

General Specifications

GS 33Y05Q10-32E

Models SSS7700, SSS7710,
SSS7711, SSS7720,
SSS7750
Plant Resource Manager



■ GENERAL

PRM is a software tool that manages field devices online. This Plant Resource Manager Package for the digital network era efficiently handles field device management and maintenance work for the FOUNDATION™ fieldbus and HART devices, which helps reduce Total Cost of Ownership (TCO) in your plant.

This package also can support conventional analog devices with manual registration; it can provide integrated management of conventional analog, FOUNDATION fieldbus, HART, field wireless (conforms to ISA 100.11a) and PROFIBUS devices.

■ FUNCTION SPECIFICATIONS

Plant Resource Manager (PRM) consists of the following components:

● PRM Server

- Collect and store the data for device diagnostic such as device parameters, device alarms and Inspection Memo.
- Implements centralized management of device information such as the device list, inspection record and schedule, user-created electronic documents, and parts lists.
- This function can generate maintenance alarms for necessary information (phenomena, causes, action) and can distribute this maintenance alarm information to personnel who want it.

● PRM Client

- User-friendly Windows-based operating environment, with Explorer-like "Navigator" for selecting a specific device.
- Uses bidirectional, all-digital field networks such as FOUNDATION fieldbus. Performs automatic device recognition and registration (Plug and Play), monitors device health status with maintenance alarm functions, monitors communication error, monitors advanced diagnosis of device, process interface diagnosis and Unit diagnosis, etc. by PRM Advanced Diagnosis application, allows tuning of device parameters, and performs device diagnosis.
- For a device with an unconfirmed maintenance alarm status (device health status), a confirmation status icon appears next to the device icon.
- The user can freely define the device icon displayed in the device navigator. Moreover, the user can select one from three sizes of icons and fonts, and can customize the characters and the icons according to the screen size or on the user's request.
- A maintenance mark can be assigned to devices for setting and checking maintenance status. A maintenance mark is displayed in device icon; it gives permission for devices to change access level temporarily. It enables to share the situation of operation and maintenance between operators and maintenance personnel.
- Online device adjustment/setting can be performed on the screen with the same user interface as that of on-site adjustment setting tool FieldMate.
- Possible to exchange parameters and maintenance information between FieldMate and PRM.
- The status display icon appears beside the device icon changes depending on communication and device status. This provides an easy-to-understand overview of device health status.
- In addition to Maintenance Alarm Function and standard diagnostic functions, Yokogawa provides as components of the PRM Advanced Diagnosis package. With these software components, you can carry out advanced predictive, proactive and preventive maintenance using a field network.
- Allows not merely FOUNDATION fieldbus-compliant devices and HART-compliant devices but also conventional analog field devices to be registered together for true, centralized device management.
- Allows using the 3rd party, such as device vendors, software as a PLUG-IN Application in addition to Yokogawa's product, DeviceViewer (*1) and PLUG-IN ValveNavi. PRM Client can start up a calibration tool or a diagnosis tool that is uniquely designed by device vendors as PLUG-IN Application.
- Corresponds to both FDT/DTM (Field Device Tool/ Device Type Manager) and EDDL (Electronic Device Description Language) as an interface with field devices.

*1: DeviceViewer is a build-in PLUG-IN Application for self-diagnostic of FOUNDATION fieldbus devices and HART devices into PRM Client. The way to use the product differs from regular PLUG-IN Application. To be able to run the DeviceViewer of a device from each vendor, definition files must be obtained from that device vendor. DeviceViewer can be displayed on CENTUM VP/CS 3000 HIS. However, for displaying DeviceViewer, the CENTUM VP/CS 3000 Operation and Monitoring Functions must be R3.07 or later release.

● Field Communications Server

PRM supports two types of field communication (FOUNDATION fieldbus and HART).

PRM can communicate with FOUNDATION fieldbus devices via FOUNDATION fieldbus communication module in CENTUM system and in STARDOM system.

When connecting to field devices, two system configuration types shown below are available.

Supported Configuration

- FOUNDATION fieldbus communication modules for CENTUM VP/CS 3000
- AI/AO Modules with HART Communication for CENTUM VP/CS 3000
- FOUNDATION fieldbus communication modules for STARDOM
- AI/AO Modules with HART Communication for STARDOM
- AI/AO Modules with HART Communication for ProSafe-RS
- NI-FBUS card
- 3rd party HART Multiplexer (P+F, MTL, ELCON, STAHL)
- 3rd party PROFIBUS communication device (commDTM/gatewayDTM communication)
- Field Wireless Integrated Gateway (commDTM/gatewayDTM communication)

● Multi-server Switchover

The scope of PRM management generally corresponds to a CENTUM VP/CS 3000 project, ProSafe-RS project or STARDOM project. In addition, a wider range of management integration for large-scale plants is also achieved.

A large project that has a large number of devices should be split into multiple PRM servers. In such a case, multi-server functions make it possible to select the PRM server that is referenced by a PRM client. This allows multiple PRM servers to be monitored from a single client PC.

● PRM Advanced Diagnosis (Option)

PRM Advanced Diagnostic Server provides an environment for executing the diagnostic algorithm of field devices.

By using diagnostic algorithm applications, you can execute diagnosis with the acquired parameters for possible anomalies.

By using PRM Advanced Diagnostic Application Software Development Kit (PAA-SDK) in addition to the package, you can create and execute diagnostic applications containing advanced diagnostic algorithms for process interface, device and unit that have been difficult to realize with field devices alone.

For details of PRM Advanced Diagnosis, see GS 33Y05Q21-32E "SSS7740 PRM Advanced Diagnosis Server".

● PST Scheduler Package (Option)

With PST (*1) Scheduler, PST execution can be scheduled. Along the schedule, PST can be executed automatically and the result is totally managed. Also, modification of schedule and switching into manual PST execution mode are possible.

As for the detail of PST Scheduler Package, refer to GS 33Y05Q23-32E "SSS7780 PST Scheduler Package".

- 1: PST stands for Partial Stroke Test.
By slightly operating emergency shutdown valves (or ESD Valves) online which need not operate under normal condition, PST is to check if ESD valves function correctly in case of emergency. By using PST, the interval period for Full Stroke Tests (or FST) can be shortened safely, plus the cost for the ESD Valves maintenance can be reduced.

● Interface to Computerized Maintenance Management System (Option)

Plant Resource Manager (PRM) supports interface with Maximo, a Computerized Maintenance Management System (CMMS) provided by IBM. This enables PRM to connect with the CMMS and to provide information online. For details of Interface to Computerized Maintenance Management System, see GS 33Y05Q20-32E "SSS7730 Interface for CMMS".

● Interface for GE Energy System 1 (Option)

Interface for GE Energy System 1 is a PRM optional package for connecting PRM with System 1 Optimization and Diagnostics Software Platform of GE Energy so as to allow PRM to handle the devices under the management of System 1 software.

For more information about the Interface for GE Energy System 1, see "SSS7770 Interface for GE Energy System 1" (GS 33Y05Q22-32E).

