

General Specifications

GS 33J05D20-01EN

VP6H1150

Server for Remote Operation and Monitoring Function

CENTUM VP

[Release 6]

■ GENERAL

CENTUM VP Server for Remote Operation and Monitoring Function can be executed from the remote computers for plant operation and monitoring. By using the terminal service (TS) server of the Windows Server, the Server for Remote Operation and Monitoring Function allows multiple computers which are connected with one server simultaneously operating and monitoring in the TS server. If a computer is located away from the instrument room, as long as the computer is connected to the HIS terminal service server through the network, the operation and monitoring view on the HIS can be displayed on the remote computer. The remote computer does not need to have the operation and monitoring applications.

■ FUNCTIONAL SPECIFICATIONS

● System Configuration

The Server for Remote Operation and Monitoring Function runs on a in Windows Server OS, allowing it to be a server for remote-access operation and monitoring. If user names are entered and logged on from a network client computer connected to the server for remote operation and monitoring, the functions running on the server for remote operation and monitoring can be used on the client computer.

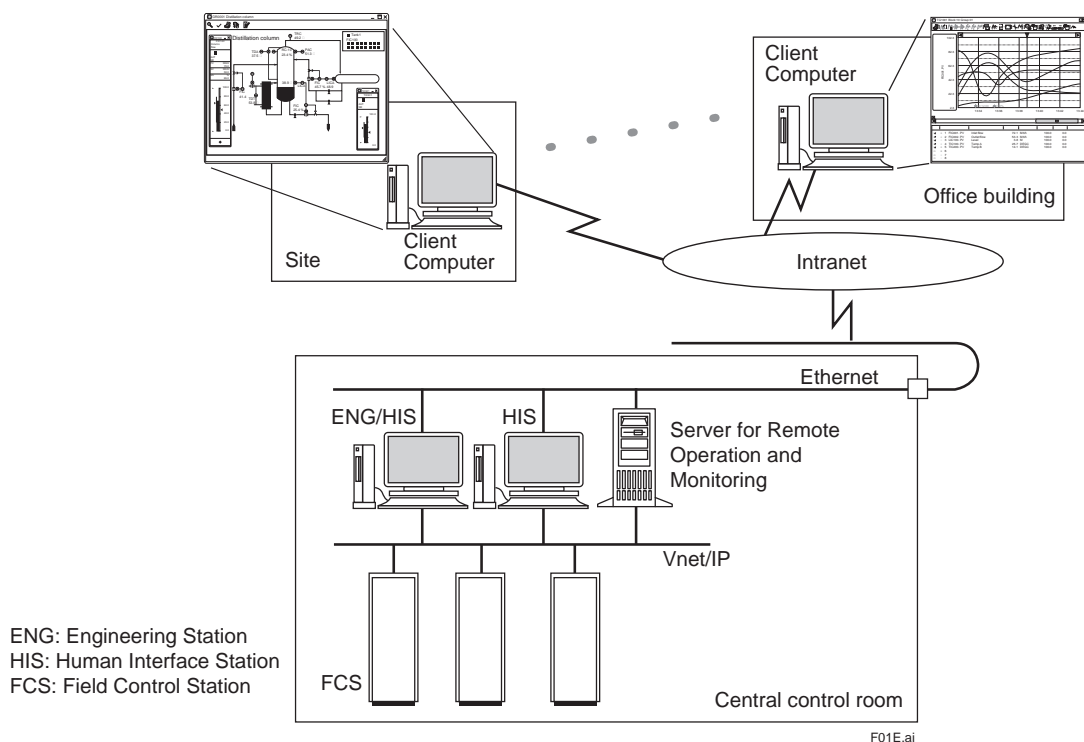


Figure Example of Configuration of Server for Remote Operation and Monitoring Function

A maximum of eight simultaneous sessions (a session stands for a logic connection to the server for remote operation and monitoring function started from logon and ended at logoff) can be run on one server for remote operation and monitoring.

The client computer displays screens by the session regardless of the screens displayed on the remote operation and monitoring server or other clients. It may take a few seconds for the client computer to display the session screens depending on the network speed. In addition, use of this remote operation and monitoring function is not suitable for continuous operation because the session between the server and the client computer may be disconnected. Alarm notifications and display updating stop during this period.

