

## SIMATIC Software



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**Brochures**

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

<http://www.siemens.com/simatic/printmaterial>

# SIMATIC Software

## Introduction

### Software for SIMATIC S7/C7/WinAC

#### Overview

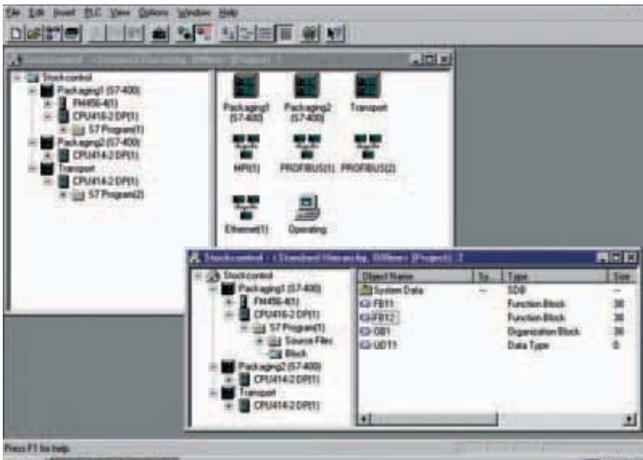


- System of seamlessly meshed software tools for SIMATIC S7 and PC-based Control SIMATIC WinAC
- With user-friendly functions for all phases of an automation project
- Comprising:
  - Standard tools:  
Basis for the SIMATIC hardware.
  - Engineering tools:  
High-level programming languages and technology-oriented software.
  - Runtime software:  
Off-the-shelf execution software for the production process.
  - Human Machine Interface:  
Software especially for operator control and monitoring.

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

<http://www.siemens.com/simatic/printmaterial>

### 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
- Connectable to USB 1.1 and 2.0 ports
- Applicable for SIMATIC S7-200, S7-300, S7-400 and C7
- Supports routing
- Automatic transmission rates 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)
- Applicable in Windows 2000, Windows XP Home and Windows XP Professional
- 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".

# SIMATIC Software

## Standard Tools

### STEP 7

#### Technical specifications PC adapter USB

6ES7 972-0CB20-0XA0	
<b>Supply voltages</b>	
Rated value	
• DC 24 V	Yes
<b>Current consumption</b>	
Current consumption, typ.	100 mA
<b>Current consumption/ power loss</b>	
Power consumption	
• Power consumption, typ.	max. 2,5 W
<b>EMC</b>	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity to IEC 61000-4-2	Yes; 6 kV, contact discharge (to IEC 61000-4-2); 8 kV, air discharge (to IEC 61000-4-2)
Interference immunity to cable-borne interference	
• on the supply lines to IEC 61000-4-4	Yes; 2 kV (to IEC 61000-4-4, Burst)
• Interference immunity on signal lines to IEC 61000-4-4	Yes; 1 kV (to IEC 61000-4-4; burst; length < 3 m); 2 kV (to IEC 61000-4-4; burst; length > 3 m)
• on the supply lines to IEC 61000-4-5	Yes; 1 kV (to IEC 61000-4-5; surge symm.); 2 kV (to IEC 61000-4-5; surge asymm.)
• Interference immunity against high frequency irradiation to IEC 61000-4-3	Yes; 10 V/m, 80 to 1000 MHz (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)
• Interference immunity against high frequency current feed to IEC 61000-4-6	Yes; 10 V, 9 kHz to 80 MHz (to IEC 61000-4-6)
• Interference immunity to magnetic fields at 50 Hz	30 A/m; to IEC 61000-4-8
• Interference emission to EN 55022, class B	Yes

6ES7 972-0CB20-0XA0	
<b>Environmental requirements</b>	
Operating temperature	
• min.	5 °C
• max.	40 °C
• permissible temperature change	10 °C/h; Operation: 10 K/h; storage/transport: 20 K/h
Storage/transport temperature	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, min.	5%
• Operation, max.	80%; at 25 °C (no condensation)
• Storage/transport, min.	5%
• Storage/transport, max.	95%; at 25 °C (no condensation)
Vibrations	
• Operation checked according to IEC 60068-2-6	Yes; 10 to 58 Hz: amplitude 0.075 mm; 58 to 500 Hz: acceleration 9.8 m/s <sup>2</sup>
• Transport tested checked to IEC 60068-2-6	Yes; (packed) 5 to 9 Hz, amplitude 3.5 mm; 9 to 500 Hz, acceleration 9.8 m/s <sup>2</sup>
Shock test	
• Impact test	Tested to DIN IEC 60068-2-2; Operation: 950 m/s <sup>2</sup> (10 g), 30 ms, 100 Shocks; Transport (packaged): 250 m/s <sup>2</sup> (25 g), 6 ms, 1000 shocks
<b>Dimensions</b>	
Dimensions	
• Width	105 mm
• Height	58 mm
• Depth	26 mm
Weights	
• Weight, approx.	100 g

