

Experion Vista Specification



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Table of Contents

1.	Product Introduction	1
1.1.	Experion Vista	1
1.2.	Architecture Overview	1
1.3.	Experion Vista Overview	1
1.4.	HC900 Hybrid Controller	1
2.	Experion Vista Specifications	2
2.1.	Database and Station Sizing	2
2.2.	Alarms, Events and Messages	3
2.3.	Enterprise Model Sizing	3
2.4.	History Sizing	4
2.5.	Supervisory Control and Data Acquisition (SCADA)	6
2.6.	Server Scripting	8
2.7.	OPC	9
2.8.	Microsoft Excel Data Exchange	13
2.9.	ODBC Driver	13
2.10.	Recipe Management	13
2.11.	Batch Reporting	14
2.12.	HC900 Hybrid Controller Integration	14
2.13.	Station Display Performance	15
2.14.	Experion Vista Options	16
3.	Hardware and Software Requirements	17
4.	Model Numbers	18
4.1.	Development and Run-Time Software	18
4.2.	Run-Time Software	18
4.3.	Off-Process Development Software	18
4.4.	Options	18
5.	Glossary	19

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1. Product Introduction

1.1. Experion Vista

Experion Vista is a powerful and versatile software platform that incorporates innovative applications for supervisory control and data acquisition (SCADA). Built upon the proven technologies of the Experion platform, Experion Vista supports a feature set targeted for smaller unit process operations involving Honeywell’s HC900 Hybrid Controller.

1.2. Architecture Overview

The Experion Vista / HC900 hybrid controller system comprises several different integrated hardware and software solutions that support a wide range of application needs. The pictured architecture is a representation of the possible nodes and controllers. Note that the architecture is scalable and not all nodes are necessary or required.

1.3. Experion Vista Overview

The Experion Vista server functions as a historian and database for the HC900 hybrid controller. The Experion Vista server also supports communication to SCADA point sources and holds the system event journal, system configuration files, custom applications and server scripts. The server is the source for data, alarms, events, etc. for the Experion Vista Flex Station(s).

The Experion Vista Flex Station is the human machine interface (HMI) that can be utilized for different functions around a plant or mill including operations, monitoring, maintenance and engineering.

Experion Vista / HC900 systems may be implemented with the server and Station on the same computer.

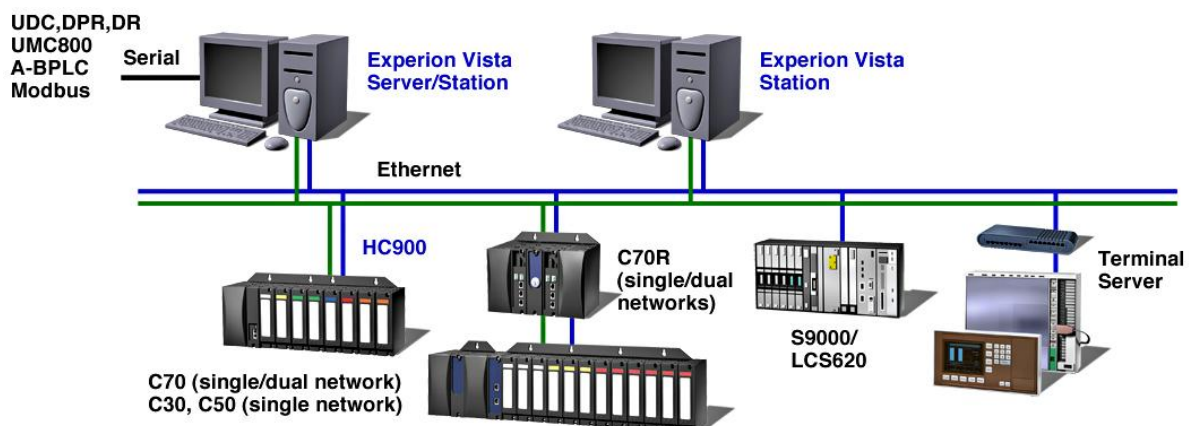
1.4. HC900 Hybrid Controller

The Honeywell HC900 Hybrid Controller combines loop and logic control in a single cost-effective platform for unit process applications requiring non-redundant or redundant control and networking.

