Brochures

For brochures serving as selection guides for SIMATIC products refer to:

www.siemens.com/simatic/printmaterial

Siemens ST 70 · 2015

Software for SIMATIC controllers

Introduction

Software for SIMATIC controllers

Overview

- System of seamlessly interconnected software tools for SIMATIC S7 and SIMATIC WinAC
- With user-friendly functions for all phases of an automation project
- Comprising:
  - Controller software in the TIA Portal
  - STEP 7 programming software
  - Options for programming and design
  - Options for diagnostics and service
  - Options for engineering and drive systems

■ **Overview Licensing**

Siemens Digital Factory offers various types of software license.

For further information, see catalog section 16, page 16/17

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■ **Overview Software Update Service**

- Service for automatic dispatch of all new software versions during contract lifetime
- Reduced logistics effort thanks to automatic contract extension
- Reduced costs as updates are provided free of charge

Ordering

- The Software Update Service is ordered in the same way as any other product. The corresponding order number is given in the ordering information of the software product in question.
- You must own the current version of the software.
- One Software Update Service is ordered for each software license installed.
- The Software Update Service runs for 1 year from date of order.
- It is extended automatically by a further year in each case, as long as it is not canceled 3 months before it expires.
- An annual lump sum is invoiced per license.

■ **Application**

SIMATIC software is continuously enhanced and improved. The **Software Update Service** is the easiest way to regularly take advantage of these improvements. This service automatically sends new software updates when they are released so you always have the latest version.

The Software Update Service

- Saves time and effort:
  Once it is ordered, the Software Update Service is automatically renewed every year.
- Lowers costs:
  The service pays for itself after the first update as it costs less than an individually ordered update.
- Makes budgeting easier:
  Software expenditures can be accounted for early in the budgeting process and they are easier to write off.
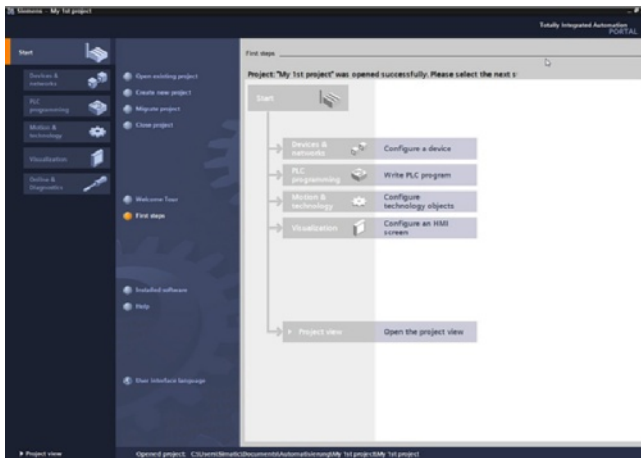
■ **Design**

Scope of delivery

- All software versions released after ordering the Software Update Service (usually several consignments per year)
- SIMATIC Customer Support Knowledge Base CD-ROM with FAQs, tips & tricks and downloads (several issues per year)

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Software for SIMATIC controllers
Controller Software in the TIA Portal

STEP 7 (TIA Portal)

■ **Overview**

STEP 7 V13 SP1 (TIA Portal), portal view
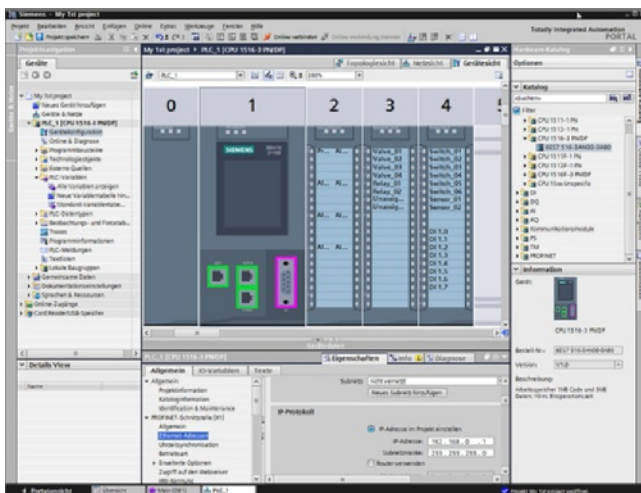
STEP 7 V13 SP1 (TIA Portal), device view: configuring and parameterizing in photographically realistic representation

Intuitive, efficient and future-oriented - the engineering software for programming the SIMATIC controllers

SIMATIC STEP 7 Professional V13 SP1 is the engineering system for the SIMATIC controllers S7-1200, S7-1500, S7-300, S7-400, WinAC and software controllers.

SIMATIC STEP 7 Basic V13 SP1 is the engineering system for the S7-1200.

STEP 7 V13 is based on the central engineering framework Totally Integrated Automation Portal (TIA Portal), which offers the user a uniform, efficient and intuitive solution to all automation tasks.

New with V13 SP1

- Supports the new SIMATIC Open controllers
- Systematic further development of language elements for programming
- Functional enhancements for team engineering
- Scalable online security options
- "Undo" is activated in online mode
- Simulation for S7-1200 V4.0 and higher
- API engineering of STEP 7 and WinCC
- Multiple usability expansions for efficient engineering

Technical specifications

	STEP 7 Professional / Basic V13 SP1 (TIA Portal)
Type of license	Floating license
Software class	A
Current version	V13 SP1
Target system	SIMATIC S7-1200, S7-1500, S7-300, S7-400, WinAC, software controllers
Operating system	Windows 7 (64-bit) • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 Windows 8.1 (64-bit) • Windows 8.1 • Windows 8.1 Professional • Windows 8.1 Enterprise Windows Server (64-bit) • Windows Server 2008 R2 StdE SP1 (full installation) • Windows Server 2012 R2 StdE (full installation)

	STEP 7 Professional / Basic V13 SP1 (TIA Portal)
Computer	SIMATIC Field PG M4 PREMIUM or higher (or comparable PC)
Processor	Intel Core i5-3320M 3.3GHz or higher
RAM	min. 8 GB
Hard disk	300 GB SSD
Screen	15.6" widescreen display (1920 x 1080)
Note	Includes the IEC programming languages SCL, LAD, FBD, STL and GRAPH

Compatibility with other SIMATIC products

STEP 7 Professional / Basic V13 SP1 (incl. WinCC Basic V13 SP1) can be installed on a PC in parallel with other versions of STEP 7 V12, V5.4 or V5.5, STEP 7 Micro/WIN, WinCC flexible (from 2008), S7-PCT (from V3.3) and WinCC (from V7.0 SP2).

Ordering data

	Article No.
STEP 7 Professional / Basic V13 SP1 Target system: SIMATIC S7-1200, S7-1500, S7-300, S7-400, WinAC Requirement: Windows 7 Professional SP1 (64 bit), Windows 7 Enterprise SP1 (64 bit), Windows 7 Ultimate SP1 (64 bit), Windows 8.1 (64 bit), Windows 8.1 Professional (64 bit), Windows 8.1 Enterprise (64 bit), Windows Server 2008 R2 StdE (full installation), Windows Server 2012 StdE (full installation) Form of delivery: German, English, Chinese, Italian, French, Spanish	
STEP 7 Professional V13 SP1, Floating License	6ES7822-1AA03-0YA5
STEP 7 Professional V13 SP1, Floating License, software download incl. license key [1] E-mail address required for delivery	6ES7822-1AE03-0YA5
STEP 7 Professional V13 SP1, Trial License	6ES7822-1AA03-0YA7
STEP 7 Professional 2010/V13 SP1, Floating Combo License; on DVD	6ES7810-5CC11-0YA5
STEP 7 Professional 2010/V13 SP1, Floating Combo License, license key download [1] without software and documentation; E-mail address required for delivery	6ES7810-5CE11-0YB5

	Article No.
Conversion package STEP 7 Professional V13 SP1 Only valid if ordered together with a Software Update Service 6ES7810-5CC04-0YE2 (STEP 7 Professional and STEP 7 Professional in the TIA Portal).	
• Powerpack & upgrade from STEP 7 V5.5 to STEP 7 Professional 2010/V13 SP1, floating license. Prerequisite is an existing STEP 7 Software Update Service.	6ES7822-1AA03-0XC2
• Powerpack & upgrade from STEP 7 V5.5 to STEP 7 Professional 2010/V13 SP1, floating license. Prerequisite is an existing STEP 7 Software Update Service. Software download incl. license key [1] E-mail address required for delivery	6ES7822-1AE03-0XC2
Upgrade STEP 7 Professional V12 to STEP 7 Professional V13 SP1, Floating License	6ES7822-1AA03-0YE5
Upgrade from STEP 7 Prof. V12 to STEP 7 Professional V13 SP1, Floating License, software download incl. license key [1] E-mail address required for delivery	6ES7822-1AE03-0YE5

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

Software for SIMATIC controllers
## Controller Software in the TIA Portal

STEP 7 (TIA Portal)

Ordering data	Article No.
Upgrade from STEP 7 Prof. 2006/2010 to STEP 7 Professional 2010/V13 SP1, Floating License	6ES7822-1AA03-0XE5
Upgrade from STEP 7 Prof. 2006/2010 to STEP 7 Professional 2010/V13 SP1, Floating License, software download incl. license key[1] E-mail address required for delivery	6ES7822-1AE03-0XE5
Powerpack & upgrade from STEP 7 V5.4/V5.5 to STEP 7 Professional 2010/V13 SP1, Floating License.	6ES7822-1AA03-0XC5
Powerpack & upgrade from STEP 7 V5.4/V5.5 to STEP 7 Professional 2010/V13 SP1, Floating License, software download incl. license key[1] E-mail address required for delivery	6ES7822-1AE03-0XC5
Powerpack STEP 7 Basic V13 SP1 to STEP 7 Professional V13 SP1, Floating License	6ES7822-1AA03-0YC5
Powerpack STEP 7 Basic V13 SP1 to STEP 7 Professional V13 SP1, Floating License, software download incl. license key[1] E-mail address required for delivery	6ES7822-1AE03-0YC5
STEP 7 Basic V13 SP1, Floating License	6ES7822-0AA03-0YA5
STEP 7 Basic V13 SP1, Floating License, software download incl. license key[1] E-mail address required for delivery	6ES7822-0AE03-0YA5
STEP 7 Basic V13 SP1, Trial License	6ES7822-0AA03-0YA7
Upgrade STEP 7 Basic V12 to STEP 7 Basic V13 SP1, Floating License	6ES7822-0AA03-0YE5
Upgrade STEP 7 Basic V12 to STEP 7 Basic V13 SP1, Floating License, software download incl. license key[1] E-mail address required for delivery	6ES7822-0AE03-0YE5

	Article No.
Software Update Service For a period of 12 months and for a fixed price, the customer is automatically provided with all upgrades and service packs for each installed software package. The contract is automatically extended by a further year unless canceled at least 12 weeks prior to expiration. Requires the current software version	
Software Update Service (Standard Edition)[2] The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.) • STEP 7 Professional V1x • STEP 7 Professional and STEP 7 Professional in the TIA Portal • STEP 7 Basic	 6ES7822-1AA00-0YL5 6ES7810-5CC04-0YE2 6ES7822-0AA00-0YL0
Software Update Service (Compact Edition)[2] The delivery items are combined. For several contracts, only 1 package with 1 data medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of COLs will be supplied. Delivery items to be combined must be ordered as one item. • STEP 7 Professional V1x • STEP 7 Professional and STEP 7 Professional in the TIA Portal • STEP 7 Basic	 6ES7822-1AA00-0YM5 6ES7810-5CC00-0YM2 6ES7822-0AA00-0YM0
Software Update Service (download)[2] The upgrades and service packs are available for downloading. E-mail address required for delivery • STEP 7 Professional V1x • STEP 7 Professional and STEP 7 Professional in the TIA Portal • STEP 7 Basic	 6ES7822-1AE00-0YY0 6ES7810-5CC04-0YY2 6ES7822-0AE00-0YY0

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

[2] For more information on the Software Update Service, see page 11/3.

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Overview
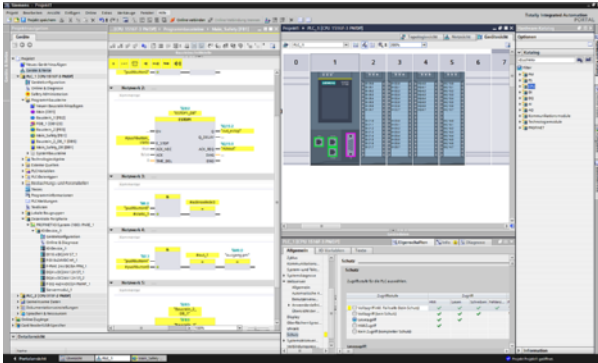
- For creating safety-related programs on the STEP 7 operator interface
- For seamless and easy to use integration of safety-related functions into the standard automation
- All the required configuration and programming tools are integrated into the STEP 7 operator interface and utilize a common project structure
- STEP 7 Safety Basic option package for parameter assignment and programming of the fail-safe S7-1200
- STEP 7 Safety Advanced option package for all fail-safe TIA SIMATIC controller classes (S7-1500, S7-1200, S7-300, S7-400, WinAC)

Ordering data

	Article No.		Article No.
STEP 7 Safety Advanced V13 SP1		**Software Update Service (download)**[1]	6ES7833-1FC00-0YY0
Task: Engineering tool for configuring fail-safe user programs for SIMATIC S7-1200 FC, S7-1500F, S7-300F, S7-400F, WinAC RTX F, ET 200SP F controllers, ET 200SP, ET 200S, ET 200M, ET 200iSP, ET 200pro, ET 200eco Requirement: STEP 7 Professional V13 SP1		Requires the current software version. E-mail address required for delivery.	
		STEP 7 Safety Advanced Upgrade	
Floating license for 1 user, software and documentation on DVD, license key on USB flash drive	6ES7833-1FA13-0YA5	Upgrade from Distributed Safety V5.4 SP5 to STEP 7 Safety Advanced V13 SP1 for parallel use of both versions; software and documentation on DVD, license key on USB flash drive; Combo License	6ES7833-1FA13-0YF5
Floating license for 1 user, software, documentation and license key for download[2]; e-mail address required for delivery	6ES7833-1FA13-0YH5	Upgrade from Distributed Safety V5.4 SP5 to STEP 7 Safety Advanced V13 SP1 for parallel use of both versions; software, license key and documentation for download[2]; Combo License; e-mail address required for delivery	6ES7833-1FA13-0YY5
Software Update Service (Standard Edition)[1]	6ES7833-1FC00-0YX2		
The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.) Requires the current software version.		Upgrade from STEP 7 Safety Advanced V11/V12 to STEP 7 Advanced Safety V13 SP1 for parallel use of both versions; software and documentation on DVD, license key on USB flash drive; Upgrade License	6ES7833-1FA13-0YE5
Software Update Service (Compact Edition)[1]	6ES7833-1FC00-0YM2	Upgrade from STEP 7 Safety Advanced V11/V12 to STEP 7 Advanced Safety V13 SP1 for parallel use of both versions; Upgrade License; software, license key and documentation for download[2]; e-mail address required for delivery	6ES7833-1FA13-0YK5
The delivery items are combined. For several contracts, only 1 package with 1 data medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of COLs will be supplied. The deliveries that are to be grouped together must be ordered as one item. Requires the current software version. Minimum order quantity: 5 units			

[1] For more information on the software update Service, see page 11/3.
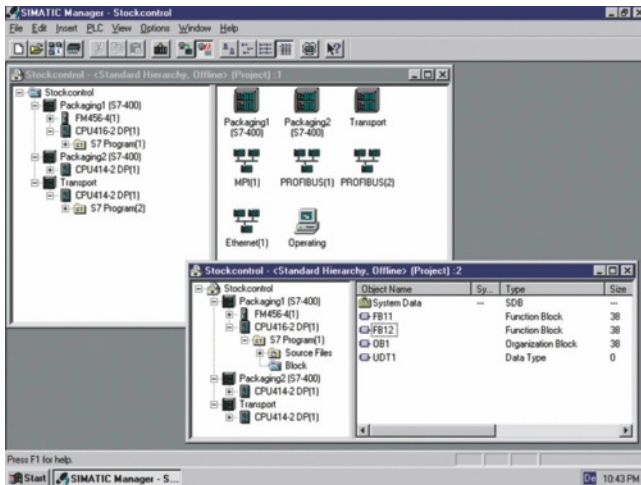[2] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Software for SIMATIC controllers
Controller Software in the TIA Portal

STEP 7 Safety (TIA Portal)

Ordering data	Article No.		Article No.
STEP 7 Safety Advanced Powerpack		**STEP 7 Safety Basic V13 SP1**	
Powerpack STEP 7 Safety Basic V13 SP1 to STEP 7 Safety Advanced V13 SP1; license key on USB flash drive; Floating license for 1 user	**6ES7833-1FA13-0YC5**	Task: Engineering tool for configuring fail-safe user programs for SIMATIC S7-1200 FC Requirement: STEP 7 Basic V13 SP1 and higher	
Powerpack STEP 7 Safety Basic V13 SP1 to STEP 7 Safety Advanced V13 SP1; license key for download[2]; Floating license for 1 user; e-mail address required for delivery	**6ES7833-1FA13-0YJ5**	Floating license for 1 user, software and documentation on DVD, license key on USB flash drive	**6ES7833-1FB13-0YA5**
STEP 7 Safety Advanced V13 SP1 Trial	**6ES7833-1FA13-0YA8**	Floating license for 1 user, software, documentation and license key for download[1]; e-mail address required for delivery	**6ES7833-1FB13-0YH5**
Trial License, valid for 21 days; software and documentation on DVD; executable with TIA Portal V13 SP1 from STEP 7 Professional V13 SP1 and higher; for configuring S7-1200 FC, S7-1500F, S7-300F, S7-400F, WinAC F			

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Overview

- STEP 7 basic software:
  The standard tool for the SIMATIC S7, SIMATIC C7 and SIMATIC WinAC automation systems.
- Makes use of the full performance capabilities of the systems
- User-friendly functions for all phases of an automation project:
  - Configuring and parameterizing the hardware
  - Definition of communication
  - Programming
  - Testing, commissioning and service
  - Documentation, archiving
  - Operating, diagnostics functions

Components for connecting a PC to MPI and PROFIBUS

The components described below are used to connect programming devices and PCs (incl. notebooks) to PROFIBUS and to the multipoint SIMATIC S7 MPI interface in conjunction with STEP 7.

