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You can download all instructions, catalogs and certificates free of charge at: https://new.siemens.com/global/en/products/automation/process-instrumentation/communication-and-software.html

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SITRANS SAM IQ

Overview

SITRANS SAM IQ (Smart Asset Management) is an app that applies diagnostics and monitoring to field device data.

Benefits

- One application for all field devices and protocols
- Increase plant uptime by avoiding upcoming device failures
- Reduce of maintenance costs through event driven maintenance
- Increase transparency of measurement reliability
- Assurance of product and process quality

Application

With the smart asset management app, SITRANS SAM IQ, you can make unused, but valuable, data available. SITRANS SAM IQ will manage all your field device data, with comprehensive possibilities of diagnostics and monitoring.

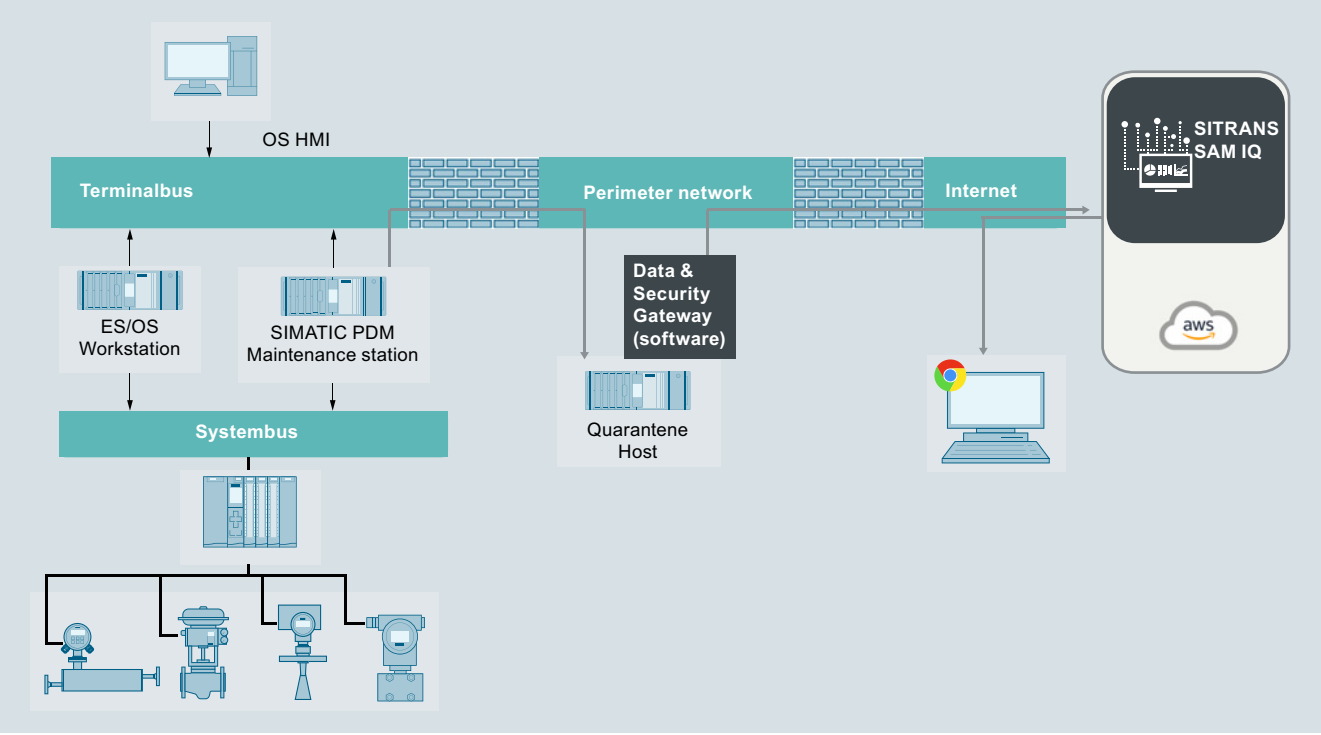
By monitoring the health state of each field device and event-based device management, SITRANS SAM IQ reduces upcoming device failures. Moreover, device-specific diagnostics of process values and customized multi-parameter dashboards allow you to validate device measurements and optimize your processes.

Design

The cloud based version of SITRANS SAM IQ is updated automatically. The annual license includes the update service.

Application versions	
Standard	
The Standard version includes the following functionality:	
• Device list	Provides an overview of all field instruments with essential device information.
• Device details	• Access to device-specific KPIs. • Track device replacements and configuration changes over the entire life-cycle of a measurement point. • Easy comparison of actual working range with measurement range of the device (e.g. to optimize valve sizes or improve accuracy).
• Events	Detection of unauthorized device or configuration changes.
Advanced	
The Advanced version includes the standard version and the following additional functionality:	
• Analysis	Create custom dashboards to compare values between devices and share expert know-how. Perform customized plausibility checks of measurements for one or more devices.

SITRANS SAM IQ is optimized for Google Chrome on desktop, tablet, and smart phone.



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Technical specifications

Google Chrome	Optimized for Google Chrome web browser (version 67 or later)
SIMATIC PDM/SIMATIC PCS 7	Compatible only with data provided through SIMATIC PDM Maintenance Station (V3.0 or later) or SIMATIC PCS 7 Maintenance Station (V9.0.1 or later).
Security	Installation of Data and Security Gateway is required in your IT infrastructure. The software will be provided together with the delivery of SITRANS SAM IQ.

Selection and ordering data

	Article No.
Base package	
SITRANS SAM IQ (Smart Asset Management) is an app that applies diagnostics and monitoring to field device data. Base package for application access is required for Standard and Advanced packages.[1]	
• 1 year license for application access	**6BG0000-0AA111BA**
Standard package	
SITRANS SAM IQ (Smart Asset Management) is an app that applies diagnostics and monitoring to field device data. Standard package includes device list with identification, version and diagnostics, device details, and event list. SITRANS SAM IQ is a cloud app updated automatically.[1]	
• 1 year license for 10 devices	**6BG0000-0AA111BB**
• 1 year license for 100 devices	**6BG0000-0AA111BC**
• 1 year license for 1 000 devices	**6BG0000-0AA111BE**
Advanced package	
SITRANS SAM IQ (Smart Asset Management) is an app that applies diagnostics and monitoring to field device data. Advanced package includes device list with identification, version and diagnostics, device details, and event list. It also features customizable diagnostics view and dashboards. SITRANS SAM IQ is a cloud app updated automatically.[1]	
• 1 year license for 10 devices	**6BG0000-0AA111BG**
• 1 year license for 100 devices	**6BG0000-0AA111BH**
• 1 year license for 1 000 devices	**6BG0000-0AA111BK**
3rd party integration	
For integration of 3rd party devices into SITRANS SAM IQ[1)2)]	
• Integration of one 3rd party device	**6BG0000-0AA241BF**

1) Smart Asset Management product sheet and specific terms and digital service agreement shall apply.

2) Integration of the device requires the parameter description and XML export files from SIMATIC PDM Maintenance station. Conditions from Smart Asset Management technical data sheet shall apply.

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SITRANS mobile IQ

Overview

SITRANS mobile IQ is an app that gives you easy access to SITRANS field devices via your smartphone or tablet.

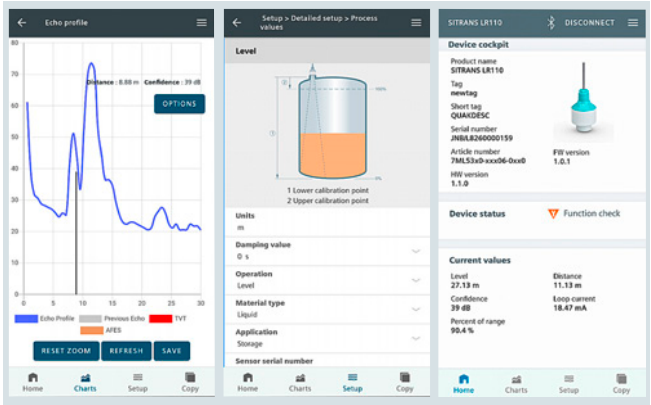
Benefits

- Commissioning and parameterization of field devices.
- Displays device status and measurement values.
- Helps with identifying errors and troubleshooting in case of failures.
- Direct link to manuals, certificates, FAQs, and much more.

Application

Commissioning and parameterization of field devices:

- **Device list**
  All supported devices in the environment are displayed.
- **Device Cockpit**
  Overview of the connected device, device status, and current measured values.
- **Setup**
  Commissioning and parameterization of the device, including graphical support.
- **Charts**
  History of selected measurement and diagnostic values.



Mode of operation

Mobile devices / operating systems

SITRANS mobile IQ is compatible with supported Android and iOS mobile devices.

SITRANS mobile IQ uses a Bluetooth interface to communicate with the field devices. Your mobile device must have a Bluetooth interface, version 4.2 or better.

Currently supported field devices are listed on SIOS (http://www.siemens.com/osSITRANSmobileIQ) and in the App Store and Google Play. Additional field devices are in preparation and require a new installation of the App on your mobile device. Only the listed field devices are compatible with SITRANS mobile IQ.

Data connection: internet connection is required to access additional information such as manuals of supported field devices.

Integration

Further information

Product note in Industry Online Support – Product Support

https://support.industry.siemens.com/cs/document/109775578/sitrans-mobile-iq?dti=0&lc=en-WW

Download App

Available on the App Store

https://apps.apple.com/us/app/sitrans-mobile-iq/id1496146361

ANDROID APP ON Google play

https://play.google.com/store/apps/details?id=com.siemens.sitransmobileiq&hl=en_US

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Overview

SITRANS store IQ is a Siemens MindSphere based application used to monitor and manage inventories in process and discrete industries.

