

General Specifications

GS 33J05D10-01EN

VP6H1100 Standard Operation and Monitoring Function



[Release 6]

■ GENERAL

Standard Operation and Monitoring Function has various functions required to monitor plant operation. A variety of special views can be used according to a purpose of operation and monitoring. For alarm management, Unified Alarms and Conditions Server (UACS) (*1) or Consolidated Alarm Management Function (CAMS for HIS) can be selected in addition to a basic alarm management. For basic alarm management, whether to detect alarms is specified and alarm inhibition is performed for each function block of FCS, GSGW, and APCS. By selecting the Unified Alarms and Conditions Server (UACS) (*1) or the CAMS for HIS it is possible to manage alarms in further advanced approach such as unifying alarm formats, and displaying alarms for easy recognition.

*1: VP6A2500 Unified Alarms and Conditions Server (UACS) is required. For details, refer to "VP6A2500 Unified Alarms and Conditions Server (UACS), VP6A2505 UACS Simulator Package, VP6A2510 UACS Advanced Suppression Function, VP6A2580 UACS Multiple Project Connection Package" (GS 33J05D30-01EN).

■ FUNCTION SPECIFICATIONS

● Operation Screen Mode

HIS provides two operation screen modes. In each mode, HIS displays views such as the Graphic View or the Trend View.

Full-Screen Mode

In this mode, HIS displays a frame that consists of several views assigned for a certain function or purpose. On HIS, a number of tabbed frames can be displayed and overlapped in full-screen mode. In this mode, a Pop-Up Window such as a Faceplate View can be displayed in front of the frame.

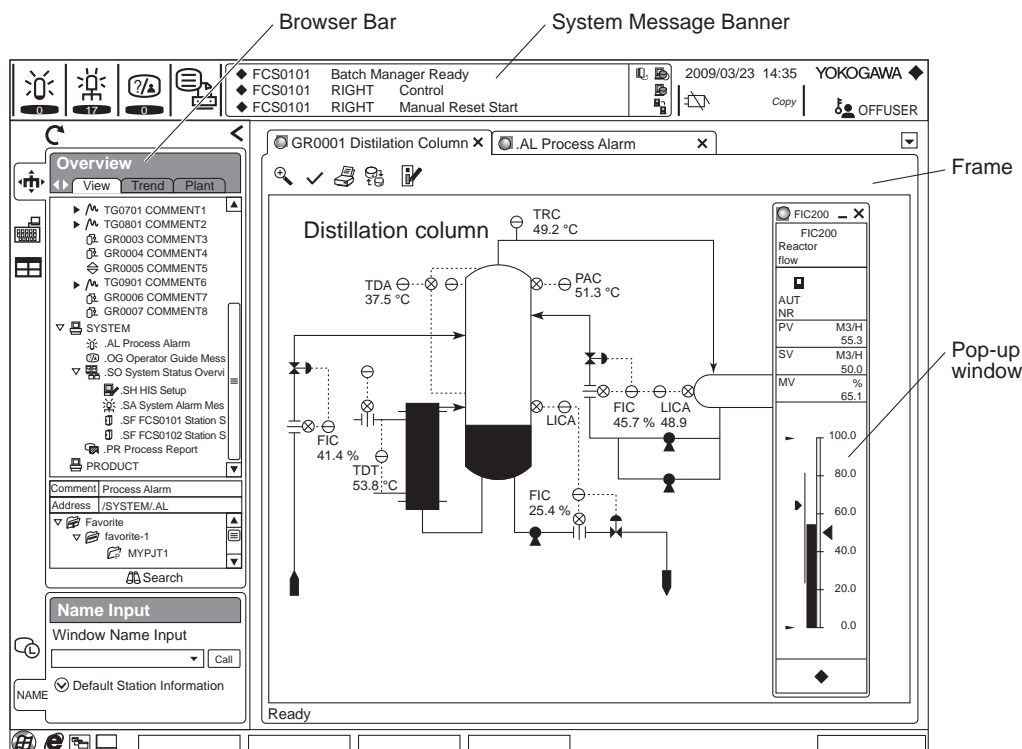
Number of Frames:

Maximum 5 per monitor

Number of Pop-Up Window:

Maximum 4 per HIS.

If VP6H4600 Multiple-Monitor Support package is installed in the computer, maximum is 8 per HIS.



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Figure Display in Full-Screen Mode

Window Mode

In this mode, several windows can be displayed in cascade style of Microsoft Windows so that the windows are overlapped. Each window contains only one view.

Number of Windows:

Maximum 5.

If VP6H4600 Multiple-Monitor Support package is installed in the computer, maximum is 12.