PC adapter USB

- To connect a PC to the SIMATIC S7 programmable controller via the USB port.
- For connection to USB 1.1 and 2.0 interfaces.
- Can be used for SIMATIC S7-200, S7-300, S7-400 and C7.
- Supports routing.
- Automatic transmission rate and profile search.
- Noticeably improved performance (up to three times faster than the PC adapter via RS 232).
- Including subsequently updatable firmware (e.g. for function expansions or troubleshooting).
- Can be used under Windows XP, Windows Vista, Windows 7 (32/64-bit).
- Scope of delivery:
  - PC adapter USB.
  - CD "SIMATIC Software PC Adapter USB" including software and documentation.
  - USB cable, 5 m.
  - MPI cable, 0.3 m.

CP 5512

- For programming devices/ PCs/notebooks with PCMCIA slot.
- PCMCIA slot Type II (32-bit cardbus).
- Incl. adapter with 9-pin sub-D socket for connection to PROFIBUS.

CP 5611/CP 5611-MPI

- For programming devices/PCs with PCI slot
- Short PCI card (32 bit).
- CP 5611-MPI including MPI cable.

Components for connecting the PC to Industrial Ethernet

The PC modules described below are used to connect programming devices and AT-compatible PCs/notebooks to Industrial Ethernet in conjunction with STEP 7 and SOFTNET-PG (as of V6.0).

CP 1512

- For programming devices/ PCs/notebooks with PCMCIA slot.
- PCMCIA slot Type II (32-bit cardbus); 10/100 Mbit/s.
- Incl. adapter with RJ45 socket for connection to Industrial Ethernet.

CP 1612

- For programming devices/PCs with PCI slot
- Short PCI card (32 bit); 10/100 Mbit/s
- Incl. RJ45 socket for connection to Industrial Ethernet.

Please refer to the respective product catalog for technical information regarding product versions and supported operating systems.

You will find additional information about the online connection of PCs and SIMATIC S7/C7 controllers under "SIMATIC NET Communication Systems".

Technical specifications

Standard tool	STEP 7
Type of license	Floating license
Software class	A
Current version	V 5.5
Target system	SIMATIC S7-300 SIMATIC S7-400
Operating system	Windows XP Professional
	Windows 7 Professional, Windows 7 Ultimate
Main memory expansion in programming device/PC, min.	Depends on Microsoft Windows operating system used. Recommendation: 1 to 2 GB
Hard drive requirement in programming device/PC	Depending on scope of installation, 650 to 900 MB
Size of user program in the CPU	approx. factor 1.5 compared with STEP 5 with AWL (STL - instruction list), KOP (LAD - ladder diagram), FUP (FBD - function block diagram)
Comment	-

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Software for SIMATIC controllers
STEP 7 programming software

STEP 7

■ Ordering data

Ordering data	Article No.		Article No.

	Article No.
STEP 7 Version 5.5	
Target system: SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC Requirement: Windows XP Prof., Windows 7 Professional / Ultimate Delivery package: German, English, French, Spanish, Italian; incl. license key on USB flash drive, with electronic docu- mentation	
Floating license on DVD	**6ES7810-4CC10-0YA5**
Floating license, license key download without software and documentation[1]; e-mail address required for delivery	**6ES7810-4CE10-0YB5**
Rental license for 50 hours	**6ES7810-4CC10-0YA6**
Rental License for 50 hours, license key download without software and documentation[1]; e-mail address required for delivery	**6ES7810-4CE10-0YB6**
Upgrade Floating license 3.x/4.x/5.x to V5.5; on DVD	**6ES7810-4CC10-0YE5**
Trial License STEP 7 V5.5; on DVD, 14 day trial	**6ES7810-4CC10-0YA7**
STEP 7 Version 5.5 Japanese	
Target system: SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC Requirement: Windows XP Professional Japanese Delivery package: English, Japanese; incl. license key on USB flash drive, with electronic documentation	
Floating license Japanese on DVD	**6ES7810-4CC10-0JA5**
Upgrade Floating license Japanese 3.x/4.x/5.x to V5.5; on DVD	**6ES7810-4CC10-0JE5**
STEP 7 Version 5.5, Chinese	
Target system: SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC Requirement: Windows XP Professional Chinese Delivery package: English, Chinese; incl. license key on USB flash drive, with electronic documentation	
Floating license Chinese on DVD	**6ES7810-4CC10-0KA5**
Upgrade Floating license Chinese 3.x/4.x/5.x to V5.5; on DVD	**6ES7810-4CC10-0KE5**
Documentation package STEP 7 basic information	
Comprising Getting Started, hardware configuration manual, programming manual, migration manual	
German	**6ES7810-4CA10-8AW0**
English	**6ES7810-4CA10-8BW0**
French	**6ES7810-4CA10-8CW0**
Spanish	**6ES7810-4CA10-8DW0**
Italian	**6ES7810-4CA10-8EW0**

	Article No.
STEP 7 reference manuals	
Consisting of STL, LAD and FBD manuals as well as a reference manual for standard and system functions for SIMATIC S7-300/400	
German	**6ES7810-4CA10-8AW1**
English	**6ES7810-4CA10-8BW1**
French	**6ES7810-4CA10-8CW1**
Spanish	**6ES7810-4CA10-8DW1**
Italian	**6ES7810-4CA10-8EW1**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**
Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**
Current "Manual Collection" DVD and the three subsequent updates	
EPROM programming device, USB prommer	**6ES7792-0AA00-0XA0**
For programming SIMATIC memory cards and EPROM modules	
MPI cable	**6ES7901-0BF00-0AA0**
For linking SIMATIC S7 and PG through MPI (5 m)	
Components for connecting a PC to MPI and PROFIBUS	
For PCs with a free PCI slot:	
CP 5612	**6GK1561-2AA00**
For PCs with a free PCMCIA slot:	
CP 5512	**6GK1551-2AA00**
For Windows XP Professional	
For PCs without a free PCI slot:	
USB A2 PC adapter	**6GK1571-0BA00-0AA0**
For connecting a PG/PC or Notebook to PROFIBUS or MPI; USB cable included in scope of delivery	
Components for connecting the PC to Industrial Ethernet	
For PCs with a free PCI slot:	
Layer 2 Ethernet cards	
For PCs with a free PCMCIA slot:	
SOFTNET-IE RNA V7.1 (Win XP/Vista/Server2003)	**6GK1704-1PW71-3AA0**
SOFTNET-IE RNA V8.1 (Win 7/Server2008)	**6GK1704-1PW08-1AA0**

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Overview

STEP 7 Professional supports all IEC languages.

In addition to the languages recognized by STEP 7

- LAD
- FBD
- IL

The following are also available:

- "Sequential Function Chart"
- "Structured Text"

An offline simulation of programs created with these languages is included. STEP 7 Professional thus replaces the combination of the individual packages STEP 7, S7-GRAPH, S7-SCL and S7-PLCSIM.

A POWERPACK is offered to customers who use STEP 7 already and wish to change. A valid STEP 7 license is required for purchasing the POWERPACK. A separate update service is available for STEP 7 Professional.

Technical specifications

Standard tool	STEP 7 Professional
Type of license	Floating license
Software class	A
Current version	Edition 2010
Target system	SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7
Operating system	Windows XP Professional Windows 7 Professional Windows 7 Ultimate
Main memory expansion in programming device/PC, min.	Depends on Microsoft Windows operating system used. Recommendation: 1 to 2 GB
Hard drive requirement in programming device/PC	Depending on scope of installation, 700 to 1000 MB
Size of user program in the CPU	approx. factor 1.5 compared with STEP 5 with AWL (STL - instruction list), KOP (LAD - ladder diagram), FUP (FBD - function block diagram)
Comment	Includes all 5 IEC programming languages KOP (LAD - ladder diagram), FUP (FBD - function block diagram), AWL (STL - instruction list), SCL (structured control language), GRAPH and the PLC simulation software S7-PLCSIM

Ordering data

	Article No.
STEP 7 Professional 2010/V13 Target system: SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC Requirement: Windows XP Prof. (32-bit), Windows 7 Professional / Ultimate (32/64-bit) Available in: German, English, French, Spanish, Italian; license key on USB flash drive, with electronic documentation	
Floating Combo License on DVD	6ES7810-5CC11-0YA5
Floating license, license key download[1] without software and documentation; e-mail address required for delivery	6ES7810-5CE11-0YB5
Rental License for 50 hours	6ES7810-5CC11-0YA6
Rental License for 50 hours, license key download[1] without software and documentation; e-mail address required for delivery	6ES7810-5CE11-0YB6
Upgrade of Floating license to 2010 Edition; on DVD	6ES7810-5CC11-0YE5
Powerpack Floating license for upgrading from STEP 7 to STEP 7 Professional	6ES7810-5CC11-0YC5
Trial License STEP 7 Professional 2010; on DVD, runs for 14 days	6ES7810-5CC11-0YA7

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Software for SIMATIC controllers
STEP 7 programming software

STEP 7 Professional

Ordering data   **Article No.**

	Article No.		Article No.
Software Update Service		**SIMATIC Manual Collection**	6ES7998-8XC01-8YE0
For a period of 12 months and for a fixed price, the customer is automatically provided with all upgrades and service packs for each installed software package. The contract is automatically extended by a further year unless canceled at least 12 weeks prior to expiration. Requires the current software version		Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
Software Update Service (Standard Edition)[1]		**SIMATIC Manual Collection update service for 1 year**	6ES7998-8XC01-8YE2
The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.)		Current "Manual Collection" DVD and the three subsequent updates	
• STEP 7 Professional and STEP 7 Professional in the TIA Portal	6ES7810-5CC04-0YE2	**EPROM programming device, USB prommer**	6ES7792-0AA00-0XA0
Software Update Service (Compact Edition)[1]		For programming SIMATIC memory cards and EPROM modules	
The delivery items are combined. For multiple contracts, only 1 package with 1 data medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of COLs will be supplied.		**MPI cable**	6ES7901-0BF00-0AA0
		For linking SIMATIC S7 and PG through MPI (5 m)	
		Components for connecting a PC to MPI and PROFIBUS	
		For PCs with a free PCI slot:	
Delivery items to be combined must be ordered as one item.		**CP 5612**	6GK1561-2AA00
• STEP 7 Professional and STEP 7 Professional in the TIA Portal	6ES7810-5CC00-0YM2	*For PCs with a free PCMCIA slot:*	
		CP 5512	6GK1551-2AA00
		For Windows XP Professional	
Software Update Service (download)[1]		*For PCs without a free PCI slot:*	
The upgrades and service packs are available for downloading.		**USB A2 PC adapter**	6GK1571-0BA00-0AA0
E-mail address required for delivery		For connecting a PG/PC or Notebook to PROFIBUS or MPI; USB cable included in scope of delivery	
• STEP 7 Professional and STEP 7 Professional in the TIA Portal	6ES7810-5CC04-0YY2	**Components for connecting the PC to Industrial Ethernet**	
Documentation package STEP 7 basic information		*For PCs with a free PCI slot:*	
Comprising Getting Started, hardware configuration manual, programming manual, migration manual		**Layer 2 Ethernet cards**	
		For PCs with a free PCMCIA slot:	
German	6ES7810-4CA10-8AW0	**SOFTNET-IE RNA V7.1 (Win XP/Vista/Server2003)**	6GK1704-1PW71-3AA0
English	6ES7810-4CA10-8BW0	**SOFTNET-IE RNA V8.1 (Win 7/Server2008)**	6GK1704-1PW08-1AA0
French	6ES7810-4CA10-8CW0		
Spanish	6ES7810-4CA10-8DW0		
Italian	6ES7810-4CA10-8EW0		
STEP 7 reference manuals			
Consisting of STL, LAD and FBD manuals as well as a reference manual for standard and system functions for SIMATIC S7-300/400			
German	6ES7810-4CA10-8AW1		
English	6ES7810-4CA10-8BW1		
French	6ES7810-4CA10-8CW1		
Spanish	6ES7810-4CA10-8DW1		
Italian	6ES7810-4CA10-8EW1		

[1] For more information on the Software Update Service, see page 11/3.

11

Overview

- The simple, easy to learn programming software under Windows 2000/XP for the SIMATIC S7-200
- A large number of wizards support the programming even of difficult automation tasks
- For fast startup and timesaving programming
- With large scope of functions
- Based on standard Windows software (user interface similar to standard applications, such as Microsoft Word, Outlook)
- With 3 standard editors STL, LAD and FBD; you can switch between these editors at any time
- Generation, exporting and importing of user-specific libraries (including standard commands and user-defined subroutines)
- Documentation CD with manuals, software tools and example programs as support

Technical specifications

Standard tool	STEP 7 Micro/WIN
Type of license	Single license
Software class	A
Current version	V 4.0
Target system	SIMATIC S7-200
Operating system	Windows XP SP3 (32-bit) Windows 7 (32/64-bit)
Main memory expansion in programming device / PC, min.	32 MB
Hard drive requirement in programming device / PC	50 MB
Size of user program in the CPU	approx. factor of 1.0 compared with STEP 5 for STL and LAD

Ordering data | Article No.