Benefits

- Manage entire inventory network from a central location.
- Reduce overhead required to monitor and plan stock levels.
- Avoid unnecessary downtime and cost associated with unexpected shortages.
- Increase transparency of measurement reliability.

Application

Inventory management is a necessary task in virtually every value chain. Inventories are required whenever material is processed, produced, or assembled. SITRANS store IQ is an inventory management app based on Siemens MindSphere, that records measurements and data from various types of instrumentation, including a level device at a process tank or scales mounted in storage shelves. SITRANS store IQ also monitors auxiliary measurements, helping to better characterize inventories, for example, with temperature readings or binaries.

SITRANS store IQ records readings and visualizes them in a customizable way, offering structuring with hierarchies, map views, and graph views. The acquired data can be used to create proactive alarms via email or SMS, exactly as required for your application. The SITRANS store IQ app can be used on a desktop computer or mobile device.

Design

- A reliable and accurate record of inventory data from anywhere.
- A flexible structure for configuring an inventory network of any size.
- Provides a visualization of an inventory mix, with material breakdown.
- KPI thresholds to easily assess inventory levels.
- Custom alarms for proactive notifications.
- Based on MindSphere and MindSphere connectivity solutions.
- Open to virtually every measurement technology.
- Ability to monitor any process values, including humidity, temperature, digital inputs.

The following standard SITRANS store IQ packages are available:

SITRANS store IQ is distributed via the MindSphere Digital Exchange: https://www.dex.siemens.com

Software packages	**Entry**	**Small**	**Medium**
MindSphere base tenant includes:	✓	✓	✓
MindSphere users	2	2	5
Agents	1	2	10
Data ingest rate	0.01 kB/s	0.05 kB/s	0.1 kB/s
Data storage	0.5 GB	0.5 GB	5 GB
SITRANS store IQ application includes:			
Monitored assets	3	10	100
License type	Subscription with 12-month initial subscription term. The 12 month subscription will renew automatically if not cancelled 60 days before the end of the first subscription term.		

License upgrade options	
Asset upgrade	
Additional monitored assets	10
Additional data ingest rate	0.1 kB/s
Additional data storage	0.5 GB

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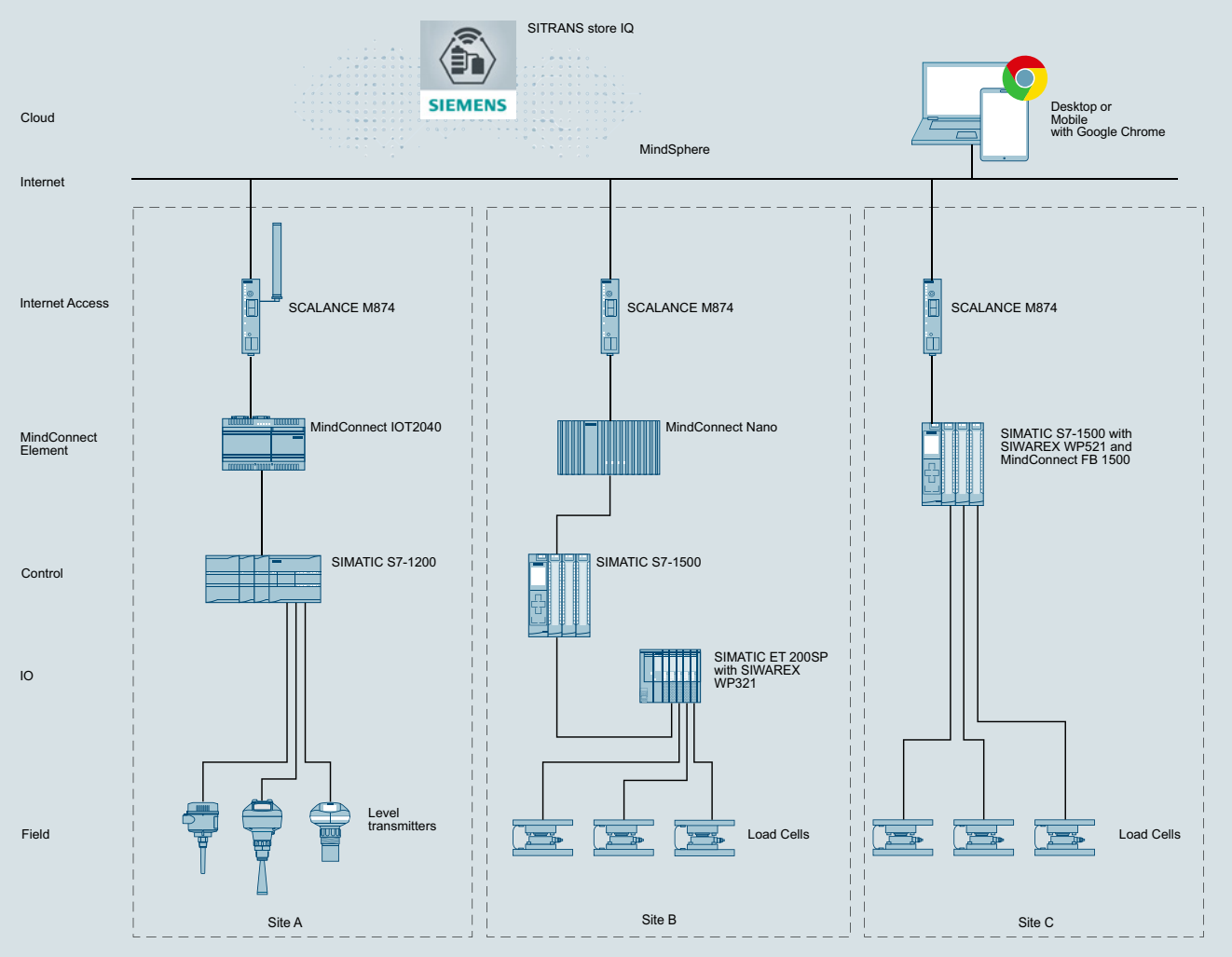
Integration



SITRANS store IQ is based on MindSphere and supports various possibilities to onboard instrumentation devices and acquire data. The figure shows several integration examples.

8

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Overview

SITRANS DTM provides an easy way for Field Device Tool (FDT)/ Device Type Manager (DTM) users to parameterize Siemens Instruments using international standards.

Benefits

- Same look and feel for all Siemens field instruments
- Support for Quick start wizards and other dialog boxes
- Quick overview using table and tree views
- Online and offline configuration
- Conformity to IEC profiles for HART and PROFIBUS

Application

Electronic Device Description (EDD) is a proven way to describe the behavior and functionality of field instruments and other automation components.

For many years, EDD-based tools such as SIMATIC PDM from Siemens or handheld communicator have been used successfully in the process industry. Some years ago, an additional technology called FDT / DTM with the same approach was introduced to the market. To support the FDT DTM Technology for Siemens devices, the software SITRANS DTM has been developed which combines both technologies, EDD and FDT.

SITRANS DTM uses EDDs as the device description and provides the DTM interface to allow the integration of our field instruments into FDT-frame applications.

The following field instruments are currently available in SITRANS DTM:

- SITRANS TH300 HART
- SITRANS TH400 PA
- SITRANS P300 HART
- SITRANS P DSIII HART
- SITRANS P F M MAGFLO MAG6000 DP/PA
- SITRANS F C MASSFLO MASS6000 PA/PA
- SITRANS PROBE LU HART 6 m, 12 m
- SITRANS LR200 HART, PA
- SITRANS LR250 HART, PA
- SITRANS LR260 HART, PA
- SITRANS LR560 HART, PA
- SIPART PS2 HART, PA

Additionally, the SIPART PS2 FF has a DTM.

Technical specifications

Current Version	3.1
Compatible with PACTware versions	3.6, 4.0, 4.1
Compatible with Windows	XP, 7
Certified by FDT group	Yes

Free DTM software can be downloaded here:
http://www.siemens.com/sitransdtm

- SITRANS DTM V3.1:
  https://support.industry.siemens.com/cs/document/53754140/software%3A-sitrans-dtm-v3-1?dti=0&lc=en-WW
- SITRANS DTM V4.1:
  https://support.industry.siemens.com/cs/document/109484287/sitrans-dtm-v4-1?dti=0&lc=en-WW