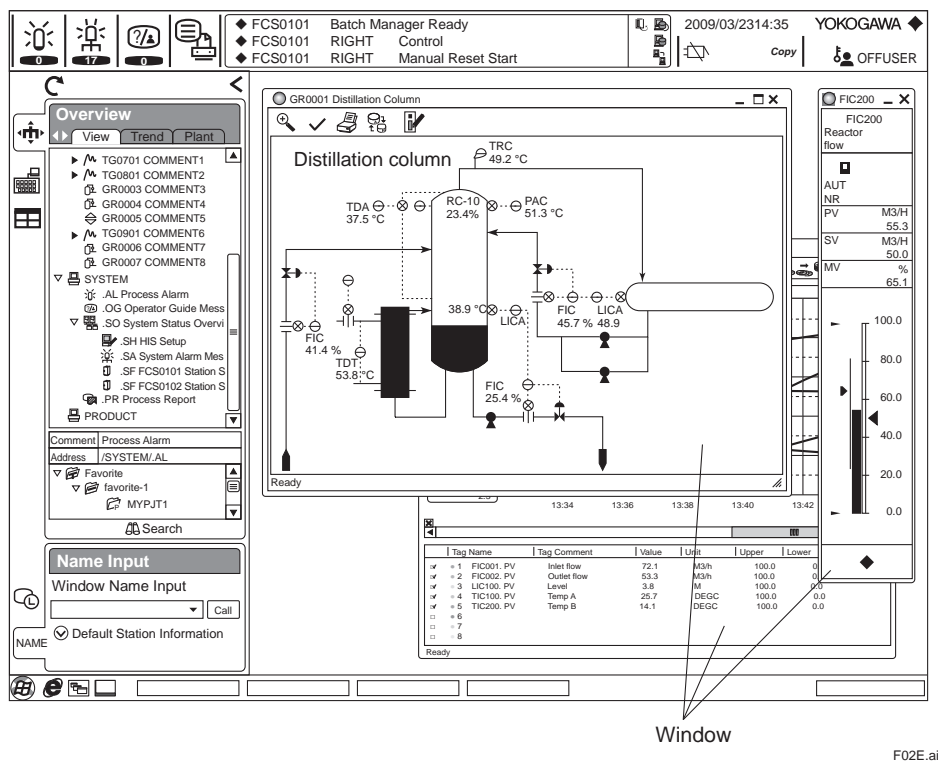


Figure Display in Window Mode

The System Message Banner is always displayed at the top of the display, and expresses the alarm occurrence status visually. The Browser Bar is displayed in the left or right side of the screen, and has the role as the launcher to call up various operation and monitoring windows.

● Operation and Monitoring Windows

Graphic View

Displays graphics and display format of user-defined process data.

Displayed Process Data: Up to 400 data per view (including modifiers)

Data Display Format: Numerical data, graphs and faceplates, etc.

Modifiers: Up to 200 data per view

Types of Modifiers: Color change, flashing, reverse video, character string change, etc.

Display Colors: True Color

- CI View (HTML display): Up to 1 per view (*1)

- Graphic Attribute

Display process data along with a process flow chart or to call up various views that are targets of operation and monitoring.

- Overview Attribute

Displays a process status list, checks alarm status and calls the related views.

Number of Elements to be Monitored: Up to 64 per view

- Control Attribute

Displays the status of function blocks and elements as instrument faceplates, from which you can operate and monitor them.

Number of Instrument Faceplates: Up to 16 per view

*1: With R6.09 or later, CI View of Collaborative Information Server (CI Server) can be used on Graphic View. However, one license of CI View (HTML5) is required for each HIS. For details on CI Server, refer to the GS "Collaborative Information Server" (GS 36K01A10-01EN).

Trend View

Displays trend data acquired by the Trend Recording Functions.

Number of Displayed Pens: Up to 8 pens per view (R6.01), Up to 16 pens per view (R6.02 or later)

Number of Views: Up to 800 per HIS (R6.01), Up to 1584 per HIS (R6.02 or later)

Trend Point View

Displays one of pens assigned on the Trend View.

Number of Displayed Pens: One pen per view.

Number of Views: Up to 6400 per HIS (R6.01), Up to 12672 per HIS (R6.02 or later)

Tuning View

Displays and monitors an instrument faceplate of a function block or element and parameters.

Number of Instrument Faceplates: One per view

- **Tuning Trend**

When the Tuning View is displayed, tuning trend data acquisition starts. When closed, data acquisition stops. To continue data acquisition after the view is closed, use the Reserve function.

Table Tuning Trend Specifications

Items		Specifications
Recording Data		PV (CPV), SV, MV, FV, SW
Acquisition Cycle		1 sec
Reserve Function	Points	16 points
	Recording Time	48 min (2880 data per point)
	Acquisition Method	Continuous-Rotary Type

Operator Guide View

Displays the latest operator guide message on top.

Saved Messages: 40 messages per HIS.

Process Alarm View

Displays the latest process alarm and annunciator message occurred in an operation group on top.

Saved Alarm: 200 alarms per HIS

Sequence Table View

Displays the process status and condition true/false status of sequence tables in different color.

SFC View

Displays the process status of SFC blocks and unit instruments.

Table Views

View name	Max. No. of Views
Graphic View Graphic Attribute Overview Attribute Control Attribute	4000 (R6.01) (*1) 5000 (R6.02 or later) (*2)
Trend View	
Trend Point View	6400 (R6.01), 12672 (R6.02 or later)
Tuning View	100000

*1: Trend View can use up to 800 of 4000.

*2: Trend View can use up to 1584 of 5000.

Data Update Period

Standard: 1 sec.

The update period can be defined for each Graphic View (integer only).

