive testing to ensure true interoperability. OPC certification means multi-vendor system interoperability is guaranteed.

Integrated 900 control station with global database

The 900 Control Station operator interface provides a large assortment of standard preformatted displays for controller monitoring and servicing. Their use shortens design time, reduces engineering costs, and facilitates standardization of operator interaction with the process—all while enhancing the ability to customize easy-to-understand graphic displays that look like the process the operator is monitoring.

Station Designer software is a robust yet user-friendly PC tool that integrates with the HC900 Controller's Designer software to streamline the task of configuring a custom operator interface. It is an intuitive development environment that offers more than 4,000 pre-built process graphic symbols (for pumps, valves, tanks, buttons, switches), widgets, animation, hide object, if-then-else scripting, and more.

High performance—
enhances quality

ControlEdge HC900's diverse connectivity and communications options adapt to existing process-line infrastructure, satisfy specific control requirements, and accommodate specialty applications.

ControlEdge HC900 provides tighter control

- The standard fuzzy logic of the HC900 prevents process overshoot, provides accurate control, increases throughput and efficiency and minimizes energy costs

Accurate Diagnostics

- Advanced diagnostics at module and channel level add reliability to system

Flexible connectivity to suit your process environment

- Open Ethernet connectivity
- Serial Modbus connectivity
- Peer-to-peer communications
- Wireless connectivity
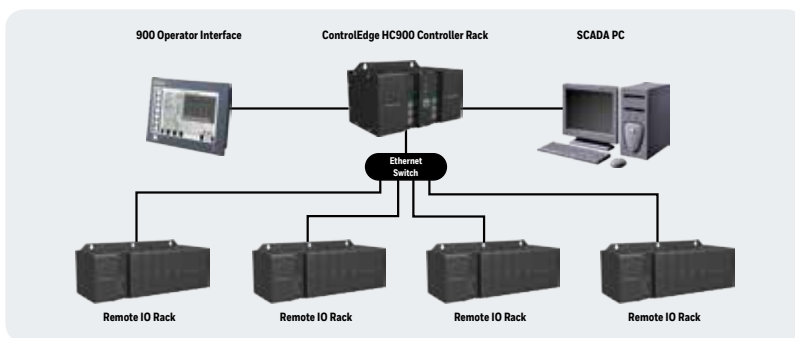- E-mailed alarm/event reporting

Fault Tolerant and reliable

- Keeps your system running continuously with redundancy

Low total cost of ownership— maximizes profitability

The ControlEdge HC900 process and safety system integrates easily and smoothly with the Honeywell Experion HS (SCADA) solution, and with Matrikon OPC third-party solutions.

Lowest product lifecycle cost

- Free Matrikon OPC license with every purchase
- No annual software license fee (HC Designer)
- Free software WEB downloads for product enhancements
- World-wide free global phone product support

Same I/O modules for process and safety

- Reduced inventory costs
- Quick replacement of modules maximizes plant uptime

Common software tools for process and safety

- Reduced training costs
- Reduces engineering time and cost

Controller

Function Blocks: C70, C75CPU - up to 15000, C50CPU- 2000, C30CPU-400.

Analog Inputs: Up to 1152 universal analog inputs, 2304 high level.

Accuracy: 0.1% of span (field calibration to ± 0.05% of span).

Analog Outputs: Up to 480 with internal power, 2304 with external power 0 to 20 mA maximum,12 bits, 0.1% accuracy.

Universal IO (SIL): Up to 2304 per system. User configurable DI with SOE, DO 24VDC, AI /AO 4-20mA with Line Monitoring

Digital Inputs/Outputs: Up to 4608, contact DI, 24Vdc DI/DO, 120Vac DI/DO, 240Vac DI/DO.

Total I/O: Up to 4608.

I/O Racks per System: One controller and up to 11 remote I/O racks.

Control Loops: PID, on/off, cascade, ratio, %C, three-position step.

Control Output Types: Current, time-proportioning, position-proportioning, three-position steps.

Setpoint Programmers: 50 segments each, 16 event outputs, multiple stored profiles.

Setpoint Scheduler: 50 segments, 8 ramp/soak outputs, eight auxiliary outputs, 16 events, multiple schedules.

Comm: Ethernet 10/100/base T, Modbus/TCP protocol, up to 10 Ethernet hosts on C50, C70, C75 up to 32 peer-to-peer controllers, Serial Modbus RTU, RS485 or, slave or master operation (up to 32 slaves).

Operating Temp: Rated 32°F to 140°F (0° to 60°C).

Humidity: Rated 10% RH to 90% RH, non-condensing.

Control Station Operator Interface

Display: 10.4in (264mm), TFT active matrix color LCD.

Touch Screen: Resistive analog.

Distance from Controller: Ethernet—328ft (100m), RS485—2000ft (600m).

Power Supply: 24Vdc, 1.4A.

Size (WxHxD): 12.83in x 9.5in x 2.2in (325.8m x 241.3m x 55m).

Operating Temperature: 32° to 122°F, (0° to 50°C).

Humidity: Rated 10 to 90%, non-condensing.

Panel Rating: Type 4X.

Memory: 16MB onboard non-volatile flash, optional memory card (compact flash 2GB).

Comm. Ports: Ethernet 10/100 base T, 1xRS-485, 2xRS232 Serial.

USB Ports: 2 x USB specification 2.0 host port, type A, 1 x USB specification 2.0 device port type B.

900 Station Designer Software

Configuration: 900 control station CS interface—offline.

Operating Environment: Windows 2000, XP, Vista, Windows 7 (32 & 64-bit), Windows 8, Windows 10.

PC: Pentium class processor and RAM as required by the chosen operating system plus 50MB for software installation. 800 by 600 pixels minimum, 256 or more colors. RS-232 or USB port.

Multilingual: English, French, Italian, German, Spanish

Cable: USB Host, RS232 Serial, Ethernet 10/100 base T.

Setpoint Programmer Pre-plot Display

Concurrent Batch Reports

Bar Code/Keyboard Input

GSM/GPRS, SMS Available

NEMA Type 4X operator interface screen withstands harsh operating environments.

Function block widgets accelerate configuration development.

Recipe selection makes product/process changeovers simple and accurate.

Multi-level log-on security feature prevents unauthorized access.

Alarm/event logging with e-mail notification

Embedded web server feature allows access to your application from anywhere.

Multiple interfaces on each controller enable process management from up to three locations.

HC900 Designer Software

Configuration: HC900 Controller—offline with run-mode editing.

Operating System: Windows™ XP onwards, Windows 7 (32 & 64-bit), Windows 8, Windows 10

CPU: 1.5 GHz (2.5 GHz preferred)

RAM: > 1GB

DrivePorts: USB (2.0 & 3.0)/ Ethernet

Cable: RS485—three-wire, Ethernet 10/100 base T.

Modem Support: Monitor, upload, download configuration.

Language: English and Chinese Mandarin

For more information

To learn more about Honeywell's ControlEdge HC900, visit www.honeywellprocess.com or contact your Honeywell account manager.

Honeywell Process Solutions

1250 West Sam Houston Parkway
SouthHouston, TX 77042

Honeywell House, Skimped Hill Lane Bracknell, Berkshire, England RG12 1EB UK

Building #1, 555 Huanke Road, Zhangjiang Hi-Tech Industrial Park, Pudong New Area, Shanghai 201203

www.honeywellprocess.com

Honeywell