STEP 7-Micro/WIN V4 programming software	
Target system: All SIMATIC S7-200 CPUs Requirement: Windows XP (32-bit), Windows 7 (32/64-bit); on PG or PC Delivery package: German, English, French, Spanish, Italian, Chinese; with online documentation	
Single license	**6ES7810-2CC03-0YX0**
Single license upgrade[1]	**6ES7810-2CC03-0YX3**
To be ordered separately:	
Intelligent RS 232/PPI multi-master cable	**6ES7901-3CB30-0XA0**
For connecting devices with RS 232 interface to SIMATIC S7-200 or PPI network; master in multi-master PPI network	
Intelligent USB/PPI multi-master cable	**6ES7901-3DB30-0XA0**
For connecting devices with USB interface to SIMATIC S7-200 or PPI network; master in multi-master PPI network	
Components for connecting a PC to MPI and PROFIBUS	
For PCs with a free PCI slot:	
CP 5612	**6GK1561-2AA00**
For PCs with a free PCMCIA slot:	
CP 5512	**6GK1551-2AA00**
For Windows XP Professional	
For PCs without a free PCI slot:	
USB A2 PC adapter	**6GK1571-0BA00-0AA0**
For connecting a PG/PC or Notebook to PROFIBUS or MPI; USB cable included in scope of delivery	

[1] Upgrade for all previous STEP 7 Micro/WIN and STEP 7 Micro/DOS versions

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Software for SIMATIC controllers
STEP 7 programming software

S7-SCL

Overview

- PASCAL-type high-level language
- Optimized for programming pogrammable logic controllers
- With PLCopen Base Level certificate
- For use in SIMATIC S7-300 (recommended for CPU 314 and CPU 312C or higher), S7-400, C7 and WinAC

Technical specifications

Engineering Tool	S7-SCL
Current version	V5.3
Software class	A
Application areas	
Can be used for	Text-based high-level language programming of simple and complex calculations, CASE, loop, jump, and comparison functions
Marketing message	Programming of algorithms and calculations made easy!
Advantages	• Clear and easy-to-read programs • Functional, module-based programming • CASE instruction replaces a large number of jump and comparison functions • Easily understood by PLC programmers, as the programming philosophy of LAD/FBD/STL is retained • Easy switchover to PLC programming for PC programmers • Exchangeability (porting) of subroutines in accordance with IEC 61131-3 • Less time required for engineering compared to LAD/FBD/STL: Up to 20% for simple programs; at least 50% for demanding program structures
Sectors	• Labeling machines • Chemical plants (e.g. oxygen extraction, evaluation of measured values) • Rubber and plastics machines • Woodworking machines • Storage and logistics systems • Paper and printing machinery • Punching and cutting machines • Water industry • Coilers
Target systems	
Can be used in	S7-300 (CPU 313 or higher and CPU 312C or higher recommended)
	S7-400
	C7 (C7-626 or higher recommended)
	WinAC
System prerequisites	
Operating system	Windows XP Professional Windows 7 Ultimate/Professional (S7-SCL V5.3 SP5 and higher)
Required hard drive memory in the PG/PC	50 MB
Required software	STEP 7 V5.4 or higher
Properties	
Monitoring tags	Yes
Controlling tags	Yes
Single-step processing	Yes
Integration in CFC	Yes
Program runtimes	
with S7-300 (typical)	Similar to LAD/FBD/STL
with S7-400 (typical)	Similar to LAD/FBD/STL

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■ Technical specifications (continued)

Engineering Tool	S7-SCL
Diagnostics	
Integration of diagnostic data in ProAgent	-
Integration of diagnostic data in ProTool/Pro	-
Integration of diagnostic data in WinCC	-
Supported standards	
IEC 61131-3	PLCopen certification • Base level ST available • Reusability Level ST available
Available versions/licenses	
Floating license	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License on USB stick
	Certificate of License
	Product information
Upgrade (floating license)	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License on USB stick
	Certificate of License
	Product information
Software Update Service (SUS)	
Also a component part of	
STEP 7 Professional	Yes
S7 Trainer Package	Yes
PCS 7	Yes
D7-SYS	-

■ Ordering data | Article No.

SIMATIC S7 SCL, Version 5.3

Task:
High-level language programming
Target system:
SIMATIC S7-300 (CPU 314 and higher), SIMATIC S7-400, SIMATIC C7, SIMATIC WinAC
Requirement:
STEP 7 V5.4 SP5 and higher
Type of delivery:
on CD; German, English, French, Spanish, Italian; incl. authorization diskette, with electronic documentation

Floating license	**6ES7811-1CC05-0YA5**
Software Update Service (requires current software version)[1]	**6ES7811-1CA01-0YX2**
Upgrade floating to V5.3	**6ES7811-1CC05-0YE5**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**

Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC

SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**

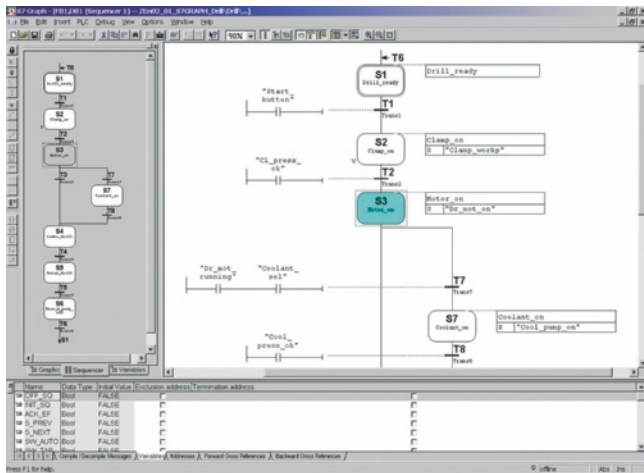Current "Manual Collection" DVD and the three subsequent updates

[1] For more information on the Software Update Service, see page 11/3.

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Software for SIMATIC controllers
STEP 7 programming software

S7-GRAPH

Overview

- For configuring and programming sequential processes using sequencers
- Standardized representation to DIN EN 1131-3
- Clearly comprehensible program thanks to structuring of the process into separate steps
- With extensive diagnostics functions, integrated into the SIMATIC diagnostics concept
- With PLCopen Base Level certificate
- For use in SIMATIC S7-300 (recommended for CPU 315 and CPU 312C or higher), S7-400, C7 and WinAC

Technical specifications

Engineering Tool	S7-GRAPH
Current version	V5.3
Software class	A
Application areas	
Can be used for	Graphical programming of sequential controllers and sequencers
Marketing message	Fast, elegant way to program sequential processes easily and transparently!
Advantages	• Can be used to optimum effect even during the design phase • Less configuration effort thanks to graphical structuring and programming • Quick and easy familiarization • Precise fault localization thanks to integrated diagnostics in combination with ProAgent for ProTool/Pro and WinCC • Less time required for engineering compared to LAD/FBD/STL: approx. 40 to 70%
Sectors	• Automotive industry (e.g. body-in-white, final assembly) • Electrical equipment manufacture • Rubber and plastics machines • Pick-and-place machines • Woodworking machines • Metalworking machines • Paper and printing machinery • Testing machines • Rolling mills • Coilers • Leisure and entertainment facilities
Target systems	
Can be used in	S7-300 (CPU 314 or higher and CPU 312C or higher recommended)
	S7-400
	C7 (C7-626 or higher recommended)
	WinAC
System prerequisites	
Operating system	Windows XP Professional Windows 7 Professional Windows 7 Ultimate
Required hard drive memory in the PG/PC	50 MB
Required software	STEP 7 V5.4 with SP4 or SP5 or STEP 7 V5.5 with or without SP1
Properties	
Monitoring tags	Yes
Controlling tags	Yes
Single-step processing	Yes
Integration in CFC	-
Program runtimes	
with S7-300 (typical)	3 ms per block + 1 ms per active step
with S7-400 (typical)	0.4 ms per block + 0.06 ms per active step

■ **Technical specifications** (continued)

Engineering Tool	S7-GRAPH
Diagnostics	
Integration of diagnostic data in ProAgent	Yes
Integration of diagnostic data in ProTool/Pro	Via ProAgent
Integration of diagnostic data in WinCC	Via ProAgent
Supported standards	
IEC 61131-3	PLCopen certification • Base Level SFC available
Status of PLCopen activities	-
Available versions/licenses	
Floating license	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License key on USB stick
	Certificate of License
	Product information
Upgrade (floating license)	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License key on USB stick
	Certificate of License
	Product information
Software Update Service (SUS)	
Also a component part of	
STEP 7 Professional	Yes
S7 Trainer Package	Yes
PCS 7	-
D7-SYS	-

■ **Ordering data**   **Article No.**

SIMATIC S7 GRAPH, Version 5.3

Task:
Configuration and programming of sequences
Target system:
SIMATIC S7-300, SIMATIC S7-400, SIMATIC C7, SIMATIC WinAC
Requirement:
STEP 7 V5.4 with SP4/SP5 or STEP 7 V5.5 with or without SP1
Type of delivery:
on CD; German, English, French, Spanish, Italian; including license key on USB flash drive, with electronic documentation

Floating license	**6ES7811-0CC06-0YA5**
Software Update Service (requires current software version)[1]	**6ES7811-0CA01-0YX2**
Floating license upgrade to V5.3	**6ES7811-0CC06-0YE5**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**

Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC

SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**

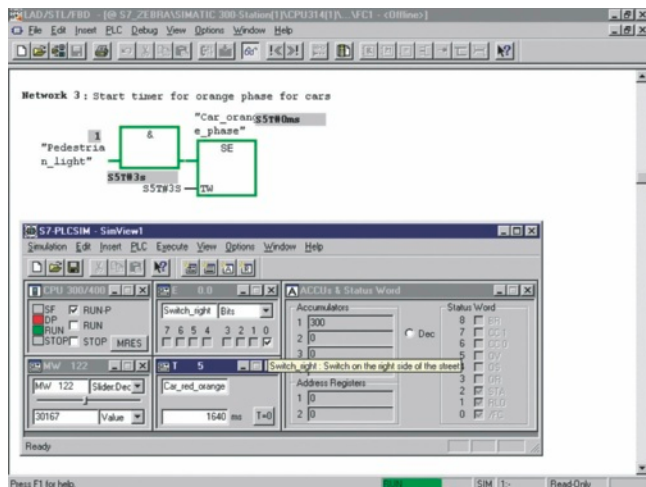Current "Manual Collection" DVD and the three subsequent updates

[1] For more information on the Software Update Service, see page 11/3.

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Software for SIMATIC controllers
STEP 7 programming software

S7-PLCSIM

Overview

- For functional testing of the generated SIMATIC S7 user blocks on the PG/PC, independent of the availability of the target hardware
- To transfer detection and elimination of program faults to an early phase of program development
- Permits accelerated, cost-reduced initial commissioning, and an increase in program quality
- Can be used for LAD, FBD, STL, S7-GRAPH, S7-HiGraph, S7-SCL, CFC, S7-PDIAG, WinCC (local installation)

Technical specifications

Engineering Tool	S7-PLCSIM
Type of license	Floating license
Software class	A
Current version	V5.4
Target system (recommended)	SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7
Operating system	Windows XP Professional Windows 7 Professional Windows 7 Ultimate
Required software packages	STEP 7 V5.4 with SP4 or SP5 or STEP 7 V5.5 with or without SP1
Disk space required in PG/PC	5 MB

Ordering data | Article No.

|	
S7-PLCSIM, Version 5.4	
Task: Function testing of SIMATIC S7 application blocks on PG/PC Target system: SIMATIC S7-300, SIMATIC S7-400, SIMATIC C7 Requirement: STEP 7 V5.4 or higher incl. SP4/SP5 or STEP 7 V5.5 with or without SP1 Type of delivery: on CD; English, German, French, Spanish, Italian; license key on USB flash drive, with electronic documentation	
Floating license	**6ES7841-0CC05-0YA5**
Software Update Service (requires current software version)[1]	**6ES7841-0CA01-0YX2**
Floating license upgrade to V5.4	**6ES7841-0CC05-0YE5**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**
Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**
Current "Manual Collection" DVD and the three subsequent updates	

[1] For more information on the Software Update Service, see page 11/3.

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Overview
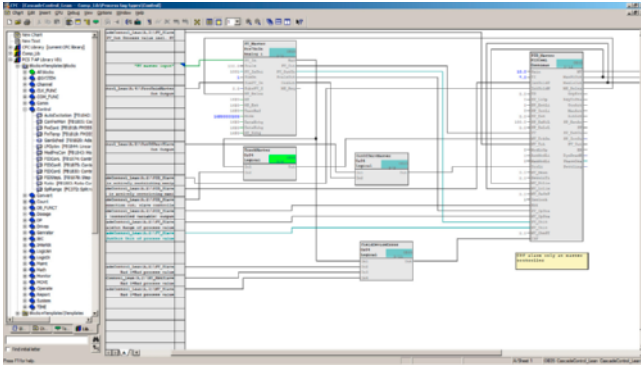
- For the generation of automation programs by drawing a function chart
- With extensive libraries of ready-made software blocks to which user-created blocks can be added
- Minimized outlay and reduced error susceptibility due to the interconnection of ready-made blocks
- Optimized integration in the world of automation, for example, through guaranteed compatibility with all STEP 7 tools
- Can be used for SIMATIC S7-300 (recommended for CPU 316 or CPU 314C or higher), SIMATIC S7-400, SIMATIC WinAC and D7-SYS

Technical specifications

EngineringTool	CFC
Current version	V8.1
Software class	A
Application areas	
Can be used for	Graphical creation, interconnection and parameterization of (preconfigured) blocks and functions
Marketing message	Simply interconnect and configure instead of programming!
Advantages	• Can be used to optimum effect even during the design phase • Reduced configuration effort thanks to graphical interconnection • High degree of reusability of diagrams that have already been created • Quick and easy familiarization • Quick and transparent interconnection of ready-made functions • Technological creation of the program as a whole • Clear representation of control loop structures • Short commissioning time • High plant availability • Less time required for engineering compared to LAD/FBD/STL: up to 50%
Sectors	• Automotive industry (e.g. thermostats, tire production processes) • Chemicals • Power engineering and supply • Rubber and plastics machines • Metalworking machines • Food and beverage machines • Petrochemicals • Rolling mills • Water industry • Coilers
Target systems	
Can be used in	S7-300
	S7-400
	F/H systems
	WinAC
System prerequisites	
Operating system	MS Windows XP Professional SP3 MS Windows Server 2003 SP2 Standard MS Windows Server 2003 R2 SP2 MS Windows 7 SP1 Ultimate 32-bit MS Windows 7 SP1 Ultimate 64-bit MS Windows Server 2008 SP2 32-bit MS Windows Server 2008 R2 SP1 64-bit MS Windows 7 Professional SP1 32-bit MS Windows 7 Professional SP1 64-bit MS Windows Vista 32-bit SP2 Ultimate MS Windows Vista 32-bit SP2 Business
Required hard drive memory in the PG/PC	approx. 80 MB
Required software	STEP 7 V5.4 SP5 or higher

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Software for SIMATIC controllers
Options for programming and design

CFC

■ Technical specifications (continued)

EngineringTool	CFC
Properties	
Monitoring tags	Yes
Controlling tags	Yes
Single-step processing	-
Integration in CFC	Yes
Program runtimes	
with S7-300 (typical)	Depending on the interconnected blocks
with S7-400 (typical)	Depending on the interconnected blocks
Diagnostics	
Integration of diagnostic data in ProAgent	-
Integration of diagnostic data in ProTool/Pro	-
Integration of diagnostic data in WinCC	-
Supported standards	
IEC 61131-3	based on the IEC standard
Status of PLCopen activities	-
Available versions/licenses	
Floating license (S7-HiGraph) or single license (CFC)	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License Key Disk
	Terms and Conditions
	Certificate of License
Floating license (S7-HiGraph) or single license (CFC)	CD-ROM with • Tool • Electronic manual • Getting Started guide • Examples
	License Key Disk
	Emergency Key Disk
	Certificate of License
	Terms and Conditions
	Product information
Software Update Service (SUS)	
Also a component part of	
STEP 7 Professional	-
S7 Trainer Package	-
PCS 7	Yes
D7-SYS	Yes

■ Ordering data | Article No.

SIMATIC CFC, Version 8.1

Task:
Graphic configuring and programming of automation applications in the form of function charts
Target system:
SIMATIC S7-300/400, SIMATIC WinAC, D7-SYS
Requirements:
STEP 7 V5.4 SP5 and higher
Type of delivery:
Engineering software and electronic documentation on CD-ROM, License Key on USB flash drive, Certificate of License

Floating license	**6ES7658-1EX18-0YA5**
Floating license upgrade from V8.0 to V8.1	**6ES7658-1EX18-0YE5**
Software Update Service (requires current software version)[1]	**6ES7658-1EX00-2YL8**
Software Update Service for multiple orders (requires current software version); the delivery items are combined. For several contracts, only 1 package (1 data medium set and the corresponding number of licenses) will be supplied. Can be ordered with 5 or more contracts[1]	**6ES7658-1EX00-2YM8**

The delivery items to be combined must be ordered as one item.

SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**

Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC

SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

[1] For more information on the Software Update Service, see page 11/3.