When using the Server for Remote Operation and Monitoring Function, please set up one or more standard HIS along with the client computer on the control network. The standard HIS has better reliability for real-time operations than the client computer.

● Functions Available for Remote Operation and Monitoring

The functions running on the server for remote operation and monitoring can be used on the client computer.

Standard engineering functions realize engineering with a remote computer using the TS functions directly. In this case, the standard engineering function can connect only one session apart from eight sessions for operation and monitoring.

System views on multiple computers, including the server for remote operation and monitoring, cannot be started simultaneously. However, if reference builders are called up in reference mode, screens can be displayed on multiple computers.

Table Package Coexistence in the Server for Remote Operation and Monitoring (1/2)

Model	Name	Coexistence	Note
VP6H1100	Standard Operation and Monitoring Function	X	
VP6H1120	Console HIS Support Package for Enclose Display Style	—	
VP6H1130	Console HIS Support Package for Open Display Style	—	
VP6H2411	Exaopc OPC Interface Package (for HIS)	X	When the OPC package is used on the remote operation and monitoring server, it behaves slightly different when it is used with the standard HIS. Confirm the operation of the application program under the server for remote operation and monitoring environment is required.
VP6H2412	CENTUM Data Access Library	X	The operation check is required in each created application.
VP6H4000	Million Tag Handling Package	X	
VP6H4100	Configured information Reference Package	X	
VP6H4150	Output to External Recorder Package	—	
VP6H4190	Line Printer Support Package	—	
VP6H4200	Consolidated Historical Message (Meeting FDA)	—	
VP6H4410	Control Drawing Status Display Package	X	
VP6H4420	Logic Chart Status Display Package	X	
VP6H4450	Multi project Connection Package	X	
VP6H4600	Multiple-monitor Support Package	—	
VP6H4700	Advanced Alarm Filter Package	—	
VP6H6510	Long-term Data Archive Package	X	
VP6H6530	Report Package	—	A remote operation environment can be constructed by installing the Report Package in the client computer. (*1)
VP6H6660	Process Management Package	X	Please define the server for remote operation and monitoring as a client station in the process management configuration definition.
VP6H6710	FCS Data Setting/Acquisition Package (PICOT)	—	

X: Yes —: No

*1: Conforms to operating environment of VP6H6530 Report Package.

Table Package Coexistence in the Server for Remote Operation and Monitoring (2/2)

Model	Name	Coexistence	Note
VP6E5000	Engineering Server Function	X	Only one session is available simultaneously.
VP6E5100	Standard Engineering Function	X	Only one session is available simultaneously.
VP6E5110	Access Control package	X	Only one session is available simultaneously.
VP6E5150	Graphic Builder	X	Only one session is available simultaneously.
VP6E5165	Batch Builder	X	Only one session is available simultaneously.
VP6E5166	Recipe Management Package	X	Only one session is available simultaneously.
VP6E5170	Access Administrator Package (FDA:21 CFR Part 11 compliant)	X	Only one session is available simultaneously.
VP6E5210	Module-based Engineering Function	X	Only one session is available simultaneously.
VP6E5215	Tuning Parameter Management Package (for Module-based Engineering)	X	Only one session is available simultaneously.
VP6E5216	Bulk Editing Package (for Module-based Engineering)	X	Only one session is available simultaneously.
VP6E5250	Change Management Package	X	Only one session is available simultaneously.
VP6E5260	Dependency Analysis Package	X	Only one session is available simultaneously.
VP6E5420	Test Function	—	
VP6E5425	Expanded Test Function	—	
VP6E5426	FCS Simulator Package	—	
VP6E5427	HIS Simulator Package	—	
VP6E5450	Multiple Project Connection Builder	X	Only one session is available simultaneously.
VP6E5490	Self-documentation Package	X	Only one session is available simultaneously.
VP6C5495	Electronic Instruction Manual	X	Only one session is available simultaneously.
VP6P6920	Sem Sequence of Event Manager (for FIO)	X	

X: Yes
—: No

● Operation Screen Mode and Display Mode

HIS provides two operation screen modes, full-screen mode and window mode. In each mode, HIS displays views such as the Graphic View or the Trend View. Moreover, a remote HIS terminal connected through the Server for Remote Operation and Monitoring Function package also has two display modes.