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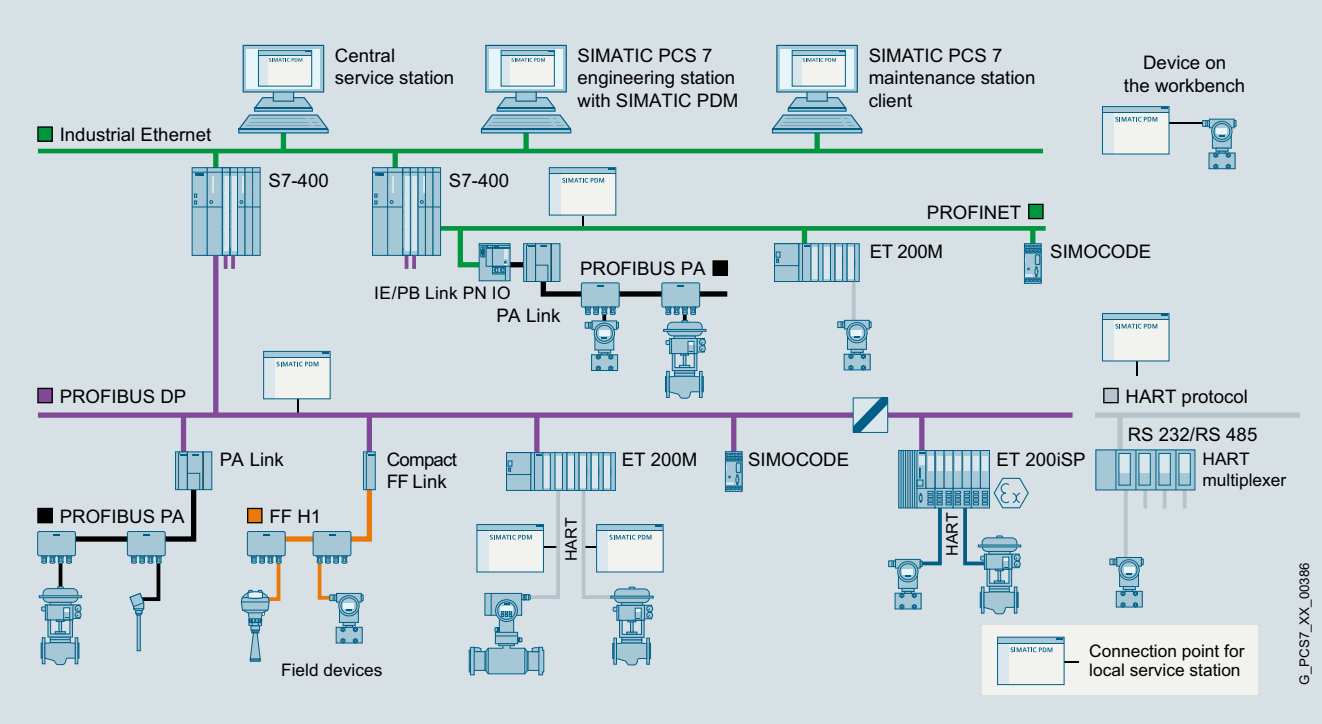
Overview



Configuration options with SIMATIC PDM

SIMATIC PDM (Process Device Manager) is a universal, vendor-independent tool for the configuration, parameter assignment, commissioning, diagnostics and servicing of intelligent field devices (sensors and actuators) and field components (remote I/Os, multiplexers, control-room devices, compact controllers), which in the following sections will be referred to simply as devices.

With *one* software product, SIMATIC PDM enables users to work with over 4 000 devices and device variants from Siemens and over 200 other manufacturers worldwide on a *single* homogeneous user interface.

The user interface satisfies the requirements of the VDI/VDE GMA 2187 and IEC 65/349/CD directives. Parameters and functions for all supported devices are displayed in a consistent and uniform fashion independent of their communications interface. Even complex devices with several hundred parameters can be represented clearly and processed quickly. Using SIMATIC PDM it is very easy to navigate in highly complex stations such as remote I/Os and even connected field devices.

From the viewpoint of device integration, SIMATIC PDM is the most powerful open process device manager on the global market. Devices not previously supported can be integrated in SIMATIC PDM by importing their device description packages (either EDD or FDI). This provides security for your investment and saves you investment costs, training expenses and follow-up costs.

SIMATIC PDM supports the operative system management in particular through:

- Uniform representation and operation of devices
- Uniform representation of diagnostics information
- Indicators for preventive maintenance and servicing
- Detection of changes in the project and device
- Increasing the operational reliability
- Reducing the investment, operating and maintenance costs
- Quantity options for
  - Transfer of parameters between devices
  - Transfer of parameter sets to the devices
  - Export and import functions
  - Diagnostics update

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Overview (continued)

SIMATIC PDM can be used extremely flexibly and tailored to a specific task for field device service:

- Single-point station for point-to-point connection to field devices
- Local service and parameter assignment station with connection to fieldbus segments
- Central service and parameter assignment station with connection to plant bus
- Central HART service and parameter assignment station for HART multiplexers and WirelessHART field devices
- Integrated into the stand-alone SIMATIC PDM Maintenance Station
- Integrated into the SIMATIC PCS 7 process control system

Maintenance personnel can assign field device parameters at mobile and stationary workstations with SIMATIC PDM. Practically every workstation integrated in the production plant can be used for configuration. Service personnel are thus able to work directly at the location of the field device, while data is stored centrally in the engineering station or maintenance station. This leads to a significant shortening of maintenance and travel times. Additional device-independent system functions support higher-level maintenance stations for creating progress lists for work and servicing.

When a maintenance station is configured in the SIMATIC PCS 7 process control system, SIMATIC PDM is integrated into it and transmits parameter data, diagnostic information and processing information. You can switch directly to the SIMATIC PDM views from the diagnostics faceplates in the maintenance station to perform diagnostics and work on the device in more detail.

A SIMATIC PDM user administration system based on SIMATIC Logon is used to assign various roles with defined function privileges to users. These function privileges refer to SIMATIC PDM system functions, e.g. writing to the device.

For all devices integrated with device description packages, SIMATIC PDM provides a range of information for display and further processing on the maintenance station, for example:

- Device type information (electronic rating plate)
- Detailed diagnostics information (manufacturer information, information on error diagnostics and troubleshooting, further documentation)
- Results of internal condition monitoring functions
- Status information (for example local configuration changes), device test completed
- Information on changes (audit trail report)
- Parameter information

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Design

Components	Product packages							
	SIMATIC PDM Stand alone				SIMATIC PDM system-integrated			
	Minimum configuration	Basic configuration	Service and parameter assignment station		in the configuration environment			
			local	central	SIMATIC S7	SIMATIC PCS 7		
	PDM Single Point	**PDM Basic**	**PDM Service**	**PDM Stand alone Server**	**PDM S7**	**PDM PCS 7**	**PDM PCS 7 Server**	**PDM PCS 7 FF**
SIMATIC PDM TAGs[1] in scope of supply	1	4	4 + 50	4 + 100	4 + 100	4 + 100	4 + 100	4 + 100
SIMATIC PDM expansion options								
Count Relevant Licenses (accumulative) - 10 TAGs - 100 TAGs - 1 000 TAGs	*cannot be expanded*	o	o	o	o	o	o	o
SIMATIC PDM Basic		●	●	●	●	●	●	●
SIMATIC PDM Extended		o	o	●	●	●	●	●
SIMATIC PDM integration in STEP 7/PCS 7		o	o	o	●	●	●	●
SIMATIC PDM Routing[2]		o	o	o	o	●	●	●
SIMATIC PDM Server		o	o	●	o	o	●	o
SIMATIC PDM 1 Client[3]		o	o	● (2 ×)	o	o	o	o
SIMATIC PDM Communication FOUNDATION Fieldbus		–	–	–	o	o	o	●
SIMATIC PDM HART Server		o	o	o	o	–	–	–

SIMATIC PDM product structure

● Product component is part of the product package

o Optional product component for the product package; order additive

– Product component is not relevant for the product package or not available

1) For TAG definition, see "Design" section under "SIMATIC PDM TAGs"

2) In combination with SIMATIC PDM Integration in STEP 7/PCS 7

3) In combination with SIMATIC PDM Server

Customer-oriented product structure

The customer-oriented product structure of SIMATIC PDM provides optimal support for the named main use cases and enables you to adapt the scope of functions and performance to your individual requirements. The product range is organized as follows:

SIMATIC PDM Stand alone product packages

- SIMATIC PDM Single Point, a minimum configuration for single device handling
- SIMATIC PDM Basic for local service and parameter assignment stations as well as basic configuration for individual product package with optional product components
- SIMATIC PDM Service for local service and parameter assignment stations
- SIMATIC PDM Stand alone Server for central service and parameter assignment stations, e.g. for various plant units

SIMATIC PDM system-integrated product packages

- SIMATIC PDM S7 for local SIMATIC S7 engineering and service stations
- Various configurations for central SIMATIC PCS 7 engineering and service stations:
  - SIMATIC PDM PCS 7
  - SIMATIC PDM PCS 7 Server (enables device parameter assignment and diagnostics on clients of the PCS 7 engineering station and PCS 7 Maintenance Station)
  - SIMATIC PDM PCS 7-FF (supports the FOUNDATION Fieldbus H1)

In some circumstances, the product packages can be expanded with optional product components (for details, see the Design section).

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Design (continued)

Product range	SIMATIC PDM V9.1							
	Single Point	Basic	Service	Stand alone Server	S7	PCS 7	PCS 7 Server	PCS 7-FF
TAGs contained	**1**	**4**	**4 + 50**	**4 + 100**	**4 + 100**	**4 + 100**	**4 + 100**	**4 + 100**
Project: Create offline	●	●	●	●	●	●	●	●
Project: Usable TAG extensions	–	●	●	●	●	●	●	●
Project: Process device network view	●	●	●	●	●	●	●	●
Project: Process device plant view	●	●	●	●	●	●	●	●
Project: Export/import devices	–	–	●	●	–	–	–	–
Project: Export/import parameters	–	o	●	●	●	●	●	●
Project: HW Config	–	o	o	o	●	●	●	●
Project: Utilization of SIMATIC PDM options	–	●	●	●	●	●	●	●
Project: Integration in STEP 7/PCS 7	–	o	o	o	●	●	●	●
Group operations	–	o	o	●	o	●	●	●
Setting device IDs	–	o	o	●	o	●	●	●
Communication: HART modem	●	●	●	●	●	–	–	–
Communication: HART interface	●	●	●	●	●	–	–	–
Communication: PROFIBUS DP/PA	●	●	●	●	●	●	●	●
Communication: HART over PROFIBUS DP	●	●	●	●	●	●	●	●
Communication: FF H1	–	–	–	–	o	o	o	●
Communication: Modbus	●	●	●	●	●	●	●	●
Communication: Ethernet	●	●	●	●	●	●	●	●
Communication: PROFINET	●	●	●	●	●	●	●	●
Communication: HART over PROFINET	●	●	●	●	●	●	●	●
Devices: Export/import parameters	–	o	o	●	●	●	●	●
Devices: Comparison of parameter values	–	o	o	●	●	●	●	●
Devices: Saving parameters	●	●	●	●	●	●	●	●
Devices: Change log (Audit Trail)	–	o	o	●	●	●	●	●
Devices: Calibration report	–	o	o	●	●	●	●	●
Devices: Print function	●	o	o	●	●	●	●	●
Devices: Document manager	–	o	o	●	●	●	●	●
Lifelist: Basic functionality	●	●	●	●	●	●	●	●
Lifelist: Expanded functionality (scan range, diagnostics, export, addressing)	–	o	o	●	●	●	●	●
Communication: Data record routing	–	o	o	o	o	●	●	●
Communication: HART multiplexer	–	o	o	o	o	–	–	–
Communication: WirelessHART	–	o	o	o	o	–	–	–
Function: HART SHC mode (increased communication speed)	●	●	●	●	●	●	●	●
Function: Device parameterization on PCS 7 maintenance station clients	–	o	o	o	o	o	●	o
Function: Device parameter assignment on SIMATIC PDM clients	–	o	o	● (2 ×)	o	o	o	o