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▪ Overview

- For creating safety-oriented automation applications with SIMATIC S7 in LAD or FBD (STEP 7 required)
- Implementation of safety functions by making simple connections between function blocks
- With preconfigured function block library
- User-defined blocks can be created
- Optimum embedding in the automation world due to guaranteed integration with STEP 7 tools
- Scope of supply:
  - Distributed Safety editor
  - Code generator
  - Debugger
  - Libraries of standard blocks

▪ Ordering data

	Article No.
S7 Distributed Safety V5.4 programming tool	
Task: Configuration software for configuring fail-safe user programs for SIMATIC S7-300F, S7-400F, WinAC RTX F, ET 200S, ET 200M, ET 200iSP, ET 200pro, ET 200eco Requirement: STEP 7 V5.3 SP3 and higher	
Floating license for 1 user	**6ES7833-1FC02-0YA5**
Floating license for 1 user, license key download without software or documentation[2]; e-mail address required for delivery	**6ES7833-1FC02-0YH5**
S7 Distributed Safety upgrade	
From V5.x to V5.4; Floating license for 1 user	**6ES7833-1FC02-0YE5**

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Software for SIMATIC controllers
Options for programming and design

■ Overview
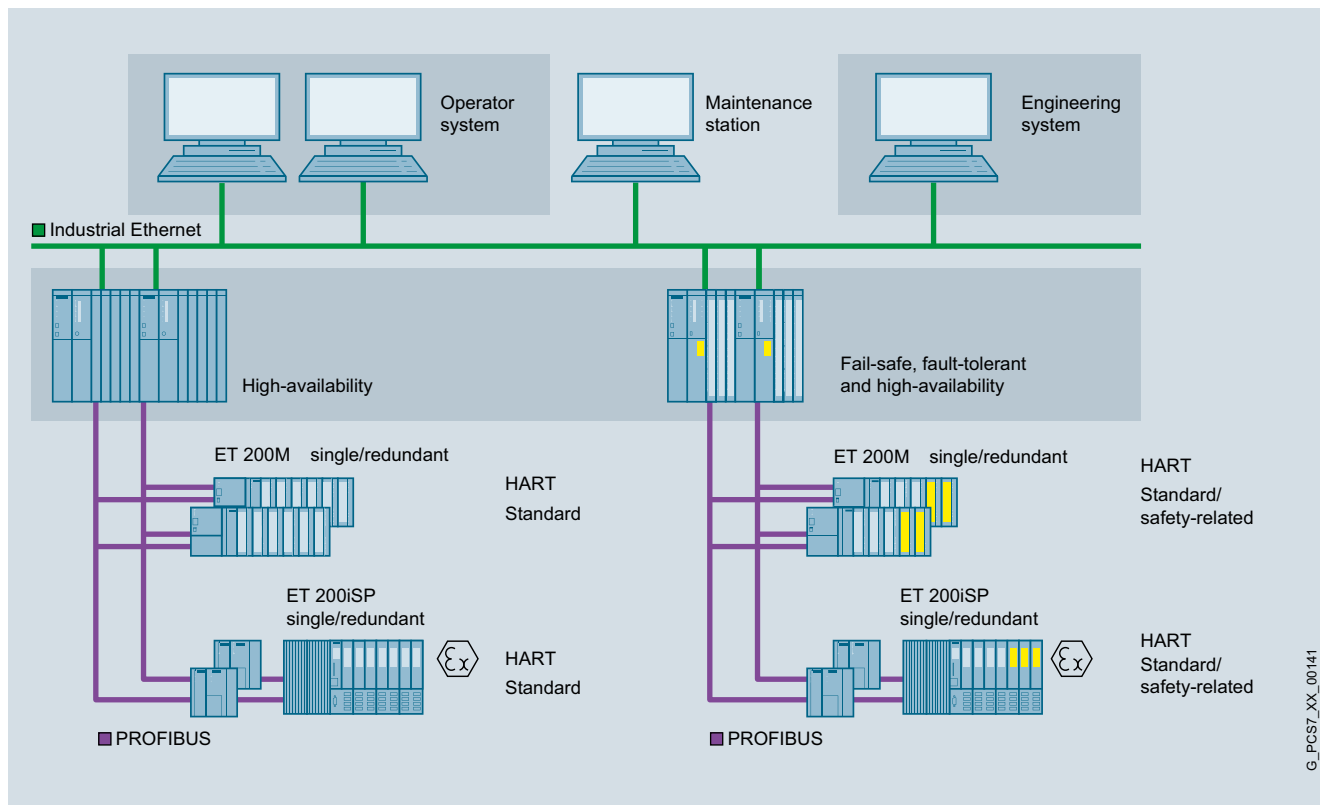
Common engineering system for basic process control system and safety instrumented system

The process industry frequently features complex technological sequences with high safety demands, and faults and failures in the process automation could have fatal consequences for personnel, machines, plants and the environment. Therefore process safety is of particular significance. The safety technology used must reliably detect errors in the process and also its own internal errors, and automatically set the plant/application to a safe state if an error is detected.

S7 F/FH Systems is the comprehensive range of products and services from Siemens for safe, fault-tolerant applications in the process industry. This is characterized by:

- Safe communication via PROFIBUS with PROFIsafe
- Safe communication also via PROFIBUS PA with PROFIsafe
- ET 200 distributed I/O systems with safety-related I/O modules
- User-friendly process visualization, including safety-relevant fault messages, via the optional operator system
- Engineering system with S7 F Systems software package and SIMATIC Safety Matrix

- AS 412F/FH, AS 414F/FH and AS 417F/FH safety-related automation systems
  The safety-related automation systems of the S7 F/FH-System are based on the hardware of the CPU 412H, CPU 414H or CPU 417H that are extended with the S7 F Systems software package to include safety functions. All F/FH systems listed are TÜV-certified and comply with the safety requirements up to SIL 3 according to IEC 61508. There are two design variants:
  - Single-channel (with one CPU, safety-related)
  - High-availability (with redundant CPUs, safety-related and fault-tolerant)

Overview
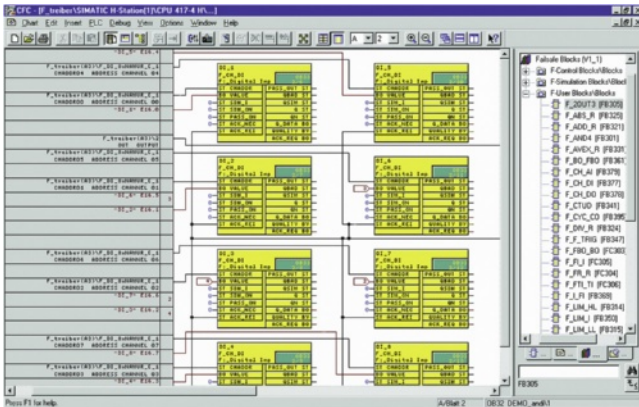
The S7 F Systems engineering tool integrated in the SIMATIC Manager can be used to configure an S7 F/FH System. With this tool you can:

- Parameterize CPU and F-signal modules
- Create safety-related applications in the CFC.

Predefined, TÜV-approved blocks are available for this purpose. The safety-related blocks save the user having to perform redundant programming for detecting and reacting to errors.

Ordering data

	Article No.
S7 F Systems RT license For processing safety-related application programs, for one AS 412F/FH, AS 414F/FH or AS 417F/FH	**6ES7833-1CC00-6YX0**
S7 F Systems V6.1 Programming and configuring environment for creating and operating safety-related STEP 7 programs for an S7 400H-based target system, floating license for 1 user, executable under Windows XP Prof SP2/SP3, Windows Server 2003 SP2 2 languages (German, English) Type of supply: Certificate of license as well as software and electronic documentation on CD	**6ES7833-1CC02-0YA5**
S7 F Systems upgrade from V5.x/V6.0 to V6.1 2 languages (German, English), floating license for 1 user Type of supply: Certificate of license as well as software and electronic documentation on CD	**6ES7833-1CC02-0YE5**

Note:
In the case of an S7 F Systems Upgrade from V5.x to V6.1, the type of S7 F Systems license changes from single license to floating license.

Software for SIMATIC controllers
Options for programming and design

S7 F/FH Systems - SIMATIC Safety Matrix

Overview

The SIMATIC Safety Matrix which can be used in addition to the CFC is an innovative safety lifecycle tool from Siemens that can be used not only for user-friendly configuration of safety applications, but also for their operation and service. The tool, which is based on the proven principle of a cause & effect matrix, is ideally suited to processes where defined statuses require specific safety reactions.

The SIMATIC Safety Matrix not only means that programming of the safety logic is significantly simpler and more convenient, but also much faster than in the conventional manner. During the risk analysis of a plant, the configuration engineer can assign exactly defined reactions (effects) to events (causes) which may occur during a process.

Ordering data

|	Article No.
SIMATIC Safety Matrix Tool V6.2	
Creation, configuration, compilation, loading and online monitoring of the Safety Matrix in a SIMATIC PCS 7 environment	
Including SIMATIC Safety Matrix Viewer for SIMATIC PCS 7, for operation and monitoring of the Safety Matrix in a SIMATIC PCS 7 environment with several operator control levels	
1 language (English), executes with Windows XP Prof. SP3, Windows Server 2003 SP2, Windows 7 Ultimate, Windows Server 2008 R2	
Type of supply: Certificate of License and authorization diskette for Safety Matrix Tool and Safety Matrix Viewer; software and electronic documentation on CD	
Floating license for 1 installation	6ES7833-1SM02-0YA5
Floating license upgrade from V5.x/V6.x to V6.2	6ES7833-1SM02-0YE5
SIMATIC Safety Matrix Editor V6.2	6ES7833-1SM42-0YA5
Creation and checking of the Safety Matrix logic on an external computer without a SIMATIC PCS 7 or STEP 7 environment	
1 language (English), executes with Windows XP Prof. SP3, Windows Server 2003 SP2, Windows 7 Ultimate, Windows Server 2008 R2, single license for 1 installation	
Type of supply: Certificate of License and authorization diskette; software and electronic documentation on CD	
SIMATIC Safety Matrix Viewer V6.2 for SIMATIC PCS 7	
Operation and monitoring of the Safety Matrix in the SIMATIC PCS 7 environment with several operating levels Bilingual (English/German), runs on Windows XP Prof. SP3, Windows Server 2003 SP2, Windows 7 Ultimate, Windows Server 2008 R2 Type of supply: Certificate of License and authorization diskette; software and electronic documentation on CD	
Floating license for 1 installation	6ES7833-1SM62-0YA5
Floating license upgrade from V6.x to V6.2	6ES7833-1SM62-0YE5

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Overview
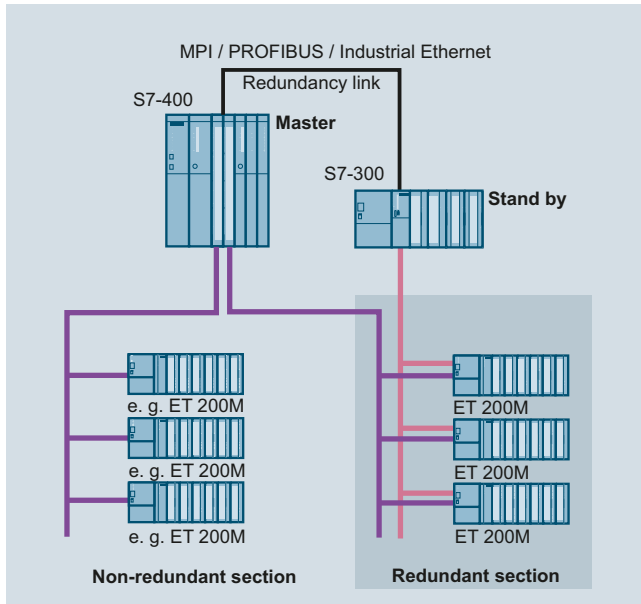
- Software package for assembling fault-tolerant control systems based on software
- Designed for control systems with single-channel distributed I/O
- For use in applications with low demands on changeover speed, such as the control of hydroelectric power plants, cooling circuits, traffic flows, level control, measured data acquisition
- Inexpensive thanks to the use of standard S7-300 and S7-400 components
- I/O linking with PROFIBUS DP in redundant configuration
- Optional control via WinCC operator station

Technical specifications

Hardware requirements	
CPU	S7-300: CPU 313C-2 DP, 314C-2 DP, 315-2 DP, 316-2 DP, 318-2 DP S7-400: all CPUs
Redundancy link of the CPUs	MPI, PROFIBUS, Industrial Ethernet; existing connections can also be used.
Suitable modules for ET 200M	IM 153-2; all DI/O, AI/O for ET 200M; FM 350-1 counter module CP 341
Software requirements	
Configuring/programming	STEP 7 V4.0
Communication configuration for redundant PROFIBUS DP	NCM S7 for PROFIBUS

Ordering data · Article No.

	Article No.
Program package software redundancy V1.2 Task: Configuring a redundant control. Target system: SIMATIC S7-300, S7-400 Requirement: STEP 7 V5.2, NCM S7 for PROFIBUS Delivery package: incl. electronic documentation (English, German, French, Spanish, Italian), 4 application examples and faceplate for WinCC on CD-ROM	
Single license (for 2 CPUs)	**6ES7862-0AC01-0YA0**
Single license, without software and documentation	**6ES7862-0AC01-0YA1**
SIMATIC Manual Collection Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	**6ES7998-8XC01-8YE0**
SIMATIC Manual Collection update service for 1 year Current "Manual Collection" DVD and the three subsequent updates	**6ES7998-8XC01-8YE2**

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Software for SIMATIC controllers
Options for programming and design

■ Overview
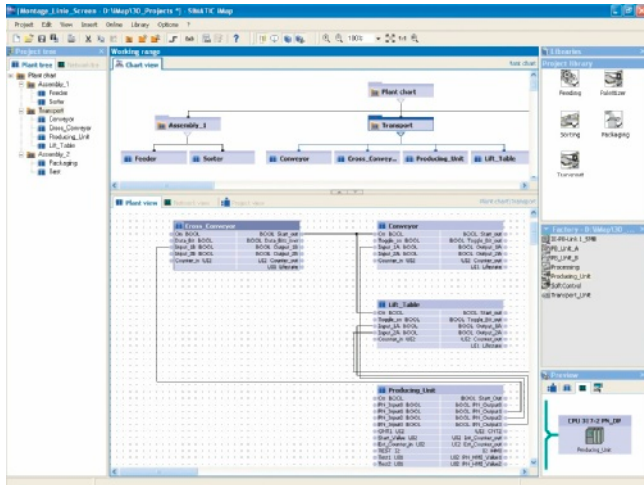
- Component-based software tool for configuring the communication in distributed automation solutions
- For easy graphical configuration of the communication between subsystems and machine-to-machine communication in the production line
- Based on the PROFINET standard
- Open for PROFINET devices from various manufacturers on Industrial Ethernet
- Runs under Windows XP Professional and Windows 7 Ultimate/Professional

■ Technical specifications

Engineering tool	SIMATIC iMap
Current version	V3.0
Software class	A
Application areas	
Keyword	SIMATIC iMap is an engineering tool for configuring communication between automation and field devices in distributed automation solutions.
Marketing message	"Time and cost savings in modular machine and plant construction with Component based Automation." "Modularization and machine-to-machine communication along the production line."
Advantages	• Open component-based engineering tool to the PROFINET standard. • Simple communication between intelligent automation and field devices on PROFIBUS DP and on Ethernet. • Graphical configuration of communication on PROFIBUS DP and on Ethernet • Extremely high reusability of software components (technology modules) • Graphical structuring of the plant using "chart-in-chart" function • Convenient navigation through the project tree • Easy creation and structuring of technology libraries • PROFIBUS and Ethernet in the overview of the network view • Fast start-up thanks to downloading and testing directly on Ethernet (also of PROFIBUS slaves) • Online display of values of the technology modules on the interfaces and in the variable table • Diagnosis of communication in the diagnostics window
Sectors	• Automotive industry (especially in assembly, conveyor systems and in the paint shop) • Complex food and packaging machines • Conveyor systems based on PROFIBUS DP • Production lines with several interlinked machines

Engineering tool	SIMATIC iMap
Target systems	• SIMATIC S7 CPU 31x-2 PN/DP and SIMATIC S7 CPU 319-3 PN/DP (with integrated PROFINET interface. This can be used as a proxy function for the devices of a complete PROFIBUS segment, one line only) • SIMATIC WinAC PN (can be used as a proxy function for the devices of a complete PROFIBUS segment, one line only) • SIMATIC NET IE/PB Link (can be used as a proxy function for the devices of a complete PROFIBUS segment) • SIMATIC NET CP 343-1 and CP 343-1 Advanced (for connecting SIMATIC S7-300 to Ethernet), CP443-1 Advanced (for connecting SIMATIC S7-400 to Ethernet) • Distributed I/O stations with separate CPU (all intelligent field devices on PROFIBUS such as SIMATIC CPU 313C-2DP, CPU 314C-2DP, CPU 315-2DP, CPU 316-2DP, ET 200 IM 151 CPU, ET 200S BM 147 CPU), • PROFINET CBA OPC Server (for access from PC applications to data in PROFINET devices) • Devices on Industrial Ethernet based on the PROFINET CBA standard • SIMATIC OPs (within the components) • SIMATIC ProTool/Pro, WinCC or any other visualization system with OPC client function

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▮ Technical specifications (continued)

Engineering tool	SIMATIC iMap
System prerequisites	
Operating system	Windows XP Prof. with Service Pack 2 or Windows 7 Ultimate/Professional; PC administration rights are required for installation
PG/PC hardware	Pentium processor, 1 GHz or higher
Recommended expansion of main memory in PG/PC	RAM: 512 MB or more
Hard disk space required in PG/PC	Approx. 200 MB
Software required	• STEP 7 V5.3 Service Pack 3 or higher • PN OPC-Server V6.3 or higher The following software must be installed before iMap (included in the iMap package): • MS Internet Explorer V6.0 Service Pack 1 and higher • Adobe Acrobat Reader V5.0
Delivery format	
Languages	English, German, French, Italian and Spanish
Single License (SL)	Yes
Upgrade License (UL)	Yes, from V2.0 to V3.0
Paper manuals	Electronically on CD
Authorization/licenses	
Authorization	Yes
Single License (SL)	Yes
Upgrade License (UL)	Yes
Software Update Service	Yes
Unlock Copy License	No

▮ Ordering data — Article No.