However, the display of the CI View on the Graphic View is updated at the timing when the CI Server updates the display, independent of the update period of the Graphic View.

● Trend Recording Functions

Acquires process data and displays them on the Trend View and Trend Point View. The Trend View displays eight points, and the Trend Point View displays one of the points assigned on the Trend View.

Trend Recording Blocks

Block: Minimum "unit" for trend recording.
 Number of Acquisition Points: 128 per trend recording block
 Number of Acquisition Data: 2,880 per acquisition point
 Recording Time: See Table "Trend Recording Specifications."

Number of Trend Recording Blocks

Up to 50 (R6.01) or 99 (R6.02 or later) blocks per HIS, but up to 34 blocks for local HIS

Number of Other HISs' Trend Recording Blocks that can be Displayed

Up to the number of trend recording blocks mentioned above, including local HIS blocks

Number of Trend Recording Input Points

Up to 4,352 points (34 trend recording blocks), including one- and ten-second trend acquisition points

Number of One- and 10-second Trend Acquisition Points

Up to 2,048 points (16 trend recording blocks) (*1)

*1: One-second trend acquisition points per FCS
 For AFV30□/AFV40□/A2FV50□/A2FV70□: 1024 points
 For other FCS: 256 points

Data Acquisition Scan Period

Specify same data acquisition period for all 128 points in a block.

Table: Data Acquisition Method

Data acquisition method	How to start data acquisition	When memory is full	How to stop data acquisition
Continuous-Rotary Type	Acquires trend regularly after HIS starts	Old data is overwritten with new data	Data acquisition cannot be stopped
Batch-Stop Type	By acquisition start command	Acquisition stops	Send data acquisition stop command. When memory is full, data acquisition stops.
Batch-Rotary Type	By acquisition start command	Old data is overwritten with new data	Send data acquisition stop command

Trend Save

You can save the data acquired by the Trend Recording function in a specified file. The saved data can be displayed on the Trend View.

Table: Trend Recording Specifications

Scan Period	Recording Time
1 sec (*1)	48 min
10 sec	8 hours
1 min	2 days
2 min	4 days
5 min	10 days
10 min	20 days

*1: The process data of μ XL can not be acquired and displayed at 1 sec period.

● Tag Name Specifications

Number of Tags: Up to 100000 per system (When using VP6H4000, up to 1000000 per system).
 Tag Name: Std. 8 characters, max. 16 alphanumeric characters (capital letters only for the English alphabet), [_] (underscore) and [-] (hyphen).
 Tag Comment: Max. 24 characters

● Operation Support Functions

Process Report

- Tag Status Report
Displays and prints the status of function blocks and tag-based common switches in the FCS.
- I/O Report
Displays and prints the bit map image of annunciator, common switches, and digital input/output.

Historical Message Report

Displays and prints up to about 50,000 (10 MB) past alarms and operation history.

140 Byte/1 Historical Message

Hard Copy Function

Prints the displayed data on a printer and saves it in a file.

Security

Protects system by restricting access with the following security functions:

authentication of authorized individuals by user name and password; setting the validity of password; setting the number of break-ins (alert when wrong operations for authentication are performed continuously more than the number of times set previously, and so on); and automatic user shut-out function (automatically shutting user out when keyboard or mouse is not used at the time set previously). Up to 250 users can be registered.

Windows Desktop Environment Change

Hides icons and other items from an Windows desktop to provide appropriate desktop as an HMI of DCS.

● System Maintenance Functions

Displays the operating status of system components such as HIS or FCS. System maintenance functions include:

- System Status Overview
- FCS Status Display
- System Alarm Message Display
- HIS Settings:
equalization function
operation mark settings
function key assignment and definitions
etc
- Time Setting

● Buzzer Sounds

The HIS produces the following types of buzzer sounds. (The speaker built in the operation keyboard is used as the output device by default; however, the speaker in the computer or the output of the installed sound card can also be used.) By using these buzzer sounds, alarms and contents of messages (alarm types, priority levels, and alarm sources) can be distinguished aurally.

Buzzer sound: Alarms, message sounds

Operation sound: Key/touch panel operation sounds

Table: Buzzer Sounds

Classification	Alarm Types
System Alarm	System Alarm
Process Alarm	Process Alarm High Priority
	Process Alarm Medium Priority
	Process Alarm Recover
Message	Operation Guide
	Reconfirmation
	Mis-Operation

● Access Administrator (FDA: 21 CFR Part 11 compliant)

By using both the security functions and historical message report functions described above, a system can be compliant with "Personnel Authentication" and "Audit trail" that the requirement of an operator management stated in FDA: 21 CFR Part 11.

For details of the compliance with FDA: 21 CFR Part 11, refer to CENTUM VP System Overview (GS 33J01A10-01EN) and VP6E5170 Access Administrator Package (FDA: 21 CFR Part 11 compliant) (GS 33J10D40-01EN).

■ UACS CLIENT FUNCTION

UACS provides functions that can further improve the efficiency of alarm management in process control by suppressing alarms, unifying alarm formats, and displaying alarms for easy recognition using selecting alarms and customizing notification of alarms.

UACS is configured as a server and client model.