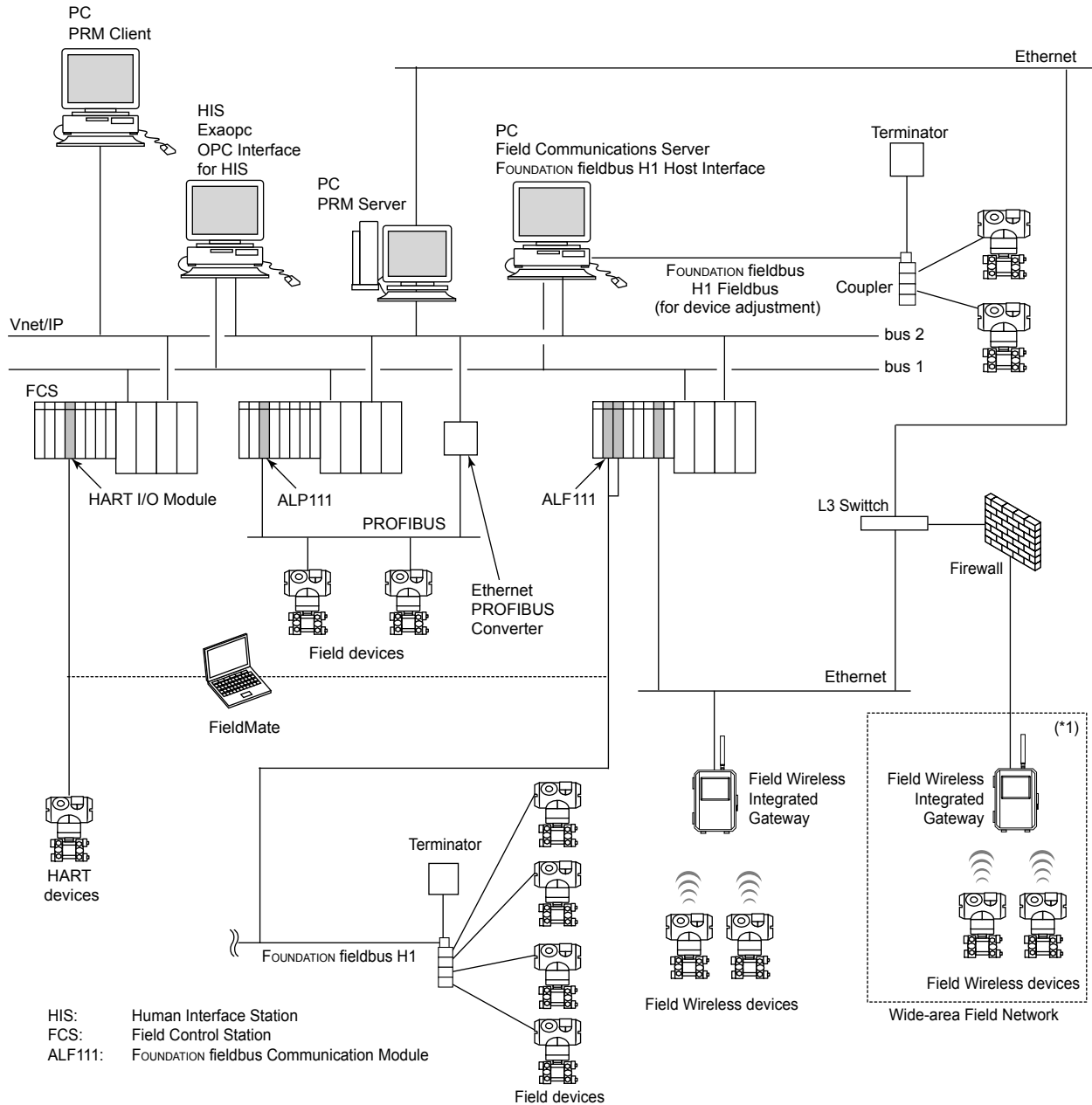
■ SYSTEM CONFIGURATION

A single PRM Server is the unit for management (e.g. for search operations). You can choose the minimum configuration consisting of one PRM server, one Field Communication Server and one PRM Client included in one PC or the configuration for multiple clients systems.

This section shows an example of system configuration for Plant Resource Manager.

● System Configuration

CENTUM VP/CS 3000



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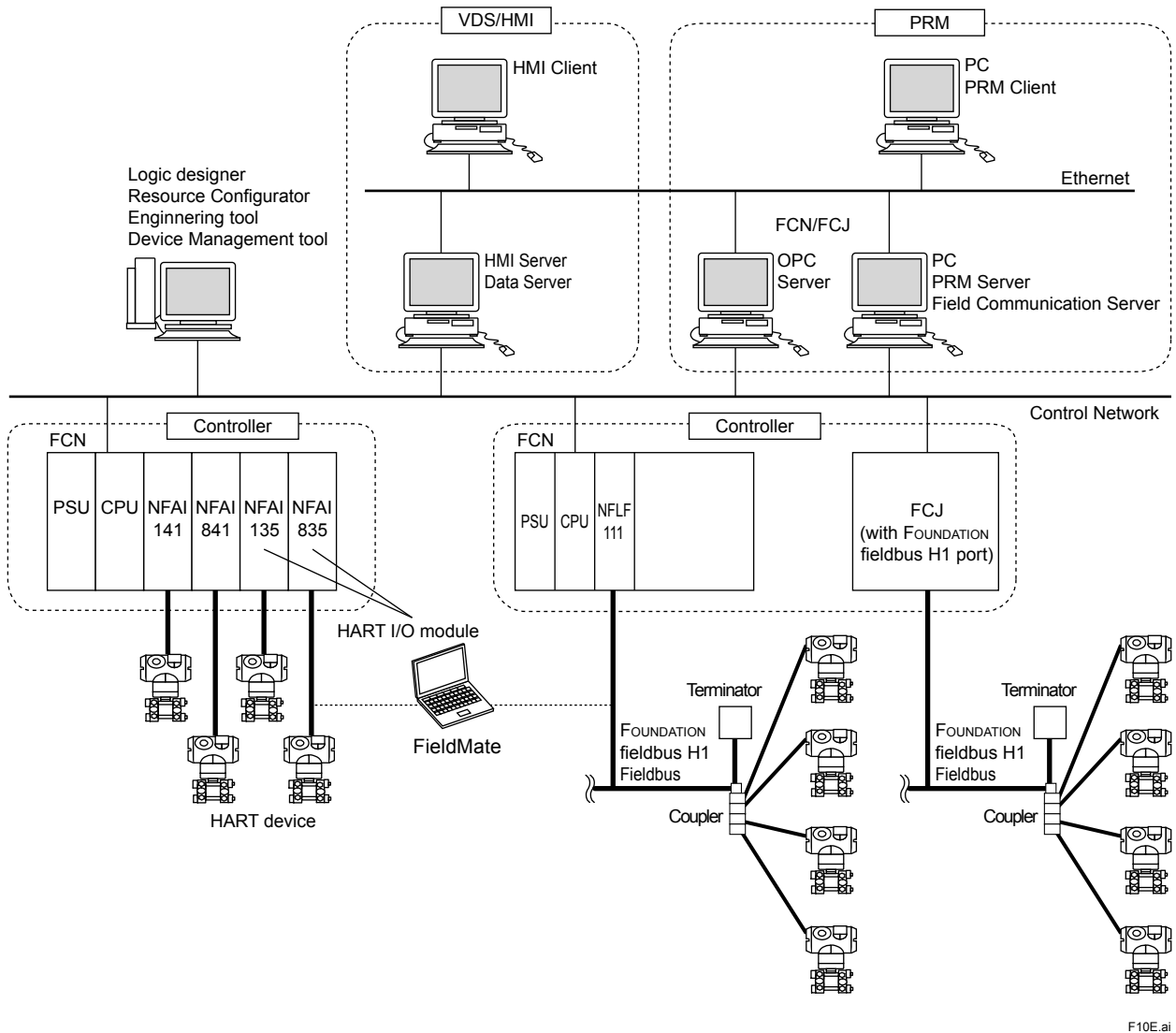
Figure: System Configuration (CENTUM VP/CS 3000 system)

Note: PRM Server, PRM Client and Field Communication Server can run on the same PC.
 PRM Client can run on the same PC in which HIS/ENG is already installed.