SIMATIC PDM overview of functions and features

● Product component is part of the product package

o Optional product component for the product package; order additive

– Product component is not relevant for the product package or not available

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Design (continued)

SIMATIC PDM Stand alone product packages

SIMATIC PDM Single Point V9.1

This minimum configuration with handheld functionality is intended for handling exactly *one* field device via point-to-point coupling. It cannot be expanded with functions or with SIMATIC PDM TAG or SIMATIC PDM 1 Client licenses. Upgrading to a different product variant, e.g. SIMATIC PDM Basic, or a different product version is also not possible.

Supported communication types:

- PROFIBUS DP/PA
- HART communication (modem, RS 232 and via PROFIBUS/PROFINET)
- Modbus
- Ethernet
- PROFINET

The functionality is matched accordingly. The device functions are supported as defined in the device description, for example:

- Managing the device library and unlimited device selection
- Parameter assignment and diagnostics according to the device description
- Exporting and importing of parameter data
- Device identification
- Lifelist
- Printing the parameter list

SIMATIC PDM Basic V9.1

SIMATIC PDM Basic is for local service and parameter assignment stations on any computers (IPC/notebook) with local connection to bus segments or direct connection to the device.

Supported communication types:

- PROFIBUS DP/PA
- HART communication (modem, RS 232 and via PROFIBUS/PROFINET)
- Modbus
- Ethernet
- PROFINET

SIMATIC PDM Basic is equipped with all basic functions required for operation and parameter assignment of devices. That is, compared to SIMATIC PDM Single Point, it has the following additional functions:

- EDD-based diagnostics in the lifelist
- Memory function (only exporting and importing of parameter data)
- Report function
- Communication with HART field devices via remote I/Os

As a basic block for an individual configuration, SIMATIC PDM Basic can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs. Without TAG expansion, SIMATIC PDM Basic is suitable for projects with up to 4 TAGs. SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

The SIMATIC PDM Extended option allows the activation of additional SIMATIC PDM system functions (for details, see SIMATIC PDM Extended V9.1 under "Optional product components").

SIMATIC PDM Service V9.1

With this product package for extended service, local service and parameter assignment stations can be realized on any type of computer (IPC/notebook) with a local connection to a bus segment or direct connection to field devices.

It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- 50 SIMATIC PDM TAGs

Like SIMATIC PDM Basic, SIMATIC PDM Service can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1 000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option. It is permitted to upgrade to another product version.

Note: For use of gateways and for PROFINET or Ethernet communication with field devices, SIMATIC PDM TAG licenses are charged for according to the objects configured in the process device plant view as follows:

- 10 SIMATIC PDM TAGs per S7 DSGW (data record gateway) with one PROFIBUS subnet
- 20 SIMATIC PDM TAGs per S7 DSGW with more than one PROFIBUS subnet
- 10 TAGs per IE/PB Link
- 1 TAG per field device (except in the case of special specifications)

SIMATIC PDM stand-alone server V9.1

With the SIMATIC PDM Stand alone Server product package, you can establish central service and parameter assignment stations that operate according to the client/server principle. Portals opened on licensed SIMATIC PDM clients (SIMATIC PDM sessions) enable handling of production plant field devices via the SIMATIC PDM server on the plant bus assigned via registration. The product package can be used multiple times within a plant, e.g. for various plant units. It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM Server
- 2 × SIMATIC PDM 1 Client
- 100 SIMATIC PDM TAGs

SIMATIC PDM Stand alone Server can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs and SIMATIC PDM 1-client licenses (see "Optional product components"). The portals opened on these clients (SIMATIC PDM sessions) must also be licensed with the SIMATIC PDM 1-client licenses (besides the SIMATIC PDM clients). For details about this, refer to "SIMATIC PDM 1 Client" under "Optional product components". For user management of the SIMATIC PDM clients, the SIMATIC Logon product is also required. It is possible to upgrade to another product version.

Note: For use of gateways and for PROFINET or Ethernet communication with field devices, SIMATIC PDM TAG licenses are charged according to the objects configured in the process device plant view (for details, see corresponding note under SIMATIC PDM Service V9.1).

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Design (continued)

SIMATIC PDM system-integrated product packages

SIMATIC PDM S7 V9.1

The SIMATIC PDM S7 product package designed for use in a SIMATIC S7 configuration environment is intended for setup of a local SIMATIC S7 engineering and service station. It requires the installation of STEP 7 V5.5+SP4. It includes:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- 100 SIMATIC PDM TAGs

SIMATIC PDM S7 can be expanded with the functional options SIMATIC PDM Routing, SIMATIC PDM Communication FOUNDATION Fieldbus, SIMATIC PDM Server, and SIMATIC PDM HART Server as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1 000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

SIMATIC PDM PCS 7 V9.1

The SIMATIC PDM PCS 7 product package suitable for use in a SIMATIC PCS 7 configuration environment is intended for use in a central SIMATIC PCS 7 engineering and service station. It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- 100 SIMATIC PDM TAGs

SIMATIC PDM PCS 7 can be expanded with the functional options SIMATIC PDM Communication FOUNDATION Fieldbus and SIMATIC PDM Server as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

SIMATIC PDM PCS 7 Server V9.1

Instead of SIMATIC PDM PCS 7, the SIMATIC PDM PCS 7 Server product package expanded with the SIMATIC PDM Server option can also be used for a central SIMATIC PCS 7 engineering and service station. Field devices integrated using an Electronic Device Description (EDD) can then be assigned parameters on any client of the SIMATIC PCS 7 Maintenance Station as well as on local SIMATIC PDM clients. The following are components of SIMATIC PDM PCS 7 Server:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Server
- 100 SIMATIC PDM TAGs

SIMATIC PDM PCS 7 Server can be expanded with the functional option SIMATIC PDM Communication FOUNDATION Fieldbus as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs and SIMATIC PDM 1-Client licenses (see "Optional product components"). The portals opened on these clients (SIMATIC PDM sessions) must also be licensed with the SIMATIC PDM 1-client licenses (besides the SIMATIC PDM clients). For details about this, refer to "SIMATIC PDM 1 Client" under "Optional product components".

SIMATIC PDM PCS 7-FF V9.1

Instead of SIMATIC PDM PCS 7, the SIMATIC PDM PCS 7-FF product package expanded with the SIMATIC PDM Communication FOUNDATION Fieldbus option can also be used for a central SIMATIC PCS 7 engineering and service station. This additionally supports parameter assignment of field devices on FOUNDATION Fieldbus H1. Components of SIMATIC PDM PCS 7-FF are:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Communication FOUNDATION Fieldbus
- 100 SIMATIC PDM TAGs

SIMATIC PDM PCS 7-FF V9.1 can be expanded with the functional option SIMATIC PDM Server as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

Optional product components

SIMATIC PDM Extended V9.1 option

The SIMATIC PDM Extended option enables you to unlock other system functions for SIMATIC PDM Basic and SIMATIC PDM, for example:

- Change log
- Calibration report
- Extended information in the Lifelist
- Export and import functions
- Print functions
- Document manager
- Comparison function
- Group operations
- Setting device IDs

This functionality is already integrated in the following product packages: SIMATIC PDM Stand alone Server, SIMATIC PDM S7, SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server and SIMATIC PDM PCS 7-FF.

SIMATIC PDM Integration option in STEP 7/PCS 7 V9.1

This option is used for the integration of SIMATIC PDM in a SIMATIC S7 or SIMATIC PCS 7 configuration environment. SIMATIC PDM can then be started directly from the hardware configurator (HW Config) in STEP 7/SIMATIC PCS 7.

This functionality is already integrated in the product packages of category "SIMATIC PDM system-integrated" (SIMATIC PDM S7, SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server, and SIMATIC PDM PCS 7-FF).

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Design (continued)

SIMATIC PDM Routing V9.1 option

If SIMATIC PDM is used on an engineering station, the SIMATIC PDM Routing option enables handling of every device in the field that can be configured per EDD throughout the plant and across different bus systems and remote I/Os.
SIMATIC PDM Routing can be used in combination with SIMATIC PDM Integration in STEP 7/SIMATIC PCS 7.

Routing is already integrated in SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server, and SIMATIC PDM PCS 7-FF.
SIMATIC PDM Routing can be additionally installed as an option on a local SIMATIC S7 engineering and service station with SIMATIC PDM S7.

SIMATIC PDM Server V9.1 option

The server functionality can be activated in a local or central service station with this option. It enables parameter assignment of selected field devices on any client of the SIMATIC PCS 7 Maintenance Station as well as on local SIMATIC PDM clients. This functionality is already integrated in the SIMATIC PDM Stand alone Server and SIMATIC PDM PCS 7 Server. The SIMATIC PDM clients as well as the portals opened on these clients (SIMATIC PDM sessions) must be licensed with SIMATIC PDM 1 client licenses. For details about this, refer to "SIMATIC PDM 1 Client" under "Optional product components".