As a UACS Client, HIS receives alarm information from the UACS Station that has UACS server functions and notifies the operator of the alarm information.

● UACS Advantages

Design based on ANSI/ISA-18.2

UACS is designed according to the concept of alarm life cycle management defined in ANSI/ISA-18.2.

Centralized management and unification of alarms

UACS allows for centralized management and listing of all alarms and events by converting the formats different for each alarm generator into a unified format.

All HISs get alarm information from the UACS Station, so the unified alarm information is displayed among all HISs.

Automatic alarm suppression

Unnecessary alarms and events can be automatically suppressed according to the operating status of the plant.

For details, refer to the GS "VP6A2500 Unified Alarms and Conditions Server (UACS), VP6A2505 UACS Simulator Package, VP6A2510 UACS Advanced Suppression Function, VP6A2580 UACS Multiple Project Connection Package, VP6A2700 UACS Client License" (GS 33J05D30-01EN).

■ CONSOLIDATED ALARM MANAGEMENT SOFTWARE FUNCTION (CAMS for HIS)

The Consolidated Alarm Management Software (CAMS for HIS) integratively manages various alarm and event messages and displays them in a single window. In case a lot of alarms and events are generated it selectively displays only necessary alarm and event messages, which enables operators to manage them efficiently. Customization of operator notifications and definitions of alarm behaviors that CAMS for HIS processes can also be defined through engineering work.

The CAMS for HIS acquires various kinds of real-time alarms and events which occur in the CENTUM VP and other systems connected to the CENTUM VP. Those alarms and events are notified to operators with identifiers used for sorting such as purposes, user name, time allowed for response, and alarm priorities; and additional information such as cause of alarms and how to handle them. Operators sort a wide variety of alarms and events occurred in the plant by the identifiers, using the CAMS for HIS filtering and sorting, so that the alarms are delivered to the operators at the right timing. As a result, operators are able to perform safer, more efficient operation.

The CAMS for HIS conforms the specifications defined by EEMUA (Engineering Equipment and Materials Users' Association) No. 191 that contains a set of guidelines for alarm management.

The CAMS for HIS can be enable or disable during operation.

Major Functions of the CAMS for HIS are shown in the following:

Acquire a Wide Variety of Alarms and Events

Alarms and events generated by the CENTUM VP can be acquired as well as the systems connected to the CENTUM VP, and integrates them on HIS.

Scope of Comprehensive Management

System	Acquisition Route
CENTUM VP (*1) ProSafe-RS/ProSafe-RS Lite (*1) CENTUM CS 3000 CENTUM CS	Via control bus
PRM STARDOM	Via OPC A&E server

*1: The attributes of the alarms and events can be defined.

Define Alarms and Events Attribute

For acquired alarms and events, the attributes can be defined as the additional information (e.g., cause of alarms and countermeasures) and the identifiers (e.g., purposes, alarm priority and allowed time for response) for filtering and sorting the message.

Suppress Alarms and Events

Unnecessary alarms and events can be suppressed. So, they do not appear on the CAMS for HIS Message Monitor. Alarm suppression is done all at once when those are generated during the plant equipment's maintenance or changeover.

Supervise Alarm and Event Messages

By using the CAMS for HIS, operators can integrate process alarms, system alarms and operation guide messages, which used to be supervised on different windows, on one window (CAMS for HIS Message Monitor). In order to enable operators to monitor only necessary information for themselves in the most suitable timing out of a great variety of alarms and events given out from plants, the CAMS for HIS Message Monitor has the following functions:

- **Filtering**
A function to filter (narrow down) displayed/monitored messages by each identifier (user name, plant hierarchy title, purpose alarm priority, etc.) included in messages.
- **Sorting**
A function to sort messages to be displayed/monitored by each identifier (time of occurrence, allowed time for response, alarm priority, etc.) included in messages.
- **Eclipsing**
A function to fold and display a number of alarm messages given out from one same tag in the most important alarm message. It is effective to limit the display of repeated alarms (HI alarm chattering, etc.) and less important alarms (HI alarms during HH alarm issuance, etc.).
- **Shelving**
A function to move messages with low priority to another folder to shelve them temporarily or for a certain period of time. By specifying the shelving time, it is possible to clear alarms out of main A&E Message Pane collectively.
- **Load Shedding**
A function to automatically activate filtering specified beforehand to prevent floods of alarms and events in order to reduce operators' monitoring load and to prevent overlook of important alarms and false operation, in case a number of alarms and events happen to be given out in a short period of time.
- **Suppression**
This function suppresses messages by the unit of alarm groups and stations that had been defined beforehand.

Design Check for Alarm System (EEMUA No. 191 Compliance)

A function to give out virtual alarms and events to test if an alarm system is designed properly or not.

Alarm and Event Historian Saving

A function to save alarm and event as a historical file for a certain period of time including attributes added by CAMS for HIS. The CAMS for HIS operation history including suppression, shelving, confirmation and manual recovery is also saved as event messages.

Alarm Setpoint Management of CAMS for HIS

The CAMS for HIS has functions for supporting the alarm setpoint management.

- Alarm setpoints can be defined using CAMS for HIS Alarm builder, and all the alarm setpoints can be set in one operation to each FCS.
- CAMS for HIS compares and manages the difference of alarm setpoint values between FCS and the CAMS for HIS Alarm builder.