*1: Process data and diagnosis status can be displayed on HIS.
 As to the configuration of ISA100 Field Wireless, refer to GS 01W01A01-01EN "Field Wireless System Overview".

STARDOM

Messages from the STARDOM controller are transmitted to the PRM server via the OPC server. FCN/FCJ OPC Server for Windows is needed in the system.



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Figure: STARDOM System Configuration

Note:

PRM Server, PRM Client and Field Communication Server can run on the same PC.

PRM client and HMI client can run on the same PC.

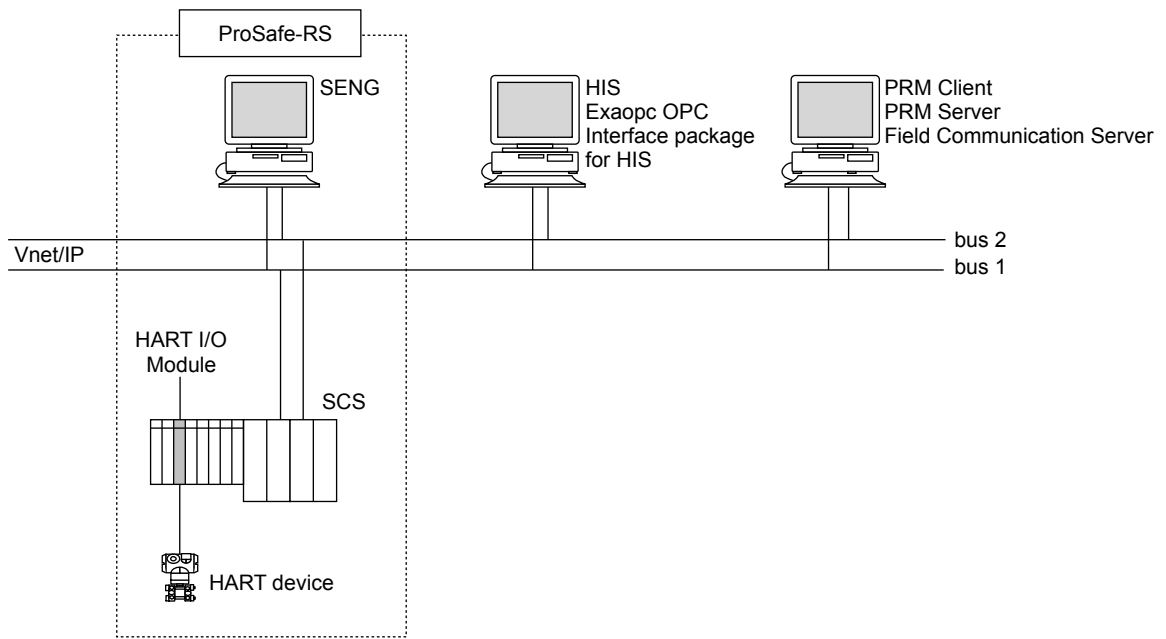
PRM Server or Field Communication Server cannot run on the PC in which VDS is already installed.

PRM server or Field Communication Server can run on the PC in which FCN/FCJ OPC server for Windows is installed. (PRM revision is R2.06 or later)

The revision of FCN/FCJ must be R1.40 or later.

Note: The maximum number of connected FCN/FCJ units supported by Field Communication Server is 100 in both case .
In large-scale system, use the multi-server function to divide the connected controllers being managed by PRM Server into groups of 100 or fewer units.

ProSafe-RS



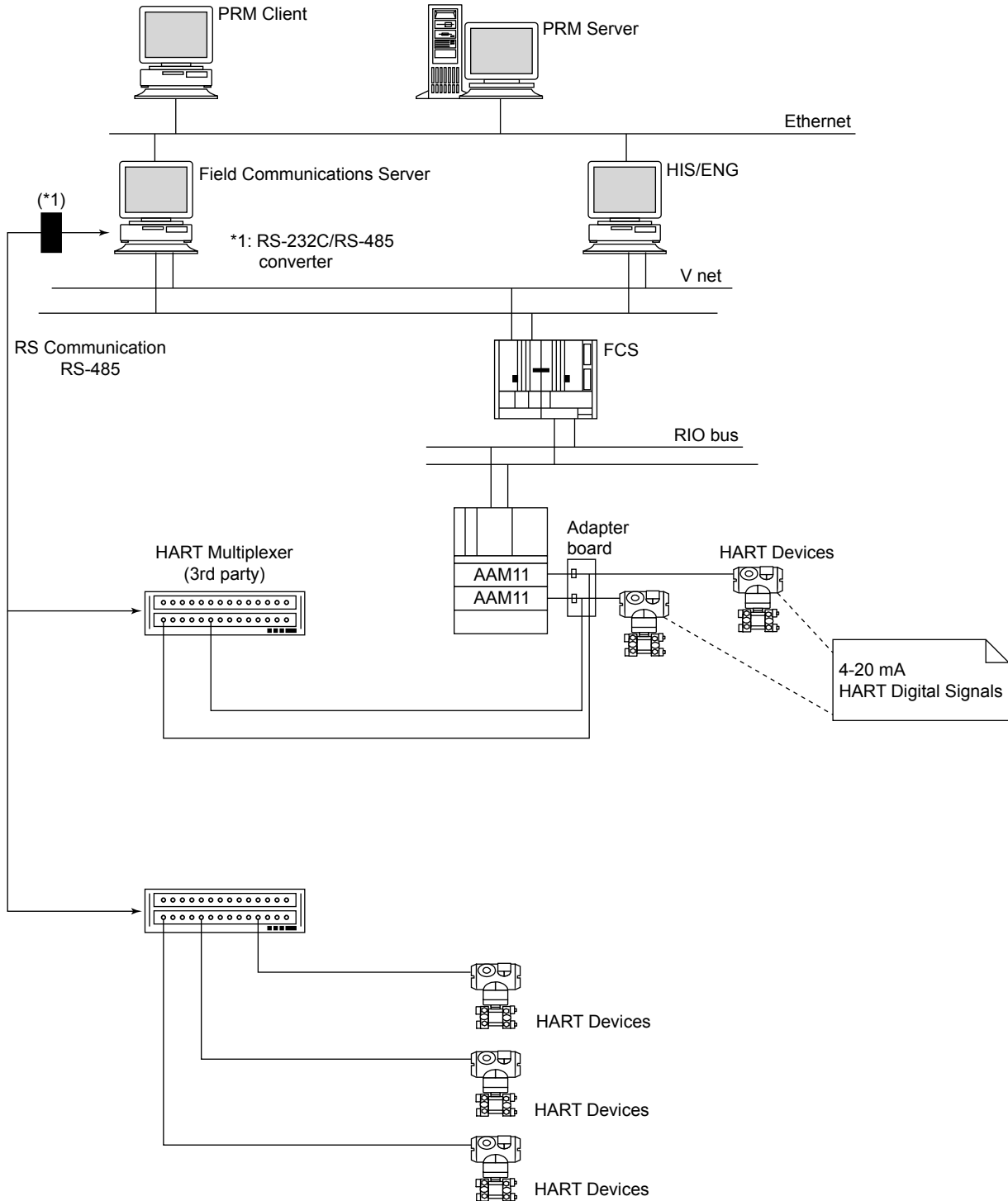
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Figure ProSafe-RS System Configuration

Note: PRM Server, PRM Client and Field Communication Server can run on the same PC.
PRM client and SENG can run on the same PC.