SIMATIC PDM Communication FOUNDATION Fieldbus V9.1 option

In a SIMATIC S7/PCS 7 configuration environment, using this option SIMATIC PDM can communicate with field devices on the FOUNDATION Fieldbus H1 via the FF link.

This functionality is already integrated in the SIMATIC PDM PCS 7-FF product package.

SIMATIC PDM HART Server V9.1 option

This option permits the use of HART multiplexers from various vendors in SIMATIC PDM. Furthermore, WirelessHART field devices can also be parameterized with SIMATIC PDM.

SIMATIC PDM TAGs (version-independent)

Depending on the project size, the SIMATIC PDM TAGs supplied with a product package (except SIMATIC PDM Single Point) can be cumulatively expanded with sets of 10, 100 or 1 000 SIMATIC PDM TAGs.

A SIMATIC PDM TAG corresponds to a SIMATIC PDM object that represents the individual field devices or field components within a project, e.g. measuring instruments, positioners, switching devices or remote I/Os. SIMATIC PDM TAGs are also relevant for diagnostics with the lifelist of SIMATIC PDM. In this case, TAGs are considered to be all recognized devices with diagnostics capability, whose detailed diagnostics is effected through the device description (EDD).

SIMATIC PDM 1 Client (version-independent)

SIMATIC PDM 1 Client is a cumulative single-client license for SIMATIC PDM configurations with SIMATIC PDM server, for example SIMATIC PDM stand-alone server or SIMATIC PDM PCS 7 server. The license is used to activate registered SIMATIC PDM clients and SIMATIC PDM sessions (opened portals) on these clients.

Each "SIMATIC PDM 1 Client" license activates one SIMATIC PDM client with one SIMATIC PDM session.
A SIMATIC PDM session is defined as one opened portal together with the parameter views of the field devices opened from the portal. Each additional simultaneously opened SIMATIC PDM session on this client requires its own "SIMATIC PDM 1 Client" license. For larger projects, up to 30 registered SIMATIC PDM Clients are possible.

The "SIMATIC PDM 1 Client" license must be transferred to the computer with the SIMATIC PDM Server. The SIMATIC PDM Standalone Server product package comes with 2 "SIMATIC PDM 1 Client" licenses.

SIMATIC PDM Software Media Package V9.1

The current SIMATIC PDM installation software is offered without a license in the form of the SIMATIC PDM Software Media Package. Purchasing of corresponding software licenses is necessary to unlock the product-specific functionalities.

With SIMATIC PDM product packages, a SIMATIC PDM Software Media Package is supplied together with each ordering item when supplied via goods delivery (not with optional product components). Further SIMATIC PDM Software Media Packages must be ordered separately as required.

The software of the SIMATIC PDM Media Package without a license can be used for demonstration purposes in demo mode. The SIMATIC PDM functionality is limited as follows in demo mode:

- Stand alone mode
- Storage functions disabled
- Export and import functions disabled
- Expanded functionality disabled
- Communication functions restricted

Information on ordering and delivery

Installation software for the SIMATIC PDM is provided in the form of a software media package. Software media packages and product-specific software licenses are separate packages, which are not merged into a single delivery unit for a goods delivery.

The number of delivered software media packages can be determined by the number of ordered items. You can find more information under "Delivery form package" in the "Software Media and Logistics" chapter, "PCS 7 Software Packages" section of the ST PCS 7 catalog.

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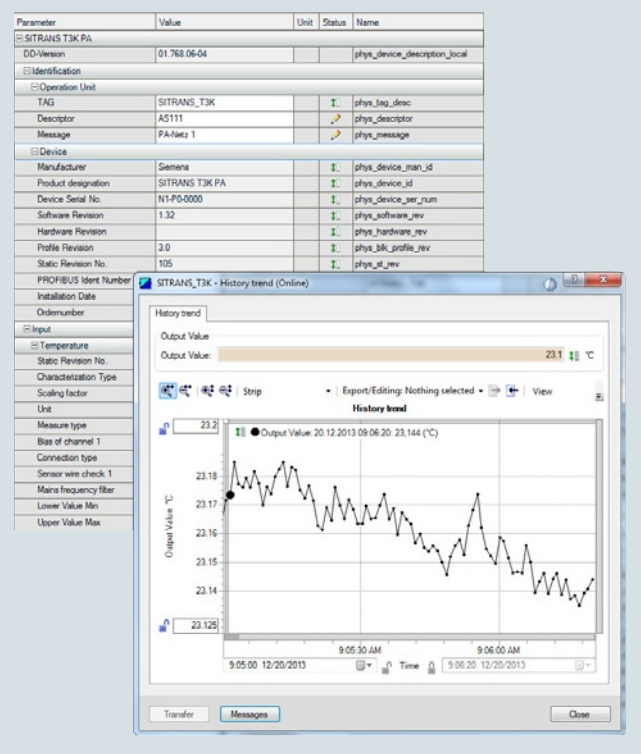
Function



SIMATIC PDM, parameter view and trend window

SIMATIC PDM core functions

- Creation of project-specific device libraries
- Adjustment and modification of device parameters
- Comparing (e.g. project and device data)
- Plausibility testing of data input
- Device identification and testing
- Device status indication (operating modes, interrupts, states)
- Simulation
- Diagnostics (standard, detailed)
- Export/import (parameter data, logs, documents)
- Management (e.g. networks and PCs)
- Commissioning functions, e.g. measuring circuit tests of device data
- Lifecycle management functions, e.g. for device replacement
- Global and device-specific modification logbook for user operations (audit trail)
- Device-specific calibration reports
- Graphic presentations of echo envelope curves, trend displays, valve diagnosis results etc.
- Presentation of incorporated manuals
- Document manager for integration of up to 10 multimedia files

Integration

Device integration

SIMATIC PDM supports all devices defined by the Electronic Device Description (EDD) and devices described by Field Device Integration Technology (FDI Technology V1.2). EDD is standardized to EN 50391 and IEC 61804. Internationally it is the most widely used standardized technology for device integration. At the same time, it is the guideline of the established organizations for

- PROFIBUS and PROFINET (PI – PROFIBUS & PROFINET International)
- HART (FCG: Field Communication Group)
- Foundation Fieldbus (FCG: Field Communication Group)

The devices are integrated directly in SIMATIC PDM through a company-specific EDD or through the libraries of the FCG. To achieve improved transparency, they can be managed in project-specific device libraries.

Field devices are described in the EDD or FDI device description packages in terms of functionality and construction using the Electronic Device Description Language (EDDL). Using this description, SIMATIC PDM automatically creates its user interfaces with the specific device data. By simply importing the manufacturer's device-specific device description packages, you can update existing devices and integrate further devices in SIMATIC PDM.

Technical support

If you wish to use devices which cannot be found in the SIMATIC PDM device description library, we would be pleased to help you integrate them.

Support Request

You can request support by service specialists at Technical Support by using a "Support Request" on the Internet:

http://www.siemens.com/automation/support-request

Contacts in the Region

The Technical Support responsible for your Region can be found on the Internet at:

http://www.automation.siemens.com/partner

Technical specifications

SIMATIC PDM V9.1	
Hardware	• PG/PC/notebook with processor corresponding to operating system requirements
Operating system (alternatives)	• Windows 7 Professional/Ultimate/Enterprise SP1 32-bit/64-bit • Windows 10 Enterprise 2015 LTSB 64-bit • Windows Server 2012 R2 SP1 Standard Edition, 64-bit • Microsoft Windows Server 2016 Standard 64-bit
Integration in STEP 7/PCS 7	• SIMATIC PCS 7 V8.0+SP2/V8.1/V8.2 (without Communication FOUNDATION Fieldbus) • SIMATIC PCS 7 V9.0 • STEP 7 V5.5+SP4/V5.6
SIMATIC PDM Client	• Microsoft Internet Explorer 10 or 11 • Google Chrome

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Selection and ordering data

	Article No.
SIMATIC PDM Stand alone product packages	
Minimum configuration	
SIMATIC PDM Single Point V9.1 including 1 TAG; product package for operation and configuration of one field device; communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS/PROFINET), Modbus, Ethernet or PROFINET	
Additional functions or SIMATIC PDM TAGs are not possible	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3HA68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) Note: Email address required!	**6ES7658-3HA68-0YH5**
Basic configuration for individual product package as well as local service and parameter assignment stations	
SIMATIC PDM Basic V9.1 including 4 TAGs; product package for operation and configuration of field devices and components; communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS/PROFINET), Modbus, Ethernet or PROFINET	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3AB68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) Note: Email address required!	**6ES7658-3AB68-0YH5**
Configuration for local service and parameter assignment station	
SIMATIC PDM Service V9.1 Product package for service and measuring circuit tests on a local service station, with • SIMATIC PDM Basic incl. 4 TAGs • 50 TAGs	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3JD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) Note: Email address required!	**6ES7658-3JD68-0YH5**
Configuration for central service and parameter assignment station	
SIMATIC PDM stand-alone server V9.1 Product package for service and device management in plant units, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Server - 2 × SIMATIC PDM 1 Client - 100 TAGs	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), single license for 1 installation	
Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3TX68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) Note: Email address required!	**6ES7658-3TX68-0YH5**

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Selection and ordering data

Article No.