Operation Screen Mode

• Full-Screen Mode

In this mode, HIS displays a frame that consists of several views assigned for a certain function or purpose. On a standard HIS, a number of tabbed frames can be displayed and overlapped in full-screen mode. However, on a remote HIS terminal connected through the Server for Remote Operation and Monitoring Function package, only a fixed frame can be displayed. In this mode, a Pop-Up Window such as a Faceplate View can be displayed in front of the frame.

• Window Mode

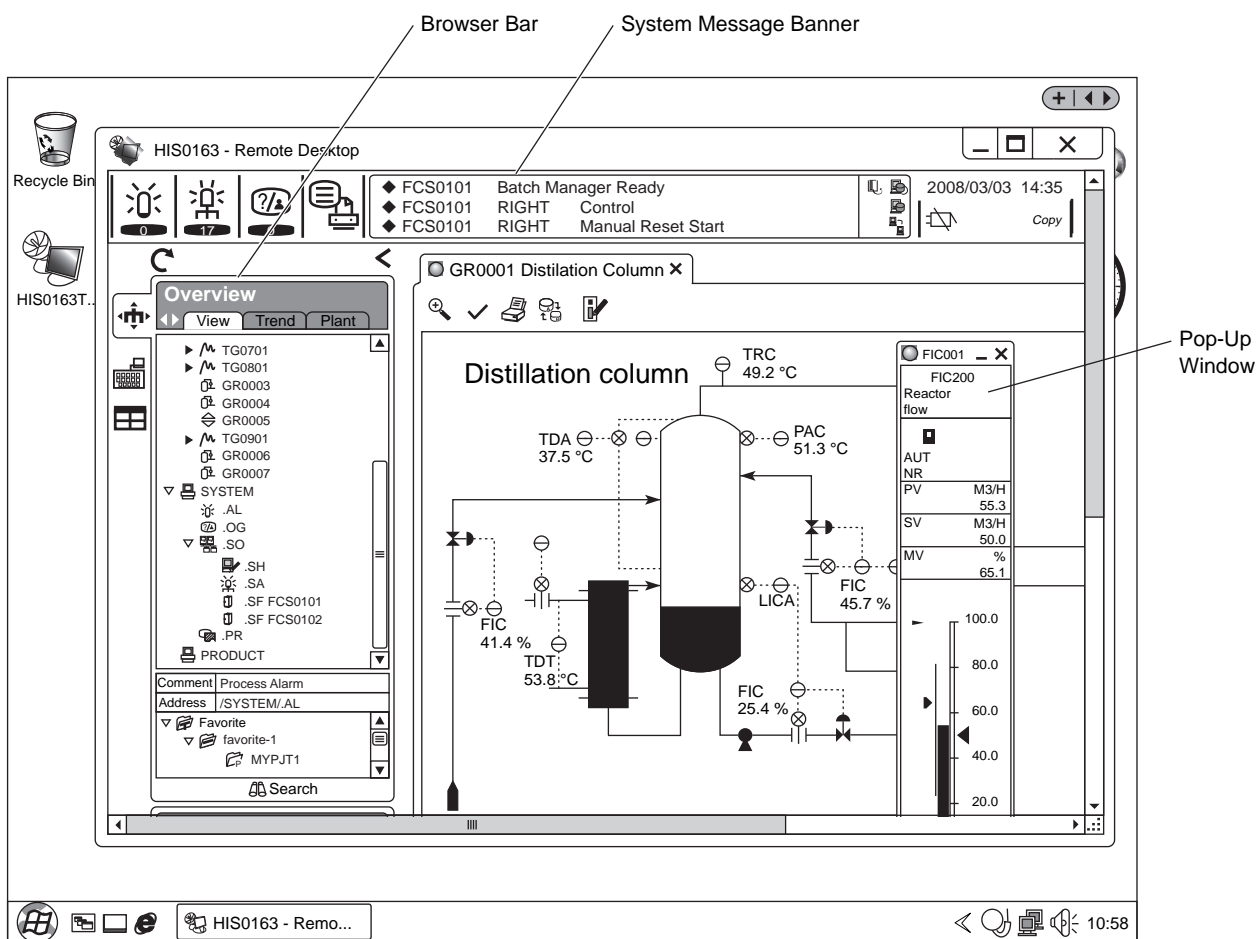
In this mode, several windows can be displayed in cascade style of Microsoft Windows so that the windows are overlapped. Each window contains only one view.