Serial port of Field communication server connection via Multiplexer

The field communication server can communicate with HART devices via HART Multiplexer connected with serial ports of Field communication server.



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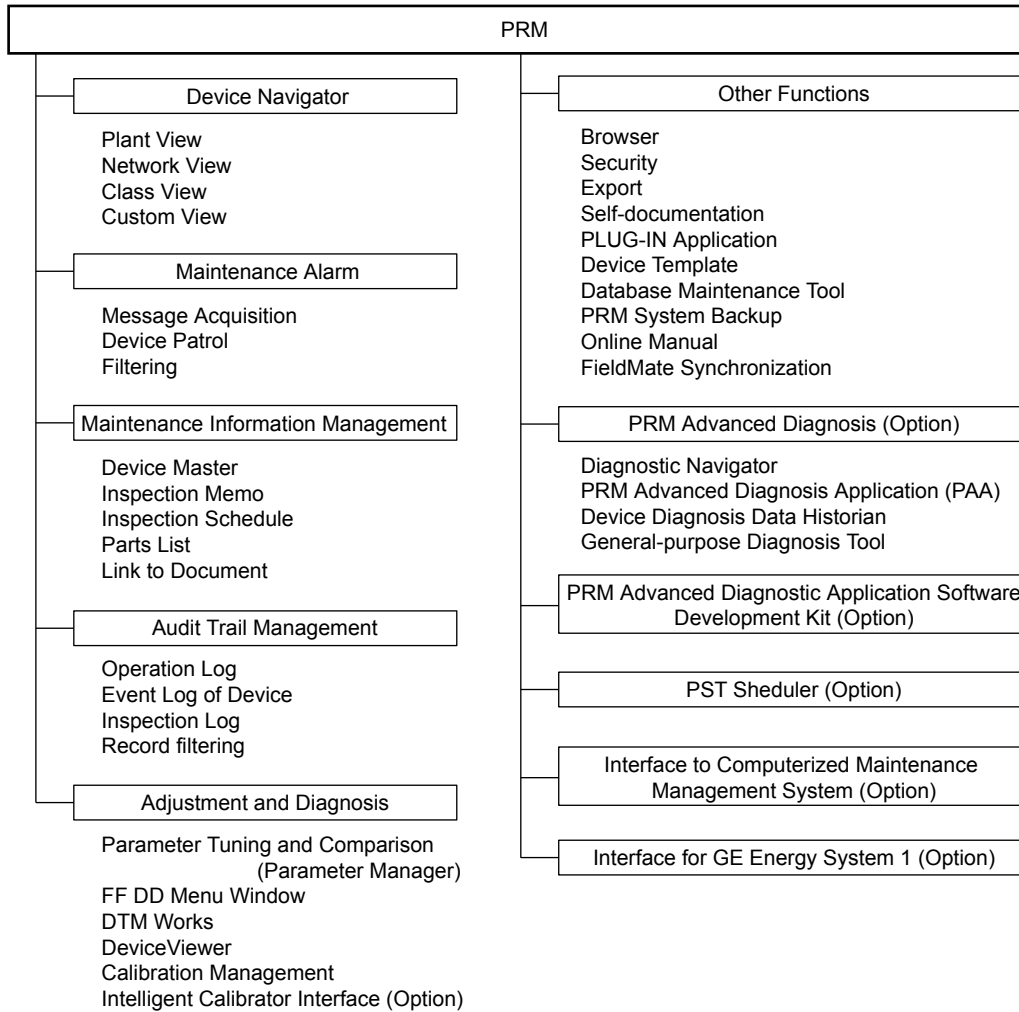
Figure Serial Port Connection via HART Multiplexer (Parallel Connection and Two-way Data Flow)

Note: PRM server, PRM client, and Field communication server can run on the same PC.

■ FUNCTION SPECIFICATIONS

● Organization of Functions

The following figure shows organization of functions.



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Figure: Organization of Functions

● Device Navigator

The Device Navigator provides Plant View, Network View, Class View and Custom View.

Each view displays arrangement of devices, in hierarchical Explorer-like format. These views can display the device status icon using a maintenance alarm function, thus allowing visual identification of device status. For a device with an unconfirmed maintenance alarm, an unconfirmed alarm icon is also displayed.

User access to the hierarchy of the device navigator can be restricted, which will prevent the person who is not in charge of the device from operating the device by mistake.

Plant View

Displays the equipment which makes up the plant, and shows its place in the plant hierarchy, in hierarchical Explorer-like format. You can manage plant organization intuitively, based on P & ID diagrams. Unused devices in the plant can be managed by putting them in the "Spare" Folder, and devices which have failed or are under maintenance can be placed in the "Off-Service" (Out of Service) Folder.

Network View

Displays position of device, related to field network physical configuration, in an Explorer-like hierarchical view. The mark next to the device icon shows the communication status and alarm status of the device – the color of the mark changes if the device fails, so users have an immediate visual view of operating status.

Class View

Displays devices in an Explorer-like hierarchical view – grouped by supplier, model, and revision. For devices which have failed or are under maintenance, you can check the (e.g. spares) status of devices of the same type at a glance. Device templates can be created with this Class View.

Custom View

Displays devices in the hierarchy structure freely created by users, in an Explorer-like hierarchical view. Devices can be classified according to persons in charge, inspection and replacement schedule, operating state, and failure state.

● Maintenance Alarm Function

This function provides a message system for maintenance information and advice guidance. The function transmits information necessary for maintaining devices to maintenance personnel. The function can not only transmit device event messages but also add necessary information, such as phenomena, causes, measures, etc., to these messages. The function transmits the alarm that occurred by a diagnosis for the user.

Message Acquisition

Acquires field device events (for FOUNDATION fieldbus) or events acquired by the CENTUM/STARDOM system. User-defined information (message priority level, object information, phenomena, causes, measures, etc.) is automatically added to raw event information for alarms in PRM. Alarms are sent to a filtering function.

Device Patrol

Acquires self-diagnosis parameter data from field devices with diagnosis information and adds user-defined information (message priority level, object information, phenomena, causes, and measures) to acquired data to provide alarms in PRM. These alarms are then transmitted to a filtering function. Data are acquired periodically or on demand. Necessary information can also be obtained from devices from which no events are issued.

Filtering Function

Alarms issued through such functions as the message acquisition, device patrol or advanced diagnostic application, and from messages generated by key entries can be filtered to change notification messages on a user-by-user basis.

● Maintenance Information Management

Manages the maintenance information of all devices.