The HC900 controller offers a blend of analog process, logic and sequencing control algorithms. Features include:

- 1920 I/O points in compact 4, 8 or 12 I/O slot rack sizes
- Large function capacity of 5000 function blocks with over 100 block types
- Support for an unlimited number of control loops
- Setpoint programmers, sequencers
- Open Ethernet network connectivity
- Peer-to-peer data exchange

The HC900 Hybrid Controller, in tandem with the Hybrid Control Designer software and Experion Vista software, shortens design time and simplifies control strategy development. The Experion Vista database may be created using the HC900 Point Builder Utility supporting tag import to the Experion Vista Quick Builder tool. This results in a total installed cost advantage with reduced engineering and process startup time.



2. Experion Vista Specifications

2.1. Database and Station Sizing

Items	Specifications	Comments
Maximum number of composite points ¹	2,050	Starting at a minimum of 50 points with increments of 100 points up to 2,050 points.
Number of Stations	1,2,3,4 or 5	Stations can be configured with a static or rotary connection. The static connection provides a permanent, dedicated link. The rotary connection provides an "as required" connection, enabling numerous casual users to access the Experion Vista system as needed. For example when 5 Station connections are configured, 5 connections can be established at one time but the software could be installed and be available for use by many more than 5 individuals.
Maximum number of Station trend displays	3,000	
Trend pens per set	32	
Trend periods	1, 5, 20 minutes 1, 2, 4, 8, 12 hours 1, 2, 5 days 1, 2, 4 weeks 3, 6 months 1 year	
Operating groups	16,000	
Points per operating group	8	
Reports	1,000	
Operators	1,000	This is the default limit.
Printer connections	50	This is the total number of printers that can be configured as either report or alarm devices.
<p>Note 1 - Points have a composite data structure that can represent several field values. For example, you only need one analog point for a control loop that maintains the temperature of a furnace or reactor because the point's data structure can include the process variable (PV), output variable (OP), setpoint (SP) and mode (MD).</p>		

2.2. Alarms, Events and Messages

Items	Specifications	Comments
Maximum number of active alarms	2,000	Number of alarms that appear in the Alarm summary. Every alarm and event that occurs is saved in the SQL Server online event database for a configurable period.
Maximum number of active messages	1,000	Number of messages that appear in the Message summary. Messages can be generated to provide additional information to an operator; for example, when a point goes into alarm, a message can provide an explanatory note or a procedure.
Maximum number of events (burst condition)	1,000 events	<ul style="list-style-type: none"> All alarms, login actions, operator actions, and configuration changes are logged. Up to two events are generated for every alarm, including one event for entering the alarm condition and one for return to normal.
Maximum number of sustained alarms/second	20/sec	
Maximum duration of events in online events database	5 weeks	
Maximum number of events in online events database	1.2 million	Event archiving can be used to access older events. Approximately 60 MB of hard disk space is required for every 100,000 events archived.

2.3. Enterprise Model Sizing

2.3.1. Assets

Items	Specifications	Comments
Assets	4,000	The asset model represents the organization of items in the enterprise, for example, process units, individual pieces of equipment or facilities, etc. The relationship or hierarchy between assets and entities forms the asset model. The primary relationship in the asset model is that of asset containment, where one asset contains another.
Assignable assets	1,000	Assignable assets provide a way to assign assets to an operator's scope of responsibility. An assigned asset includes all asset children of the assigned asset including any points associated with those assets or any alarm groups that have been designated by that asset for scope of responsibility purposes. The number of assignable assets is a subset of the total number of assets.
Nesting depth for asset hierarchies	10	
Children per asset	No limit (up to the 4,000 total assets)	

2.3.2. Alarm Groups

Items	Specifications	Comments
Alarm groups	5,000	Alarm groups present alarm state/status for a disparate group of points and assets that are not represented by a single asset in the asset model. For example, the operator may need to monitor all alarms associated with particular field assets such as motors across the entire plant.
Children per alarm group	500	
Nesting depth for alarm group hierarchies	5	

2.4. History Sizing

2.4.1. Collection Rates

Items	Specifications	Comments
Standard History	<ul style="list-style-type: none"> 1-minute snapshot 6-minute average 1-hour average 8-hour average 24-hour average 	When a point is configured for Standard History collection, all of these intervals are stored.
Fast History	1, 2, 3, 4, 5, 10, 15 or 30 seconds	When a point is configured for fast history collection, snapshots are stored at 1, 2, 3, 4, 5 (default), 10, 15, or 30 seconds. One fast history interval can be configured per server.
Extended History	<ul style="list-style-type: none"> 1-hour snapshot 8-hour snapshot 24-hour snapshot 	When a point parameter is configured for Extended History collection, all of these intervals are stored.