● HIS Operation with Effective CAMS for HIS

In the effective CAMS for HIS, windows related to alarms and events are aggregated into the CAMS for HIS Message Monitor. The following is the difference from ineffective CAMS for HIS.

Operation to Call Various Message Windows

When a process alarm view, system alarm view and operation guide view shown below is called, the CAMS for HIS Message Monitor is always called.

- **Call from System Message banner**
When a call button for process alarm view, system alarm view and operation guide view is pressed, the CAMS for HIS Message Monitor is called with filters for each alarm and event selected.
- **Call from Operation Keyboard**
- **Window Call from Function Key**
- **Call by Direct Specification of Window**
Parameter specification such as window size and position specification shall be ineffective.

Display of Alarms and Events

When the CAMS for HIS is enabled, the following views are to reflecting the alarm status displayed on the CAMS for HIS Message Monitor.

- System Message Banner
- Instrument Faceplate, Tuning View
- Graphic View

Message Printing

When an alarm is issued, every message is printed out regardless of the CAMS for HIS Message Monitor operation.

● CAMS for HIS Specification

The CAMS for HIS major specifications are shown below:

Number of HIS: Maximum 100 units/project
Number of alarms stored: Maximum 2000
Disk capacity for historical data: 20GB

● Note

In order to use VP6H4700 Advanced Alarm Filter Package, the CAMS for HIS needs to be disabled.

■ OPTIONAL SOFTWARE PACKAGES

The following optional software packages are available to add on to Standard Operation and Monitoring Function.

VP6H1140 Eight-loop Simultaneous Operation Package (for AIP831) (*1)
VP6H2411 Exaopc OPC Interface Package (for HIS)
VP6H2412 CENTUM Data Access Library
VP6H4000 Million Tag Handling Package
VP6H4100 Configured information Reference Package
VP6H4150 Recorder Output Package
VP6H4190 Line Printer Support Package
VP6H4200 Consolidated Historical Message Viewer (Meeting FDA)
VP6H4410 Control Drawing Status Display Package
VP6H4420 Logic Chart Status Display Package
VP6H4450 Multiple Projects Connection Package
VP6H4600 Multiple-monitor Support Package
VP6H4700 Advanced Alarm Filter Package
VP6E5427 HIS Simulator Package
VP6H6510 Long-Term Data Archive Package
VP6H6530 Report Package
VP6H6660 Process Management Package (VP Batch)
VP6H6710 FCS Data Setting/Acquisition Package (PICOT)

*1: When using AIP831 Operation Keyboard for Eight-loop Simultaneous Operation, VP6H1140 is required.

■ OPERATING ENVIRONMENT

● Hardware Requirements

Hardware requirements for VP6H1100 Standard Operation and Monitoring Function package are described in this section.

As to the hardware requirements for VP6H1150 Server for Remote Operation and Monitoring Function (GS 33J05D20-01EN), and VP6E5100 Standard Engineering Function (GS 33J10D10-01EN), see the corresponding General Specifications.

The Standard Operation and Monitoring Function runs on a computer which meets the following requirements:

For Windows 7 (Supported by R6.07.00 or earlier) / Windows 10

CPU	Required	Dual-core, 2.4 GHz or faster. For CAMS for HIS, Quad Core or superior is recommended.
Main memory	Required	6 GB
Hard disk	Required	250 GB or more is required with 40 GB or more of empty space to use as an HIS. RAID 1 or superior is recommended. (*1)
Display (*2)	Required	Resolution of SXGA (1280x1024) or higher, true color (16.77 million colors or more)
	For wide screen	Resolution of WXGA+ (1440x900) or higher, true color (16.77 million colors or more)
Graphics	Required	The following are supported by graphics process unit of DirectX 9 or equivalent. • Windows driver display model (WDDM) driver • Pixel Shader 2.0 • 32-bit/pixel • 128 MB graphics memory
Network	Required	One expansion slot (PCI Express slot) is used for the control bus interface (VI702). Ethernet ports, one for the information network and one for the UACS dedicated Ethernet, are used. (*3) When not used as a UACS Client, using one Ethernet port is recommended for the information network. (*3)
Optical disc drive	Required	DVD-ROM
Mouse	Required	

Note: When the sound of alarm is outputted by BEEP, a computer without a built-in speaker requires to connect an external speaker.

*1: When the optional function of VP6H6510 Long-term Data Archive Package is used, also refer to GS of "Long-term Data Archive Package" (GS 33J05J10-01EN).
When the VP6P6900 SOE Server Package is used, also refer to GS of "SEM Sequence of Events Manager" (GS 33J30D10-01EN).

*2: The maximum resolution is WUXGA (1920x1200) for DVI connection.

*3: Onboard or expansion slot is required (1 Gbps or higher transmission rate).