Device Master

Manages an inventory of devices. You can display a list of all devices, or detailed information on a single device. For devices with communications functions, the device master basic information is automatically created through device recognition and registration (Plug and Play).

Inspection Memo

Maintains historical records of device inspection memo, and malfunctions. Moreover, maintenance personnel can save notes about how a failure was handled, as well as warnings or reminders about maintenance check items, in the historical record.

Inspection Schedule

Manages inspection schedules (checking, tuning, calibration, etc.) for each device.

Parts List

A device may consist of several parts; the parts list displays attributes of each part, and stock information. For Yokogawa field devices (FOUNDATION fieldbus and HART devices), specific templates are provided.

Link to Document

This can display information such as configuration (e.g. P & ID and control drawings), exploded views, online manuals, and graphics, as desired. You can access and display this device-related information using the tag name as a key. You can also use a URL to access a document server connected via Ethernet.

● Audit Trail Management

This manages and displays the entire operating history and historical inspection data carried out on a PRM client, and device alarm events using maintenance alarm functions as historical messages. A list of these historical messages can be displayed in chronological order or on a device priority level and on a message priority level. In addition, device IDs and tag names allow the filtering of these messages.

● Adjustment and Diagnosis Functions

Supports device online tuning and diagnostic functions.

Parameter Tuning and Comparison

Online display and setting of device parameter. Compares stored device parameter with current parameter. Can upload device data at any time, and store it in the database. A collective upload function that can upload all the connected devices at a time is also supported.

Tool

- For FOUNDATION fieldbus
 - Can switch to DD Menu Window, DeviceViewer Window, DTMWorks and PRM Advanced Diagnosis
 - DD Menu: Using the Method of DD files provided by a vendor enables to perform Tuning and Diagnosis. The specifications are dependent on field devices.
 - DeviceViewer: DeviceViewer is a PLUG-IN Application that displays the self-diagnosis result of devices. In many cases upper application program detects errors in devices by reading multi-parameter, containing the self-diagnosis result, saved in devices. In the case of Yokogawa FOUNDATION fieldbus devices, DeviceViewer displays not only the self-diagnosis result by reading parameters but also the data displayed on the FOUNDATION fieldbus device's LCD, such as error messages, in user-friendly format. This allows operators to monitor the connected devices from PRM without viewing a LCD of field devices.
- For HART
 - Can switch to DTMWorks, Device Viewer and PRM Advanced Diagnosis.
 - DeviceViewer: The device viewer supports the HART Device, either. It displays the self-diagnosis hardware status and configuration status of the HART Device.

Calibration Management

The PRM database manages equipment calibration data. Calibration results, errors and pass or fail (judgement) are registered in databases, and are displayed. The calibration management functions can require the administrator to acknowledge (approve) calibration results. After such acknowledgement of calibration results, only the administrator can change the results.

The operation history management functions retain a record of calibration data.

If you use the Documenting Calibrator, you can use it to download or upload calibration data. In addition, calibration results are automatically stored in the database. (*1)

- *1: Connection to the Documenting Calibrator is an optional extra.

● Other Functions

Browser

Can search for devices using device attribute information such as device ID, device tag name, device tag comment, block name, or parameter value.

Security

During maintenance of field devices, restricts operation to specific user(s) – or restricts range of operations permitted – to prevent system trouble due to operator errors, and to maintain system security.

The user name and operation record of the logged-in operator is recorded in the operation history. User Group can be used to assign user privileges to groups of users (i.e. restrict rights) according to job function.

Moreover, the Device Security Function allows the device navigator to display devices only for the specific group.

Export

Can output a list of all devices (such as device ID, device tag, and device tag comment) stored in the database to a text file in CSV format. You can use information managed with PRM on facility management software and the like.

Self-documentation

Can collectively print out data stored in the database in report format. Device information is managed electronically, and can be printed out on demand. Information on each window can be printed out as individual reports, so a report can be printed out after maintenance work to provide a maintenance work record.

The following print properties can be edited:

- Printing range
- Table of contents
- Header/footer
- Cover page

PLUG-IN Application

The software package provided by 3rd party device vendors which is built into PRM system. The PLUG-IN Application runs on the client PC, and it accesses to field devices and database in PRM server via PLUG-IN Application Library.

Yokogawa Electric supplies DeviceViewer and the PLUG-IN ValveNavi for Yokogawa Advanced Valve Positioner, YVP110 as a PLUG-IN application. This PLUG-IN ValveNavi helps users to easily calibration and diagnose the YVP110.

This PLUG-IN ValveNavi also supports Signature function for control valve diagnosis.

The function is based on standalone ValveNavi (YVP20S YVP Management Software).

For its functions, refer to the separate GS 21B04C50-01E for Model YVP20S YVP Management Software.

- Supported PLUG-IN
 - DeviceViewer
 - PLUG-IN ValveNavi for YVP110 (Rev. 2.1 or later)
 - The PLUG-IN Application approved by YOKOGAWA Electric Corporation which is supplied by other companies.

Device Template Function

Templates in which device information is freely defined are supplied. These templates can simplify device setting in engineering work.

Database Maintenance Tool

The PRM database capacity increases as the number of devices increases. If the operation history and parameter history are used for an extended period of time, large quantities of historical data are stored. The database maintenance tool optimizes large databases to enable effective operation of the PRM.

Online Manual

All instruction manuals are provided in PDF format on CD-ROM. This enables you to view and print the electronic instruction manuals on-demand.