To support daylight savings and time zones, all collected data is historized in Universal Coordinated Time (UTC).

2.4.2. Default History Files Sizes

Items		Specifications		Comments
		Time	Samples	
Standard History	1- minute snapshot	24 hours	1,442	
	6-minute average	7 days	1,682	The averages are calculated using the 1-minute base interval. That is, 6-minute averages are calculated on six 1-minute values.
	1-hour average	7 days	170	The averages are calculated using the 1-minute base interval.
	8-hour average	3 months	280	The averages are calculated using the 1-minute base interval.
	24-hour average	1 year	368	The averages are calculated using the 1-minute base interval.

Items		Specifications		Comments
		Time	Samples	
Fast History	1 to 30-second snapshot	2 hours – 72 hours	8,652	
Extended History	1-hour snapshot	3 months	746	
	8-hour snapshot	1 year	281	
	24-hour snapshot	3 years	368	
The number of samples in each history file can theoretically be increased to 100,000 samples. If the size of the history file is increased beyond the default qualified size, care should be taken not to exceed the maximum history file size constraints. History archiving is available to store the history files for later retrieval. Experion history data is seamlessly available for use across every Station for trend displays, reports and custom displays.				

2.4.3. Maximum Parameters Assigned to History

Items	Specifications	Comments
Standard History	2,000	This is the default limit with which Experion Vista is shipped. The quantity can be increased beyond the default qualified size to 50,000.
Fast History	1,000	This is the default limit that Experion is shipped with. The number can be increased beyond the default qualified number to 10,000.
Extended History	2,000	This is the default limit that Experion Vista is shipped with. The quantity can be increased beyond the default qualified size to 10,000.
The ability to collect history at the configured rate depends upon throughput of the underlying process control network.		

2.4.4. Calculating History Space Requirements

Items	Specifications	Comments
Maximum history file size	500 MB	<ul style="list-style-type: none"> Each type of history sample is stored in a separate history file. For example, there are five history files for standard history, one each for: 1-minute snapshot, 6-minute average, and so on. An individual history file should not exceed this size.
History file size formula	History file size in bytes = $2 * N * ((P*3) + 8)$ Where: N = number of samples P = number of parameters	Example: Number of parameters (P) assigned to standard history is 50,000. Number of samples (N) for standard 24 hours one-minute snapshot is 1,442. History file size = $1,442 * ((50,000*3) + 16) = 432,623,072$ bytes / 1,048,576 bytes/megabyte = 413 MB.

2.5. Supervisory Control and Data Acquisition (SCADA)

2.5.1. Communication

Items	Specifications	Comments
SCADA Channels	99	Channels typically represent a physical connection to a device, such as an HC900 controller connected to an Ethernet LAN. A channel can support more than one controller.
SCADA Controllers (RTUs)	255	This is the maximum number of controllers (RTUs) for a given server. It is spread across all channels and includes OPC controllers to support the OPC Client Interface. This information is duplicated in the OPC Client Interface (SCADA Client) section.

2.5.2. Terminal Servers

Items	Qualified Devices
Terminal Servers	<ul style="list-style-type: none"> • Systech RCS-3282 (2 serial ports) or RCS-6008 (8 serial ports) • Cisco 2610 Router
<p>The SCADA controller connection to the server depends on several factors, including the plant's layout, the type of interface used and the controller's communication port(s). For a small system, controllers can be directly connected to the server's serial ports. More serial ports can be added to the server with a serial adapter. Controllers can also be connected to the network through a terminal server.</p>	

