

# General Specifications

GS 33J20H10-01EN

Model LPC7800  
VTSPortal Basic Pack  
Model LPC7801  
VTSPortal Multiple Client Builder License



[Release 6]

## ■ GENERAL

Yokogawa Versatile Terminal Service Application Portal (VTSPortal) enables users to browse CENTUM VP, Exaplog (\*1), Exapilot, Exaquantum, Exarqe (\*1), Exasmoc (\*1) and Plant Resource Manager (PRM) on a website via the Windows remote desktop service. The VTSPortal provides an integrated HMI framework to YOKOGAWA's Human-Machine Interface (HMI) applications such as CENTUM VP HIS to be used from remote terminals.

VTSPortal is a portal function to enhance system security by limiting the access to these applications to only authorized users via WAN (Internet, etc.).

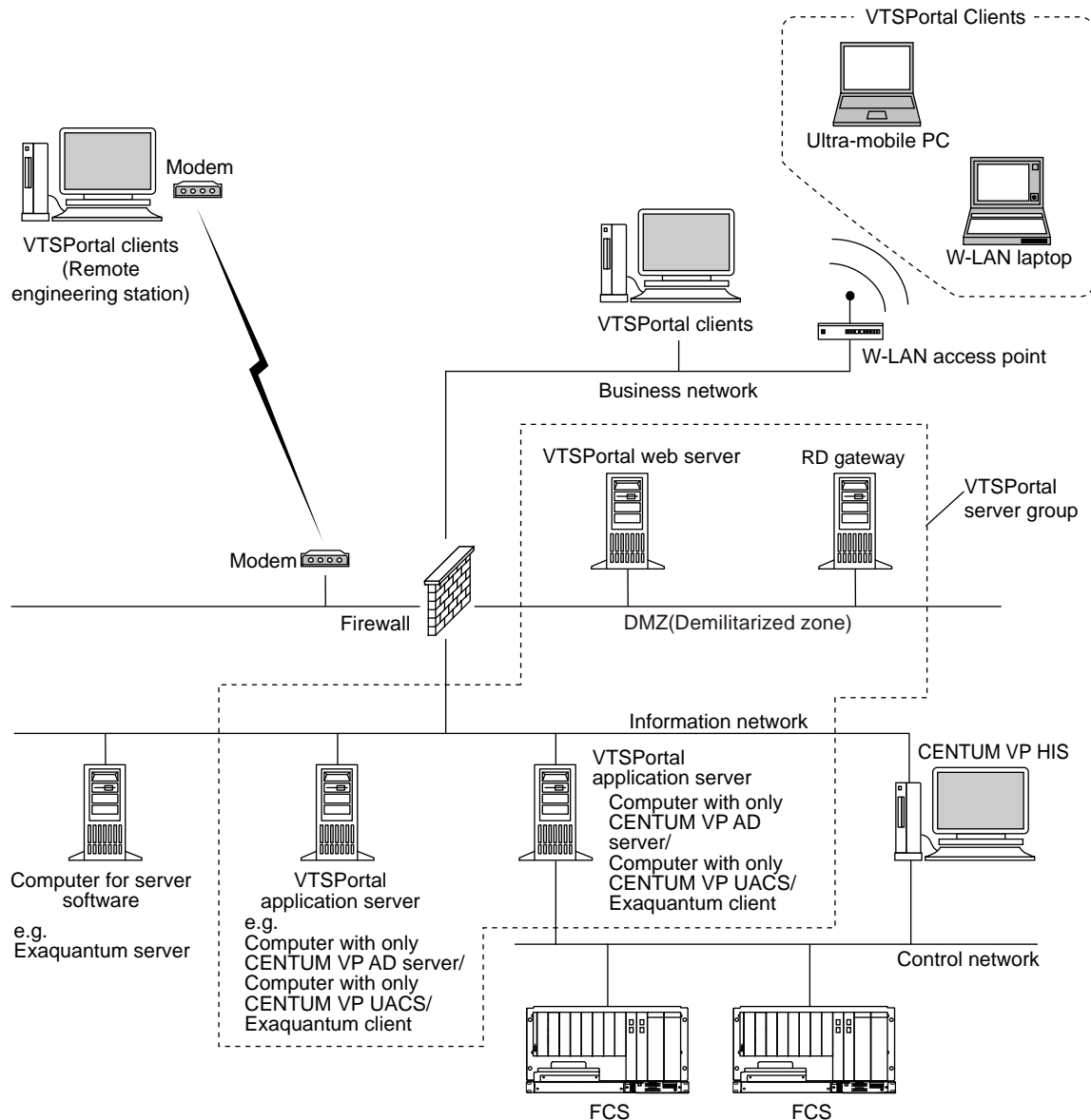
\*1: Supported by R2.06 or earlier

## ■ POTENTIAL FEATURES

- Remote maintenance and engineering work for CENTUM VP systems via WAN connection such as dial-ups are supported.
- Access points for all applications deployed in a Yokogawa systems placed in a factory or plant are aggregated.
- Application deployment is performed on a dedicated thin-client (hardware with minimum functions).
- Accesses to CENTUM VP HIS using web browsers are supported using from the remote terminals (e.g. portable HMI terminals on the offshore platforms or remote tank farms, and occasionally manned terminals with unmanned control centers.)

## ■ VTSPortal SYSTEM ARCHITECTURE

The VTSPortal can be introduced to a LAN environment (e.g. office network), a WAN environment with remote access capabilities (e.g. internet), or in a mixture that provides of both LAN and WAN accesses environment.