SIMATIC iMap V3.0

Target system:
CPU 31x-2 PN/DP,
CPU 319-3 PN/DP,
SIMATIC WinAC PN,
SIMATIC NET IE/PB Link,
SIMATIC NET CP 343-1,
SIMATIC NET CP 343-1 Advanced,
SIMATIC NET CP 443-1 Advanced,
distributed I/O devices with own CPU, PROFINET CBA OPC server, devices on the Industrial Ethernet based on the PROFINET CBA standard, SIMATIC OPs, SIMATIC ProTool/Pro
Requirements:
Windows XP Prof.
with service pack 2 or higher or Windows 7 Ultimate/Professional; on PG or PC with Pentium processor, min. 1 GHz; STEP 7 V5.3 or higher with service pack 3, PN OPC Server V6.3 or higher
Type of delivery:
German, English, with electronic documentation

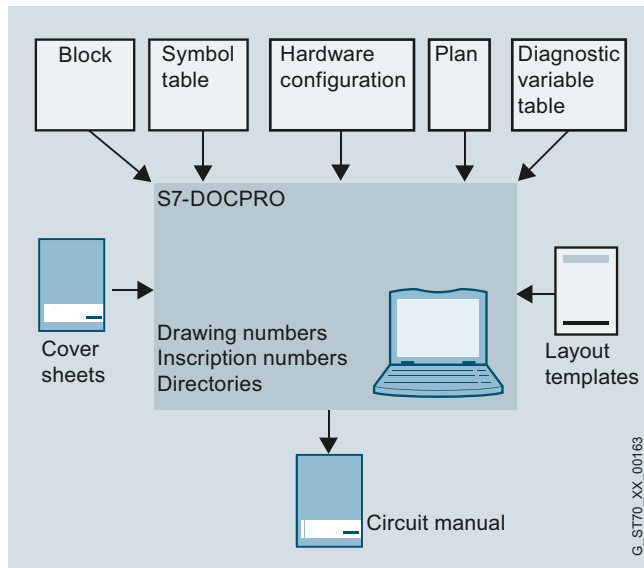|	
Floating license	**6ES7820-0CC04-0YA5**
Software Update Service (requires current software version)[1]	**6ES7820-0CC01-0YX2**
Upgrade to V3.0, floating license	**6ES7820-0CC04-0YE5**

[1] For more information on the Software Update Service, see page 11/3.

Software for SIMATIC controllers
Options for programming and design

DOCPRO

◼ Overview

- For creating and managing plant documentation
- Permits structuring of project data, the preparation in the form of wiring manuals, and the printout in a unified print image.
- For use in SIMATIC S7-300, S7-400 and C7

◼ Technical specifications

Engineering Tool	DOCPRO
Type of license	Floating license
Software class	A
Current version	V5.4
Target system (recommended)	SIMATIC S7-300/400 SIMATIC C7
Operating system	Windows XP Professional Windows 7 Ultimate/Professional from DOCPRO V5.4 SP1
Required software packages	STEP 7, V5.4 and higher; for operation under Windows 7 STEP 7, V5.5 and higher
Disk space required in PG/PC	5 MB

◼ Ordering data — Article No.

	Article No.
DOCPRO, Version 5.4	
Task: Creation of circuit manuals for plant documentation management Target system: SIMATIC S7-300, SIMATIC S7-400, SIMATIC C7 Requirement: from STEP 7 V5.4 Delivery package: on CD; German, English, French, Spanish, Italian; incl. authorization diskette, with electronic documentation	
Floating license	**6ES7803-0CC03-0YA5**
Software Update Service (requires current software version)[1]	**6ES7803-0CA01-0YX2**
Floating license upgrade to V5.4	**6ES7803-0CC03-0YE5**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**
Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**
Current "Manual Collection" DVD and the three subsequent updates	

[1] For more information on the Software Update Service, see page 11/3.

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Overview
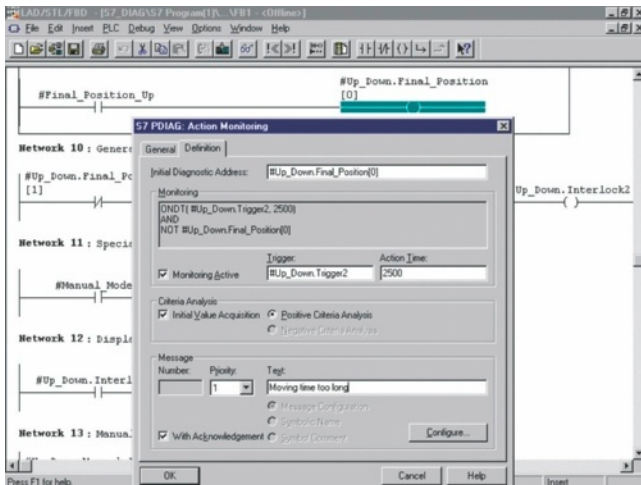
- For configuration of process diagnostics with SIMATIC S7
- Increases the availability of machines and production plants and supports with fault analysis and elimination on site
- For use on the SIMATIC S7-300, S7-400

Technical specifications

Engineering Tool	S7-PDIAG
Type of license	Floating license
Software class	A
Current version	V5.3
Target system (recommended)	SIMATIC S7-300 (CPU 314 or higher) SIMATIC S7-400
Operating system	Windows XP Professional Windows 7 Ultimate/Professional
Required software packages	STEP 7 V5.4 or higher
Disk space required in PG/PC	6 MB

Ordering data | Article No.

S7-PDIAG, Version 5.3

Task:
Configuring of process diagnostics for LAD/FBD/STL
Target system:
SIMATIC S7-300 (CPU 314 and higher); SIMATIC S7-400
Requirement:
STEP 7 V5.4 or higher
Type of delivery:
on CD; German, English, French, Spanish, Italian; incl. authorization diskette, with electronic documentation

Floating license	**6ES7840-0CC04-0YA5**
Software Update Service (requires current software version)[1]	**6ES7840-0CA01-0YX2**
Upgrade to V5.3	**6ES7840-0CC04-0YE5**
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**

Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC

SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

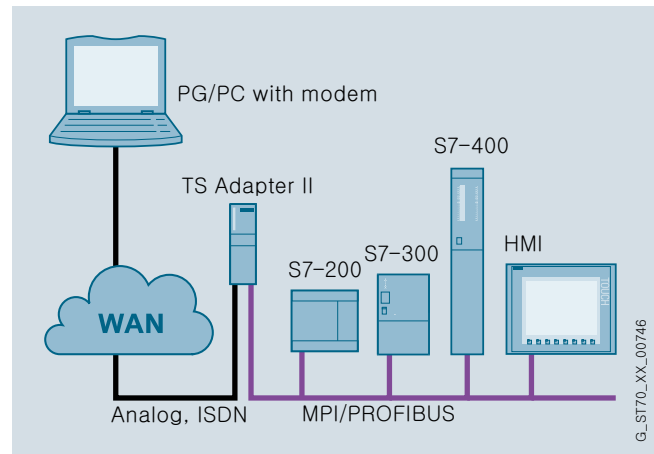[1] For more information on the Software Update Service, see page 11/3.

Software for SIMATIC controllers
Options for diagnostics and service

■ Overview

Teleservice with TS Adapter IE Advanced

Teleservice with TS Adapter IE
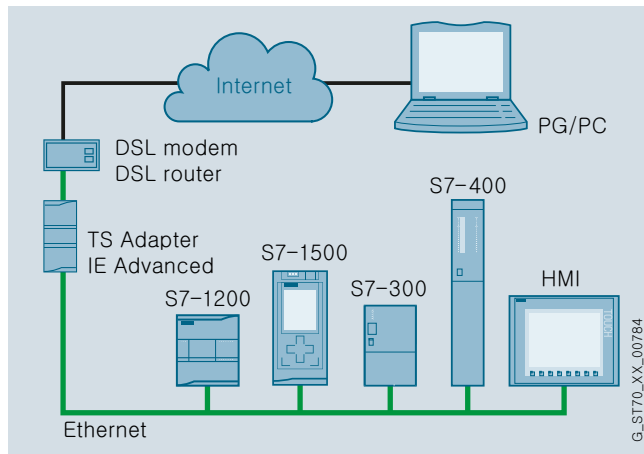
Teleservice with TS Adapter II
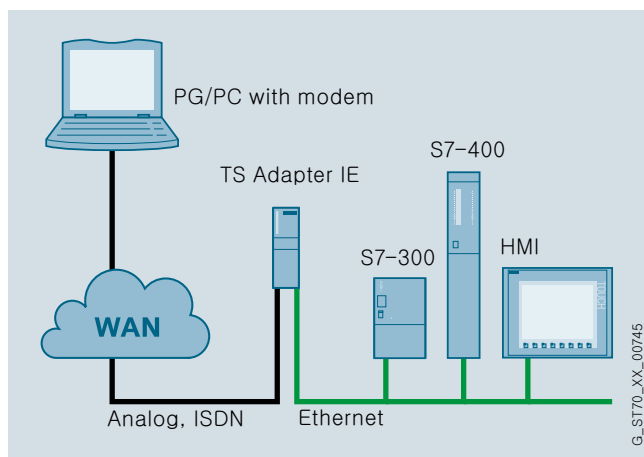
Teleservice with TS Adapter IE Basic

- For performing remote maintenance:
  A programming device/PC with an engineering tool such as STEP 7, or the TIA Portal can access automation components (e.g. S7 CPUs) which are connected to the appropriate adapters over Industrial Ethernet or PROFIBUS.
- Comprising the TeleService software and various adapters:
  - TS Adapter II for connection to PPI, MPI or PROFIBUS DP
  - TS Adapter IE, TS Adapter IE Basic or TS Adapter IE Advanced for connection to Industrial Ethernet
- Additional functions with TS Adapter II:
  - Establishing a connection from/to remote plants, e.g. for calling up process data from an automation system (PG-to-AS remote coupling).
  - Exchanging data between plants (AS-to-AS remote coupling):
    Exchange of process data between two SIMATIC automation systems.
  - Sending a text message:
    Sending a text message from a SIMATIC automation system via a GSM wireless modem.

■ **Overview** (continued)

- Additional functions with TS Adapter IE:
  - Remote operation of HMI devices:
    Access to the HMI device via an Internet browser installed on the adapter
  - Sending e-mails:
    Establishing a modem link to a dial-up server (e.g. to an Internet service provider): A SIMATIC CPU can send e-mails over an e-mail server that can be accessed in this manner.
  - Standard routing:
    A modem link can be established to an Internet service provider for accessing data on the Internet.
- Additional functions with TS Adapter IE Advanced:
  - Remote connection via the Internet

■ **Technical specifications**

	TS Adapter II
Dimensions (W x H x D) in mm	125 x 110 x 40
Weight, approx.	250 g
Interfaces • to S7/C7 • to the PC • to an external modem • to the analog telephone network • to the ISDN telephone network	RS 485 (up to 12 Mbit/s) USB 1.1 (12 Mbit/s) RS 232 (up to 115 kbaud) RJ12 RJ45
Supply voltage, external or via MPI interface	24 V DC
Current consumption	60 mA (typ.) / 120 mA (max.)
Switch-on current, max.	0.7 A; 8 µs
Degree of protection	IP20
Temperature • Operation • Storage/transport	± 0 °C to +60 °C -40 °C to +70 °C

	TS Adapter IE
Dimensions (W x H x D) in mm	125 x 110 x 40
Weight, approx.	approx. 370 g
Interfaces • Ethernet • to an external modem • to the analog telephone network • to the ISDN telephone network	RJ45 (10/100 Mbit/s) RS 232 (up to 115 kbaud) RJ12 RJ45
Supply voltage, external or via MPI interface	24 V DC
Current consumption of the TSA-IE ISDN	typ. 170 mA / max. 230 mA
Current consumption of the modem TSA IE	typ. 180 mA (typ.) / max. 240 mA
Switch-on current, max.	0.7 A; 8 µs
Degree of protection	IP20
Temperature • Operation • Storage/transport	± 0 °C to +60 °C -40 °C to +70 °C

	TS Adapter IE Basic (basic unit)
Dimensions (W x H x D) in mm	30 x 100 x 75
Weight, approx.	100 g
Interfaces • Ethernet • To the TS module	RJ45 (10/100 Mbit/s) Proprietary (can only be used for TS modules)
Supply voltage, external	24 V DC
Current consumption • With TS module modem • with TS module ISDN • with TS module RS232 • with TS module GSM	typ. 50 mA, max. 80 mA typ. 50 mA, max. 80 mA typ. 40 mA, max. 60 mA typ. 100 mA, max. 180 mA
Switch-on current, max.	240 mA
Degree of protection	IP20
Temperature • Operation • Storage	±0 °C to +60 °C (horizontal installation) ±0 °C to +40 °C (vertical installation) -40 °C to +70 °C

	TS module modem
Dimensions (W x H x D) in mm, approximately	30 x 100 x 75
Weight, approx.	98 g
ITU transmission standards	• V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34, V.34x, K56flex, V.90, V.92
Other features	• Error correction and data compression • a/b interface • Hayes (AT) command set • All data formats • Dial procedures: dual-tone multiple-frequency (DTMF), pulse dialing

	TS module ISDN
Dimensions (W x H x D) in mm	30 x 100 x 75
Weight, approx.	92 g
Reports • D channel protocols • B channel protocols	DSS1 (Euro-ISDN), 1TR6 V.110 (9600 bit/s, 19200 bit/s, 38400 bit/s) V.120 (64 Kbit/s) X.75 (64 Kbit/s)
Other features	• Multiple subscriber number (MSN) • AT command interpreter

	TS module RS232
Dimensions (W x H x D) in mm	30 x 100 x 75
Weight, approx.	100 g
Operating mode	Full duplex, asynchronous
Signals	TXD, RXD, DSR, CTS, RTS, DTR, DCD
Data transmission rate	2 400 ... 115 200 bit/s
Message frame	8 data bits (LSB first), no parity bit, 1 stop bit
Rule	according to RS232 standard
Connector	D-sub 9-pin, male (PC COMx)

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Software for SIMATIC controllers
Options for diagnostics and service

TeleService

Technical specifications (continued)

	TS module GSM
Dimensions (W x H x D) in mm	30 x 100 x 75
Weight, approx.	118 g
Transmission rate • GPRS Multislot Class 10	
- Up to 2 uplinks - Up to 4 downlinks	13.4 Kbit/s … 27 Kbit/s upload gross 40 Kbit/s … 54 Kbit/s download gross
Interfaces • SIM interface • Antenna connection	 3 V/1.8 V 1 x SMA antenna socket (50 Ohm)
Frequency ranges	Quad band: 850, 900, 1800, 1900 MHz
Transmitted output power	2 W at 850 MHz, 900 MHz 1 W at 1800 MHz, 1900 MHz

	TS Adapter IE Advanced
General information	
Engineering with	
STEP 7 TIA Portal can be configured/integrated as of version	V12 SP1
Installation	
Rail mounting possible	Yes
Wall/direct mounting possible	Yes
Supply voltage	
24 V DC	Yes
Permissible range	+19.2 V ... +28.8 V
Input current	
Current consumption, typ.	100 mA
Current consumption, max.	200 mA; incl. TS module GSM
Switch-on current, max.	4.3 A
Activation time, max.	3.1 ms
Power loss	
Power loss, typ.	2.4 W
Interfaces	
Industrial Ethernet	
Industrial Ethernet interface	3x Ethernet (RJ45), 100 Mbit
Interrupts/diagnostics/status information	
Diagnostics display LED	RUN LED, ERROR LED, MAINT LED, LINK LED, ONLINE LED, VPN LED, RX/TX LED
Insulation	
Insulation tested at	707 V DC (type test)
Dimensions	
W x H x D	55 x 117 x 75 mm
Weight	
Weight, approx.	225 g