2.5.3. Real Time Database SCADA Point Structures

Point Structure ¹	Standard Parameter		
Analog ²	Control Deadband	Scan Status	SP Low Limit
	Process Variable	OP High Limit	0% & 100% Range
	Setpoint	Scan Period	Operator Control Level
	Normal Mode	Scan Address	OP Low Limit
	Output	Control Timeout	PV Clamp Flag
	Mode	Alarm Permit Flag	Engineering Units
	SP High Limit	Alarm Status	Drift Deadband
	Up to 4 user definable inputs	Up to 8 Alarm types ³	Alarm Deadband
	Point Name	Alarm Status	Associated Display
	Point Description	PV Last Processed Time ⁴	
Status ⁵	Output Width	Output	Output Pulse Width
	Process Variable	Scan Status	Re-Alarm Status
	Control Timeout	Normal Mode	Associated Display
	Mode	Scan Period	Alarm Permit Flag
	PV Last Processed Time ³	Scan Address	Input Width
	Point Name	Alarm Priority	Control Failure Alarm Priority
	Point Description	Operator Control Level	
Accumulator ⁶	Output Width	Scan Status	Output Pulse Width
	Process Variable	Normal Mode	Re-Alarm Status
	Control Timeout	Scan Period	Associated Display
	Output	Scan Address	Input Width
	Operator Control Level	Mode	Alarm Priority
	Control Deadband	Alarm Permit Flag	PV Last Processed Time ²
	Process Variable	Control Failure Alarm Priority	SP Low Limit
	Setpoint	Scan Status	0% & 100% Range
	Normal Mode	OP High Limit	Operator Control Level

Note 1 – For each of the point types it is possible to add user-defined parameters to the existing pre-built parameters. This enables tags to be extended to contain free format values, constant values, or values used by applications and scripts to store calculated or derived plant information. User-defined parameters can be assigned to history collection. Experion supports additional data processing through the use of standard algorithms that may be attached to an analog, status or accumulator point. Functions provided by these algorithms include:

- Arithmetic calculations
- Boolean calculation
- Maximum/minimum value
- Integration
- Run hours totalization
- Group alarm inhibit
- Report request
- Application program request

Note 2 – Used for continuous values.

Note 3 – Supported alarms include: PV Hi, PV Lo, PV HiHi, PV LoLo, Deviation Hi, Deviation Lo, Transmitter Hi, Transmitter Lo, Rate of Change, Control Fail, and Control Timeout. Each of the configured alarms can be assigned a priority ranging from Journal, Low, High to Urgent. An alarm sub-priority (0 to 15) can also be assigned to further differentiate alarms.

Note 4 – Each time the PV is polled from the RTU, Experion Vista will track and maintain the time/date of when the value last changed, or more specifically, was last processed. If the analog point in Experion has a drift deadband of 1%, then the last processed time is not updated until the PV moves by >1%. Similarly, if the drift deadband is 0%, then the last processed time is not updated until the PV moves slightly.

Note 5 – Used for digital values. The PV of a status point can range from a single bit to a 3-bit digital input, allowing up to eight possible states.

Note 6 – Used for totalizer values. Data associated with pulsed inputs are stored in the system in an accumulator point type that will provide automatic tracking of instrument rollover, dependent on controller type.

2.5.4. Interfaces

Interface Software	Connection Type
Honeywell S9000	Ethernet
Honeywell 620 LCS Serial and Ethernet Interface	Serial and Ethernet
Honeywell DPR Recorders (DPR 100) ¹	Serial
Honeywell Universal Modbus Interface (HC900, UMC800, DPR180/250, UDC2300/3300, DR4300/4500, X-Series)	Serial and Ethernet (if supported by controller)
Allen-Bradley Integration (Serial Interface and RSLinx) ²	Serial, Ethernet, DH+, and ControlNet
Modbus (RTU, Plus & TCP) Interface	Serial, Modbus+, and Ethernet
Note 1 – Contact Honeywell Field Solutions Marketing for availability. Note 2 – Includes the Allen-Bradley Serial Interface, the Allen-Bradley RSLinx interface and Allen-Bradley Integration. When the RSLinx interface is used, RSLinx is required (RSLinx to be supplied by user).	

2.6. Server Scripting

Items	Specifications	Comments
Description		
Server Scripting extends the behavior of the server-resident subsystems and its run time objects. Examples of server objects are points and parameters, reports, assets and tasks (application programs). Scripts can be run by the server either periodically or when a specified event occurs. Standard displays support the monitoring of the status of running scripts.		
General Specifications		
Maximum script size	Short scripts only (typically less than 50 lines)	<ul style="list-style-type: none"> • Server scripting has been optimized for relatively short scripts. • Where possible, existing server functionality should be used in preference to writing server scripts. Standard server functionality optimizes the task implementation.