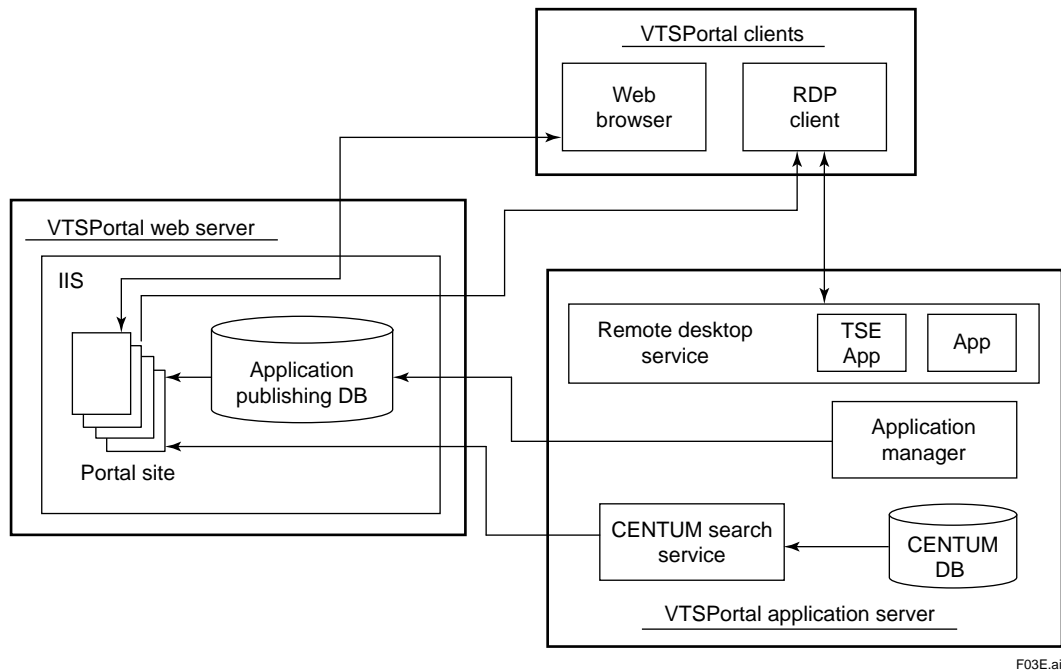
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Figure VTSPortal system architecture

- The VTSPortal client is a station providing client access to the VTSPortal application server. The client can connect to the server via Ethernet based local area network (LAN), wireless LAN (W-LAN), or wide area network (WAN).
- The VTSPortal web server is a station hosting the portal site. The VTSPortal client can displays and operates applications by accessing this portal site.
- The VTSPortal application server is a computer which provides HMI of applications for the VTSPortal client by using the Windows remote desktop service. The Windows remote desktop service, various software packages, and the VTSPortal application server function are installed on the computer which is referred to as an application server. In the figure above, the application server for CENTUM VP and the application server for Exaquantum client are prepared independently. For more details about the execution of applications, refer to "● Note for executing each application."
- The VTSPortal web server function and the application server function cannot be installed on a single computer, thus need separate computers.
- When the VTSPortal multiple client builder license is installed on the application server, builder functions can run on several client computers simultaneously.
- The VTSPortal supports Remote Desktop Gateway (RD gateway).