Ordering data

|	Article No.
TeleService, Version 6.1 Task: Remote maintenance by means of wired or radio network Target system: SIMATIC S7-200, SIMATIC S7-300, SIMATIC S7-400, SIMATIC C7 Requirement: TS Adapter (STEP 7 not required) Delivery package: on CD, German, English, French, Spanish, Italian; with electronic documentation	
Floating license	6ES7842-0CE00-0YE0
Floating license Upgrade (from each previous version)	6ES7842-0CE00-0YE4
Software Update Service (requires current software version)[1]	6ES7842-0CA01-0YX2
TS Adapter II modem	6ES7972-0CB35-0XA0
with MPI connection and RS 232; 9-pin, male	
TS Adapter II ISDN	6ES7972-0CC35-0XA0
with MPI connection and RS 232; 9-pin, male	
TS Adapter IE modem	6ES7972-0EM00-0XA0
with Ethernet connection RJ45 (10/100 Mbit/s) and RS 232; 9-pin, male	
TS Adapter IE ISDN	6ES7972-0ED00-0XA0
with Ethernet connection RJ45 (10/100 Mbit/s) and RS 232; 9-pin, male	
USB cable	6ES7901-0AE00-0XA0
for parameterizing the TS Adapter II, it can also be used for programming the connected devices. 5 m long	
TS Adapter IE Basic	6ES7972-0EB00-0XA0
Basic unit	
TS module modem	6ES7972-0MM00-0XA0
TS module ISDN	6ES7972-0MD00-0XA0
TS module RS232	6ES7972-0MS00-0XA0
TS module GSM	6GK7972-0MG00-0XA0
TS Adapter IE Advanced	6ES7972-0EA00-0XA0
for accessing automation components via the Internet (GSM, DLS, WAN)	
S7 mounting rail adapter	6ES7972-0SE00-7AA0
for mounting the TS Adapter IE Basic on S7-300 mounting rail, width 60 mm	
SIMATIC Manual Collection	6ES7998-8XC01-8YE0
SIMATIC Manual Collection update service for 1 year	6ES7998-8XC01-8YE2

[1] For more information on the Software Update Service, see page 11/3.

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Overview
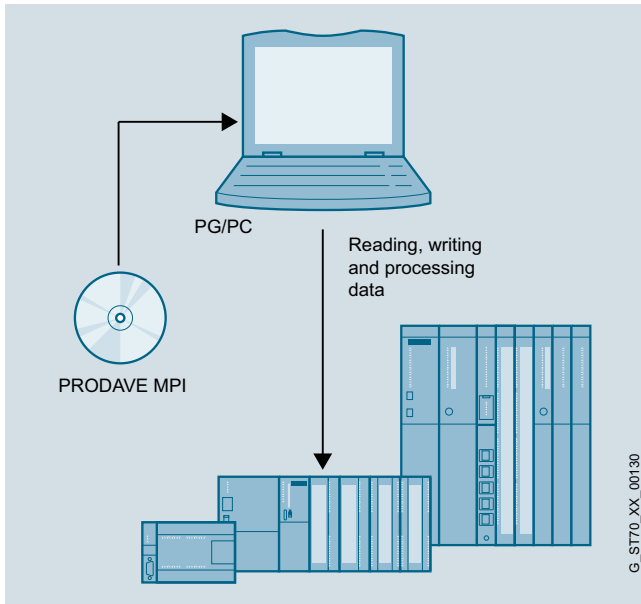
- The toolbox for exchange of process data between SIMATIC S7, SIMATIC C7 and a PG/PC
- For autonomous handling of data traffic over MPI/PPI, PROFIBUS and Industrial Ethernet

Technical specifications

Parameterization software	PRODAVE
Type of license	Simple license, copy license
Software class	A
Current version	V6.2
Target system	SIMATIC S7-200 SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7
Operating system	Windows XP Professional, Windows 7 Professional and Ultimate (32 and 64-bit in each case)
Required software packages	-
Main memory configuration in target system	8 MB on PG/PC
Disk space required in PG/PC	2 MB
Standard FBs	
Required libraries	-

Ordering data · Article No.

|	Article No.
PRODAVE MPI/IE V6.2 for Windows XP Professional, Windows 7 Professional and Ultimate (32 and 64-bit in each case) Task: Data link between PG/PC and SIMATIC S7/C7 via MPI (S7-200 via PPI) or Industrial Ethernet Requirements: Windows XP Professional, Windows 7 Professional and Ultimate (32 and 64-bit in each case); CP 5611, integrated MPI or PC adapter Delivery package: CD incl. electr. documentation (German, English)	
Single license	6ES7807-4BA03-0YA0
Copy license, without software and documentation	6ES7807-4BA03-0YA1
PRODAVE MPI Mini V6.0 for Windows 95/98/ME/NT 4.0/ 2000 Prof./XP Prof. Task: Data link between PG/PC and SIMATIC S7/C7 via MPI (S7-200 via PPI); with reduced functional scope) Requirements: Windows 95/98/ME/NT 4.0/ 2000 Prof./XP Prof.; CP 5611, integrated MPI or PC adapter Delivery package: CD incl. electr. documentation (German, English)	
Single license	6ES7807-3BA01-0YA0
Copy license, without software and documentation	6ES7807-3BA01-0YA1
SIMATIC Manual Collection	6ES7998-8XC01-8YE0
Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
SIMATIC Manual Collection update service for 1 year	6ES7998-8XC01-8YE2
Current "Manual Collection" DVD and the three subsequent updates	

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Software for SIMATIC controllers
Options for engineering and drive technology

PID Professional (TIA Portal)

■ Overview
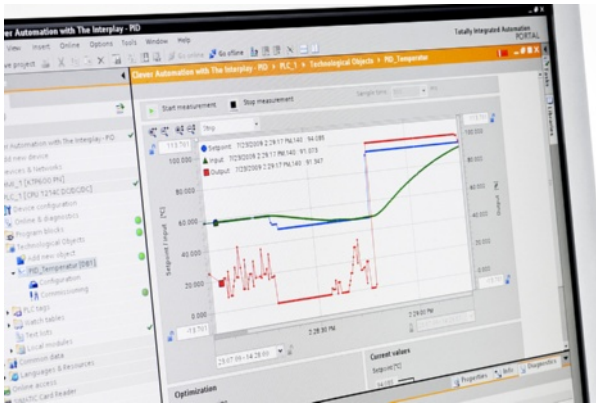
- PID Professional combines the two option packages Modular PID Control and Standard PID Control in the TIA Portal.
- Permits the simple integration of continuous PID controllers, pulse controllers and step controllers in the application program
- Can be used for simple to complex closed-loop control tasks in SIMATIC S7-300 (CPU 313 or higher), S7-400, and WinAC.
- The engineering software for PID Professional is already included in the STEP 7 package in V13 or higher.
- Tuning functionality by means of PID Self-Tuner (part of STEP 7 as of V11 SP1).
- Reduces engineering costs thanks to time-saving parameterization and optimization of the controller

■ Ordering data

|	Article No.
PID Professional for TIA Portal	
Task: Function blocks and editors for PID controllers Requirement: STEP 7 V13 or higher Delivery package: Licenses on USB flash drive / downloadable	
Floating license for the engineering and single license for runtime	**6ES7860-1XA02-0XA5**
Upgrade license from Standard PID Control or Modular PID Control V5.1 to PID Professional for TIA Portal	**6ES7860-1XA02-0XE5**
Single license (certificate of license) for runtime; per CPU (all versions)	**6ES7860-1XA01-0XB0**
Floating license for the engineering; download (e-mail address required for delivery)[1]	**6ES7860-1XA01-0XH5**
Upgrade from Standard PID Control or Modular PID Control V5.1 to PID Professional for TIA Portal; download (e-mail address required for delivery)[1]	**6ES7860-1XA01-0XK5**

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

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Overview
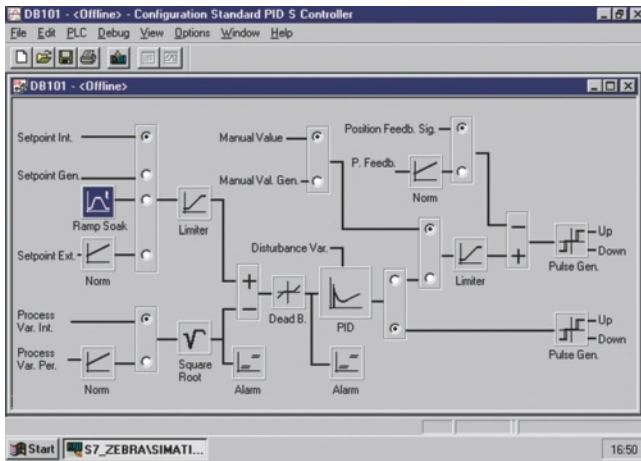
- For integrating continuous PID controllers, pulse controllers and step controllers in the application program
- Reduces engineering costs thanks to time-saving parameterization and optimization of the controller
- For use in SIMATIC S7-300 (CPU 313 or higher), S7-400 and WinAC

Technical specifications

Parameterization software	Standard PID Control					
Type of license	Single license					
Software class	A					
Current version	V 5.2					
Target system	SIMATIC S7-300 (CPU 313 or higher) SIMATIC S7-400 SIMATIC C7					
Required software packages	STEP 7 V5.3 SP2 or higher					
Main memory configuration in PG/PC	16 MB					
Disk space required in PG/PC	1.85 MB					
Standard function blocks	**PID_CP (FB 1)**		**PID_ES (FB 2)**		**LP_SCHED (FC 1)**	
Storage space requirements • FB length in the memory • DB length in the memory	Load memory 8956 bytes 1168 bytes	Work memory 7796 bytes 510 bytes	Load memory 9104 bytes 1124 bytes	Work memory 7982 bytes 484 bytes	Load memory 1064 bytes 184 bytes[2]	Work memory 976 bytes 100 bytes[2]
Runtimes • In S7-300[1] • In S7-400[1]	0.18 - 4.4 ms 0.13 - 0.35 ms		0.2 - 5.1 ms 0.16 - 0.35 ms		0.03 - 0.3 ms 0.03 - 0.08 ms	
Required libraries	Standard PID Control FBs					
Licensing forms	Simple license and 1 runtime license; 1 runtime license					
Software class	A					
Current version	V 5.2					
Target system	SIMATIC S7-300 (CPU 313 or higher) SIMATIC S7-400 SIMATIC C7					
Required software packages	STEP 7 V5.3 SP2 or higher					
Main memory configuration in PG/PC	16 MB					
Disk space required in PG/PC	1.85 MB					

[1] Depending on the CPU
[2] With 5 control loops

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Software for SIMATIC controllers
Options for engineering and drive technology

Standard PID Control

Ordering data

	Article No.		Article No.
Standard PID Control parameterization tool, V5.2		**SIMATIC Manual Collection**	**6ES7998-8XC01-8YE0**
Task: Parameterization tool for standard closed-loop controls Requirement: STEP 7, V5.3 SP2 or higher Delivery package: With electronic manual/Getting Started English, German; incl. authorization diskette		Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
Floating license	**6ES7830-2AA22-0YX0**	**SIMATIC Manual Collection update service for 1 year**	**6ES7998-8XC01-8YE2**
Upgrade license from V5.x to V5.2	**6ES7830-2AA22-0YX4**	Current "Manual Collection" DVD and the three subsequent updates	
Standard function blocks for Standard PID Control, V5.2			
Task: Standard FBs for standard closed-loop controls Target system: SIMATIC S7-300 (CPU 313 or higher), S7-400 Type of delivery: With electronic manual/Getting Started English, German			
Single license	**6ES7860-2AA21-0YX0**		
Single license without software and documentation	**6ES7860-2AA21-0YX1**		

1) For more information on the Software Update Service, see page 11/3.

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Overview
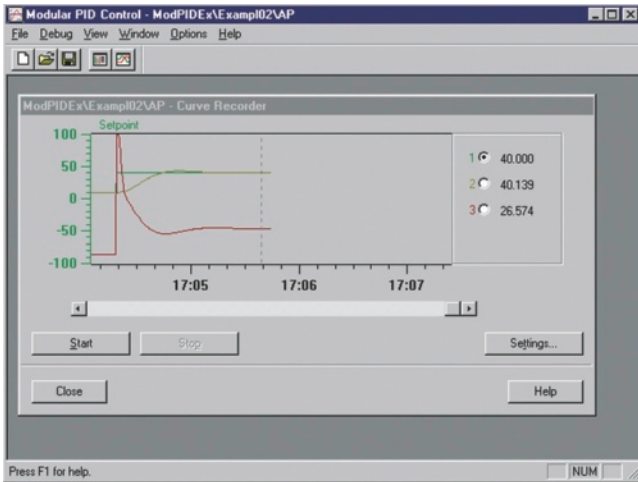
- For creating complex closed-loop control structures
- Preferred for implementation in closed-loop control equipment in mid-range and high-end applications and in process engineering
- For use in SIMATIC S7-300 (CPU 313 or higher), S7-400 and WinAC

Technical specifications

Parameterization software	Modular PID Control
Type of license	Single license
Software class	A
Current version	V 5.1
Target system	SIMATIC S7-300 (CPU 313 or higher) SIMATIC S7-400 SIMATIC C7

Parameterization software	Modular PID Control
Required software packages	STEP 7 V5.3 SP2 or higher
Main memory configuration in PG/PC	16 MB
Disk space required in PG/PC	1.85 MB
Processor, at least	486
Windows swap area, approx.	20 MB (max. possible)

Standard function blocks	A_DEAD_B		CRP_IN		CRP_OUT	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	898 bytes	692 bytes	182 bytes	70 bytes	206 bytes	96 bytes
• DB length in the memory	186 bytes	44 bytes	122 bytes	20 bytes	114 bytes	14 bytes
Runtimes in S7-300	0.13 to 0.17 ms		0.06 ms		0.18 to 0.22 ms	
Runtimes in S7-400	0.01 to 0.03 ms		0.01 to 0.02 m		0.01 to 0.04 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	DEAD_T		DEAD_BAND		DIF	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	532 bytes	394 bytes	232 bytes	120 bytes	410 bytes	268 bytes
• DB length in the memory	142 bytes	22 bytes	114 bytes	16 bytes	158 bytes	30 bytes
Runtimes in S7-300	0.26 to 0.33 ms		0.16 to 0.21 ms		0.55 to 0.71 ms	
Runtimes in S7-400	0.02 to 0.06 m		0.01 to 0.03 ms		0.03 to 0.09 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	ERR_MON		INTEG		LAG1ST	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	558 bytes	360 bytes	488 bytes	314 bytes	534 bytes	368 bytes
• DB length in the memory	206 bytes	52 bytes	168 bytes	36 bytes	156 bytes	30 bytes
Runtimes in S7-300	0.27 to 0.35 ms		0.40 to 0.51 ms		0.52 to 0.67 ms	
Runtimes in S7-400	0.01 to 0.05 ms		0.02 to 0.07 ms		0.03 to 0.09 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Software for SIMATIC controllers
Options for engineering and drive technology

Modular PID Control

■ Technical specifications (continued)