2.7. OPC

2.7.1. OPC Client Interface

Items	Specifications	Comments
Description		
<p>The OPC Client Interface provides an open method for connecting a wide range of devices for supervisory monitoring, alarming and control. These devices include subsystems such as Programmable Logic Controllers (PLCs) and Remote Terminal Units (RTUs). It also provides the interface to Honeywell's 'HWIOPC' Server for the HC900 supporting single and redundant network connections.</p>		
General OPC Client Interface Specifications		
Maximum number of third-party OPC DA servers supported	5	
OPC DA versions supported	1.0a and 2.05	
Time-stamping	Within the Experion Vista server.	Time-stamping of the data occurs within the Experion Vista server once the data has been successfully read into the SCADA database.
Alarming	Yes	Alarms are generated based on limits defined within the Experion server.
Scannable parameters per point	8 – Analog 3 – Digital 1 – Accumulator	<ul style="list-style-type: none"> • A scannable parameter is a parameter that is able to source data from an OPC Item versus an internal register. • These are the standard quantities of scannable parameters found on all SCADA analog, digital and accumulator points.

Items	Specifications	Comments
OPC Groups and Items		
Maximum number of OPC controllers	255	This is the maximum number of SCADA controllers/RTUs that can be built across all channels on an Experion Vista server.
Maximum number of items per OPC controller	735	This is the total number of OPC Items that can be built against a given controller. There will be a varying number of items consumed with each point (up to 8 for an analog point).
Maximum number of OPC groups supported	500	<p>An OPC Client controller manages groups as follows:</p> <ul style="list-style-type: none"> • A group is created for each scan period used by the point parameters (items) defined on the controller. All point parameters that have the same scan period are placed in the same group. Note that if a scan period of 0 is used, the item is placed in a group with an update rate equal to the slowest scan rate of the server system. • All points defined on the controller have the same OPC deadband. Note that the OPC deadband is not the same as the alarm and control deadbands that can be specified for analog points.
Maximum number of items per scan period per controller	735	As above.
Rate at which items can be added to groups	1,000/second	The rate at which items can be added to groups depends upon the design of the OPC Server and the throughput of the process control network with which it connects.
OPC Group update rates supported	1 second and above	The group rates supported match the Experion Vista scan rates supported.
OPC Client Callback Support		
Sustained callback rate from all OPC Servers (values per second)	1,000	
OPC client write support		
Number of item writes by OPC client interface per second (per channel)	1	
Maximum number of items per list supported (write)	10	
Sustained write rate (items/second)	1	

2.7.2. OPC Display Data Client

Items	Specifications	Comments
Description		
Primarily targeted as a convenient method of getting OPC data into HMIWeb displays. Designed for situations where you need to bring data into the Experion displays via OPC and no additional processing needs to be done on the server, for example when there is no need for alarming, historization, point detail, group, etc. The Experion OPC Display Data Client is bundled with the Experion Vista base software.		
General OPC Display Data Client Specifications		
Maximum number of third-party OPC servers supported	5	
OPC versions supported	2.05	
Alarming	No	
OPC Performance and Throughput		
OPC groups	See comment	The OPC display data client manages groups as follows: a group is created for each subscription rate used by local and remote clients: that is, all point parameters that have the same subscription rate are placed in the same group. When an item is no longer being subscribed to, it will be removed from its current group.
Maximum number of data values per display	40	The performance of third-party OPC servers can vary significantly. For very slow OPC servers it is possible that the maximum number of OPC display data client values per display may be less than this.
Maximum number of data values per OPC server	1,000	
Display rates supported	1 second and above	This value depends upon the design of the third-party OPC server and the throughput of the process control network with which it connects.
OPC Client Callback Support		
Sustained callback rate from all OPC servers (values per second)	100	The performance of third-party OPC servers can vary significantly. For very slow OPC servers it is possible that the maximum number of OPC display data client values per display may be less than this.

2.7.3. OPC Data Access Server

Items	Specifications	Comments
Description		
The Experion OPC Data Access Server provides OPC Data Access Clients with the capability to view Experion point data for the purposes of control and plant-wide historization.		
General OPC Data Access Server Specifications		
Maximum number of OPC Data Access Client Application Instances (CAIs)	3	Each OPC Client Application running on a physical node connecting to the server consumes one Client Application Instance (CAI) for each application. The applications can open multiple physical connections and this still only counts as one CAI for each application. If the same application is running on multiple nodes, one CAI is consumed for each node.
OPC DA versions supported	1.0 and 2.05	
OPC Groups and Items		
Maximum number of OPC groups supported	100	
Maximum number of items per group supported	1000	
Rate at which items can be added to groups	300/second	Assumes the parameters are already primed. The rate at which items can be added to groups depends upon the throughput of underlying process control network.
Total number of items supported across all groups	3000	
Group update rates supported	1 second and above	
OPC Client Callback Support		
Sustained callback rate from OPC server (items per second) to all OPC clients	400	
OPC Client Read Support		
(Cache read) Maximum number of list reads from OPC server per second	1	
(Cache read) Maximum number of items/list supported	400	Assumes that the data is already subscribed to and is therefore in the Experion Vista cache.
(Device read) Maximum number of list reads from OPC server per second	1	
(Device read) Maximum number of items/list supported	400	
(Device read) Sustained read rate (items/second)	200	
OPC Client Write Support		
Number of list writes to OPC server per second	1	
Maximum no. of items per list supported (write)	400	
Sustained write rate (items/second)	200	