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Ordering Data	Order No.	Order No.
<b>STEP 7 Version 5.4</b> <i>Target system:</i> SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC <i>Requirements:</i> Windows XP Prof., Vista Ultimate, Vista Business <i>Type of delivery:</i> German, English, French, Spanish, Italian; incl. license key on USB stick, without documenta- tion Floating license on DVD Rental license for 50 hours Software Update Service on DVD (requires current software version) Upgrade Floating License 3.x/4.x/5.x to V5.4; on DVD Trial License STEP 7 V5.4; on DVD, 14 day trial	<b>6ES7 810-4CC08-0YA5</b>  <b>6ES7 810-4CC08-0YA6</b>  <b>6ES7 810-4BC01-0YX2</b>  <b>6ES7 810-4CC08-0YE5</b>  <b>6ES7 810-4CC08-0YA7</b>	<b>STEP 7 reference manuals</b> Consisting of STL, LAD and FBD manuals as well as a reference manual for standard and system functions for SIMATIC S7-300/400 German <b>6ES7 810-4CA08-8AW1</b> English <b>6ES7 810-4CA08-8BW1</b> French <b>6ES7 810-4CA08-8CW1</b> Spanish <b>6ES7 810-4CA08-8DW1</b> Italian <b>6ES7 810-4CA08-8EW1</b> <b>SIMATIC Manual Collection</b> B3 <b>6ES7 998-8XC01-8YE0</b> Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET <b>SIMATIC Manual Collection</b> B3 <b>update service for 1 year</b> <b>6ES7 998-8XC01-8YE2</b> Current "Manual Collection" DVD and the three subsequent updates <b>EPROM programming device,</b> <b>USB prommer</b> <b>6ES7 792-0AA00-0XA0</b> For programming SIMATIC memory cards and EPROM modules <b>MPI cable</b> <b>6ES7 901-0BF00-0AA0</b> For linking SIMATIC S7 and CP through MPI (5 m) <b>Components for connecting a</b> <b>PC to MPI and PROFIBUS</b> <i>For PCs with a free PCI slot:</i> <b>CP 5611</b> <b>6GK1 561-1AA01</b> <b>CP 5611 MPI</b> B7 <b>6GK1 561-1AM01</b> incl. MPI cable (5 m) <i>For PCs with a free PCMCIA slot:</i> <b>CP 5512</b> <b>6GK1 551-2AA00</b> For Windows XP Professional <i>For PCs without a free PCI slot:</i> <b>PC adapter USB</b> <b>6ES7 972-0CB20-0XA0</b> For connecting a PC to S7-300/ -400/C7 through a USB interface; with USB cable (5 m) <b>Components for connecting the</b> <b>PC to Industrial Ethernet</b> <i>For PCs with a free PCI slot:</i> <b>Layer 2 Ethernet cards</b> <i>For PCs with a free PCMCIA slot:</i> <b>SOFTNET-PG Edition 2006</b> <b>6GK1 704-1PW64-3AA0</b>
<b>STEP 7 Version 5.4 Japanese</b> <i>Target system:</i> SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC <i>Requirements:</i> Windows XP Professional Japanese <i>Delivery package:</i> English, Japanese; incl. license key on USB stick, without documentation Floating License Japanese on DVD Upgrade Floating License Japanese 3.x/4.x/5.x to V5.4; on DVD	<b>6ES7 810-4CC08-0JA5</b>  <b>6ES7 810-4CC08-0JE5</b>	
<b>STEP 7 Version 5.4, Chinese</b> <i>Target system:</i> SIMATIC S7-300/400, SIMATIC C7, SIMATIC WinAC <i>Requirements:</i> Windows XP Professional Chinese <i>Delivery package:</i> English, Chinese; incl. license key on USB stick, without documen- tation Floating License Chinese on DVD Upgrade Floating License Chinese 3.x/4.x/5.x to V5.4; on DVD	<b>6ES7 810-4CC08-0KA5</b>  <b>6ES7 810-4CC08-0KE5</b>	
<b>Documentation package</b> <b>STEP 7 basic information</b> Comprising Getting Started, hardware configuration manual, programming manual, migration manual German <b>6ES7 810-4CA08-8AW0</b> English <b>6ES7 810-4CA08-8BW0</b> French <b>6ES7 810-4CA08-8CW0</b> Spanish <b>6ES7 810-4CA08-8DW0</b> Italian <b>6ES7 810-4CA08-8EW0</b>		

B3: Subject to export regulations: AL: N and ECCN: 5D992B1  
 B7: Subject to export regulations: AL: N and ECCN: EAR99H

# SIMATIC Software

## Standard Tools

### STEP 7 Professional

#### 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.

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#### Ordering Data

##### STEP 7 Professional Edition 2006

###### Target system:

SIMATIC S7-300/400,  
SIMATIC C7, SIMATIC WinAC

###### Requirements:

Windows XP Prof., Vista Ultimate,  
Vista Business

###### Type of delivery:

German, English, French,  
Spanish, Italian; license key on  
USB stick, without documentation

Floating license on DVD

**6ES7 810-5CC10-0YA5**

Rental license for 50 hours

**6ES7 810-5CC10-0YA6**

Software Update Service on DVD  
(requires current software  
version)

**6ES7 810-5CC04-0YE2**

Upgrade of Floating License to  
Edition 2006; on DVD

**6ES7 810-5CC10-0YE5**

Powerpack Floating License for  
upgrading from STEP 7 to  
STEP 7 Professional

**6ES7 810-5CC10-0YC5**

Trial License STEP 7 Professional  
Edition 2006;  
on DVD, runs for 14 days

**6ES7 810-5CC10-0YA7**

##### Documentation package STEP 7 basic information

Comprising Getting Started,  
hardware configuration manual,  
programming manual, migration  
manual

German

**6ES7 810-4CA08-8AW0**

English

**6ES7 810-4CA08-8BW0**

French

**6ES7 810-4CA08-8CW0**

Spanish

**6ES7 810-4CA08-8DW0**

Italian

**6ES7 810-4CA08-8EW0**

#### Order No.

#### Order 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

**6ES7 810-4CA08-8AW1**

English

**6ES7 810-4CA08-8BW1**

French

**6ES7 810-4CA08-8CW1**

Spanish

**6ES7 810-4CA08-8DW1**

Italian

**6ES7 810-4CA08-8EW1**

##### SIMATIC Manual Collection B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five  
languages: S7-200/300/400, C7,  
LOGO!, SIMATIC DP, PC, PG,  
STEP 7, engineering software,  
runtime software, PCS 7, S  
IMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD  
and the three subsequent  
updates

##### EPROM programming device, USB prommer

**6ES7 792-0AA00-0XA0**

For linking SIMATIC S7 and CP  
through MPI (5 m)

##### MPI cable

**6ES7 901-0BF00-0AA0**

For linking SIMATIC S7 and CP  
through MPI (5 m)

##### Components for connecting a PC to MPI and PROFIBUS

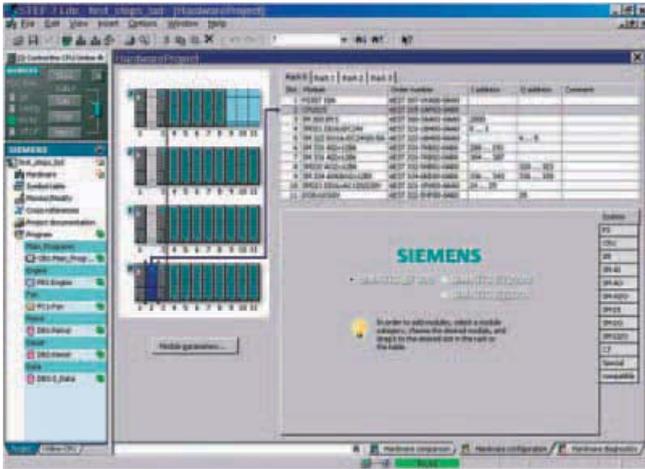
see STEP 7, page 6/5

##### Components for connecting the PC to Industrial Ethernet

see STEP 7, page 6/5

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

### Overview



- Programming software for creating stand-alone systems with SIMATIC S7-300, SIMATIC C7, ET 200S and ET 200X
- Operation is simple and intuitive
- Projects created with STEP 7/STEP 7 Professional can still be used

STEP 7 Lite is available for *free download* as of immediately. Additional information is available in the Internet at:

<http://support.automation.siemens.com/WW/view/en/22764848>

### Ordering Data

### Order No.

#### STEP 7 Lite V3.0

*Target system:*  
SIMATIC S7-300, SIMATIC C7,  
ET 200S, ET 200X

*Requirements:*  
Windows 2000 Prof./XP Home/  
XP Prof.