Display Mode

On a remote HIS terminal connected through the Server for Remote Operation and Monitoring Function package, the display mode can be either desktop mode or panel mode. The mode can be selected when the client computer is connecting to the server for the remote operation and monitoring services.

• Desktop Mode

In desktop mode, the operation and monitoring activities on a remote HIS can be carried out in the same style as on a standard HIS where the System Message Banner is displayed on the top and the Browser Bar is displayed on the left.

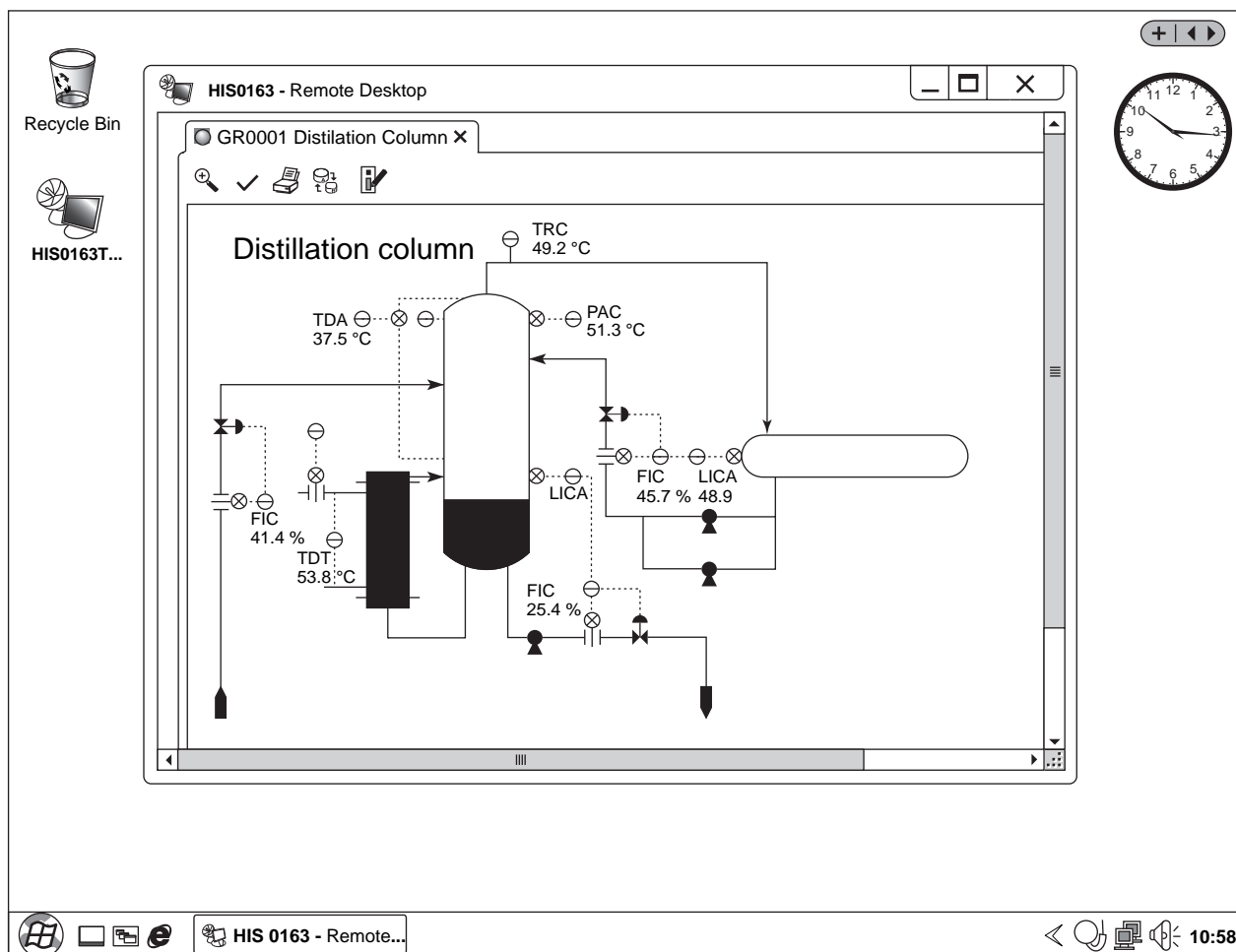


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Figure Desktop Mode HIS Window Display in Full-Screen

- Panel Mode

In panel mode, a designated view such as Graphic View or Trend View can be displayed on desktop. The System Message Banner and the Browser Bar are not displayed. The session can be established much faster than it is in the desktop mode.