Standard function blocks	LAG2ND		LIMALARM		LIMITER	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	690 bytes	516 bytes	390 bytes	240 bytes	262 bytes	140 bytes
• DB length in the memory	190 bytes	46 bytes	152 bytes	28 bytes	124 bytes	20 bytes
Runtimes in S7-300	0.88 to 1.14 ms		0.47 to 0.61 ms		0.14 to 0.17 ms	
Runtimes in S7-400	0.04 to 0.16 ms		0.02 to 0.07 ms		0.03 to 0.01 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	LMNGEN_C		LMNGEN_S		NONLIN	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	1576 bytes	1280 bytes	2578 bytes	2152 bytes	826 bytes	672 bytes
• DB length in the memory	276 bytes	80 bytes	360 bytes	110 bytes	138 bytes	18 bytes
Runtimes in S7-300	0.32 to 0.41 ms		1.16 to 1.47 ms		0.32 to 0.41 ms	
Runtimes in S7-400	0.02 to 0.06 ms		0.06 to 0.18 ms		0.02 to 0.07 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	NORM		OVERRIDE		PARA_CTL	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	234 bytes	122 bytes	362 bytes	214 bytes	406 bytes	232 bytes
• DB length in the memory	130 bytes	24 bytes	146 bytes	28 bytes	234 bytes	82 bytes
Runtimes in S7-300	0.33 to 0.43 ms		0.15 to 0.18 ms		0.12 to 0.15 ms	
Runtimes in S7-400	0.02 to 0.07 ms		0.01 to 0.04 ms		0.01 to 0.03 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	PID		PULSEGEN		RMP_SOAK	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	1560 bytes	1242 bytes	1110 bytes	872 bytes	1706 bytes	1500 bytes
• DB length in the memory	340 bytes	98 bytes	190 bytes	34 bytes	212 bytes	62 bytes
Runtimes in S7-300	1.15 to 1.46 ms		0.17 to 0.20 ms		0.16 to 0.20 ms	
Runtimes in S7-400	0.06 to 0.18 ms		0.01 to 0.05 ms		0.01 to 0.04 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

Standard function blocks	ROC_LIM		SCALE		SP_GEN	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	1242 bytes	980 bytes	136 bytes	32 bytes	658 bytes	484 bytes
• DB length in the memory	222 bytes	50 bytes	114 bytes	16 bytes	164 bytes	40 bytes
Runtimes in S7-300	0.53 to 0.68 ms		0.10 to 0.13 ms		0.27 to 0.35 ms	
Runtimes in S7-400	0.02 to 0.09 ms		0.01 to 0.02 ms		0.02 to 0.06 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

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Technical specifications (continued)

Standard function blocks	SPLT_RAN		SWITCH		LP_SCHED	
Storage space requirements	Load memory	Work memory	Load memory	Work memory	Load memory	Work memory
• FB length in the memory	304 bytes	180 bytes	238 bytes	116 bytes	1104 bytes	972 bytes[1]
• DB length in the memory	138 bytes	28 bytes	118 bytes	18 bytes	234 bytes	64 bytes[1]
Runtimes in S7-300	0.09 to 0.11 ms		0.07 to 0.09 ms		0.28 to 0.34 ms	
Runtimes in S7-400	0.01 to 0.02 ms		0.01 to 0.03 ms		0.03 to 0.08 ms	
Target system	SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC		SIMATIC S7-300 (CPU 313 and higher), S7-400, WinAC	

[1] With 5 control loops

	Standard FBs in general
Required libraries	Modular PID Control FBs
Licensing forms	Simple license and 1 runtime license; 1 runtime license
Software class	A

	Standard FBs in general
Current version	V 5.1
Required software packages	STEP 7 V5.3 SP2 or higher
Main memory configuration in PG/PC	16 MB
Disk space required in PG/PC	1.85 MB

Ordering data

	Article No.
Modular PID Control commissioning tool, V5.1 for SIMATIC S7 and WinAC	
Task: Commissioning tool for modular PID controllers Requirement: STEP 7, V5.3 SP2 or higher Delivery package: With electronic manual, English, German; incl. authorization diskette	
Floating license	**6ES7830-1AA11-0YX0**
Upgrade license from V5.0 to V5.1	**6ES7830-1AA11-0YX4**
Standard function blocks for Modular PID Control, V5.1	
Task: Standard FBs for modular PID controllers Target system: SIMATIC S7-300 (CPU 313 or higher), S7-400, WinAC Type of delivery: English, German; with electronic manual	
Single license	**6ES7860-1AA10-0YX0**
Single license, without software and documentation	**6ES7860-1AA10-0YX1**

	Article No.
SIMATIC Manual Collection Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	**6ES7998-8XC01-8YE0**
SIMATIC Manual Collection update service for 1 year Current "Manual Collection" DVD and the three subsequent updates	**6ES7998-8XC01-8YE2**

[1] For more information on the Software Update Service, see page 11/3.

Software for SIMATIC controllers

Options for engineering and drive technology

PID Self-Tuner

Overview

- PID Self-Tuner: For expanding existing PID controllers to create self-tuning PI or PID controllers.
- Optimization of PI or PID controllers with 3-step action (HEATING – OFF – COOLING)
- Convenient online initial setting and online adaptation during operation

- Ideally applicable to temperature controllers, but also suitable for level and flow controllers
- Can be used with SIMATIC S7-300 (CPU 313 or higher), SIMATIC S7-400 and WinAC; in combination with PID control (integrated in STEP 7), Standard PID Control, Modular PID Control, FM 355, FM 455 as well as with any PID algorithm

Technical specifications

Parameterization software	PID Self-Tuner			
Type of license	-			
Software class	-			
Current version	-			
Target system	-			
Operating system	-			
Required software packages	-			
Main memory configuration in PG/PC	-			
Disk space required in PG/PC	-			
Standard FBs	**-**			
PID Self-Tuner	**TUN_EC**		**TUN_ES**	
Storage space requirements • FB length in the memory • DB length in the memory	Load memory approx. 6542 bytes 644 bytes	Work memory approx. 5956 bytes 294 bytes	Load memory 6332 bytes 638 bytes	Work memory 5714 bytes 288 bytes
Runtimes • In S7-300 • In S7-400	1.0 ms to 1.5 ms [1] 0.06 ms to 0.19 ms [1]		1.0 ms to 1.5 ms [1] 0.06 ms to 0.19 ms [1]	
Required libraries	PID Self-Tuner FBs V5.0			
Licensing forms	-			
Software class	A			
Current version	V5.0			
Target system	SIMATIC S7-300 (CPU 313 or higher) SIMATIC S7-400 SIMATIC C7-620			
Required software packages	STEP 7 V3.2 or higher			
Main memory configuration in PG/PC	-			
Disk space required in PG/PC	-			

[1] Depending on the CPU selected

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Ordering data

	Article No.		Article No.
PID Self Tuner V5.1 Task: Online optimization for PID controller PLC: SIMATIC S7-300 (CPU 313 or higher), S7-400, WinAC Type of delivery: Standard function blocks, electronic manual and Getting Started (German/English);		**SIMATIC Manual Collection** Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	6ES7998-8XC01-8YE0
Single license	6ES7860-4AA01-0YX0		
Single license, without software and documentation	6ES7860-4AA01-0YX1	**SIMATIC Manual Collection update service for 1 year** Current "Manual Collection" DVD and the three subsequent updates	6ES7998-8XC01-8YE2

Overview

- Option package for creating motion control tasks for CPU 31xT-2 DP and CPU 317TF-2 DP
- Optimal embedding in the automation world thanks to total integration in the STEP 7 tools
- Programming in the standard SIMATIC programming languages LAD, FBD and STL
- Additional Engineering Tools such as S7-SCL or S7-GRAPH can be used

Ordering data

	Article No.
S7-Technology V4.2	
Task: Option package for configuring and programming technology tasks with the SIMATIC S7 CPU 31xT-2 DP and SIMATIC S7 CPU 317TF-2 DP Requirement: STEP 7 V5.5 SP2 and higher Delivery form: On DVD; incl. documentation for CPU 31xT-2 DP, CPU 317TF-2 DP (also on DVD)	
Floating license	**6ES7864-1CC42-0YA5**
Floating license for 1 user, license key download without software or documentation[1]; e-mail address required for delivery	**6ES7864-1CC42-0XH5**
Upgrade to V4.2	**6ES7864-1CC42-0YE5**
Trial license	**6ES7864-1CC42-0YA7**

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

Software for SIMATIC controllers
Options for engineering and drive technology

Easy Motion Control

■ Overview

- Low-priced package for simple, controlled positioning and simple geared synchronous motion
- For use with any standard variable-speed drive, such as frequency converter or servo drive
- For incremental and absolute encoders

■ Technical specifications

Supported hardware:

Easy Motion Control is runnable on the following CPUs:
- S7-300.
- S7-400.
- WinAC.
- ET 200S.
- ET 200pro.

Supported modules for the measuring of actual values:
- CPU 314C (FW version 2.0 of the CPU or higher).
- ET 200S 1 Count 5V/500 kHz.
- ET 200S 1 Count 24V/100kHz.
- ET 200S 1SSI.
- SM 338.
- FM 350-1, FM 450-1.
- SIMODRIVE sensor with PROFIBUS DP.
- IM 174.
- Other modules for measuring actual values (using free driver).

Supported modules for setpoint output:
- ET 200S 2AO U.
- SM 332.
- SM 432.
- IM 174.
- Other modules for setpoint output (using free driver).

Supported drives using PROFIBUS DP:
- Micromaster 4.
- SINAMICS G120.
- SINAMICS S120.

Storage space requirements

Required main storage in byte		
Block	Required main storage per block	Additional main storage required per instance
MC_Init	1086	-
MC_MoveAbsolute	3924	112
MC_MoveRelative	2982	110
MC_MoveJog	3110	110
MC_Home	2886	104
MC_StopMotion	1114	70
MC_Control	1756	58
MC_Simulation	410	64
MC_GearIn	3476	128
Input driver	1416 ... 2654	76 ... 128
Output driver	384 ... 1242	52 ... 68
Axis data block	-	294

■ Ordering data

|	Article No.
Easy Motion Control V2.1	
Requirement: STEP 7 V5.3 SP2 Type of delivery: Software and documentation in 6 languages on CD	
Floating license	**6ES7864-0AC01-0YX0**
Easy Motion Control for TIA Portal	
Requirement: STEP 7 V12 SP1 and higher Type of delivery: Software and documentation in 6 languages on CD	
Floating license and single license (Runtime)	**6ES7864-2XA02-0XA5**
Floating license for downloading by e-mail, valid for V11 or higher (e-mail address required for delivery[1])	**6ES7864-2XA01-0XH5**
Easy Motion Control Runtime License	
Type of delivery: CoL for one runtime single license (valid for Easy Motion Control V2.x and V11 or higher), without software or documentation	**6ES7864-0AF01-0YX0**

[1] For up-to-date information and download availability, see:
http://www.siemens.com/tia-online-software-delivery

■ Overview
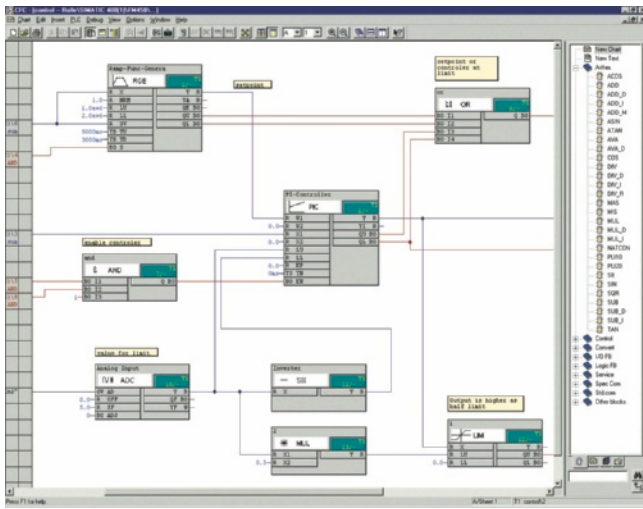
- Add-on for STEP 7/CFC/SFC for configuration of control and automation tasks with T400, FM 458, SIMADYN D or SIMATIC TDC
- Contains function blocks for every application
- Scope of delivery:
  Software packages D7-SYS, CFC, SFC, TH-PO
- Optional:
  D7-FB-Gen, function block generator for the creation of customized function blocks

■ Ordering data

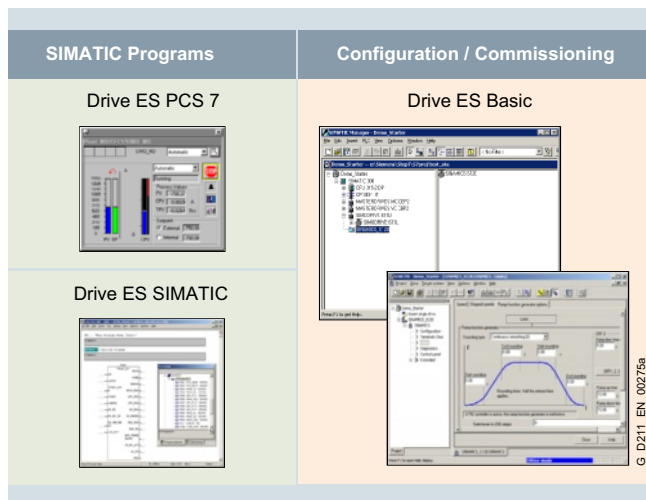|	Article No.
SIMATIC D7-SYS V8.0	
Task: Function block library for configuring closed-loop control and automation tasks Target system: SIMATIC S7-400/FM 458/ SIMATIC TDC/T400/SIMADYN Requirement: Windows XP, Windows 7 32/64-bit, Windows Server 2003/2008 Type of delivery: On CD, German, English, with electronic documentation	
Floating license	**6ES7852-0CC03-0YA5**
Upgrade license V7.x and higher	**6ES7852-0CC03-0YE5**
Software Update Service[1]	**6ES7852-0CC01-0YL5**
SIMATIC D7 FB Gen V2.1	**6DD1805-5DA0**
Function block generator	
SIMATIC Manual Collection	**6ES7998-8XC01-8YE0**
Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
SIMATIC Manual Collection update service for 1 year	**6ES7998-8XC01-8YE2**
Current "Manual Collection" DVD and the three subsequent updates	

[1] For more information on the Software Update Service, see page 11/3.

Software for SIMATIC controllers
Options for engineering and drive technology

Drive ES engineering software

■ Overview

SIMATIC Programs	Configuration / Commissioning
Drive ES PCS 7	Drive ES Basic
Drive ES SIMATIC	

G_D211_EN_00275a

Drive ES is the engineering system used to integrate the communication, configuration and data management functions of Siemens drive technology into the SIMATIC automation world easily, efficiently and cost-effectively.

It is based on the operator interface of the STEP 7 Manager, the essential element when it comes to engineering.

Various software packages are available for selection:

• Drive ES Basic
• Drive ES SIMATIC
• Drive ES PCS 7

Drive ES (**D**rive **E**ngineering **S**oftware) fully integrates drives from Siemens into the world of Totally Integrated Automation.

■ Ordering data

|	Article No.		Article No.
Drive ES Basic V5.5 SPx *)		**Drive ES PCS 7 V7.1 SPx** *)	
Configuration software for the integration of drives into TIA (Totally Integrated Automation)		Block library for PCS 7 for the integration of drives	
Precondition: STEP 7 V5.3, SP3 and higher		Precondition: PCS 7, V7.1 and higher	
Supplied as: DVD Languages: Eng, Fr, Ger, It, Sp with electronic documentation		Supplied as: CD-ROM Languages: Eng, Fr, Ger, It, Sp with electronic documentation	
• Floating license, 1 user	6SW1700-5JA00-5AA0	• Single-user license incl. 1 runtime license	6SW1700-7JD00-1AA0
• Floating license, (copy license), 60 users	6SW1700-5JA00-5AA1	• Runtime license (without data carrier)	6SW1700-5JD00-1AC0
• Upgrade from V5.x to V5.5 SPx *)	6SW1700-5JA00-5AA4	• Update service for single-user license	6SW1700-0JD00-0AB2
		• Upgrade from V6.x to V7.1 SPx *)	6SW1700-7JD00-1AA4
Drive ES SIMATIC V5.5 SPx *)		**Drive ES PCS 7 V8.0 SPx** *)	
Block library for SIMATIC for the parameterization of communication with the drives		Block library for PCS 7 for the integration of drives in Classic Style (as predecessor)	
Precondition: STEP 7 V5.3, SP3 and higher		Precondition: PCS 7 V8.0 and higher	
Supplied as: CD-ROM Languages: Eng, Fr, Ger, It, Sp with electronic documentation		Supplied as: CD-ROM Languages: Eng, Fr, Ger, It, Sp with electronic documentation	
• Single-user license incl. 1 runtime license	6SW1700-5JC00-5AA0	• Single-user license incl. 1 runtime license	6SW1700-8JD00-0AA0
• Runtime license (without data carrier)	6SW1700-5JC00-1AC0	• Runtime license (without data carrier)	6SW1700-5JD00-1AC0
• Upgrade from V5.x to V5.5 SPx *)	6SW1700-5JC00-5AA4	• Update service for single-user license	6SW1700-0JD00-0AB2
		• Upgrade from V6.x to V8.0 SPx *)	6SW1700-8JD00-0AA4
Drive ES PCS 7 V7.0 SPx *)		**Drive ES PCS 7 APL V8.0 SPx** *)	
Block library for PCS 7 for the integration of drives		Block library for PCS 7 for the integration of drives in APL Style (Advanced Process Library)	
Precondition: PCS 7 V7.0 and higher		Precondition: PCS 7 V8.0 and higher	
Supplied as: CD-ROM Languages: Eng, Fr, Ger, It, Sp with electronic documentation		Supplied as: CD-ROM Languages: Eng, Fr, Ger, It, Sp with electronic documentation	
• Single-user license incl. 1 runtime license	6SW1700-7JD00-0AA0	• Single-user license incl. 1 runtime license	6SW1700-8JD01-0AA0
• Runtime license (without data carrier)	6SW1700-5JD00-1AC0	• Runtime license (without data carrier)	6SW1700-5JD00-1AC0
• Update service for single-user license	6SW1700-0JD00-0AB2	• Update service for single-user license	6SW1700-0JD01-0AB2
		• Upgrade of APL V8.0 to V8.0 SP1 or Drive ES PCS 7 V6.x, V7.x, V8.x classic to Drive ES PCS 7 APL V8.0 SPx *)	6SW1700-8JD01-0AA4

*) Orders are automatically supplied with the latest Service Pack (SP).