## ■ FUNCTIONAL OVERVIEW



**Figure Functional overview**

- Web browser is a client program used to navigate a portal site. Either the VTSEplorer dedicatedly provided with the VTSPortal or Internet Explorer / Microsoft Edge can be used for this purpose. VTSEplorer is a secured browser, which can be accessed only by the registered VTSPortal web server. The VTSEplorer has a session share function which enables to count multiple numbers of sessions as one. (\*1) While multiple windows are launched on the client only one window is counted per application server (from logging on to the server to logging off). Thus the number of clients to connect to the application server can be increased.
- The RDP client, runs on the Windows OS, is the remote desktop client provided by Microsoft to enable remote desktop connections.
- Portal site is collections of files and data to enable accesses from the portal client to applications such as web pages, stored data, and template files.
- Application manager is an administration tool used on each application server to select which applications to publish to the portal users out of those already installed.
- CENTUM search service is a search engine web service used to search and display results for CENTUM VP HIS/ENG applications.
- Remote desktop service is a Windows Server 2016/2019/2022 service which enables to use Windows applications installed in the VTSPortal application server from the VTSPortal client computers.
- TSE App/App means applications such as CENTUM VP's server for remote operation and monitoring function which are available for the VTSPortal client.

\*1: Supported only by VTSPortal R2.06 or earlier on a 32-bit Windows OS.

## ■ FUNCTIONAL SPECIFICATIONS

### ● Supported products and applications

Table CENTUM VP revisions

VTSPortal revision	CENTUM VP				
	R5.01/ R5.02/ R5.03/ R5.04.20	R6.01/ R6.02/ R6.03/ R6.04/ R6.05	R6.06	R6.07.10 R6.08/ R6.09	R6.10/ R6.11
R2.01	—	—	—	—	—
R2.02	—	—	—	—	—
R2.03	—	—	—	—	—
R2.04	Yes	—	—	—	—
R2.05	Yes	Yes	—	—	—
R2.06	Yes	Yes	Yes	—	—
R2.07	—	—	Yes	Yes	—
R2.08	—	—	Yes	Yes	Yes

Table Exaquantum revisions

VTSPortal revision	Exaquantum							
	R2.20	R2.40	R2.50	R2.80/ R2.85	R3.01 R3.02	R3.10	R3.15/ R3.20/ R3.30	R3.40
R2.01	Yes	—	—	—	—	—	—	—
R2.02	Yes	Yes	—	—	—	—	—	—
R2.03	Yes	Yes	Yes	—	—	—	—	—
R2.04	Yes	Yes	Yes	Yes	—	—	—	—
R2.05	Yes	Yes	Yes	Yes	Yes	Yes	—	—
R2.06	—	—	—	Yes	Yes	Yes	—	—
R2.07	—	—	—	—	—	Yes	Yes	—
R2.08	—	—	—	—	—	Yes	Yes	Yes

Table Exaplog revisions

VTSPortal revision	Exaplog			
	R3.02	R3.20	R3.30	R3.40
R2.01	Yes	—	—	—
R2.02	Yes	Yes	—	—
R2.03	Yes	Yes	Yes	—
R2.04	Yes	Yes	Yes	Yes
R2.05	Yes	Yes	Yes	Yes
R2.06	—	—	—	Yes
R2.07 or later	—	—	—	—

Table Exapilot revisions

VTSPortal revision	Exapilot						
	R3.30.20	R3.60.10	R3.70	R3.95/ R3.96.10	R3.96.20/ R3.97	R3.98.10/ R3.99	R4.01/ R4.02/ R4.03
R2.01	Yes	—	—	—	—	—	—
R2.02	Yes	Yes	—	—	—	—	—
R2.03	Yes	Yes	Yes	—	—	—	—
R2.04	Yes	Yes	Yes	Yes	—	—	—
R2.05	Yes	Yes	Yes	Yes	Yes	—	—
R2.06	—	—	—	Yes	Yes	Yes	—
R2.07	—	—	—	—	—	Yes	—
R2.08	—	—	—	—	—	Yes	Yes