*Delivery package:*  
German, English, French,  
Spanish, Italian;  
incl. 3.5" authorization diskette

Floating license

**6ES7 810-3CC07-0YA5**

#### SIMATIC Manual Collection B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

#### SIMATIC Manual Collection update service for 1 year B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

#### EPROM programming device, USB prommer

**6ES7 792-0AA00-0XA0**

For linking SIMATIC S7 and CP through MPI (5 m)

#### MPI cable

**6ES7 901-0BF00-0AA0**

For linking SIMATIC S7 and CP through MPI (5 m)

Engineering Software for use with STEP 7 Lite

#### S7-PLCSIM

see page 6/16

#### TeleService

see page 6/17

#### Components for connecting a PC to MPI and PROFIBUS

*For PCs with a free PCI slot:*

#### CP 5611

**6GK1 561-1AA01**

#### CP 5611 MPI B7

**6GK1 561-1AM01**

incl. MPI cable (5 m)

*For PCs with a free PCMCIA slot:*

#### CP 5512

**6GK1 551-2AA00**

For Windows XP Professional

*For PCs without a free PCI slot:*

#### PC adapter USB

**6ES7 972-0CB20-0XA0**

For connecting a PC to S7-300/-400/C7 through a USB interface; with USB cable (5 m)

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B7: Subject to export regulations: AL: N and ECCN: EAR99H

# SIMATIC Software

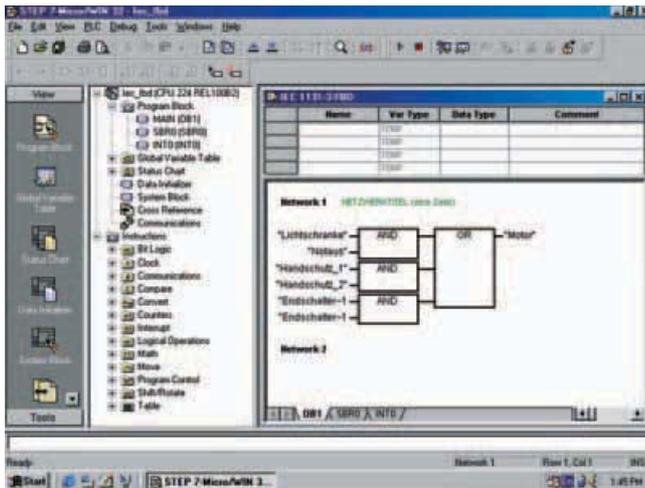
## Standard Tools

### STEP 7 Lite

#### STEP 7 selection assistance

	STEP 7 Lite	STEP 7	STEP 7 Professional
<b>Configuration</b>			
Target systems	S7-300/C7	S7-300/S7-400/C7/WinAC	
Boards	Digital, analog I/O, IFM only central	Digital, analog I/O, IFM, FM, CP central and distributed (DP)	
Network/communication	No	Time-based, cyclic data transmission between automation components; MPI, PROFIBUS or Industrial Ethernet	
Distributed I/Os	No	Yes	
Message configuration (HMI display)	No	Yes	
Read from/write on MMC	Yes, only in CPU	Yes, in CPU and directly on PG/PC (updating of AS operating system possible)	
Export/import	Program, symbols	Program, symbols, HW configuration	
Documentation function	Included	Included; option DOCPRO for standardized documentation of the S7 project	
Multilingual project documentation	Yes	Yes	
Multi-user engineering	No	Yes	
<b>Programming</b>			
Languages	LAD/FBD/IL	LAD/FBD/IL and IL source	Like STEP 7 plus S7-GRAPH (sequencer)/ S7-SCL (textual high-language)
Structured/symbolic programming	Yes/yes	Yes/yes	
Checking/establishing program consistently	Yes/yes	Yes/yes	
Standard/user libraries	Yes/no	Yes/yes	
<b>Online functions</b>			
Online access	MPI	MPI, PROFIBUS, option: Industrial Ethernet	
Test functions	Monitoring, control, forcing	Monitoring, control, forcing, single step (debugging)	
Offline/online comparison functions	Program, HW configuration	Program	
Diagnostics	System diagnostics	System diagnostics, signaling of system faults, integrated process fault diagnostics with S7-GRAPH	
<b>Option packages</b>			
Optional programming languages	None	S7-GRAPH, S7-SCL, S7-HiGraph, CFC	S7-HiGraph, CFC
Options for simulation, documentation, diagnostics and remote maintenance	S7-PLCSIM, S7-Teleservice	S7-PLCSIM, S7-DOCPRO, TeleService, S7-PDiag	DOCPRO, TeleService, S7-PDiag (S7-PLCSIM included in scope of delivery)

### 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 CSF; 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

### Ordering Data

### Order No.

#### STEP 7-Micro/WIN V4 programming software

*Target system:*  
All CPUs of the SIMATIC S7-200

*Prerequisite:*  
Windows 2000/XP on PG or PC

*Type of delivery:*  
German, English, French, Spanish, Italian, Chinese; with online documentation

Single license	B8	<b>6ES7 810-2CC03-0YX0</b>
Upgrade Single License <sup>1)</sup>	B8	<b>6ES7 810-2CC03-0YX3</b>

To be ordered separately:

<b>Intelligent RS 232/PPI multi-master cable</b>		<b>6ES7 901-3CB30-0XA0</b>
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For connecting devices with an RS 232 interface to SIMATIC S7-200 or the PPI network; master in the multi-master PPI network

<b>Intelligent USB/PPI multi-master cable</b>		<b>6ES7 901-3DB30-0XA0</b>
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For connecting devices with an USB interface to SIMATIC S7-200 or the PPI network; master in the multi-master PPI network

#### System manual for S7-22x CPUs

German		<b>6ES7 298-8FA24-8AH0</b>
English		<b>6ES7 298-8FA24-8BH0</b>
French		<b>6ES7 298-8FA24-8CH0</b>
Spanish		<b>6ES7 298-8FA24-8DH0</b>
Italian		<b>6ES7 298-8FA24-8EH0</b>
Chinese		<b>6ES7 298-8FA24-8FH0</b>

#### Components for connecting a PC to MPI and PROFIBUS

*For PCs with a free PCI slot::*

<b>CP 5611</b>		<b>6GK1 561-1AA01</b>
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<b>CP 5611 MPI</b>	B7	<b>6GK1 561-1AM01</b>
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incl. MPI cable (5 m)

*For PCs with a free PCMCIA slot:*

<b>CP 5512</b>		<b>6GK1 551-2AA00</b>
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For Windows XP Professional

*For PCs without a free PCI slot:*

<b>PC adapter USB</b>		<b>6ES7 972-0CB20-0XA0</b>
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For connecting a PC to S7-300/-400/C7 through a USB interface; with USB cable (5 m)

1) Upgrade for all previous STEP 7-Micro/WIN and STEP 7-Micro/DOS versions

B7: Subject to export regulations: AL: N and ECCN: EAR99H

B8: Subject to export regulations: AL: N and ECCN: EAR99S

# SIMATIC Software

## Standard Tools

### STEP 7-Micro/WIN instruction library

#### Overview

- Additional instruction libraries for STEP 7 Micro/WIN V3.2:
  - USS protocol library
- MODBUS protocol library

#### Ordering Data

##### STEP 7-Micro/Win command library V1.1

Protocol libraries for USS and MODBUS protocols; can be used with STEP 7-Micro/Win32 V3.2; including documentation, on CD-ROM