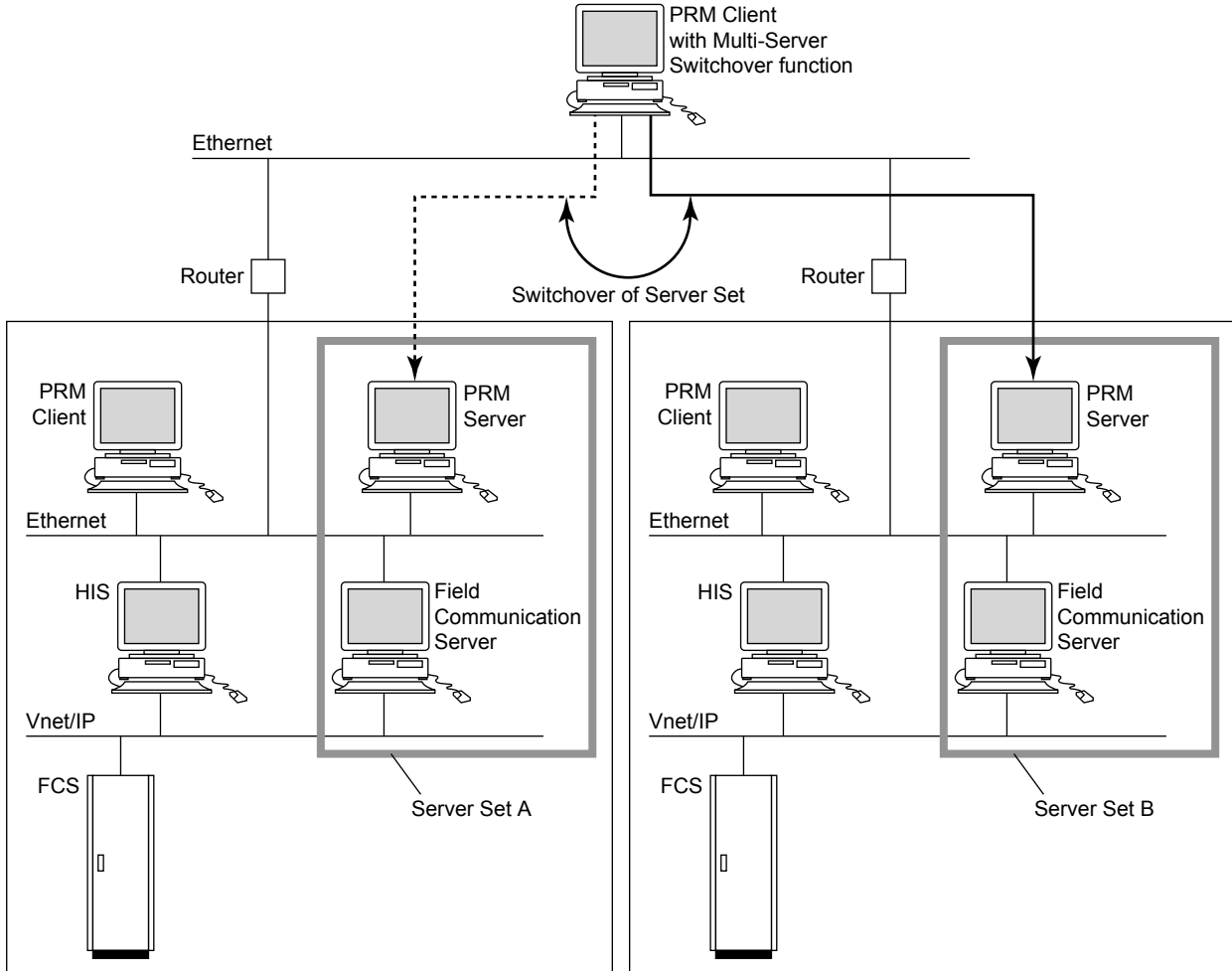
PRM System Backup

PRM provides a simple tool to back up data to meet user environments. This tool can back up registry information, PRM databases, advanced diagnosis databases, etc.

■ MULTI-SERVER SWITCHOVER

The multi-server switchover functions are used for integrated management of multiple plants. "Server Set" means a set of field communication servers and PRM servers to which the PRM client is connected. Using a "Server Set" concept, you can switch from one Server Set to other Server Set. Server sets are user-defined before use. This allows centralized management of the facility management data from multiple remote plants.

It is also possible to connect PRMs in STARDOM and PRMs in CENTUM, ProSafe-RS system on same Ethernet.



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Figure: Multi-Server Switchover

● **Supported Functions**

All functions can be performed for FOUNDATION fieldbus devices, but there are some restrictions for HART devices.

Table Supported Functions

Function		Conventional Devices (*1)	FOUNDATION fieldbus	HART (*2)	ISA100.11a (*4)	PROFIBUS (*5)
Device Navigation Function	Plant View	XX	XX	XX	XX	XX
	Network View	—	XX	XX	XX	XX
	Class View	XX	XX	XX	XX	XX
	Custum View	XX	XX	XX	XX	XX
Maintenance Information Management Functions	Device Master	XX	XX	XX	XX	XX
	Plug_& Play	—	XX	XX	XX	XX
	Register from Host_File_Set	—	XX	X	—	X
	Inspection Memo	XX	XX	XX	XX	XX
	Inspection Schedule	XX	XX	XX	XX	XX
	Parts List	XX	XX	XX	XX	XX
	Link To Document	XX	XX	XX	XX	XX
Audit Trail Management Function	Parameter History	—	XX	XX	XX	XX
	Inspection Memo History	XX	XX	XX	XX	XX
	Operation History	XX	XX	XX	XX	XX
	Device Event Message	—	XX	XX	—	XX (*6)
Adjustment and Diagnosis	Parameter Tuning and Comparison	—	XX	XX (*3)	XX	XX
	Status Display	—	XX	XX	XX	XX
	Tool	—	XX	XX	—	—
	Calibration	—	XX	XX	—	—
Maintenance Alarm	Plant View	—	XX	XX	—	XX
	Network View	—	XX	XX	—	XX
	Class View	—	XX	XX	—	XX
	Custum View	—	XX	XX	—	XX
Other Functions	Browse Function	XX	XX	XX	XX	XX
	Security	XX	XX	XX	XX	XX
	Printing	XX	XX	XX	XX	XX
	PLUG-IN Application	—	XX	XX	—	—
	FieldMate	XX	XX	XX	—	—

XX: Supported X: Partly supported —: Not applicable

*1: The conventional device includes the 4 to 20 mA analog devices and the static devices as a motor.

*2: HART 5/6/7 is supported, except for Wireless HART.

*3: Supported by R2.03 or later versions.

*4: Conforms to ISA(International Society of Automation) 100.11a which has been progressed as the standards of Wireless system for Industrial Automation.

*5: Condition monitoring with device navigator can be achieved for PROFIBUS PA device which conforms to "PA Profile". To confirm if the device is conformed to PA Profile, visit the web site of PROFIBUS International or device vendor.

*6: PROFIBUS Device Event Message is acquired via APL111.

■ OPERATING ENVIRONMENT

● Hardware Requirements

The necessary amounts of main memory and disk space depend on the number of devices registered. This section discusses the minimum hardware requirements when no more than 3,000 devices are connected. If more than 3,000 devices need to be connected, consult Yokogawa.

For the necessary amount of main memory, prepare/provide the larger main memory in case the size of the required main memory differs by Windows OS and the PRM packages (PRM Server, PRM Client, and Field Communication Server).

The main memory sizes required by the applicable Windows OS are described as below.

Table Required Main Memory Size by Windows OS

Windows Server 2008	512MB or more required
	2GB or more recommended
Windows Vista Business Edition	512MB or more required
	1GB or more recommended
Windows XP or Windows Server 2003	256MB or more required
	512MB or more recommended

PRM Server

IBM PC/AT-compatible: See the table below.

Main memory: See the table below.

Disk capacity: See the table below.

Other requirements:

DVD drive

DAT drive (for backup).

Ethernet card

Display: 256 colors or more are mandatory

Table PRM Server Hardware Requirements (without Advanced Diagnosis Server)

	Number of Devices		
	300 units or less	1000 units or less	3000 units or less
CPU	Pentium 1 GHz or higher required	Pentium 1 GHz or higher required Pentium 4 2.8 GHz or higher recommended	Pentium 4 2.8 GHz or higher required Xeon Dual 2.8 GHz or higher recommended
Main storage capacity	For Windows Server 2008: 2 GB or greater recommended For other applicable Windows OS: 512 MB or greater required	For Windows Server 2008: 2 GB or greater recommended For other applicable Windows OS: 512 MB or greater required 1 GB or greater recommended	For all applicable Windows OS: 1 GB or greater required 2 GB or greater recommended
Disc capacity	3 GB or greater free area	5 GB or greater free area required High-speed disc such as SCSI and RAID recommended	10 GB or greater free area required High-speed disc such as SCSI and RAID recommended
PRM database (*1)	600 MB	2 GB	6 GB

*1: Device database capacity indicates disc capacity required for a year. It is calculated based on the assumption that the work "updating parameter value on a parameter comparison window and saving it" is done for five times in a year for every block of every device.

Note: For hardware requirements for servers with advanced diagnosis, refer to GS 33Y05Q21-32E "PRM Advanced Diagnosis Server".