Table Exasmoc revisions

VTSPortal revision	Exasmoc			
	R3.06	R4.01	R4.03	R4.03.20
R2.01	Yes	—	—	—
R2.02	Yes	Yes	—	—
R2.03	Yes	Yes	—	—
R2.04	Yes	Yes	Yes	—
R2.05	Yes	Yes	Yes	Yes
R2.06	—	—	Yes	Yes
R2.07 or later	—	—	—	—

Table Exarqe revisions

VTSPortal revision	Exarqe			
	R3.06	R4.01	R4.03	R4.03.20
R2.01	Yes	—	—	—
R2.02	Yes	Yes	—	—
R2.03	Yes	Yes	—	—
R2.04	Yes	Yes	Yes	—
R2.05	—	Yes	Yes	Yes
R2.06	—	—	Yes	Yes
R2.07 or later	—	—	—	—

Table PRM revisions

VTSPortal revision	PRM								
	R2.10	R3.03	R3.05	R3.11	R3.20/ R3.30/ R3.31.00/ R3.31.10	R4.01	R4.02	R4.03/ R4.04/ R4.05	R4.06
R2.01	Yes	—	—	—	—	—	—	—	—
R2.02	Yes	Yes	—	—	—	—	—	—	—
R2.03	Yes	Yes	Yes	—	—	—	—	—	—
R2.04	Yes	Yes	Yes	Yes	—	—	—	—	—
R2.05	Yes	Yes	Yes	Yes	Yes	—	—	—	—
R2.06	—	—	—	Yes	Yes	Yes	Yes	—	—
R2.07	—	—	—	—	—	—	Yes	Yes	—
R2.08	—	—	—	—	—	—	Yes	Yes	Yes

## ■ OPERATING ENVIRONMENT

### ● Hardware requirements

The following hardware environment is required to run VTSPortal normally.

#### VTSPortal web server

Item	VTSPortal Web Server
Processor	2.0 GHz or higher
Memory (RAM)	2 GB or more
Hard disk capacity	20 GB or more (NTFS partition)
Network	Ethernet network card

#### RD gateway

Item	RD Gateway
Processor	2.0 GHz or higher
Memory (RAM)	2 GB or more
Hard disk capacity	20 GB or more (NTFS partition)
Network	Ethernet network card

#### VTSPortal application server

Item	VTSPortal Application Server (*1)
Processor	2.5 GHz or higher
Memory (RAM)	2 GB or more
Hard disk capacity	20 GB or more (NTFS partition)
Network	Ethernet network card, Yokogawa control bus interface card (*2)
Display	—

\*1: The hardware environment for the VTSPortal application server must satisfy the hardware requirements of the applications to be installed.

\*2: A control bus interface card is required to publish the CENTUM VP software.

#### VTSPortal client

Item	VTSPortal Client
Processor	The hardware environment for the VTSPortal client must satisfy the hardware requirements of the operating system.
Memory (RAM)	
Hard disk capacity	
Network	Ethernet network card
Display	Color: True color recommended Resolution: 1280x1024 recommended (*1)

\*1: The hardware environment of the VTSPortal client must satisfy the display requirements of the installed applications.

## ● Software requirements

The following software environment is required to run the VTSPortal functions normally. VTSPortal Web Server, RD Gateway, and VTSPortal Application Server can work on the virtualization environment (\*1). In this case, use Windows OS for VTSPortal Client because Thin OS cannot be used.

\*1: Supported by R2.07 or later.

### VTSPortal web server

Item	VTSPortal Web Server
OS	Windows Server 2016 Standard (64-bit) Windows Server 2019 Standard (64-bit) Windows Server 2022 Standard (64-bit) (*1)
Web server	Microsoft IIS v10
Database	SQL Server 2008 Datacenter, Enterprise, Standard, Express (*2) (*3) (*4) SQL Server 2008 R2 Datacenter, Enterprise, Standard, Express (*2) (*3) (*4) SQL Server 2012 Datacenter, Enterprise, Standard, Express (*2) (*3) (*4) SQL Server 2014 Datacenter, Enterprise, Standard, Express (*2) (*3) (*4) SQL Server 2016 Datacenter, Enterprise, Standard, Express (*2) (*3) (*5) SQL Server 2016 SP2 Datacenter, Enterprise, Standard, Express (*2) (*6) SQL Server 2016 SP3 Enterprise, Standard, Express (*1) SQL Server 2019 Enterprise, Standard, Express (*7)
Document reader	Adobe Acrobat Reader DC/2020
Application environment	.NET Framework 3.5 / .Net Framework 4.6 or later

\*1: Supported by R2.08 or later.