#### Order No.

6ES7 830-2BC00-0YX0

#### Technical specifications Standard Tools

Standard Tool	STEP 7 Professional	STEP 7	STEP 7 Lite	STEP 7- Micro/WIN
Type of license	Floating license	Floating license	Floating license	Single license
Software class	A	A	A	A
Current version	Edition 2006	V 5.4	V 3.0	V 4.0
Target system	SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 SIMATIC C7	SIMATIC S7-200
Operating system	Windows XP Professional Windows Vista Ultimate, Windows Vista Business	Windows XP Professional Windows Vista Ultimate, Windows Vista Business	Windows XP Home Windows 2000 Professional Windows XP Professional	Windows 2000 Windows XP
Main memory expansion in programming device / PC, min.	Depends on Microsoft Windows operating system used. Recommendation: 1 to 2 GB	Depends on Microsoft Windows operating system used. Recommendation: 1 to 2 GB	Depends on Microsoft Windows operating system used. Recommendation: 128 MB	32 MB
Hard drive requirement in programming device / PC	Depending on scope of installation, 700 to 1000 MB	Depending on scope of installation, 650 to 900 MB	Depending on scope of installation, 90 to 250 MB	50 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)	approx. factor 1.5 compared with STEP 5 with AWL (STL - instruction list), KOP (LAD - ladder diagram), FUP (FBD - function block diagram)	approx. factor 1.5 compared with STEP 5 with AWL (STL - instruction list), KOP (LAD - ladder diagram), FUP (FBD - function block diagram)	approx. factor 1.0 compared with STEP 5 with AWL (STL - instruction list), KOP (LAD - ladder 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	-	For stand-alone applications with centralized I/O.	

## Overview

```

FUNCTION_BLOCK FB27
VAR_INPUT
  SIG_SEL : INT := 0;
  GRP1_SEL : BOOL := 0;
  GRP2_SEL : BOOL := 0;
  END_VAL : BOOL := 0;
END_VAR

VAR_OUTPUT
  SEL_OUT : INT := 0;
  GRP1_OUT : BOOL := 0;
  GRP2_OUT : BOOL := 0;
  END_VAL : BOOL := 0;
END_VAR

BEGIN
  SELECT
  SELECT
  IF SELECT < 0 THEN
  SELECT := -SELECT;
  END_IF;
  IF SELECT > MAX THEN
  SELECT := MAX;
  END_IF;
  SEL_OUT := SELECT;
  
```

- PASCAL-type high-level language
- Optimized for programming programmable 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



## Ordering Data

## Order 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 V5.3 and higher

#### Delivery package:

on CD; German, English, French, Spanish, Italian; incl. authorization diskette, with electronic documentation

Floating license

Software Update Service (requires current software version)

Upgrade floating to V5.3

**6ES7 811-1CC05-0YA5**

**6ES7 811-1CA01-0YX2**

**6ES7 811-1CC05-0YE5**

### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

### SIMATIC Manual Collection update service for 1 year

B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

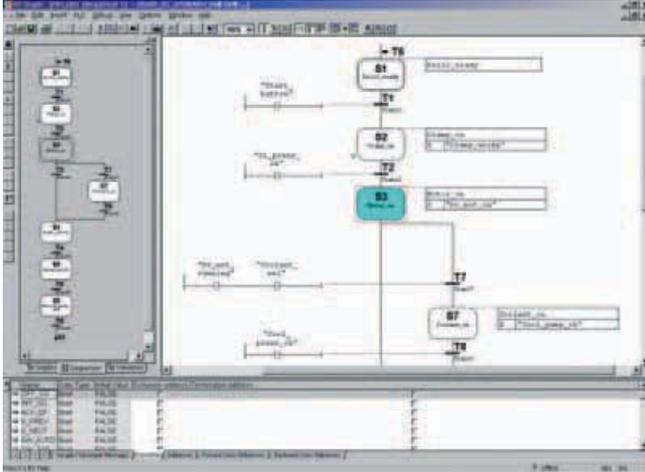
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Engineering Tools

### S7-GRAPH

#### Overview



6

- 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



#### Ordering Data

#### Order 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 V5.3 and higher

*Delivery package:*  
on CD; German, English, French,  
Spanish, Italian; incl. authori-  
zation diskette, with electronic  
documentation

Floating license

**6ES7 811-0CC06-0YA5**

Software Update Service  
(requires current software  
version)

**6ES7 811-0CA01-0YX2**

Floating license upgrade to V5.3

**6ES7 811-0CC06-0YE5**

##### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five  
languages: S7-200/300/400, C7,  
LOGO!, SIMATIC DP, PC, PG,  
STEP 7, engineering software,  
runtime software, PCS 7,  
SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

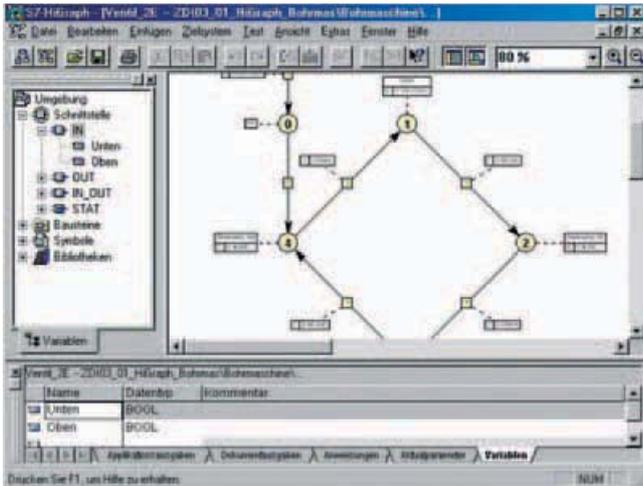
B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD  
and the three subsequent  
updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## Overview



- For graphic description of asynchronous processes using state graphs
- Also particularly suitable for machine constructors (technologists), commissioning engineers and service engineers
- Extremely flexible using freely-positionable graphic elements
- With integrated monitoring and signaling functions
- Can be used in SIMATIC S7-300, S7-400, C7 and WinAC

## Ordering Data

## Order No.

### SIMATIC S7 HiGraph, Version 5.3

*Task:*

Programming of state diagrams

*Target system:*

SIMATIC S7-300,  
SIMATIC S7-400, SIMATIC C7,  
SIMATIC WinAC

*Requirement:*

STEP 7 V5.3 and higher

*Delivery package:*

on CD; German, English, French,  
Spanish, Italian; incl. authori-  
zation diskette, with electronic  
documentation

Floating license

**6ES7 811-3CC05-0YA5**

Software Update Service  
(requires current software  
version)

**6ES7 811-3BA01-0YX2**

Floating license upgrade to V5.3

**6ES7 811-3CC05-0YE5**

### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five  
languages: S7-200/300/400, C7,  
LOGO!, SIMATIC DP, PC, PG,  
STEP 7, engineering software,  
runtime software, PCS 7,  
SIMATIC HMI, SIMATIC NET

### SIMATIC Manual Collection update service for 1 year

B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD  
and the three subsequent  
updates