For Windows Vista (Supported by R6.03.10 or earlier)

CPU	Required	Dual-core, 2.4 GHz or faster. For CAMS for HIS, Quad Core or superior is recommended.
Main memory	Required	4 GB
Hard disk	Required	250 GB or more is required with 40 GB or more of empty space to use as an HIS. RAID 1 or superior is recommended. (*1)
Display	Required	Resolution of SXGA (1280x1024) or higher, true color (16.77 million colors or more)
	For wide screen	Resolution of WXGA+ (1440x900) or higher, true color (16.77 million colors or more)
Graphics	Required	The following are supported by graphics process unit of DirectX 9 or equivalent. • Windows driver display model (WDDM) driver • Pixel Shader 2.0 • 32-bit/pixel • 128 MB graphics memory
Expansion slot	Required	One slot is used by the control bus interface (*2)
Optical disc drive	Required	DVD-ROM
Mouse	Required	

*1: When the optional function of VP6H6510 Long-term Data Archive Package is used, also refer to GS of "Long-term Data Archive Package" (GS 33J05J10-01EN).
When the VP6P6900 SOE Server Package is used, also refer to GS of "SEM Sequence of Events Manager" (GS 33J30D10-01EN).

*2: VI702 is required as a control bus interface card.

For Windows Server 2008 R2 (Supported by R6.07.00 or earlier) / Windows Server 2016 / Windows Server 2019 / Windows Server 2022

CPU	Required	Dual-core, 2.5 GHz or faster. For CAMS for HIS, Quad Core or superior is recommended.
Main memory	Required	8 GB
Hard disk	Required	250 GB or more is required with 40 GB or more of empty space to use as an HIS. RAID 1 or superior is recommended. (*1)
Display (*2)	Required	Resolution of SXGA (1280x1024) or higher, true color (16.77 million colors or more)
	For wide screen	Resolution of WXGA+ (1440x900) or higher, true color (16.77 million colors or more)
Graphics	Required	The following are supported by graphics process unit of DirectX 9 or equivalent. • Windows driver display model (WDDM) driver • Pixel Shader 2.0 • 32-bit/pixel • 128 MB graphics memory
Network	Required	One expansion slot (PCI Express slot) is used for the control bus interface (VI702).
		Ethernet ports, one for the information network and one for the UACS dedicated Ethernet, are used. (*3) When not used as a UACS Client, using one Ethernet port is recommended for the information network. (*3)
Optical disc drive	Required	DVD-ROM
Mouse	Required	

Note: When using Windows Sever 2008, note the following restrictions.

- Graphic call up time is longer than Windows 7.
- An operation keyboard is required for buzzing alarms.

*1: When the optional function of VP6H6510 Long-term Data Archive Package is used, also refer to GS of "Long-term Data Archive Package" (GS 33J05J10-01EN).
When the VP6P6900 SOE Server Package is used, also refer to GS of "SEM Sequence of Events Manager" (GS 33J30D10-01EN).

*2: The maximum resolution is WUXGA (1920x1200) for DVI connection.

*3: Onboard or expansion slot is required (1 Gbps or higher transmission rate).

For Windows Sever 2008 (Supported by R6.03.10 or earlier)

CPU	Required	Dual-core, 2.4 GHz or faster. For CAMS for HIS, Quad Core or superior is recommended.
Main memory	Required	4 GB
Hard disk	Required	250 GB or more is required with 40 GB or more of empty space to use as an HIS. RAID 1 or superior is recommended. (*1)
Display	Required	Resolution of SXGA (1280x1024) or higher, true color (16.77 million colors or more)
	For wide screen	Resolution of WXGA+ (1440x900) or higher, true color (16.77 million colors or more)
Graphics	Required	The following are supported by graphics process unit of DirectX 9 or equivalent. • Windows driver display model (WDDM) driver • Pixel Shader 2.0 • 32-bit/pixel • 128 MB graphics memory
Expansion slot	Required	One slot is used by the control bus interface (*2)
Optical disc drive	Required	DVD-ROM
Mouse	Required	

Note: When using Windows Sever 2008, note the following restrictions.

- Graphic call up time is longer than Windows 7 and Windows Vista.
- An operation keyboard is required for buzzing alarms.

*1: When the optional function of VP6H6510 Long-term Data Archive Package is used, also refer to GS of "Long-term Data Archive Package" (GS 33J05J10-01EN).
When the VP6P6900 SOE Server Package is used, also refer to GS of "SEM Sequence of Events Manager" (GS 33J30D10-01EN).

*2: VI702 is required as a control bus interface card.

For the hardware specifications when VP6H1100 Standard Operation and Monitoring Function and VP6E5000 Engineering Server Function and/or VP6E5100 Standard Engineering Function coexist in the same computer, refer to the GS "Automation Design Suite (AD Suite), Engineering Server Function, Standard Engineering Function" (GS 33J10D10-01EN).

● Software Requirements

Software requirements for VP6H1100 Standard Operation and Monitoring Function package are described in this section.

As to the software requirements for VP6H1150 Server for Remote Operation and Monitoring Function (GS 33J05D20-01EN), and VP6E5100 Standard Engineering Function (GS 33J10D10-01EN), see the corresponding General Specifications.