\*2: Microsoft SQL Server 2016/2019 Express are free database software provided by Microsoft which can be downloaded from the Microsoft's website. Other official database software such as Microsoft SQL Server 2016/2019 Datacenter, Enterprise, or Standard can be also used. There is no functional difference between the free and official software to use with the VTSPortal web server.

\*3: SQL Server 2008/2008 R2/2012/2014 are supported only when upgrading VTSPortal R2.05 or earlier to VTSPortal R2.06.

\*4: Supported by R2.06 or earlier.

\*5: supported by R2.06.

\*6: supported by R2.07.

\*7: Supported by R2.07 or later.

### RD gateway

Item	RD Gateway (*1)
OS	Windows Server 2016 Standard (64-bit) Windows Server 2019 Standard (64-bit) Windows Server 2022 Standard (64-bit) (*2)
Web server	Microsoft IIS v10
Database	—
Document reader	—
Application environment	.NET Framework 3.5 / .Net Framework 4.0 or later

\*1: The RD gateway is supported by the VTSPortal R2.03 or later.

\*2: Supported by R2.08 or later.



**VTSPortal application server**

Item	VTSPortal Application Server
<b>OS (*1)</b>	Windows Server 2016 Standard (64-bit) Windows Server 2019 Standard (64-bit) Windows Server 2022 Standard (64-bit) (*2)
<b>Browser</b>	—
<b>Application (*4)</b>	CENTUM VP (*3), Exaquantum, Exaplog, Exapilot, Exasmoc, Exarqe, PRM
<b>Document reader</b>	Adobe Acrobat Reader DC/2020 (*5)
<b>Application environment</b>	.NET Framework 3.5 / .Net Framework 4.0 or later

- \*1: In order to use the Windows Remote Desktop Service, Remote Desktop Server Client Access License (RDS CAL) is required in addition to the regular Windows Server 2016/2019/2022 Client Access License (CAL).
- \*2: Supported by R2.08 or later.
- \*3: Using the CENTUM Search Service requires engineering functions of CENTUM VP.
- \*4: The licenses of applications are not included in the license of the VTSPortal software. Please purchase the licenses of the required applications separately.
- \*5: In case Adobe Reader's software version is specified by the installed applications, follow the instructions. When the installed applications use Adobe Acrobat, do not install Adobe Reader.

**VTSPortal client**

Item	VTSPortal Client
<b>OS (*1)</b>	Windows 10 Enterprise 2016 LTSB (64-bit, including IoT version) Windows 10 Enterprise LTSC 2019 (64-bit, including IoT version) Windows 10 Enterprise LTSC 2021 (64-bit, including IoT version) (*2)
<b>Browser</b>	VTSExplorer (*3) (*4) (*7) Microsoft Internet Explorer 11.0 (*5) Microsoft Edge(IE mode) (*5)
<b>Application</b>	—
<b>Document reader</b>	—
<b>Application environment</b>	.NET Framework 3.5 / .Net Framework 4.0 or later

- \*1: In order to use the Windows Remote Desktop Service, Remote Desktop Server Client Access License (RDS CAL) is required in addition to the regular Windows Server 2016/2019/2022 Client Access License (CAL).
- \*2: Supported by R2.08 or later.
- \*3: VTSExplorer is the software provided by VTSPortal. Install VTSExplorer as needed.
- \*4: When Windows OS 64-bit edition is used, the session share function cannot be used, which means a session is consumed every time a window is launched by the VTSPortal client.
- \*5: When Windows OS 64-bit edition is used, launching a new window from the already launched one on HIS desktop can save a session.

## ● Applications and OS newly supported by VTSPortal R2.08

The following table shows relations with applicable applications' revision No. and OS.

From VTSPortal R2.07, IT security version 2.0 is supported.