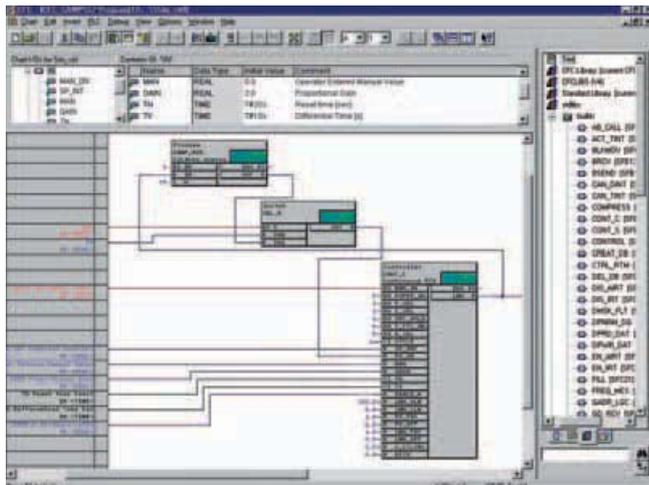
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Engineering Tools

### CFC

#### Overview



- For creating automation programs by drawing a function chart
- With extensive libraries of prefabricated function blocks to which function blocks created by the user can be added
- Reduced costs and fewer mistakes by simply interconnecting read-to-use function 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

#### Ordering Data

#### Order No.

##### SIMATIC CFC, Version 7.0

###### Task:

Graphic configuring and programming of automation applications in the form of technology-oriented diagrams

###### Target system:

SIMATIC S7-300/400,  
SIMATIC WinAC, D7-SYS

###### Requirements:

STEP 7 V5.3 and higher, also  
S7-SCL V5.1 SP3 and higher

###### Delivery form:

Engineering software and electronic documentation on CD-ROM, License Key Disk, Emergency Key Disk, Certificate of License, Terms and Conditions

Floating license

**6ES7 658-1EX07-2YA5**

Upgrade to floating license V7.0

**6ES7 658-1EX07-2YE5**

Software Update Service  
(requires current software version)

**6ES7 658-1EX00-2YL8**

##### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

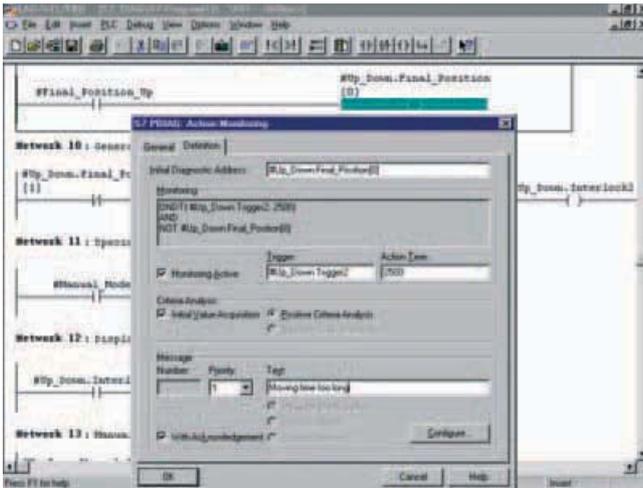
B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## 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

## Ordering Data

## Order 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 V5.3 SP3 and higher

*Delivery package:*  
on CD; German, English, French, Spanish, Italian; incl. authorization diskette, with electronic documentation

Floating license

**6ES7 840-0CC04-0YA5**

Software Update Service  
(requires current software version)

**6ES7 840-0CA01-0YX2**

Upgrade to V5.3

**6ES7 840-0CC04-0YE5**

### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

### SIMATIC Manual Collection update service for 1 year

B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

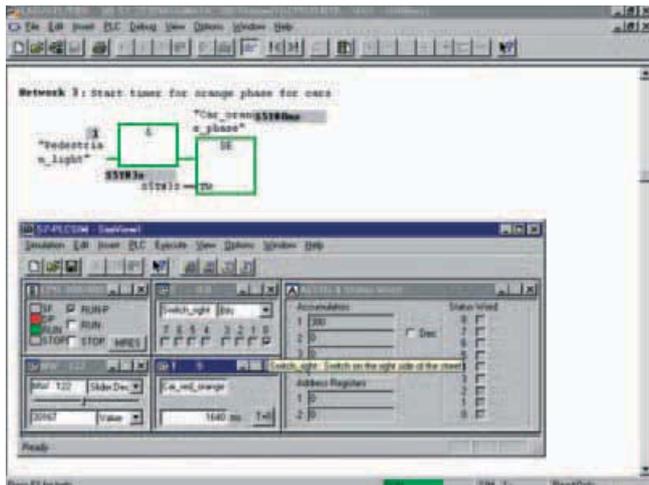
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Engineering Tools

### 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)

#### Ordering Data

#### Order 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:

From STEP 7 V5. 4 incl. SP1, SP2 or SP3

###### Type of delivery:

on CD; English, German, French, Spanish, Italian; license key on USB stick, with electronic documentation

Floating license

**6ES7 841-0CC05-0YA5**

Software Update Service (requires current software version)