2.8. Microsoft Excel Data Exchange

Item	Specification
Description	
Enables capture of real-time point parameter and history information, and displays the data in a Microsoft Excel spreadsheet, using cell formulas or the Microsoft Excel Data Exchange Wizard.	
Details	
Access to real-time.point.parameter values	Read/write access
Access to historical.point.parameter values	Read only
Access to database files (user tables)	Read/write access

2.9. ODBC Driver

Item	Specification
Description	
Primarily intended for reporting, the ODBC driver enables an ODBC-compliant application to access data in the Experion Vista database, such as history, event, and point parameter values. With the ODBC driver, the Experion Vista server acts as a server application (contrast this with ODBC Data Exchange, where the Experion Vista server acts a client application). The ODBC driver allows the server database to be queried using SQL commands from ODBC client applications. Additionally, custom applications written in Visual Basic or C++ can also access the server database via the ODBC driver.	
Details	
Access to real-time.point.parameter values	Read only
Access to historical.point.parameter values	Read only
Access to events	Read only
Configuration	Optimized for Microsoft Access and other ODBC ad hoc query/report applications.

2.10. Recipe Management

Items	Specifications	Comments
Description		
Recipe Management provides facilities to create recipes and download them to nominated process units. Each recipe may have up to 30 items and recipes can be chained together to form larger recipes, if required. Recipe items may be used to set ingredient targets, set alarm limits, set timers and place equipment into correct operating state. Items may be individually enabled for scaling.		
Details		
Maximum number of recipes	500	This is the default limit.

2.11. Batch Reporting

Items	Specifications	Comments
Description		
Batch reporting enables integrated reporting of batches or lots of a production process run, to be compiled and archived automatically by the Experion Vista server.		
Details		
Maximum number of history samples per batch report	65,000	A batch report can collect one type of history sample (such as 5-second samples or 1-hour averages) for up to 50 points.

2.12. HC900 Hybrid Controller Integration

Items	Specifications	Comments
Description		
The HC900 controller is supported with standard features made available through use of the Universal Modbus driver. This includes standard displays for set point programmer operation, SP profile definition, and recipes based on HC900 variables. The Universal Modbus driver is based on acronyms rather than Modbus addresses for entering database points. An available HC900 Point Builder tool also allows the import of HC900 database tags from the HC Designer tag export files to streamline the Experion Vista database development task. Channels, controllers, and points developed using this tool can be imported to Quick Builder and downloaded to the server.		
Universal Modbus driver		
Channel Support	Single or redundant networks	Redundant Ethernet networks supported for C70R and C70 controllers, single network for all other models. Failover time: 6 seconds or less typical (depends on communication barometer values set for Marginal and Fail limits).
Controllers	Up to 4 required	Each virtual controller defined for a channel supports 2000 hex holding registers in an HC900. Minimum of 2 required to support control loops, setpoint programmers, variables and signal tags.
Points	Up to 2050	Analog (monitor), analog (loop), and digital status points in any combination.
Point Addressing		Uses acronyms for point location assignments when using HC900 fixed Modbus map and hex addresses for some fixed Modbus map plus extended, custom Modbus map assignments.
Modbus Address Range Supported	0 – 7FFF hex, 0 – 32767 decimal	All custom Modbus map assignments must be within this range.
Set Point Programmers	First 4 SPP blocks supported per controller	Standard SP profile pre-plot / PV trend display for primary and auxiliary outputs available in Station. Tabular display for setup and operation. All controller firmware revisions are supported.
Set Point Profiles Stored	1000	Assignable to any compatible controller.
SP Profile Segments	Up to 50	
Set Point Programmer – Point allocation requirement	1 point per programmer	
Recipes Stored	1000	
Variables per Recipe	50	First 187 Variable 8-character tag names (or first 8 characters of 16 character tag names) are selectable via combo box.
Combined Recipes	1000	Each consists of 1 or 2 SP programmers and a recipe of up to 50 variables, assignable to compatible controllers.