**Table Operating systems and application versions newly supported by VTSPortal R2.08**

VTSPortal R2.08	OS	CENTUM VP		Exapilot			PRM	Exaquantum
		R6.10	R6.11	R4.01	R4.02	R4.03	R4.06	R3.40
VTSPortal Client	Windows 10 Enterprise 2016 LTSC (64-bit, including IoT version) (*1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Windows 10 Enterprise LTSC 2019 (64-bit, including IoT version) (*1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Windows 10 Enterprise LTSC 2021 (64-bit, including IoT version) (*1)	—	Yes	—	—	Yes	—	—
VTSPortal Application Server	Windows Server 2016 Standard (64-bit)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Windows Server 2019 Standard (64-bit)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Windows Server 2022 Standard (64-bit)	—	Yes	—	—	Yes	—	Yes

\*1: The session share function of VTSExplorer is not available in Windows OS 64-bit edition. A session starts every time a window is launched from the VTSPortal client.

## ● Note for executing each application

- The hardware and the software requirements of the VTSPortal application server must satisfy the software requirements of each application to be installed. For the software requirements of each application, refer to General Specifications (GS) of each application.
- For Exaplog, Exapilot, Exarqe, Exasmoc and PRM, a computer can be used as an application server where both the server and the client functions are resided. For Exaquantum, a computer with the client function only can be used as an application server; however, a computer with both the server and the client functions cannot be used as an application server.
- On the VTSPortal application server, FDA:21 CFR Part 11 compliant package (VP6E5170/LHS5170) cannot be used. On a system compliant to FDA:21 CFR Part 11, do not publicize the builder function and the recipe management function.
- When publishing the application of CENTUM VP, the standard operation and monitoring function (VP6H1100/LHS1100/LHM1101) and the server for remote operation and monitoring function (VP6H1150/LHS1150/LHM1150) are required.
- When publishing the control and monitoring function of CENTUM VP, the server for remote operation and monitoring function is used. Therefore, optional functions not supported by the server for remote operation and monitoring function cannot be used by VTSPortal. As for the optional functions supported by the server for remote operation and monitoring function, refer to the relevant GS of "VP6H1150, LHS1150, LHM1150 Server for Remote Operation and Monitoring Function."

## ■ MODEL AND SUFFIX CODE

### VTSPortal basic pack (for new installation)

		Description
<b>Model</b>	LPC7800	VTSPortal Basic Pack [Media model LPCAM80-C11]
<b>Suffix Codes</b>	-S	Basic software license
	-C	Multiple software license (for 2 or more)
	1	Always 1
	1	English version
<b>Option Codes</b>	/N□□□□	The number of additional clients

Note: The web server license, the application server license, the application manager license, and the 10 client connection license are included in this package.

Note: Specify the number of excess clients by the option code when more than 10 clients are connected.

Note: The number of clients might be restricted by the application.

Note: Project ID license of CENTUM VP is not required.

Note: When multiple VTSPortal systems exist in the network, select the suffix code for "Multiple software license" for the second and more VTSPortal web servers.

### VTSPortal basic pack (for addition)

		Description
<b>Model</b>	LPC7800	VTSPortal Basic Pack [Media model LPCAM80-C11]
<b>Suffix Codes</b>	-A	Software License for additional clients
	1	Always 1
	1	English version
	1	English version
<b>Option Codes</b>	/N□□□□	The number of additional clients

Note: Specify the number of clients by the option code to add clients to connect simultaneously.

Note: When the number of clients is restricted by the application, add the client licenses to the application side, if required.

Note: Project ID license of CENTUM VP is not required.

### VTSPortal multiple client builder license

		Description
<b>Model</b>	LPC7801	VTSPortal multiple client builder license [Media model LPCAM80-C11]
<b>Suffix Codes</b>	-S	Basic software license
	-C	Multiple software license for 2 or more)
	1	Always 1
	1	English version

Note: Project ID license of CENTUM VP is not required.

Note: This license is required for each VTSPortal application server respectively. When multiple VTSPortal application servers exist in the network, select the suffix code for "Multiple software license" to use with the second and more VTSPortal application servers.

### Software media for VTSPortal

		Description
<b>Model</b>	LPCAM80	Software media for VTSPortal
<b>Suffix Codes</b>	-C	Supplied media: CD-ROM
	1	Always 1
	1	English version
	1	English version

Note: The media contains the electronic instruction manual for the VTSPortal.

Note: No license is required to use the electronic instruction manual media.

## ■ ORDERING INFORMATION

Specify the model and suffix codes.

## ■ TRADEMARK ACKNOWLEDGMENT

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