Windows OS (Supported by R6.07.10 or earlier)

CENTUM VP Release number	Windows 10 Enterprise 2016 LTSC	Windows 7 Professional	Windows Vista Business	Windows Server 2016 Standard	Windows Server 2008 R2 Standard	Windows Server 2008 Standard
	64-bit	64-bit	32-bit	64-bit	64-bit	32-bit
	without SP	SP1	SP2	without SP	SP1	SP2
R6.01.00/ R6.01.10	No	Yes	Yes	No	Yes	Yes
R6.02.00	No	Yes	Yes	No	Yes	Yes
R6.03.00/ R6.03.10	No	Yes	Yes	No	Yes	Yes
R6.04.00	Yes (*1)	Yes	No	No	Yes	No
R6.05.00	Yes (*1)	Yes	No	No	Yes	No
R6.06.00	Yes (*1)	Yes	No	Yes	Yes	No
R6.07.00	Yes (*1)	Yes	No	Yes	Yes	No
R6.07.10	Yes (*1)	No	No	Yes	No	No

Yes: Applicable

No: Not applicable

Note: SP stands for Service Pack (e.g. SP1 stands for Service Pack 1).

*1: Windows 10 IoT Enterprise 2016 LTSC is supported, too.

Windows OS (Supported by R6.08.00 or later)

CENTUM VP Release number	Windows 10 Enterprise LTSC 2021	Windows 10 Enterprise LTSC 2019	Windows 10 Enterprise 2016 LTSC	Windows Server 2022 Standard	Windows Server 2019 Standard	Windows Server 2016 Standard
	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit
	without SP	without SP	without SP	without SP	without SP	without SP
R6.08.00	No	Yes (*2)	Yes (*1)	No	No	Yes
R6.09.00	No	Yes (*2)	Yes (*1)	No	Yes (*3)	Yes
R6.10.00	No	Yes (*2)	Yes (*1)	No	Yes (*3)	Yes
R6.11.00	Yes (*4)	Yes (*2)	Yes (*1)	Yes (*5)	Yes (*3)	Yes

Yes: Applicable

No: Not applicable

Note: SP stands for Service Pack (e.g. SP1 stands for Service Pack 1).

*1: Windows 10 IoT Enterprise 2016 LTSC is supported, too.

*2: Windows 10 IoT Enterprise 2019 LTSC is supported, too.

*3: Windows Server IoT 2019 Standard is supported, too.

*4: Windows 10 IoT Enterprise LTSC 2021 is supported, too.

*5: Windows Server IoT 2022 Standard is supported, too.

The following software is required for some packages used with VP6H1100 Standard Operation and Monitoring Function package.

As to the required versions for respective software, refer to the tables below.

Windows Internet Explorer

CENTUM VP Release number	Internet Explorer			Microsoft Edge
	8.0	9.0	11.0	
R6.01.00/ R6.01.10	Yes	Yes	Yes	No
R6.02.00	No	Yes	Yes	No
R6.03.00/ R6.03.10	No	Yes	Yes	No
R6.04.00	No	No	Yes	No
R6.05.00	No	No	Yes	No
R6.06.00	No	No	Yes	No
R6.07.00/ R6.07.10	No	No	Yes	No
R6.08.00	No	No	Yes	No
R6.09.00	No	No	Yes	No
R6.10.00	No	No	Yes	No
R6.11.00	No	No	Yes	Yes

Yes: Applicable

No: Not applicable

Microsoft Visual Studio

CENTUM VP Release number	Microsoft Visual Studio				
	2008 SP1	2012	2013	2017	2019
R6.01.00/ R6.01.10	Yes	Yes	No	No	No
R6.02.00	Yes	Yes	Yes	No	No
R6.03.00/ R6.03.10	Yes	Yes	Yes	No	No
R6.04.00	Yes (*1)	Yes	Yes	No	No
R6.05.00	Yes (*1)	Yes	Yes	No	No
R6.06.00	No	No	No	Yes (*2) (*3)	No
R6.07.00/ R6.07.10	No	No	No	Yes (*2) (*3)	No
R6.08.00	No	No	No	Yes (*2) (*3)	No
R6.09.00	No	No	No	Yes (*2) (*3)	No
R6.10.00	No	No	No	Yes (*2) (*3)	Yes (*2) (*3)
R6.1100	No	No	No	Yes (*2) (*3)	Yes (*2) (*3)

Yes: Applicable

No: Not applicable

*1: Visual Studio 2008 does not support Windows 10.

*2: Visual Studio 2017 and Visual Studio 2019 do not support Windows 10 (IoT) Enterprise 2016 LTSC, Windows 10 (IoT) Enterprise LTSC 2019, and Windows 10 (IoT) Enterprise LTSC 2021.

*3: Rebuild the user applications that had been used in the system up to CENTUM R6.05 under the development environment of Microsoft Visual Studio 2017 or 2019. If the user application is a .NET Framework application, specify .NET Framework version 4.6.2.