OPC Client driver		
HWIOPC Server Support (Honeywell)	Supports OPC 2.05	HWIOPC server supports single or redundant networks. Failover time: 6 seconds typical.
HWIOPC Server Tag Import	Fixed Modbus map	An HC Designer "All Modbus addresses" .csv file can be imported into the HWIOPC Server to build the OPC database. Each parameter can be selectively copy/pasted into the Quick Builder OPC Client point location.
HC900 Point Builder Utility (available separately from Honeywell free-of-charge), V1.2		
Drivers supported	Honeywell Universal Modbus	Configures channels, controllers, points (analog points for control loops (1-24), SP programmers (1-4), Variables and Signal Tags; digital status points for digital Variables and Signal Tags). Uses acronyms for point assignments in Quick Builder, e.g., LOOP 1 PV, TAG 14, etc.
HC900 Modbus Map supported	Fixed Modbus Map	Does not support any custom Modbus map assignments.
Universal Modbus point assignment in Quick Builder	Defined acronyms	Universal Modbus acronyms are assigned on import to Quick Builder.
HC900 Controller firmware versions supported	V4.2 and below	Contact HFS Marketing for any firmware version support changes
HC900 files imported	HC Designer Tag export (.csv)	Function block summary, signal tag and variable export files, user selects which tags to convert to points.
HC900 Point Builder Utility (available separately from Honeywell free-of-charge), V2.2		
Drivers supported	Honeywell Universal Modbus OPC Client	Configures channels, controllers, points (analog points for control loops (1 -31), SP programmers (1-4), Variables and Signal Tags; digital status points for digital Variables and Signal Tags). Configures OPC channels, OPC controllers, and OPC points (analog including control loops, digital status points) based on HWIOPC server group and device names. SP programmer support is not provided.
HC900 Modbus Map supported	Fixed and Custom Modbus Map	Supports custom map partition import for Universal Modbus or OPC Client drivers
Universal Modbus point assignment in Quick Builder	Modbus hex addresses	Uses Modbus hex addresses for point location assignments.
HC900 controller versions supported	V4.2 and below	
HC900 files imported	HC Designer Tag export (.csv)	Fixed map: see list for V1.2 above Custom map: partition export files related to control loops, signal tags, and variables only for HC900 V4.0 and greater

2.13. Station Display Performance

Station Display Performance Specifications	Specification
Number of dynamic parameters per display ¹	350 or fewer
Typical non-complex display call up time with 100 or less parameters ²	< 2 seconds
Typical complex display call up time with 200 or less parameters ³	< 4 seconds
Maximum number of Station instances per computer	4
<p>Note 1 – For displays above 300 dynamic parameters, Honeywell recommends the use of the Performance Station computer.</p> <p>Note 2 – Call up time depends on display complexity: a non-complex display uses standard HMIWeb Display Builder objects with limited use of scripts this excludes the first initial call up and is based on a standard Station computer.</p> <p>Note 3 – Complex displays are defined by the number of data bound objects identified, large amount of total objects on the display, and a significant amount of scripting; assumes performance platform; this excludes the first initial call up and is based on a standard Station computer.</p>	

2.14. Experion Vista Options

2.14.1. Alarm Pager

Items	Specifications	Comments
Protocols		
	<ul style="list-style-type: none"> • Paging Entry Terminal (PET) • Telocator Alphanumeric Protocol (TAP) • UCP protocols • UCP 01 • UCP 30 • UCP 51 	Service providers in North America generally use the PET or TAP protocols where as the UCP protocols are mainly used in Europe. The 2-digit suffixes refer to the EMI command numbers used by the provider.
Sizing		
Number of pagers	50	Each pager and email address can be configured with an individual schedule of operation so that users are only paged when they are on call.
Number of email addresses	50	
Delays		
Configurable Notification delays	0 to 60 minutes	

2.14.2. Point Control Scheduler

Item	Specification
Description	
The Scheduler option allows point supervisory control to be automatically scheduled to occur at a specified time. This may occur on a "one-shot" basis, daily, workday, weekend, holiday, or a day of the week.	
Details	
Maximum number of point control schedules	100

3. Hardware and Software Requirements

A computer must meet the following specifications and these guidelines are intended to provide a minimum baseline. Actual requirements depend on the system configuration. The Experion Vista Server and Station components may be installed on the same computer.