SIMATIC PDM system-integrated product packages

Configuration for local SIMATIC S7 engineering and service station

SIMATIC PDM S7 V9.1

Product package for use in a SIMATIC S7 configuration environment, with
- SIMATIC PDM Basic incl. 4 TAGs
- SIMATIC PDM Extended
- SIMATIC PDM Integration in STEP 7/PCS 7
- 100 TAGs

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user

Without SIMATIC PCS 7 Software Media Package

- Goods delivery
  License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item — **6ES7658-3KD68-0YA5**
- Online delivery
  License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download)
  Note: Email address required! — **6ES7658-3KD68-0YH5**

Configuration for central SIMATIC PCS 7 engineering and service stations

SIMATIC PDM PCS 7 V9.1
Product package for use in a SIMATIC PCS 7 configuration environment

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information)

Floating license for 1 user, with
- SIMATIC PDM Basic incl. 4 TAGs
- SIMATIC PDM Extended
- SIMATIC PDM Integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- 100 TAGs

Without SIMATIC PCS 7 Software Media Package

- Goods delivery
  License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item — **6ES7658-3LD68-0YA5**
- Online delivery
  License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download)
  Note: Email address required! — **6ES7658-3LD68-0YH5**

SIMATIC PDM PCS 7-FF V9.1
Product package for use in a SIMATIC PCS 7 configuration environment, including FOUNDATION Fieldbus H1 communication

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information)

Floating license for 1 user, with
- SIMATIC PDM Basic incl. 4 TAGs
- SIMATIC PDM Extended
- SIMATIC PDM Integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Communication FOUNDATION Fieldbus
- 100 TAGs

Without SIMATIC PCS 7 Software Media Package

- Goods delivery
  License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item — **6ES7658-3MD68-0YA5**
- Online delivery
  License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download)
  Note: Email address required! — **6ES7658-3MD68-0YH5**

SIMATIC PDM PCS 7 Server V9.1
Product package for use in a SIMATIC PCS 7 configuration environment, including server functionality

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information)

Single license for 1 installation, with
- SIMATIC PDM Basic incl. 4 TAGs
- SIMATIC PDM Extended
- SIMATIC PDM Integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Server
- 100 TAGs

Without SIMATIC PCS 7 Software Media Package

- Goods delivery
  License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item — **6ES7658-3TD68-0YA5**
- Online delivery
  License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download)
  Note: Email address required! — **6ES7658-3TD68-0YH5**

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Selection and ordering data	Article No.
Optional product components for SIMATIC PDM	
SIMATIC PDM Extended V9.1 For enabling additional system functions	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3NX68-2YB5**
• Online delivery (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) License key download and online Certificate of License Note: Email address required!	**6ES7658-3NX68-2YH5**
SIMATIC PDM Integration in STEP 7/SIMATIC PCS 7 V9.1 For integration in a SIMATIC S7/SIMATIC PCS 7 configuration environment	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3BX68-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	**6ES7658-3BX68-2YH5**
SIMATIC PDM Routing V9.1 For plant-wide navigation to field devices	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3CX68-2YB5**
• Online delivery License key download, online Certificate of License Note: Email address required!	**6ES7658-3CX68-2YH5**
SIMATIC PDM Server V9.1 For activating the server functionality	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), single license for 1 installation	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive, Certificate of License	**6ES7658-3TX68-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	**6ES7658-3TX68-2YH5**
SIMATIC PDM Communication FOUNDATION Fieldbus V9.1 For communication with field devices on FOUNDATION Fieldbus H1	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3QX68-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	**6ES7658-3QX68-2YH5**
SIMATIC PDM HART Server V9.1 For using HART multiplexers as well as for configuration of WirelessHART field devices	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user	
Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3EX68-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	**6ES7658-3EX68-2YH5**

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Selection and ordering data

	Article No.
SIMATIC PDM 1 Client Cumulative client license for SIMATIC PDM configurations with SIMATIC PDM Server, software class A, single license for 1 installation	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3UA00-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	**6ES7658-3UA00-2YH5**
SIMATIC PDM TAGs TAG licenses for expanding the available TAG volume, cumulative, software class A, floating license for 1 user	
• Goods delivery License key on USB flash drive and Certificate of License	
- 10 TAGs	**6ES7658-3XC00-2YB5**
- 100 TAGs	**6ES7658-3XD00-2YB5**
- 1 000 TAGs	**6ES7658-3XE00-2YB5**
• Online delivery License key download and online Certificate of License Note: Email address required!	
- 10 TAGs	**6ES7658-3XC00-2YH5**
- 100 TAGs	**6ES7658-3XD00-2YH5**
- 1 000 TAGs	**6ES7658-3XE00-2YH5**

	Article No.
SIMATIC PDM Software Media Package	
SIMATIC PDM Software Media Package V9.1 Installation software without license, 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information) Without SIMATIC PCS 7 Software Media Package Note: Can only be used in conjunction with a valid license or in demo mode!	
• Goods delivery SIMATIC PDM and device library software on DVD	**6ES7658-3GX68-0YT8**
• Online delivery SIMATIC PDM and device library software download Note: Email address required!	**6ES7658-3GX68-0YG8**

More information

Update/Upgrade

Existing installations based on SIMATIC PDM V6.x or V8.x/V9.0 (including SP in each case) can be upgraded straight to V9.1 with upgrade packages.

Projects with SIMATIC PDM V7.0 can only be upgraded to version 9.1 by first upgrading to version 8.0. Two upgrade packages are offered for SIMATIC PDM V8.x/V9.0:

- SIMATIC PDM Upgrade Package Basic[1] (with/without SIMATIC PDM HART Server option in each case) for configurations based on:
  - SIMATIC PDM Basic
  - SIMATIC PDM Service
  - SIMATIC PDM S7
  - SIMATIC PDM PCS 7
- SIMATIC PDM Upgrade Package Complete[1] for configurations based on:
  - SIMATIC PDM PCS 7 Server
  - SIMATIC PDM PCS 7-FF

[1] Optional product components for SIMATIC PDM such as PDM Extended, PDM Integration in STEP 7/PCS 7, PDM Routing, PDM Server and PDM Communication FOUNDATION Fieldbus are each included in a product package listed in the SIMATIC PDM Upgrade Package Basic or SIMATIC PDM Upgrade Package Complete and are implicitly authorized to be updated via the corresponding license. The SIMATIC PDM Upgrade Package Complete is required for use of the product components PDM Server or PDM Communication FOUNDATION Fieldbus.

For more information, see the section "Update/upgrade packages", "Updates/upgrades asynchronous to the PCS 7 version" - "Upgrades SIMATIC PDM".

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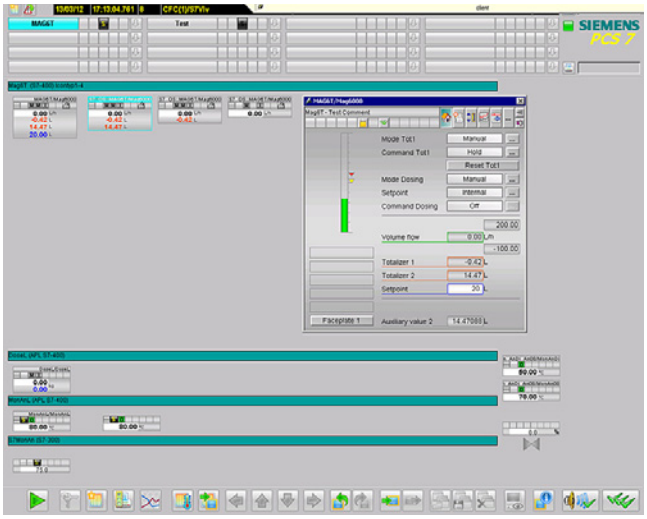
Overview



The SITRANS Library for SIMATIC PCS 7 V8.0 and higher extends the standard functionality of the SIMATIC PCS 7 process control system concentrated in the SIMATIC PCS 7 Advanced Process Library (APL) with technological blocks and faceplates for device-specific functions of the SITRANS field devices.

Benefits

The SITRANS Library allows you to easily operate all device functions, such as the dosing of the SITRANS F M MAG6000, in a single faceplate. It also supports operator control and monitoring via Touch Panels as well as the integration of SIMATIC S 7 applications (only SITRANS F M MAG6000). The SITRANS Library is based on the modern design of the Advanced Process Library (APL). Together with the APL, the SITRANS Library enables you to create harmonic overall solutions with a consistent look & feel and optimum use of the functions of the SITRANS field devices in many industries.

It helps accelerate the engineering process, reduces the time-to-market, and simplifies process control. In addition, operator functions (such as "dosing") and process-related diagnostic information (such as empty pipe detection and flow direction) are provided.

Note:

SITRANS Library can only be used in combination with SIMATIC PCS 7 V8.0 or higher.

Application

The SITRANS Library is best used in combination with SIMATIC PCS 7 and SITRANS field devices.

A current list of SITRANS field devices and the supported SIMATIC PCS 7 versions is available at https://support.industry.siemens.com/cs/ww/en/view/85285872

The SITRANS Library can be used for all core sectors of the process industry. These are:

- Chemical industry
- Pharmaceutical industry
- Water and wastewater
- Glass and solar
- Oil & gas
- Food and beverage industry
- Minerals and mining

Design

The product structure is geared toward the operational environment in the SIMATIC PCS 7 process control system. Consequently, SITRANS Library is offered in the form of an engineering component:

- SITRANS Library engineering software with engineering license
- SITRANS Library Runtime license for one automation project (SIMATIC PCS 7 automation systems of all designs and S7-300 controllers)

The SITRANS Library product component enables you to perform configuration work on a SIMATIC PCS 7 engineering station.

The SITRANS Library product component allows you to run blocks from a library on an automation system.

When using function blocks from SITRANS Library in SIMATIC PC 7 automation systems, please note that SIMATIC PCS 7 AS Runtime POs are also booked.

Function

SITRANS Library for SIMATIC PCS 7/SIMATIC S7

Sublibrary for the functional expansion of the SIMATIC PCS 7 Advanced Process Library with:

- Function blocks and faceplates for SITRANS field devices
- Function blocks and faceplates for SITRANS field devices for S7-400 and SIMATIC S7-300 with WinCC

The function blocks are configured in CFC.