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Overview
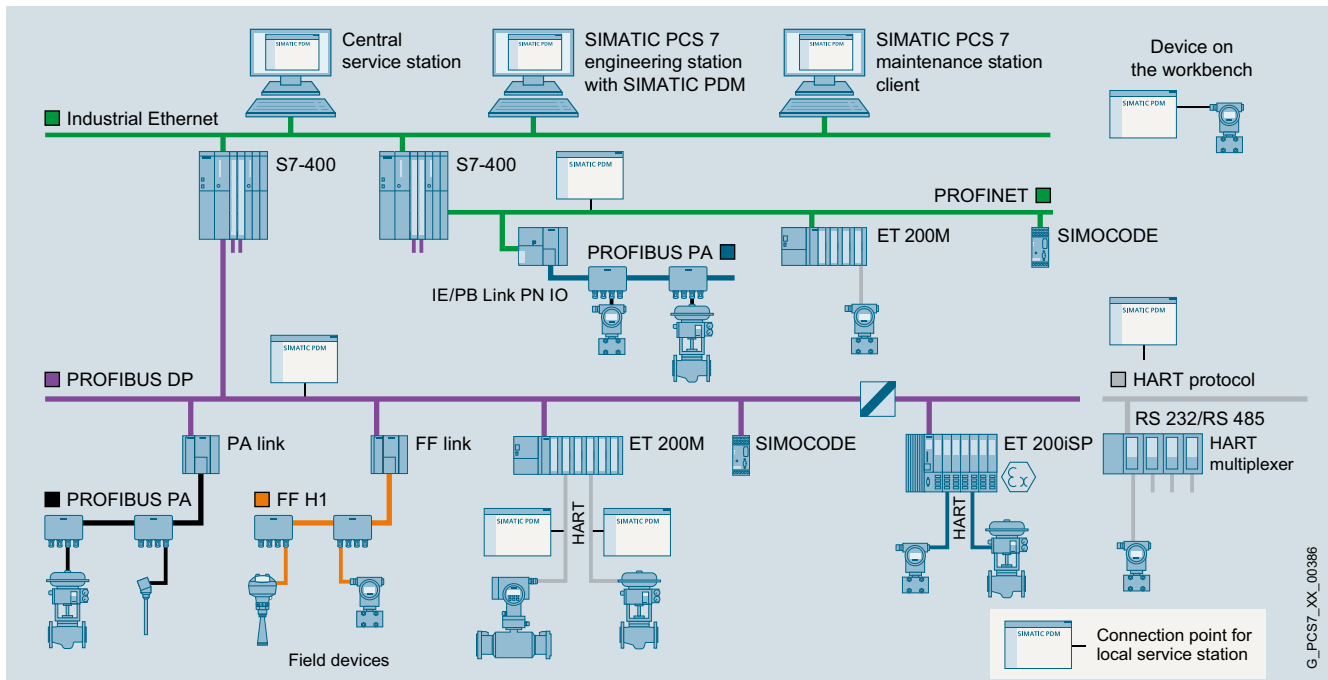
Configuration options with SIMATIC PDM

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.

Using *one* software, SIMATIC PDM enables the processing of more than 2 500 devices from Siemens and over 200 vendors worldwide on *one* 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 device manager available in the world. Devices which previously were not supported can be integrated in SIMATIC PDM by importing their device descriptions (EDD). 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 presentation 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

When used in SIMATIC PCS 7, SIMATIC PDM is integrated in the maintenance station of the process control system and transmits parameter data and diagnostics information. You can change directly to the SIMATIC PDM views from the diagnostics faceplates in the Maintenance Station.

As an option, SIMATIC PDM can also be started on any SIMATIC PCS 7 maintenance station client (MS Client) in order to parameterize and diagnose the devices integrated per electronic device description (EDD). In this context, SIMATIC PDM user administration based on SIMATIC Logon allows various roles with defined function privileges to be assigned to users. These function privileges refer to SIMATIC PDM system functions, e.g. writing to the device.

For all devices described per electronic device description (EDD), SIMATIC PDM delivers a range of information for display and further processing on the maintenance station, e.g.:

- 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 (e.g. local configuration changes)
- Information on changes (audit trail report)
- Parameter information

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Software for SIMATIC controllers
Software for joint tasks in the maintenance sector

SIMATIC PDM

Technical specifications

	SIMATIC PDM V8.2
Hardware	• PG/PC/notebook with processor corresponding to operating system requirements
Operating systems (alternative)	• Windows 7 Professional/Ultimate/ Enterprise SP1 (32-bit/64-bit) • Windows Server 2008 R2 SP1 Standard Edition (64-bit)
Integration in STEP 7/PCS 7	• SIMATIC PCS 7 V8.1 (incl. update 1) • STEP 7 V5.5+SP4

Ordering data | Article No.

SIMATIC PDM stand-alone product packages	
Minimum configuration	
SIMATIC PDM Single Point V8.2 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 with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user	
• Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position	**6ES7658-3HA28-0YA5**
• Delivery form online (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) license key download and online certificate of license Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package.	**6ES7658-3HA28-0YH5**

Basic configuration for individual product packages

SIMATIC PDM Basic V8.2 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 with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user	
• Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position	**6ES7658-3AB28-0YA5**
• Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package.	**6ES7658-3AB28-0YH5**
Configuration for mobile service	
SIMATIC PDM Service V8.2 Product package for stand-alone user in service, with • SIMATIC PDM Basic incl. 4 TAGs • 100 TAGs	
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user	
• Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position	**6ES7658-3JD28-0YA5**
• Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package.	**6ES7658-3JD28-0YH5**

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Ordering data

	Article No.

SIMATIC PDM system-integrated product packages

Configuration for integration in SIMATIC S7 configuration environment

SIMATIC PDM S7 V8.2

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 with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user

Note:
STEP 7 V5.5+SP4 is required to use the full functionality of SIMATIC PDM S7 V8.2!

- Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position — **6ES7658-3KD28-0YA5**
- Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license
Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package. — **6ES7658-3KD28-0YH5**

Configuration for integration in SIMATIC PCS 7 configuration environment

SIMATIC PDM PCS 7 V8.2
Product package for integration into the engineering toolset of the SIMATIC PCS 7 engineering system

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit

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

Note:
SIMATIC PCS 7 V8.1 is required to use the full functionality of SIMATIC PDM PCS 7 V8.2!

- Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position — **6ES7658-3LD28-0YA5**

SIMATIC PDM PCS 7 V8.2 (cont.)
- Delivery form online (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) license key download and online certificate of license
Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package. — **6ES7658-3LD28-0YH5**

SIMATIC PDM PCS 7-FF V8.2
Product package for integration into the engineering toolset of the SIMATIC PCS 7 engineering system

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit

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

Note:
SIMATIC PCS 7 V8.1 is required to use the full functionality of SIMATIC PDM PCS 7-FF V8.2!

- Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position — **6ES7658-3MD28-0YA5**
- Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license
Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package. — **6ES7658-3MD28-0YH5**

SIMATIC PDM PCS 7 Server V8.2
Product package for integration into the engineering toolset of the SIMATIC PCS 7 engineering system

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit

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 Server
- 100 TAGs

Note:
SIMATIC PCS 7 V8.1 is required to use the full functionality of SIMATIC PDM PCS 7 Server V8.2!

Software for SIMATIC controllers

Software for joint tasks in the maintenance sector

SIMATIC PDM

| Ordering data	Article No.		Article No.
SIMATIC PDM PCS 7 Server V8.2 (continued) • Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive and certificate of license, bundled with 1 × SIMATIC PDM Software Media Package per ordering position	**6ES7658-3TD28-0YA5**	**SIMATIC PDM Routing V8.2** 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license	**6ES7658-3CX28-2YB5**
• Delivery form online (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) license key download and online certificate of license Notes: E-mail address required; installation software also available separately as SIMATIC PDM Software Media Package.	**6ES7658-3TD28-0YH5**	• Delivery form online (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) license key download, online certificate of license Note: E-mail address required!	**6ES7658-3CX28-2YH5**
Optional product components for SIMATIC PDM V8.2		**SIMATIC PDM Server V8.2** 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user	
SIMATIC PDM Extended V8.2 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license	**6ES7658-3NX28-2YB5**	• Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive, certificate of license	**6ES7658-3TX28-2YB5**
• Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Note: E-mail address required!	**6ES7658-3NX28-2YH5**	• Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Note: E-mail address required!	**6ES7658-3TX28-2YH5**
SIMATIC PDM Integration in STEP 7/SIMATIC PCS 7 V8.2 only required for integration of SIMATIC PDM into HW Config 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license	**6ES7658-3BX28-2YB5**	**SIMATIC PDM Communication FOUNDATION Fieldbus V8.2** 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license	**6ES7658-3QX28-2YB5**
• Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Note: E-mail address required!	**6ES7658-3BX28-2YH5**	• Delivery form online (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) license key download and online certificate of license Note: E-mail address required!	**6ES7658-3QX28-2YH5**

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■ Ordering data

	Article No.		Article No.
SIMATIC PDM HART Server V8.2 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license • Delivery form online (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key download and online certificate of license Note: E-mail address required!	**6ES7658-3EX28-2YB5** **6ES7658-3EX28-2YH5**	**SIMATIC PDM TAGs** TAG licenses for expanding the available TAG volume, cumulative, software class A, floating license for 1 user • Delivery form package license key on USB flash drive and certificate of license - 10 TAGs - 100 TAGs - 1 000 TAGs • Delivery form online license key download and online certificate of license Note: E-mail address required! - 10 TAGs - 100 TAGs - 1 000 TAGs	 **6ES7658-3XC00-2YB5** **6ES7658-3XD00-2YB5** **6ES7658-3XE00-2YB5** **6ES7658-3XC00-2YH5** **6ES7658-3XD00-2YH5** **6ES7658-3XE00-2YH5**
SIMATIC PDM Command Interface V8.2 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user • Delivery form package (without SIMATIC PCS 7/ SIMATIC PDM Software Media Package) license key USB flash drive and certificate of license	**6ES7658-3SX28-2YB5**	SIMATIC PDM Software Media Package	
		SIMATIC PDM Software Media Package V8.2 Installation software without license, 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit Note: Can only be used in conjunction with a valid license or in demo mode! • Delivery form package (without SIMATIC PCS 7 Software Media Package) SIMATIC PDM and device library software on DVD • Delivery form online (without SIMATIC PCS 7 Software Media Package) SIMATIC PDM and device library software download Note: E-mail address required!	 **6ES7658-3GX28-0YT8** **6ES7658-3GX28-0YG8**

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Software for SIMATIC controllers
Software for joint tasks in the administration sector

Version Cross Manager

■ Overview
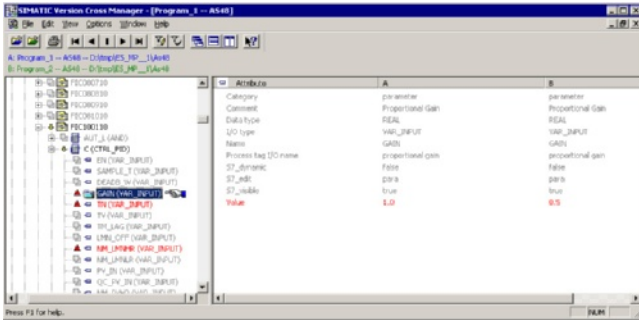
The SIMATIC Version Cross Manager is a user-friendly tool for determining the differences between various versions of individual projects or multi-projects by:

- Tracing missing, additional or differing objects by comparing hardware configuration, communication, plant hierarchy, CFC/SFC plans, SFC details, block types, messages, global tags, signals and run sequences
- Graphic display of comparison results in a combination of tree and tabular formats
- Clear hierarchical structuring according to the technological hierarchy of the plant
- Color-coded identification of the differences

■ Ordering data   Article No.

SIMATIC Version Cross Manager V7.1
Can be used with SIMATIC PCS 7 V7.1, V8.0 and V8.1

6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows XP Professional 32-bit, Windows 7 Ultimate 32/64-bit, Windows Server 2003 R2 Standard 32-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user

- Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive, certificate of license as well as TIA Engineering Toolset CD — **6ES7658-1CX17-2YA5**
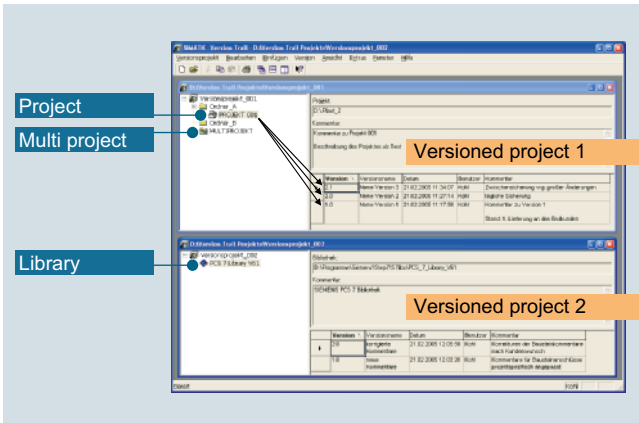- Delivery form online (without SIMATIC PCS 7 Software Media Package) license key download, online certificate of license — **6ES7658-1CX17-2YH5**
  Note:
  E-mail address required!

Version Trail

■ Overview

SIMATIC Version Trail is a software option for engineering which, together with the SIMATIC Logon central user administration, can assign a version history to libraries, projects and multi-projects.

■ Ordering data   Article No.

SIMATIC Version Trail V8.1
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user

- Delivery form package (without SIMATIC PCS 7 Software Media Package) license key USB flash drive, certificate of license as well as TIA Engineering Toolset CD — **6ES7658-1FX18-2YA5**
- Delivery form online (without SIMATIC PCS 7 Software Media Package) license key download, online certificate of license — **6ES7658-1FX18-2YH5**
  Note:
  E-mail address required!

Upgrade package (only for TIA applications)

SIMATIC Version Trail Upgrade from V8.0 to V8.1
6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows XP Professional SP3, Windows Server 2003 R2 SP2, Windows 7 Ultimate 32/64-bit or Windows Server 2008 R2 Standard 64-bit, floating license for 1 user

- Delivery form package (without SIMATIC PCS 7 Software Media Package), license key USB flash drive, certificate of license — **6ES7658-1FX18-2YE5**

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ADDM - Data Management

Overview

With ADDM, you are completely in control of the SIMATIC controls – around the clock and with any program version. This tool is indispensable in a modern production area and ensures user-friendly backup, comparison and management of control data.

Ordering data — Article No.

ADDM Agent

Languages: English, German

	Article No.
• Single license without data carrier	6BQ3030-1AA00-1AB0
• Single license with CD-ROM of current software version	6BQ3030-4AA00-0AD0

KNX/EIB2S7

Overview

- Software for SIMATIC S7 communication with components of a building automation unit
- For use of industry automation components in building automation
- Allows the integration of actuators/sensors on a KNX/EIB bus in automation solutions with SIMATIC S7
- For the use of information from building automation for the automation of a production plant

Ordering data — Article No.

	Article No.
KNX/EIB2S7 program package	6AV6643-7AC10-0AA1

Task:
Software for connecting KNX/EIB building technology components to SIMATIC S7;

Delivery form:
Editor, function blocks for SIMATIC S7, samples, documentation on C; license for editor on USB flash drive

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Software for SIMATIC controllers

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