**6ES7 841-0CA01-0YX2**

Upgrade floating license to V5.4

**6ES7 841-0CC05-0YE5**

##### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

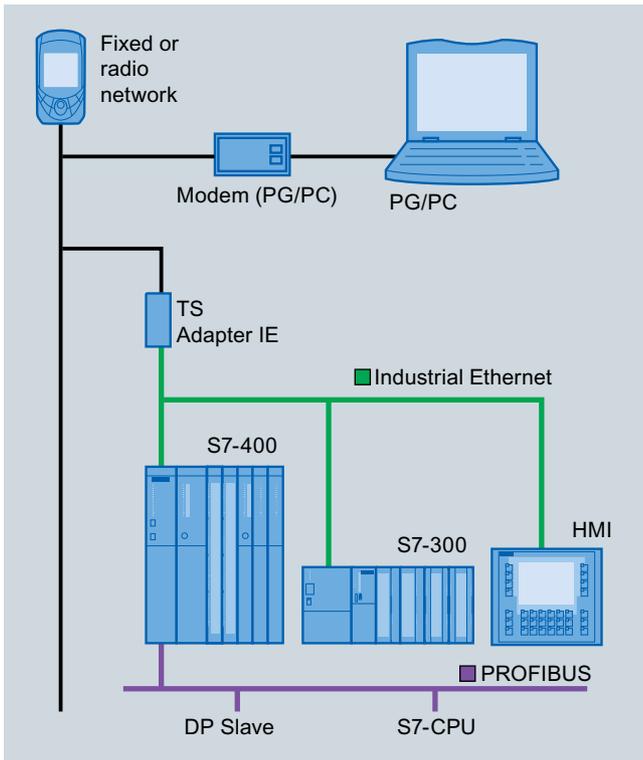
B3

**6ES7 998-8XC01-8YE2**

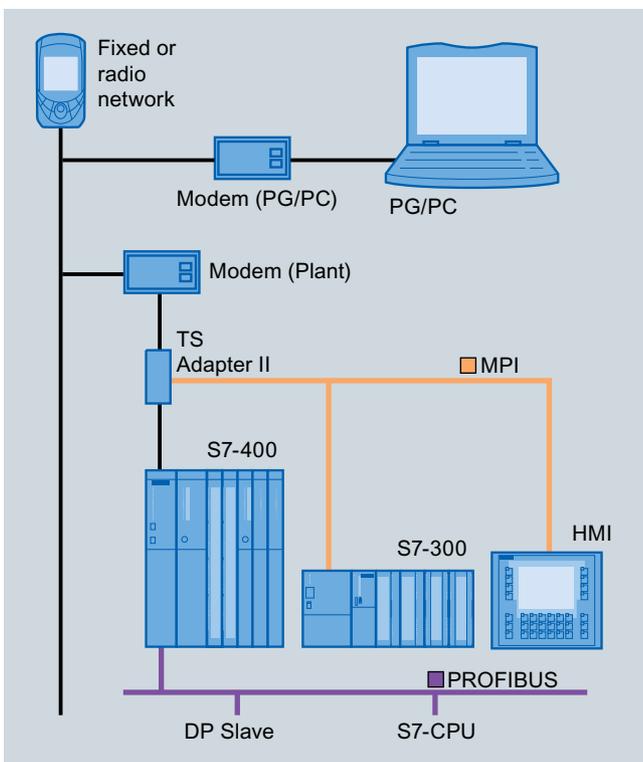
Current "Manual Collection" DVD and the three subsequent updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## Overview



Teleservice with TS Adapter IE



Teleservice with TS Adapter II

- For performing remote maintenance over the telephone network:  
A PG/PC with an Engineering Tool installed, e.g. STEP 7, can access automation components (e.g. S7 CPUs) over the telephone network that are connected to the appropriate adapters over Industrial Ethernet or PROFIBUS.
- Comprising the TeleService software and different adapters:
  - TS Adapter II for connection to PPI, MPI or PROFIBUS DP
  - TS Adapter IE 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.
- 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.

# SIMATIC Software

## Engineering Tools

### TeleService

#### Technical specifications

For technical data for TeleService, see "Engineering Tools".

TS Adapter II	
Dimensions (W x H x D) in mm	125 x 110 x 40
Weight, approx.	250 g
Interfaces	
• to S7/C7	RS 485 (up to 12 Mbit/s)
• to the PC	USB 1.1 (12 Mbit/s)
• to an external modem	RS 232 (up to 115 kbaud)
• to the analog telephone network	RJ12
• to the ISDN telephone network	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 $\mu$ s
Degree of protection	IP20
Temperature	
• Operation	$\pm 0$ °C ... +60 °C
• Storage/transport	-40 °C ... +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	RJ45 (10/100 Mbit/s)
• to an external modem	RS 232 (up to 115 kbaud)
• to the analog telephone network	RJ12
• to the ISDN telephone network	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 / max. 240 mA
Switch-on current, max.	0.7 A; 8 $\mu$ s
Degree of protection	IP20
Temperature	
• Operation	$\pm 0$ °C ... +60 °C
• Storage/transport	-40 °C ... +70 °C

#### Ordering Data

#### Order 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	B8	<b>6ES7 842-0CE00-0YE0</b>
Floating License Upgrade (from each previous version)	B8	<b>6ES7 842-0CE00-0YE4</b>
Software Update Service (requires current software version)		<b>6ES7 842-0CA01-0YX2</b>

##### TS Adapter II modem

With MPI connection and RS 232;  
9-pin, male

**6ES7 972-0CB35-0XA0**

##### TS Adapter II ISDN

With MPI connection and RS 232;  
9-pin, male

**6ES7 972-0CC35-0XA0**

##### TS Adapter IE modem

With Ethernet connection RJ45  
(10/100 Mbit/s) and RS 232;  
9-pin, male

**6ES7 972-0EM00-0XA0**

##### TS Adapter IE ISDN

With Ethernet connection RJ45  
(10/100 Mbit/s) and RS 232;  
9-pin, male

**6ES7 972-0ED00-0XA0**

##### SIMATIC Manual Collection

Electronic manuals on DVD, five  
languages: S7-200/300/400, C7,  
LOGO!, SIMATIC DP, PC, PG,  
STEP 7, engineering software,  
runtime software, PCS 7,  
SIMATIC HMI, SIMATIC NET

B3 **6ES7 998-8XC01-8YE0**

##### SIMATIC Manual Collection update service for 1 year

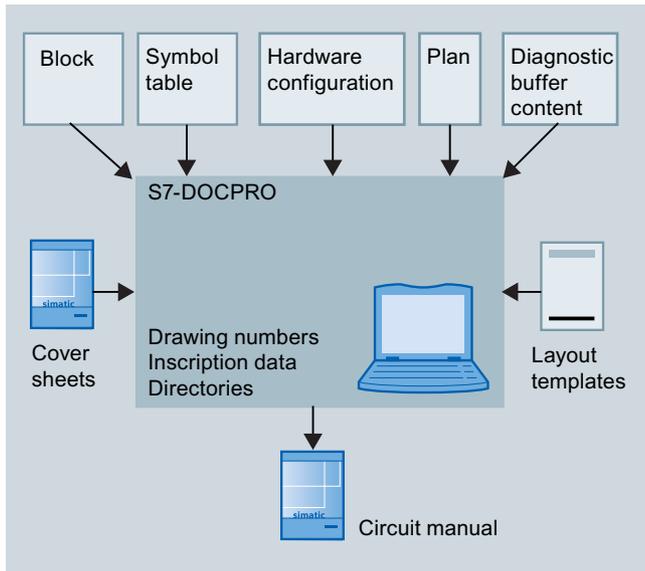
Current "Manual Collection" DVD  
and the three subsequent  
updates

B3 **6ES7 998-8XC01-8YE2**

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B8: Subject to export regulations: AL: N and ECCN: EAR99S

### 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

### Ordering Data

### Order 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

**6ES7 803-0CC03-0YA5**

Software Update Service (requires current software version)

**6ES7 803-0CA01-0YX2**

Single license upgrade to V5.4

**6ES7 803-0CC03-0YE5**

#### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

#### SIMATIC Manual Collection update service for 1 year

B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

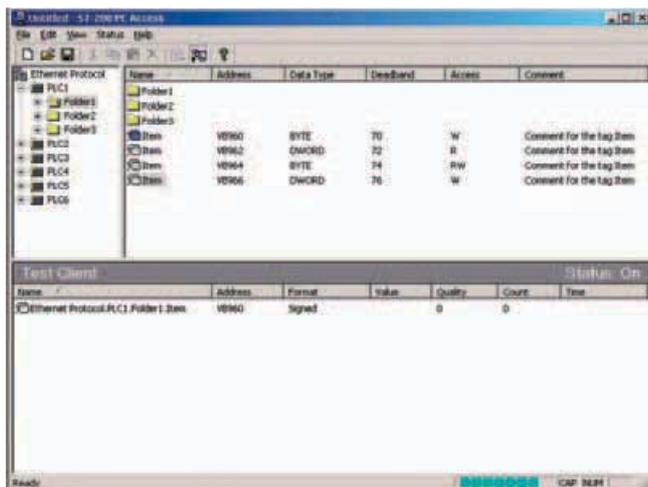
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Engineering Tools

### S7-200 PC Access

#### Overview



- OPC server as the bridge between the SIMATIC S7-200 and the PC world
- For processing and visualizing data from the S7-200 with standard Windows applications
- Database applications, human/machine interfaces (HMIs), tools for statistical evaluations with Excel, for instance, or calculation modules for complex requirements are examples of what can be created.