Microsoft Excel

CENTUM VP Release number	Microsoft Excel					
	2007	2010	2013	2016	2019	LTSC 2021
	32-bit	32-bit	32-bit	32-bit	32-bit	32-bit
	SP3	SP2	SP1	without SP	without SP	without SP
R6.01.00/ R6.01.10	Yes	Yes	Yes (*1)	No	No	No
R6.02.00	Yes	Yes	Yes (*1)	No	No	No
R6.03.00/ R6.03.10	Yes	Yes	Yes (*1)	No	No	No
R6.04.00	Yes	Yes	Yes (*1)	Yes (*1)	No	No
R6.05.00	Yes	Yes	Yes (*1)	Yes (*1)	No	No
R6.06.00	No	Yes	Yes (*1)	Yes (*1)	No	No
R6.07.00/ R6.07.10	No	Yes	Yes (*1)	Yes (*1)	No	No
R6.08.00	No	No	Yes (*1)	Yes (*1)	Yes (*1) (*2)	No
R6.09.00	No	No	Yes (*1)	Yes (*1)	Yes (*1) (*3)	No
R6.10.00	No	No	No	Yes (*1)	Yes (*1) (*3)	No
R6.11.00	No	No	No	Yes (*1)	Yes (*1) (*4)	Yes (*1) (*4)

Yes: Applicable

No: Not applicable

*1: Ensure to use the Microsoft Volume Licenses for Excel 2013, 2016, 2019, and LTSC 2021.

*2: Excel 2019 runs on Windows 10 (IoT) Enterprise LTSC 2019 only.

*3: Excel 2019 runs on Windows 10 (IoT) Enterprise LTSC 2019 and Windows Server (IoT) 2019 Standard.

*4: Excel 2019 and LTSC 2021 run on Windows 10 (IoT) Enterprise LTSC 2019, Windows 10 (IoT) Enterprise LTSC 2021, Windows Server (IoT) 2019 Standard, and Windows Server (IoT) 2022 Standard.

Adobe Acrobat

CENTUM VP Release number	Adobe Acrobat				
	X (10.1)	XI (11.0)	DC	2017	2020
R6.01.00/ R6.01.10	Yes	Yes (*1)	Yes (*2)	No	No
R6.02.00	No	Yes (*1)	Yes (*2)	No	No
R6.03.00/ R6.03.10	No	Yes (*1)	Yes (*2)	No	No
R6.04.00	No	Yes	Yes (*2)	No	No
R6.05.00	No	Yes	Yes (*2)	No	No
R6.06.00	No	No	Yes (*2)	Yes	No
R6.07.00	No	No	Yes (*2)	Yes	No
R6.07.10	No	No	Yes (*2)	Yes	Yes
R6.08.00	No	No	Yes (*2)	Yes	Yes
R6.09.00	No	No	Yes	Yes	Yes
R6.10.00	No	No	Yes	No	Yes
R6.11.00	No	No	Yes	No	Yes

Yes: Applicable

No: Not applicable

*1: Acrobat XI (11) does not support Windows Vista.

*2: Acrobat DC runs on Microsoft Windows 7 or later and Windows Server 2008 R2 or later.

■ MODEL AND SUFFIX CODES

Standard Operation and Monitoring Function

		Description
Model	VP6H1100	Standard Operation and Monitoring Function
Suffix Codes	-V	Software license
	-E	For Expansion
	1	Always 1
	1	English version
	N01	Logical I/O points are 2000 or less
	N02	Logical I/O points are 4000 or less
	N03	Logical I/O points are 6000 or less
	N04	Logical I/O points are 8000 or less
	N05	Logical I/O points are 10000 or less
	N09	Logical I/O points are 10001 or more
	N12	Logical I/O points are increased from 2000 or less to 4000 or less
	N13	Logical I/O points are increased from 2000 or less to 6000 or less
	N14	Logical I/O points are increased from 2000 or less to 8000 or less
	N15	Logical I/O points are increased from 2000 or less to 10000 or less
	N19	Logical I/O points are increased from 2000 or less to 10001 or more
	N23	Logical I/O points are increased from 4000 or less to 6000 or less
	N24	Logical I/O points are increased from 4000 or less to 8000 or less
	N25	Logical I/O points are increased from 4000 or less to 10000 or less
	N29	Logical I/O points are increased from 4000 or less to 10001 or more
	N34	Logical I/O points are increased from 6000 or less to 8000 or less
	N35	Logical I/O points are increased from 6000 or less to 10000 or less
	N39	Logical I/O points are increased from 6000 or less to 10001 or more
	N45	Logical I/O points are increased from 8000 or less to 10000 or less
	N49	Logical I/O points are increased from 8000 or less to 10001 or more
	N59	Logical I/O points are increased from 10000 or less to 10001 or more

Note: The term "logical I/O points" is sometimes referred to as "logical IO points", but they are the same.

Note: Count the number of logical I/O points in a CENTUM VP project, no necessary to count the number in the other projects, when VP6E5450 or VP6H4450 "Multiple Project Connection Package" (GS 33J05K20-01EN) is applied.

Note: When ordering this license newly, estimate the logical I/O points and be sure to select '-V' and the type of logical I/O points from 'N01' to 'N09' in the suffix codes. Up to the specified number of the points can be operated and monitored.

Note: When increasing the logical I/O points, be sure to select '-E' and the type of increased I/O points from 'N12' to 'N59' in the suffix codes.

■ NOTE

If you want to run general Windows application software on the HIS, ask Yokogawa's sales office about compatibility issues.

■ ORDERING INFORMATION

Specify model and suffix codes.

■ TRADEMARK ACKNOWLEDGMENT

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