PRM Client

IBM PC/AT-compatible: Pentium 1 GHz or higher

Main memory:

For Windows Server 2008

512 MB or greater (2 GB or greater recommended)

For Windows Vista

512 MB or greater (1 GB or greater recommended)

For Windows XP or Windows Server 2003

256 MB or greater (512 MB or greater recommended)

Disk capacity: At least 2 GB must be free.

Other requirements: DVD drive, Ethernet card

Display: 1024 x 768 (256 colors) or more are mandatory

Field Communications Server

PC: IBM PC/AT-compatible
 Main memory: See the table below.
 Disk capacity: See the table below.
 Other requirements: DVD drive

Table Hardware Requirements for Field Communication Server

	CENTUM VP/CS 3000 connection system ProSafe-RS connection system	STARDOM connection system	Simplified system for FOUNDATION fieldbus H1 device adjustment	Simplified system for HART device adjustment or system connected to HART multiplexer	commDTM/gatewayDTM communication
Main storage capacity	<ul style="list-style-type: none"> FCS/SCS 1-16 units (100+80 x number of FCS/SCS) MB or greater recommended FCS/SCS 17-44 units (1380+10 x (number of FCS/SCS-16)) MB or greater recommended 	<ul style="list-style-type: none"> FCN/FCJ 1-16 units (100+60 x number of FCN/FCJ) MB or greater recommended FCN/FCJ 17-100 units (1060+5 x (number of FCN/FCJ-16)) MB or greater recommended 	256 MB or greater required 512 MB or more recommended	256 MB or greater required 512 MB or more recommended	256 MB or greater required {30+(commDTM/gatewayDTM main memory)×(No. of node)}MB or greater recommended
Communication devices	Ethernet card Control bus interface card	Ethernet card	Ethernet card FOUNDATION fieldbus H1 interface card	Ethernet card COM port	Ethernet Card

When installing PRM Server, Field Communication Server, and PRM Client in one PC:

When all components coexists,
 PC: IBM PC/AT compatible
 The maximum connectable number of FCS/SCS: 24 or less. In case of exceeding 24, use another PC for the configuration with PRM server and Field Communication Server.
 CPU: The greatest CPU requirement among ones for each package or greater
 Main Storage Capacity: The total of the required memory capacity for each package or greater
 Disc capacity: The total of the required disc capacity for each package plus approximately 1 GB of virtual memory area or greater
 Display: 1024 x 768 256 colors or more

OPC Server (for STARDOM system)

IBM PC/AT-compatible: Pentium 300 MHz or 400 MHz or faster recommended
 Main memory: 256 MB or 512 MB or greater recommended
 Disk capacity: There must be at least 1 GB of free space.
 Ethernet card: 100BASE-TX, 10BASE-T, 10BASE-5

Two communications devices are needed to separate the STARDOM information network from its control network.

● Software Requirements

PRM Server

OS:
 Windows Server 2008 Standard Edition Service Pack 2
 Windows Server 2003 Service Pack 2
 Windows Server 2003 R2 Service Pack 2
 Windows XP Professional Service Pack 3
 Windows Vista Business Edition Service Pack 1/Service Pack 2
 Internet Explorer 5.0 or later version
 Microsoft SQL Server 2008 (Runtime) is used as a database software and is included in a software media for Plant Resource Manager.

PRM Client

OS:
 Windows Server 2008 Standard Edition Service Pack 2
 Windows Server 2003 Service Pack 2
 Windows Server 2003 R2 Service Pack 2
 Windows XP Professional Service Pack 3
 Windows Vista Business Edition Service Pack 1/Service Pack 2
 Software for document: Adobe Reader 8.0.0, Adobe Reader 9.0.0

Field Communications Server

OS:

- Windows Server 2008 Standard Edition Service Pack 2
- Windows Server 2003 Service Pack 2
- Windows Server 2003 R2 Service Pack 2
- Windows XP Professional Service Pack 3
- Windows Vista Business Edition Service Pack 1/Service Pack 2

Vnet/IP or V net CENTUM VP/CS 3000/ProSafe-RS communications driver (*1)

- *1: These communications drivers and VF702/VF701 (or VI702/VI701) are not required when communicating with HART devices via Multiplexer or when the connection is via commDTM/gatewayDTM.

● Software requirements for connected system

CENTUM VP

- CENTUM VP: R4.01 or later
- Exaopc OPC interface package (for HIS): R3.05 or later
- Exaopc OPC interface package (NTPF100): R3.01 or later

CENTUM CS 1000 / CS 3000

- CS1000/CS 3000: R3.01 or later
 - R3.02 or later to support HART devices
 - R3.07 or later to notify HIS of operator guide message
 - R3.08 or later for Consolidated Alarm Management Software for HIS (CAMS for HIS) consolidation
- Exaopc OPC interface package (for HIS): R3.01 or later
 - R3.02 or later to support HART devices
- Exaopc OPC interface package (NTPF100): R3.01 or later

STARDOM

- STARDOM: R1.40 or later
 - R1.60 or later to support HART devices
- FCN/FCJ OPC Server for Windows: R1.40 or later
 - R1.60 or later to support HART devices

ProSafe-RS

- ProSafe-RS: R1.02 or later
- Exaopc OPC interface package (for HIS): R3.06 or later
 - 3.07 or later to notify HIS of operator guide message
 - R3.08 or later for CAMS for HIS consolidation
- Exaopc OPC interface package (NTPF100): R3.01 or later

FieldMate

- PRM: R3.02 or later to support synchronization with FieldMate.
- FieldMate: R1.03.01 or later to support synchronization with FieldMate.

■ YOKOGAWA PRODUCTS AVAILABLE TO BE INSTALLED IN THE MACHINE WHERE PRM IS INSTALLED

● PRM Client

- CENTUM VP HIS
- CENTUM CS 3000/CENTUM CS 1000 HIS
- ProSafe-RS SENG
- STARDOM HMI Client PC

PRM Server or Field Communication Sever cannot be installed in the PC where products described above are installed.

■ MODELS AND SUFFIX CODES

PRM Basic Set (for new installation)

		Description
Model	PRMSET	Plant Resource Management Basic Set
Suffix Codes	-S	Basic Software License and Media fee
	1	Always 1
	1	English version
Option Codes	/N0025	Maximum number of connected devices: 25
	/N0100	Maximum number of connected devices: 300
	/N1000	Maximum number of connected devices: 1000
	/N3000	Maximum number of connected devices: 3000

Note: The PRM Basic Set includes a Plant Resource Management Client, a Plant Resource Management Server, a Field Communications Server, Software Media for Plant Resource Manager, Device Files Media and Electronic Instruction Manual Media for Plant Resource Manager.

PRM Server (for new installation)

		Description
Model	SSS7700	Plant Resource Management Server [Media model: SSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software licenses (for 2 or more)
	1	Always 1
Option Codes	1	English version
	/N0300	Maximum Number of connected devices: 300
	/N1000	Maximum Number of connected devices: 1000
	/N3000	Maximum Number of connected devices: 3000

Note: A PRM server is required for each project.

Note: This package cannot be installed in HIS/SENG/HMI Client PC. Prepare a PC separate from HIS/SENG/HMI Client PC.

Note: Exaopc OPC Interface Package for HIS (LHS2411) is required to acquire device events.