#### Ordering Data

#### Order No.

##### S7-200 PC Access V1.0

*Task:*  
OPC server for SIMATIC S7-200.

*Target system:*  
SIMATIC S7-22x.

*Requirements:*  
Windows 2000/XP; on PG or PC;  
STEP 7-Micro/Win V4.

*Delivery package:*  
German, English, French,  
Spanish, Italian, Chinese; with  
electronic documentation

Single license B8 **6ES7 840-2CC01-0YX0**

Multi Copy License for  
15 installations B8 **6ES7 840-2CC01-0YX1**

##### Intelligent RS 232/PPI multi-master cable **6ES7 901-3CB30-0XA0**

For connecting devices with an  
RS 232 interface to SIMATIC  
S7-200 or the PPI network; master  
in the multi-master PPI network

##### Intelligent USB/PPI multi-master cable **6ES7 901-3DB30-0XA0**

For connecting devices with an  
USB interface to SIMATIC S7-200  
or the PPI network; master in the  
multi-master PPI network

##### CP 5512 **6GK1 551-2AA00**

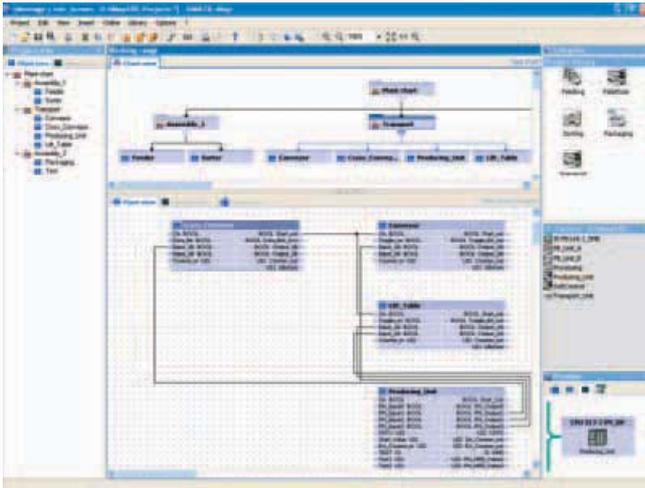
PC card (CardBus, 32-bit) for  
connecting a programming  
device or Notebook computer to  
PROFIBUS or MPI, with 32-bit  
Windows XP Professional  
(Windows 2000 Professional  
available soon), executable under  
32-bit Windows 2000 Professional  
and Windows XP Professional in  
conjunction with STEP 7 V5.2  
German/English

##### CP 5611 **6GK1 561-1AA01**

PCI card for connecting a PC to  
the CPU interface or PROFIBUS  
DP module (187.5 Kbit/s or  
12 Mbit/s) over an MPI cable

B8: Subject to export regulations: AL: N and ECCN: EAR99S

## 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 2000, Windows XP Professional and Windows 2003 Server

## Technical specifications

Engineering tool	SIMATIC iMap
Current version	V3.0
Software class	A
<b>Applications</b>	
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	<ul style="list-style-type: none"> <li>• Open component-based engineering tool to the PROFINET standard.</li> <li>• Simple communication between intelligent automation and field devices on PROFIBUS DP and on Ethernet.</li> <li>• Graphical configuration of communication on PROFIBUS DP and on Ethernet</li> <li>• Extremely high reusability of software components (technology modules)</li> <li>• Graphical structuring of the plant using "chart-in-chart" function</li> <li>• Convenient navigation through the project tree</li> <li>• Easy creation and structuring of technology libraries</li> <li>• PROFIBUS and Ethernet in the overview of the network view</li> <li>• Fast start-up thanks to downloading and testing directly on Ethernet (also of PROFIBUS slaves)</li> </ul>

Engineering Tool	SIMATIC iMap
Advantages (continued)	<ul style="list-style-type: none"> <li>• Online display of values of the technology modules on the interfaces and in the variable table</li> <li>• Diagnosis of communication in the diagnostics window</li> </ul>
Sectors	<ul style="list-style-type: none"> <li>• Automotive industry (especially in assembly, conveyor systems and in the paint shop)</li> <li>• Complex food and packaging machines</li> <li>• Conveyor systems based on PROFIBUS DP</li> <li>• Production lines with several interlinked machines</li> </ul>
Target systems	<ul style="list-style-type: none"> <li>• SIMATIC S7 CPU 31x-2 PN/DP and 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)</li> <li>• SIMATIC WinAC PN (can be used as a proxy function for the devices of a complete PROFIBUS segment, one line only)</li> <li>• SIMATIC NET IE/PB Link (can be used as a proxy function for the devices of a complete PROFIBUS segment)</li> <li>• 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)</li> </ul>

# SIMATIC Software

## Engineering Tools

### SIMATIC iMap

#### Technical specifications (continued)

Engineering Tool	SIMATIC iMap
<b>Target systems</b> (continued)	<ul style="list-style-type: none"> <li>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),</li> <li>PROFINET CBA OPC Server (for access from PC applications to data in PROFINET devices)</li> <li>Devices on Industrial Ethernet based on the PROFINET CBA standard</li> <li>SIMATIC OPs (within the components)</li> <li>SIMATIC ProTool/Pro, WinCC or any other visualization system with OPC client function</li> </ul>
<b>System requirements</b>	
Operating system	Windows 2000 Prof. Service Pack 4 and higher or Windows XP Prof. Service Pack 1 and higher or Windows 2003 Server Service Pack 1 and higher; 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	<ul style="list-style-type: none"> <li>STEP 7 V5.3 Service Pack 3 or higher</li> <li>PN OPC server V6.3 or higher</li> </ul> <p>The following software must be installed before iMap (included in the iMap package):</p> <ul style="list-style-type: none"> <li>MS Internet Explorer V6.0 Service Pack 1 and higher</li> <li>Adobe Acrobat Reader V5.0</li> </ul>
<b>Delivery format</b>	
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
<b>Authorization/licenses</b>	
Authorization	Yes
Single License (SL)	Yes
Upgrade License (UL)	Yes
Software Update Service	Yes
Unlock Copy License	No

#### Ordering Data

#### Order 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 2000 Prof. with Service Pack 4 or later or Windows XP Prof. with Service Pack 1 or later or Windows 2003 Server with Service Pack 1 or later; on PG or PC with Pentium processor, min. 1 GHz; STEP 7 V5.3 or later with Service Pack 3, PN OPC Server V6.3 or later

###### Delivery form:

German, English, with electronic documentation

Single license	B3	<b>6ES7 820-0CC04-0YA5</b>
Software Update Service (requires current software version)	B3	<b>6ES7 820-0CC01-0YX2</b>
Upgrade to V3.0, single license	B3	<b>6ES7 820-0CC04-0YE5</b>