Operator control and monitoring from a panel is configured with the panel interface blocks for the SITRANS F M MAG 6000 DP. Taking operating rights and hierarchical operating concepts (multi-control room operation) into consideration, the technological function can then be operated from both an operator station and a Touch Panel.

For detailed information on which field devices, which systems and system versions are supported as well as on the free download, see:

https://support.industry.siemens.com/cs/ww/en/view/85285872

Selection and ordering data

	Article No.
SITRANS Library Block library for SIMATIC PCS 7 as of V8.0 and SIMATIC S7 with function blocks and faceplates as well as electronic documentation Engineering software, software class A, two languages (English, German), can be run under the following operating systems: • Windows XP Professional 32 bit • Windows 7 Ultimate 32/64 bit • Windows Server 2003 R2 Standard 32-bit • Windows Server 2008 R2 Standard 64-bit Engineering license for one customer plant Type of delivery: free download	**7MP2990-0AA00**

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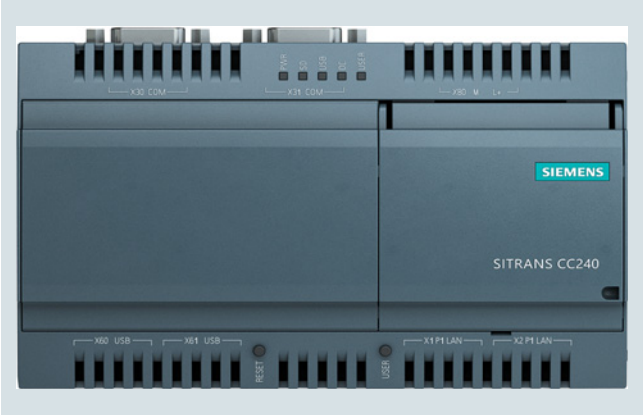
Overview



SITRANS CC240 is the industrial gateway connecting HART devices (via SITRANS MX300 multiplexer) to the IT environment.

Benefits

- Reads out data from HART devices, including versions 5, 6, and 7.
- Reads data from existing installations or stand alone.
- Uses an onboard web application for configuration and asset monitoring purposes.
- Publishes data using OPC UA information model based on Namur Open Architecture.
- Publishes data to Siemens MindSphere using MindConnect Library.
- Publishes data via a .csv file export function.

Application

When used in combination with SITRANS MX300, SITRANS CC240 can:

- Establish a second data channel to existing installations to read out identification, diagnostic and configuration parameters.
- Provide data from process field devices to the IT environment using standard technologies such as OPC UA.
- Connect process field devices to Siemens Mindsphere, for example, to provide SITRANS store IQ with inventory management data.

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Technical specifications

SITRANS CC240	
Installation type/mounting (characteristics)	
Design	IoT Gateway, built-in unit
Processor	
Processor type	Intel Quark X1020, 400 MHz
Drives	
Hard disk	1x microSD card slot; populated with 32 GB SDHC hosting OS and application
Memory	
Type of memory	DDR3-SDRAM
Main memory	1 GB RAM
Capacity of main memory max.	1 GB RAM
Ambient conditions	
Ambient temperature during operation	0 ... 50 °C (32 ... 122 °F)
Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30
• Operation	5 ... 85 % at 30 °C (86 °F), (no condensation)
• Storage/transport	5 ... 95 % at 25 ... 55 °C (77 ... 131 °F), (no condensation)
Degree of protection	
• IP degree of protection	IP20
• IP degree of protection (at the front)	IP20
Design	
Dimensions (W x H x D)	144 x 90 x 53 mm (5.7 x 3.5 x 2.1 inch)
Material	
• Enclosure	• Plastic enclosure • Resistant to vibrations and shocks • High electromagnetic compatibility, suitable for industrial environments.
Interfaces	
Ethernet interface	2 x LAN 10/100 Mbps Ethernet interface (RJ 45)
Serial interface	• 1 x COM port RS 485, for connection to SITRANS MX300 multiplexor • Sub-D9 connected to X30 interface
Integrated Functions	
Monitoring functions	
• Temperature monitoring	No
• Watchdog	Yes
• Status LEDs	Yes
• Fan	No

EMC[1]	
Interference immunity against discharge of static electricity	• ± 4 kV contact discharge acc. to IEC 61000-4-2; • ± 8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	• 10 V/m for 80 ... 1 000 MHz, 80 % AM acc. to IEC 61000-4-3 • 3 V/m for 1.4 ... 2 GHz, 80 % AM acc. to IEC 61000-4-3 • 1 V/m for 2 ... 2.7 GHz, 80 % AM acc. to IEC 61000-4-3 • 10 V for 150 kHz ... 80 MHz, 80 % AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	• ± 2 kV acc. to IEC 61000-4-4, burst • ± 1 kV acc. to IEC 61000-4-5, surge symmetric • ± 2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables > 30 m	± 2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30 m	± 2 kV in accordance with IEC 61000-4-4, burst, length > 30 m
Interference immunity against voltage surge[2]	
• Asymmetric interference	± 2 kV acc. to IEC 61000-4-5, surge asymmetric
• Symmetric interference	± 1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/AC current cables	EN 61000-6-4:2007 +A1:2011
Supply Voltage	
Isolated power supply	24 V DC (9 ... 36 V)
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
Certificates and approvals	
General	CE, UL, $_{C}UL_{US}$, KC
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007
Operating systems	
Operating system	Yocto Linux
Application	SITRANS CC240 software application

Note: Operating system and SITRANS CC240 software are preinstalled.

1) EMC standards meet immunity requirements for industrial environments.

2) Using an external surge arrestor is recommended. Please see SIMATIC IOT2040 Operating Instructions for more details: https://support.industry.siemens.com/cs/mdm/109741658?c=93713172491&lc=en-WW.

Selection and ordering data

	Article No.
SITRANS CC240 The Industrial gateway that connects up to 8 SITRANS MX300 with up to 64 HART field devices.	**7MP2200-1CC15-2AA0**

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Overview

SITRANS MX300 is a HART multiplexer for use with the industrial gateway SITRANS CC240. Used in combination, these devices can read and acquire data from HART networks of up to 64 instruments.

Benefits

- Connect up to 8 HART devices of revisions 5, 6, or 7, in any combination.
- Combine up to 8 SITRANS MX300 devices with one SITRANS CC240, using the backplane connection to conveniently read up to 64 HART devices
- Operate each channel selectively in slave mode (where there is an existing HART master) or in stand-alone mode (where there is no existing HART master), configurable using switches, 250 Ω for connection in series to the field devices or no load for the connection in parallel.
- Galvanically isolated channels allow the device to interface with different networks.
- Supports HART multidrop.
- Small footprint supports retrofitting of existing installations.

Application

When used in combination with SITRANS CC240, SITRANS MX300 can:

- Establish a second data channel for existing HART installations to read out identification, diagnostic and configuration parameters.
- Establish a physical connection to the HART device, ensuring proper handling of the HART communication protocol and avoid communication conflicts with additional HART masters that may be present on the 4 to 20 mA loop.

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Technical specifications

SITRANS MX300	
Installation type/mounting (characteristics)	
Mounting type	Rail mounting
Input current	
Current consumption (rated value)	10 mA (24 V)
Current consumption, max.	20 mA
Analog inputs	
Number of analog inputs	8
Permissible input current (destruction limit)	30 mA
Reverse polarity protection	Yes, for power supply, not applicable for HART inputs
Input ranges (rated values)	
0 ... 20 mA	Yes
• Input resistance (0 ... 20 mA)	250 Ω, switchable
4 ... 20 mA	Yes
• Input resistance (4 ... 20 mA)	250 Ω, switchable
Ambient conditions	
Ambient temperature during operation	-40 ... +50 °C (-40 ... +122 °F)
Horizontal installation	-40 ... +60 °C (-40 ... +140 °F)
Vertical installation	-40 ... +50 °C (-40 ... +122 °F)
Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30
• Operation	5 ... 80 % at 30 °C (86 °F) (no condensation)
• Storage/transport	5 ... 80 % at 25 ... 55 °C (77 ... 131 °F) (no condensation)
Design	
Dimensions (W x H x D)	144 x 90 x 53 mm (5.7 x 3.5 x 2.1 inch)
Weight	100 g (0.2 lb), without connectors
Material	
• Enclosure	• Plastic enclosure • Resistant to vibrations and shocks • High electromagnetic compatibility, suitable for industrial environments
Degree and class of protection	
• IP degree of protection	IP20
• IP degree of protection (at the front)	IP20
Cable length	
Shielded, max.	200 m
Electrical isolation	
Between the channels	Yes
Between the channels and backplane bus/RS 485	Yes
Between the channels and load voltage L+	Yes
Isolation tested	1 500 V DC/1 min., type test
EMC[1)]	
Interference immunity against discharge of static electricity	• ± 4 kV contact discharge acc. to IEC 61000-4-2 • ± 8 kV air discharge acc. to IEC 61000-4-2

SITRANS MX300	
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	• 10 V/m for 80 ... 1 000 MHz, 80 % AM acc. to IEC 61000-4-3 • 3 V/m for 1.4 ... 2 GHz, 80 % AM acc. to IEC 61000-4-3 • 1 V/m for 2 ... 2.7 GHz, 80 % AM acc. to IEC 61000-4-3 • 10 V for 150 kHz ... 80 MHz, 80 % AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	• ± 2 kV acc. to IEC 61000-4-4, burst • ± 1 kV acc. to IEC 61000-4-5, surge symmetric • ± 2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables > 30 m	± 2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30 m	± 2 kV in accordance with IEC 61000-4-4, burst, length > 30 m
Interference immunity against voltage surge	
Asymmetric interference	± 1 kV acc. to IEC 61000-4-5, surge asymmetric
Symmetric interference[2)]	± 1 kV acc. to IEC 61000-4-5, surge asymmetric
Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
Interference emission via line/AC current cables	EN 61000-6-4:2007 +A1:2011
Supply voltage	
Isolated power supply	24 V DC (9 ... 35 V) via backplane connector (limit 35 V)
Rated value	24 V DC
Permissible range, lower limit	9 V DC
Permissible range, upper limit	35 V DC
Reverse polarity protection	Yes
Certificates and approvals	
General	• CE • $_{C}UL_{US}$ (in preparation)
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007
Communication	• 8 x 4/20 mA HART input • 1 x RS 485 interface via backplane connector

[1)] EMC standards meet immunity requirements for industrial environments

[2)] If there are voltage peaks on the power supply lines, use a protective device such as a varistor (MOV) UMOV = Urated x 1.2 (BLITZDUCTOR BVT AVD 24 (918 422) or compatible).