Minimum Experion Vista computer – This is the minimum computer platform capable of running Experion Vista components. This platform should only be used for supervisory and monitoring scenarios involving low complexity graphics, typically involving up to 100 points, with up to one Station.

Standard Experion Vista computer – This is the typical computer platform capable of running Experion Vista components.

Performance Experion Vista computer – This computer platform is used for demanding applications involving complex graphics that have been built within documented guidelines.

System Configuration	Minimum	Standard	Performance
Processor	3 GHz Pentium IV	Dual Core Intel 1.86 GHz or faster	Dual Core 3.0 GHz Xeon or faster
RAM	1 GB minimum, 2GB recommended	2 GB	2 GB
Networking ^{1, 2}	100 Mbps Ethernet		
Video resolution	1024 x 768 or 1280 x 1024 (standard) 65K colors		
Video memory (VRAM) per channel	32 MB		
Operating system	Windows XP SP2 Professional		
Load device	DVD-drive		
Software protection device port requirements	Requires free USB port for new systems. Requires integral parallel port (not PCI-based) for PlantScape Vista upgrades to support existing parallel port security device.		
Hard drive	40 GB	60 GB	80 GB
Example hardware	Dell Precision 390	Dell Precision 390 or 490	Dell Precision 490
Note 1 – 10 Mbps Ethernet Network between servers and Stations is not officially supported, although it may perform acceptably on small systems.			
Note 2 – A dual Ethernet network may be used for redundant communications.			

4. Model Numbers

4.1. Development and Run-Time Software

Model Number	Description
HS-EVBASE ¹	Experion Vista Base Development and Run-time software (50 points)
HS- EVD100	100 point adder to Developer and Run-time Database size
HS-EVD01K	1000 point adder to Developer and Run-time Database size
HS-EVD02K	2000 point adder to Developer and Run-time Database size
Note 1 – The Experion Vista development and run-time base software license includes 50 SCADA points, 1 Quick builder license, OPC Display Data Client, 1 Display builder license, 1 Station user license including multiple static Station support, all Experion Vista interfaces including the OPC client interface, batch reporting, recipe management, ODBC driver, 3 Microsoft Excel Data Exchange users and 3 OPC DA server connections.	

4.2. Run-Time Software

Model Number	Description
HS-EVR350 ¹	Experion Vista 350 points Run-time software
HS- EVR02K ¹	Experion Vista 2050 points Run-time software
Note 1 – These licenses have a predetermined point count of 350 or 2050 points. License contents are similar to the Experion Vista development and run-time base software except that the run-time software license does not support database changes. To configure the database an off-process development or development and run-time license must be used.	

4.3. Off-Process Development Software

Model Number	Description
HS-EVBDEV ¹	Experion Vista 2050 points off-process development software
Note 1 – This software is for system development only and cannot be used for process control. The Experion Vista off-process development software license includes 2050 SCADA points, 1 Quick builder license, OPC Display Data Client, 1 Display builder license, 1 Station user license supporting up to four instances of Station running simultaneously on a computer, all Experion Vista interfaces including the OPC client interface, batch reporting, point control scheduler, recipe management, ODBC driver, 3 Microsoft Excel Data Exchange users and 3 OPC DA client application instances.	

4.4. Options

Model Number	Description
HS-EVAE01	Alarm pager
HS-EVPE02	Point Control Scheduler
HS-EVSL01 ¹	Vista Station – 1 User
Note 1 – The Vista Station supports up to four instances of Station running simultaneously on a computer (multiple static Station). Only 1 user connection is required per computer.	

5. Glossary

Term or Acronym	Description
Experion Vista Server	The node at the heart of Experion Vista. The servers encompasses a wide range of subsystems including history collection, SCADA interfaces, alarm/event, etc.
HC900	Honeywell hybrid controller
HMI	Human machine interface
HMIWeb	Human machine interface based on Web technology
HTML	Hypertext markup language
HWIOPC	Honeywell Instruments OPC Server (for HC900)
LAN	Local area network based on Ethernet technology
OPC	Series of standard specification for open connectivity in industrial automation, originally based on Microsoft's OLE COM and DCOM technologies.
PPS	Parameters per second
RTU	Remote terminal unit
SCADA	Supervisory control and data acquisition

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