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Figure Panel Mode HIS Window Display in Full-Screen

Maximum Number of Windows

Maximum number of windows can be displayed on a client computer varies according to the HIS operation screen mode and the display mode defined in the Server for Remote Operation and Monitoring Function package.

Operation Screen Mode Display Mode	Full-Screen Mode		Window Mode
	Frame	Pop-Up Window	Window
Desktop Mode	1 (Fixed)	Maximum 2	Maximum 5
Panel Mode	1 (Fixed)	1 (Fixed)	2 (Fixed)

● Window Update Period

The update period for windows displayed on a client computer can be specified in seconds (1 to 30 seconds). This is commonly set during each client session logged onto the server for remote operation and monitoring.

● Security System

The Server for Remote Operation and Monitoring Function can be run in an independent operation and monitoring security system for each client computer by logging on using different user names. The security system for remote monitoring can be restricted.

● Operating Record

Operating messages generated at terminal equipment identify the client computer.

● Buzzer

A client computer can issue a buzzer via a sound device. In the panel mode, because buzzer reset key is not displayed, buzzer output is restricted compared with the desktop mode as follows:

Buzzer	Panel mode	Desktop mode
System	N	Y
Process (high-priority alarm)	N	Y
Process (medium- or low-priority alarm)	N	Y
Operator guide message	N	Y
Illegal operation	Y	Y
Confirmation	Y	Y
Recovery	N	Y
Click	Y	Y

Y: Buzz N: Silent

● Automatic Log-off

If there are no operations carried out at a client computer within a specified period of time, automatic log-off occurs. This is commonly set during each client session logged onto the server for remote operation and monitoring. The inactive period for automatic log-off can be set in minutes (1 to 59 minutes). Automatic log-off can be disabled.

● Functional Difference between the Server for Remote Operation and Monitoring Function and the Standard HIS

Below is functional difference between the Server for Remote Operation and Monitoring Function and the standard HIS.

- A sound function is required on the client computer in order to use a buzzer with the remote operation and monitoring function server.
- The operation and monitoring range on a remote HIS terminal can be defined by the settings on the User Security Builder. The operation and monitoring range on a standard HIS is the range that is permitted by both the settings on HIS Constants Builder defined for each HIS and the settings on the User Security Builder defined for each user. The security settings on HIS Constants Builder defined for each HIS are not valid for the remote HIS terminal, only the settings on the User Security Builder are valid.
- When restricting the range of operation and monitoring of a user according to the security settings for the user, the alarm and operator guide messages can be inhibited but not the corresponding buzzer sounds. The buzzer sound of a message will be triggered anyway as long as an alarm or an operator guide message occurs even though the message is inhibited by security settings. Therefore, when applying user security settings to restrict user's operation and monitoring range, it is necessary to turn off the buzzer of the client computer.
- Operation keyboards cannot be used on either the server or the client computer.
- Up to 50 simultaneous primitives of the trend can be displayed in the client computer.
Displaying the Graphic Window to which a number of primitive trends are allocated in several sessions might not display some primitive trends.
- The function automatically printing messages such as the process alarm is not equipped.
The print function from the historical report window and the process data window and the hard copy button are available just like HIS.

■ OPERATING ENVIRONMENT

● VP6H1150 Server for Remote Operation and Monitoring Function

Hardware Operating Environment

For Windows Server 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 (*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. <ul style="list-style-type: none"> • Windows driver display model (WDDM) driver • Pixel Shader 2.0 • 32-bit per pixel • 128 MB Graphics memory
Network	Required	One expansion slot (PCI Express slot) is used for the control bus interface (VI702).
Mouse	Required	
Optical disc drive	Required	DVD-ROM

*1: When the optional software package (Long-term Data Archive Package) is used, see also the GS Long-term Data Archive Package (GS 33J05J10-01EN).