Selection and ordering data

	Article No.
SITRANS MX300 HART multiplexer, 8 channels to connect up to 8 HART devices, 24 V DC supply voltage, rail mounting.	**7MP2200-1AD10-2AA0**

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Overview

HART is a widely used communication standard for field devices. HART devices are specified by the FieldComm Group.

The HART standard expands the analog 4 to 20 mA signal to modulated, industry-tested, digital signal transmission.

Benefits

- Tried-and-tested analog measured value transmission
- Simultaneous digital communication with bidirectional data transfer
- Possibility to transfer multiple measured variables from a field device (e.g. diagnostics, maintenance and process information)
- Connection to higher-level systems such as PROFIBUS DP.
- Easy installation and commissioning

Benefits in connection with SIMATIC PDM

- Manufacturer-neutral operation of all HART devices through standardized parameter sets
- HART field devices described by HART DLL are integrated in SIMATIC PDM via the Fieldcomm catalog. HART-DD (Device Description) in SIMATIC PDM standardized, manufacturer-neutral and very widely used. Additional field devices are integrated in SIMATIC PDM via EDD (Electronic Device Description)
- Simple operation and commissioning of field devices, even in usage locations that are difficult to access
- Advanced diagnostics, evaluating and logging functions

Application

Devices can be connected in different ways:

- Through the distributed I/O
  - SIMATIC ET 200M, ET 200SP
  - SIMATIC ET 200iSP with the HART modules
  or with analog modules 4 to 20 mA and HART Handheld Communicator,
- via a HART modem with which a point-to-point connection between the PC or Engineering System and the HART device can be established
- via HART multiplexers which are contained in the HART server of the HCF.

Integration

Siemens field devices listed in this catalog for process automation that can be controlled with HART:

Measuring instruments for pressure

SITRANS P300
SITRANS P310
SITRANS P320
SITRANS P DS III
SITRANS P410
SITRANS P420
SITRANS P500

Measuring instruments for temperature

SITRANS TF
SITRANS TH300
SITRANS TH320
SITRANS TH420
SITRANS TR300
SITRANS TR320
SITRANS TR420
SITRANS TW

Flow meters

SITRANS FM MAG 5000
SITRANS FM MAG 6000 19" / IP67
SITRANS FM MAG 6000 I / I Ex
SITRANS FM TRANSMAG 2
SITRANS FC MASS 6000 19" / IP67 / Ex d
SITRANS FC FCT030
SITRANS FS FST030
SITRANS FUS060
SITRANS FX300
SITRANS FX330

Level meters

SITRANS Probe LR
SITRANS Probe LU
SITRANS LUT400
SITRANS Probe LU240
SITRANS LR200
SITRANS LR250
SITRANS LR260
SITRANS LR460
SITRANS LG 240 / LG 250 / LG 260 / LG270

Electropneumatic positioners

SIPART PS2

Power supply units and isolation amplifiers

SITRANS I

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Overview

Today, distributed automation solutions based on open fieldbuses are standard in many areas of the manufacturing industry and in process engineering. It is only with fieldbuses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnostics options and remote parameterization.

Today, PROFIBUS is the most successful open fieldbus with a large installed base for a wide range of applications. Standardization according to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- Fully modular system, from the sensor through to the control level, permits new plant concepts
- Problem-free exchangeability of field devices, including from different manufacturers, that comply with the standard profile
- Networking of transmitters, valves, actuators, etc.
- Implementation of intrinsically safe applications through use of the field bus in hazardous areas
- Easy installation of 2-wire cables for joint power supply and data transfer
- Reduced cabling costs through savings of material and installation time
- Reduced configuration costs through central, simple engineering of the field devices (PROFIBUS PA and HART with SIMATIC PDM, also with multi-vendor support)
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnostics options
- Greatly reduced commissioning costs through simplified loop check
- Scaling/digitizing of the measured value in the field device already, hence no rescaling necessary in SIMATIC PCS 7

Application

PROFIBUS is suitable for fast communication with distributed I/O (PROFIBUS DP) in production automation as well as for communication tasks in process automation (PROFIBUS PA). It is the first fieldbus system that meets the demands of both areas with identical communication services.

The transfer technology of PROFIBUS PA is tailored to the requirements of the process industry. The standardized communications services guarantee interoperability between multi-vendor field devices and remote configuration of the field devices during operation.

With SIMATIC PDM (Process Device Manager), a universal tool that is not manufacturer-specific and is used for configuring, parameterizing, commissioning and diagnosing intelligent process devices on PROFIBUS, a variety of process devices of different manufacturers can be configured using a uniform graphic user interface.

PROFIBUS PA can be used both in standard environments and in hazardous areas. For use in hazardous areas, PROFIBUS PA and all connected devices have to be designed with type of protection Ex [i].

The uniform protocol of PROFIBUS DP and PROFIBUS PA enables the linking of both networks and thus the combination of timing performance and intrinsically safe transmission technology.

Function

PROFIBUS PA expands PROFIBUS DP with process-level components for direct connection of actuators and sensors. With PROFIBUS PA, the RS 485 transmission method is replaced by a different transmission method optimized for intrinsically safe applications. Both methods are standardized internationally in IEC 61158.

PROFIBUS PA uses the same communication protocol as DP; communication services and frames are identical.

With PROFIBUS PA, the information and energy supply for supplying the field devices can be conducted via a 2-wire cable.

Integration

Siemens field devices for process automation listed in this catalog that can be controlled with PROFIBUS:

PROFIBUS PA

Measuring instruments for pressure
SITRANS P300
SITRANS P DS III
SITRANS P410

Measuring instruments for temperature
SITRANS TH400

Flow meters
SITRANS FM MAG 6000 19" / IP67
SITRANS FM MAG 6000 I / I Ex
SITRANS FM TRANSMAG 2
SITRANS FC MASS 6000 19" / IP67 / Ex d
SITRANS FUS060

Level meters
Pointek CLS 200
Pointek CLS 300
SITRANS Probe LU
SITRANS LR200
SITRANS LR250
SITRANS LR260
SITRANS LR460

Electropneumatic positioners
SIPART PS2

Acoustic sensors for pump monitoring
SITRANS DA400

PROFIBUS DP

Measuring instruments for temperature
SITRANS TO500

Flow meters
SITRANS FM MAG 6000 19" / IP67
SITRANS FM MAG 6000 I
SITRANS FC MASS 6000 19" / IP67
SIFLOW FC070 (via ET 200M)

Level meters
HydroRanger 200
MultiRanger 100/200
SITRANS LU 01, LU 02, LU 10

Acoustic sensors for pump monitoring
SITRANS DA400

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Overview

Today, distributed automation solutions based on open field buses are state-of-the-art in large areas of the process engineering industry. It is only with fieldbuses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnostics options and remote parameterization.

Like PROFIBUS PA, the FF bus (FOUNDATION Fieldbus) is an open field bus with a large installed base for a wide range of application. Standardization according to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- A uniform modular system from the sensor to the connection to the control level enables new plant concepts
- Problem-free exchangeability of field devices, including from different manufacturers, that comply with the standard profile
- Networking of transmitters, valves, actuators, etc.
- Implementation of intrinsically safe applications through use of the field bus in hazardous areas
- Easy installation of 2-wire cables for joint energy supply and data transfer
- Reduced cabling costs through savings of material and installation time
- Reduced configuration costs through central, simple engineering of the field devices, also cross-vendor
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnostics options
- Greatly reduced commissioning costs through simplified loop check
- Scaling/digitizing of the measured values in the field device already, hence no rescaling necessary in SIMATIC PCS 7

Application

The transfer technology of the FOUNDATION Fieldbus is tailored to the needs of the process industry. Interoperability between field devices from different manufacturers and remote parameterization of the field devices during operation are guaranteed by the standardized communication services.

FOUNDATION Fieldbus can just as readily be used in standard environments as in hazardous areas. For use in hazardous areas, FOUNDATION Fieldbus and all connected devices have to be designed with type of explosion protection Ex [i].

Function

FOUNDATION Fieldbus enables the direct connection of actuators and sensors.

FOUNDATION Fieldbus is based on a transfer optimized for intrinsically safe application. The transfer technology is internationally standardized in IEC 61158.

For FOUNDATION Fieldbus the data and energy supply for the field devices can be directed through a 2-wire cable.

FOUNDATION Fieldbus enables device-to-device communication ("control in the field").

Integration

Siemens field devices for process automation which are listed in this catalog and can be controlled using Foundation Fieldbus:

Measuring instruments for pressure

SITRANS P300

SITRANS P DS III

SITRANS P410

Measuring instruments for temperature

SITRANS TH400

Electropneumatic positioners

SIPART PS2

Flow meters

SITRANS FM MAG 6000

SITRANS FM MAG 6000 I / I Ex

SITRANS FC MASS 6000

Level meters

SITRANS LR250

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Notes