PRM Server (for expansion)

		Description
Model	SSS7700	Plant Resource Management Server [Media model: SSSM02-C11]
Suffix Codes	-A	Software license for additional devices
	1	Always 1
	1	English version
Option Codes	/N0003	Expand maximum number of connected devices: 25 to 300
	/N0010	Expand maximum number of connected devices: 25 to 1000
	/N0310	Expand maximum number of connected devices: 300 to 1000
	/N0030	Expand maximum number of connected devices: 25 to 3000
	/N0330	Expand maximum number of connected devices: 300 to 3000
	/T01	Add 1000 units of connected devices
	/T02	Add 2000 units of connected devices

Note: This package cannot be installed in HIS/SENG/HMI Client PC. Prepare a separate PC from HIS/SENG/HMI Client PC.

Note: Exaopc OPC Interface Package for HIS (LHS2411) is required to acquire device events.

Note: When you have 1000 unit or more of the connected devices, you can add 1000 or 2000 units furthermore, but the maximum number must be 3000 units.

PRM Client

		Description
Model	SSS7710	Plant ResourceManagement Client [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software licenses (for 2 or more)
	1	Always 1
	1	English version

Note: This package can be installed in HIS/SENG/HMI Client PC.

Field Communications Server

		Description
Model	SSS7720	Field Communications Server [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software licenses (for 2 or more)
	1	Always 1
	1	English version

Note: The function for connecting with FOUNDATION fieldbus devices, HART devices and so on, is included in the basic specification.

Note: This package cannot be installed in HIS/SENG/HMI Client PC. Prepare a PC separate from HIS/SENG/HMI Client PC.

Any or all Plant Resource Manager (Field Communications Server, Database Server, and Client) can be installed on a single PC.

Intelligent Calibrator Interface for PRM Client

		Description
Model	SSS7711	Documenting Calibrator Interface [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	1	Always 1
	1	English version
Option Code	/FLK01	Calibrator type: Fluke 743B/744

Note: This package can be installed with basic software license in two or more PRM client PC.

Software Media for Plant Resource Manager

		Description
Model	SSSSM02	Software Media for Plant Resource Manager
Suffix Codes	-C	Supplied media: DVD
	1	Always 1
	1	English version

Note: Electric Instruction manual Media for this package is SSSSD02.

Device Files Media

		Description
Model	SSSSM03	Device Files Media
Suffix Codes	-C	Supplied media: CD-ROM
	1	Always 1
	1	English version

Note: The file about field device such as DD or DTM is installed in this media.

Electronic Instruction Manual Media for Plant Resource Manager

		Description
Model	SSSSD02	Electronic Instruction Manual Media for Plant Resource Manager
Suffix Codes	-C	Supplied media: CD-ROM
	1	Always 1
	1	English version

Note: To install this media, the software media (SSSSM02) is required.

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

PLUG-IN ValveNavi

		Description
Model	SSS7750	PLUG-IN ValveNavi [Media model: SSSAM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software license (for 2 or more)
	1	Always 1
	1	English version
Option Code	/FF-H1	For FOUNDATION fieldbus devices (*1)

Note: This package runs on the personal computer with Plant Resource Manager (Client) (SSS7710).

Note: This software cannot support HART devices.

*1: To connect with FOUNDATION fieldbus devices, specify the option code "/FF-H1."

PLUG-IN Application Media for Plant Resource Manager

		Description
Model	SSSAM02	PLUG-IN Application Media for Plant Resource Manager
Suffix Codes	-C	Supplied media: CD-ROM
	1	Always 1
	1	English version

Note: Electronic instruction manual is included in this media.

FCN/FCJ OPC Server for Windows

Please see GS 34P02Q61-01E for detail.

■ VERSION UPGRADE SOFTWARE LICENSE FROM R2 TO R3

Plant Resource Manager (Server) (for Upgrading from R2 to R3)

		Description
Model	SSS7700RU	Plant Resource Manager (Server) Upgrade [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software license (for 2 or more)
	1	Always 1
	1	English version
Option Codes	/N0300	Maximum number of connected devices: 300
	/N1000	Maximum number of connected devices: 1,000
	/N3000	Maximum number of connected devices: 3,000

Note: Purchase upgrading license from R2 to R3 in accordance with every license (basic as well as multiple) you purchased in R2. Specify the number of connected devices that you purchased in R2 including added ones.

Note: Option Code "/N0100 (maximum number of connected devices: 100 units)" in R2.10 or before is expanded to maximum 300 units of connected devices in R3. When you purchased "/N0100" in R2, specify "/N0300."

Note: In R3.05, installing Microsoft SQL Server 2008 is required to use it. Microsoft SQL Server 2008 does not support Windows 2000. There are two ways to upgrade to R3.05 from a PRM working on a Windows 2000 OS. Install R3.05 or upgrade to R3.04 first for OS replacement, then upgrade to R3.05.

Plant Resource Manager Client (for Upgrading from R2 to R3)

		Description
Model	SSS7710RU	Plant Resource Manager (Client) Upgrade [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software license (for 2 or more)
	1	Always 1
	1	English version

Note: Purchase upgrading license from R2 to R3 in accordance with every license (basic as well as multiple) you purchased in R2.

Documenting Calibrator Interface for PRM Client (for Upgrading from R2 to R3)

		Description
Model	SSS7711RU	Documenting Calibrator Interface Upgrade [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	1	Always 1
	1	English version
Option Codes	FLK01	Calibrator type: FLUKE 743B/744

Note: Purchase upgrading license from R2 to R3 in accordance with every license (basic as well as multiple) you purchased in R2.

Field Communications Server (for Upgrading from R2 to R3)

		Description
Model	SSS7720RU	Field Communications Server Upgrade [Media model: SSSSM02-C11]
Suffix Codes	-S	Basic software license
	-C	Multiple software license (for 2 or more)
	1	Always 1
	1	English version

Note: Purchase upgrading license from R2 to R3 in accordance with every license (basic as well as multiple) you purchased in R2.

Note: From R3, Field Communications Server includes HART devices as standard function. (Field Communications Server includes both FOUNDATION fieldbus H1 and HART communications functions). In upgrading license from R2 to R3 it is not necessary to add HART option (There is no HART option).

Plant Resource Manager Basic Set (for Upgrading from R2 to R3)

		Description
Model	PRMSETRU	Plant Resource Manager Basic Set Upgrade
Suffix Codes	-S	Basic software license includes upgrades and media fees
	1	Always 1
	1	English version
Option Codes	/N0025	Number of connected device: 25 units or less
	/N0300	Number of connected device: 300 units or less
	/N1000	Number of connected device: 1,000 units or less
	/N3000	Number of connected device: 3,000 units or less

Note: Basic set (for upgrading from R2 to R3) is used when PRMSET of R2 was ordered. Specify the number of connecting device same as the number you purchased in R2.

Note: Basic set includes 1 Plant Resource Manager (Client), 1 Plant Resource Manager (Server), 1 Field Communications Server, software media for Plant Resource Manager and Electronic Instruction Manual Media for Plant Resource Manager.

Note: Option Code "/N0100 (maximum number of connected devices: 100 units)" in R2.10 or before is expanded to maximum 300 units of connected devices in R3. When you purchased "/N0100" in R2, specify "/N0300."

■ ORDERING INFORMATION

Specify model and suffix codes.

■ TRADEMARKS

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