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

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. <ul style="list-style-type: none"> • Windows driver display model (WDDM) driver • Pixel Shader 2.0 in hardware • 32-bit per pixel • 128 MB Graphics memory
Network	Required	One expansion slot (PCI Express slot) is used for the control bus interface (VI702).
Mouse	Required	
Optical disc drive	Required	DVD-ROM

*1: When the optional software package (Long-term Data Archive Package) is used, see also the GS Long-term Data Archive Package (GS 33J05J10-01EN).

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

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

The relations between Windows and CENTUM VP	Windows Server 2008 Standard	Windows Server 2008 R2 Standard	Windows Server 2016 Standard	Windows Server 2019 Standard	Windows Server 2022 Standard
	32-bit	64-bit	64-bit	64-bit	64-bit
	SP2	SP1	without SP	without SP	without SP
R6.01.00/ R6.01.10	Yes	Yes	No	No	No
R6.02.00	Yes	Yes	No	No	No
R6.03.00/ R6.03.10	Yes	Yes	No	No	No
R6.04.00	No	Yes	No	No	No
R6.05.00	No	Yes	No	No	No
R6.06.00	No	Yes	Yes	No	No
R6.07.00	No	Yes	Yes	No	No
R6.07.10	No	No	Yes	No	No
R6.08.00	No	No	Yes	No	No
R6.09.00	No	No	Yes	Yes (*1)	No
R6.10.00	No	No	Yes	Yes (*1)	No
R6.11.00	No	No	Yes	Yes (*1)	Yes (*2)

Yes: Applicable

No: Not applicable

Note: Service Pack is abbreviated as SP (Example: SP1 stands for Service Pack 1).

Note: To enable this function, VP6H1100 Standard Operation and Monitoring Function is required for the server. VP6H1100 Standard Operation and Monitoring Function is not required for the client computer.

Note: A server with Windows Server 2008, Windows Server 2008 R2, Windows Server 2016, Windows Server 2019, or Windows Server 2022 itself cannot be used for operation and monitoring function.

*1: Windows Server IoT 2019 Standard is also supported.

*2: Windows Server IoT 2022 Standard is also supported.

In addition to a Server License and Windows Server Client Access License (CAL), following licenses are needed.

- for Windows Server 2008: Terminal Services Client Access License (TS CAL)
- for Windows Server 2008 R2 / Windows Server 2016 / Windows Server 2019 / Windows Server 2022: Remote Desktop Services Client Access License (RDS CAL)

● Client Computer Operating Environment

Hardware Operating Environment

Maintain the operating environment of the hardware requirements for VP6H1100 Standard Operation and Monitoring Function.

If used in desktop mode, it is recommended that the display resolution be at least 1280 x 1024 pixels. If used in panel mode, it is recommended that the display resolution be 1024 x 768 pixels or greater.

Software Operating Environment

The following Windows OS are supported.

- Windows Vista (*1)
- Windows 7 (*2)
- Windows 10 (*3)

*1: This OS is supported by VP R6.03.10 or earlier.

*2: This OS is supported by VP R6.07.00 or earlier.

*3: This OS is supported by VP R6.04.00 or later.

■ MODELS AND SUFFIX CODES

		Description
Model	VP6H1150	Server for Remote Operation and Monitoring Function
Suffix Codes	-V	Software license
	-E	For Expansion
	1	Always 1
	1	English version
	N01	Logical IO points are 4000 or less
	N03	Logical IO points are 4001 or more
	N13	For Project Scale Expansion
	T04	Number of client PCs that can be simultaneously connected: Up to four
	T08	Number of client PCs that can be simultaneously connected: Up to eight
	T48	Additional number of client PCs that can be connected simultaneously (up to four → up to eight)

Note : When ordering this license newly, be sure to select '-V', 'N01' or 'N03' as a project scale in the suffix codes and 'T04' or 'T08' as the the number of the connected client PCs simultaneously.

Note : When expanding the project from small/middle scale to large scale, select '-E' and 'N13' in the suffix codes.

Note : When adding the client PCs, select '-E' and 'T48' in the suffix codes.

Note : VP6H1100 Standard Operation and Monitoring Function is required to run this package.

■ ORDERING INFORMATION

Specify model and suffix codes.

■ TRADEMARK ACKNOWLEDGMENT

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