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## Overview

- Option package for creating motion control tasks for CPU 31xT-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

### S7-Technology V4.1

*Task:*  
Option package for configuring and programming technology tasks with SIMATIC S7 CPU 31xT-2 DP

*Requirement:*  
STEP 7 V5.4 SP2 or higher

*Type of delivery:*  
on DVD;  
incl. documentation for CPU 31xT-2 DP (included on DVD)

## Order No.

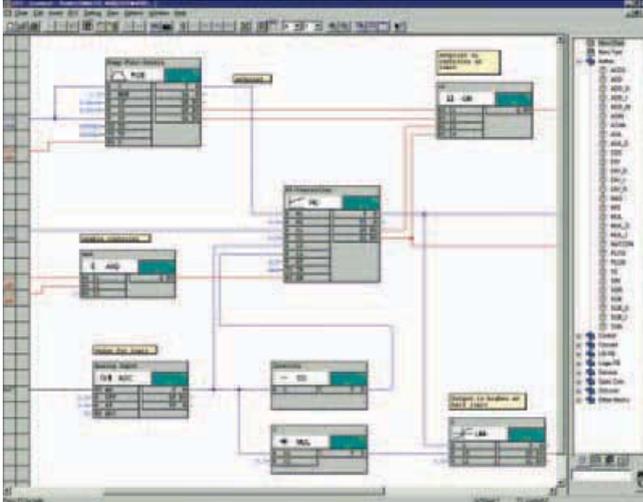
**6ES7 864-1CC41-0YX0**

# SIMATIC Software

## Engineering Tools

### D7-SYS

#### 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

#### Order No.

##### SIMATIC D7-SYS V7.0

*Task:*  
Function block library for configuring closed-loop control and automation tasks

*Target system:*  
SIMATIC S7-400/FM 458

*Requirement:*  
Windows 2000/XP

*Delivery package:*  
on CD, German, English, with electronic documentation

Floating license

**6ES7 852-0CC01-0YA5**

Upgrade License V5.x and higher

**6ES7 852-0CC01-0YE5**

Software Update Service

**6ES7 852-0CC01-0YL5**

##### SIMATIC D7 FB Gen V2.1

B8

**6DD1 805-5DA0**

Function block generator

##### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

B3

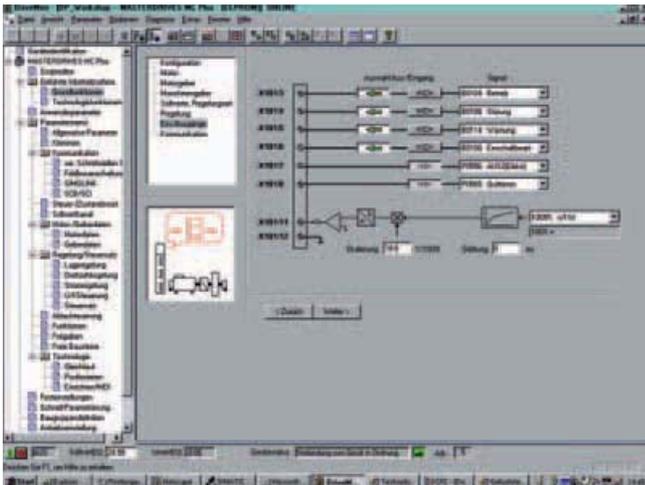
**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B8: Subject to export regulations: AL: N and ECCN: EAR99S

### Overview



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

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 -  
For entry into the world of Totally Integrated Automation and the capability of routing beyond network boundaries and the use of the SIMATIC teleservice.
- Drive ES Graphic -  
for convenient configuring of free drive functions for SIMOVERT MASTERDRIVES and SIMOREG DC MASTER.
- Drive ES SIMATIC -  
for simply assigning parameters in the STEP 7 communication software instead of programming.
- Drive ES PCS7 - integrates drives with PROFIBUS interface into the SIMATIC PCS7 process control system.

### Ordering Data

### Order No.

#### Drive ES Basic V5.4

- Configuration software for the integration of drives into Totally Integrated Automation
- Requirement:  
STEP 7 V5.3 or higher, SP 3
- Supply format: CD-ROM  
Ger, En, Fr, Sp, It.  
with electronic documentation

Single license	<b>6SW1 700-5JA00-4AA0</b>
Multi-user license, 60 pieces	<b>6SW1 700-5JA00-4AA1</b>
Software update service for single license	<b>6SW1 700-0JA00-0AB2</b>
Software update service for multi-user license	<b>6SW1 700-0JA00-1AB2</b>
Upgrade from V5.x to V5.4	<b>6SW1 700-5JA00-4AA4</b>

#### Drive ES Graphic V6.0

- Option for Drive ES Basic, in conjunction with SIMATIC tool CFC for graphical configuring the functions available in SIMOVERT MASTERDRIVES
- Requirement: Drive ES Basic V5 or higher and CFC V5.1 or higher, SP 2
- Supply format: on CD-ROM  
Ger, En, Fr, Sp, It  
with electronic documentation

Single license V6.0	<b>6SW1 700-6JB00-0AA0</b>
Upgrade from V5.x to V6.0	<b>6SW1 700-6JB00-0AA4</b>

#### Drive ES SIMATIC V5.4

- Function block library for SIMATIC for the parameterization of the communication with the drives
- Requirement: STEP 7 V5.3, SP 3 or higher
- Supply format: on CD-ROM  
Ger, En, Fr, Sp, It  
with electronic documentation

Single license, incl. 1 runtime license	<b>6SW1 700-5JC00-4AA0</b>
Runtime license	<b>6SW1 700-5JC00-1AC0</b>
Software update service for single license	<b>6SW1 700-0JC00-0AB2</b>
Upgrade from V5.x to V5.4	<b>6SW1 700-5JC00-4AA4</b>

#### Drive ES PCS7 V6.1

- Function block library for PCS 7 for the integration of drives
- Requirement:  
PCS7 V6.1 and higher
- Supply format: CD-ROM  
de, en, fr, es, it  
with electronic documentation

Single license, incl. 1x runtime license	<b>6SW1 700-6JD00-1AA0</b>
Runtime license	<b>6SW1 700-5JD00-1AC0</b>
Software update service for single license	<b>6SW1 700-0JD00-0AB2</b>
Upgrade from V5.x to V6.x	<b>6SW1 700-6JD00-1AA4</b>

# SIMATIC Software

## Engineering Tools

### Distributed Safety Software

#### 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

#### Order No.

##### Distributed Safety V5.4 programming tool

###### Task:

Software for configuring fail-safe user programs for SIMATIC S7-300F, S7-400F, ET 200S

###### Requirement:

STEP 7 V5.3 SP3 and higher

Floating license

**6ES7 833-1FC02-0YA5**

Software Update Service (requires current software version)

**6ES7 833-1FC00-0YX2**

##### Distributed Safety Upgrade

From V5.x to V5.4;  
Floating license for 1 user

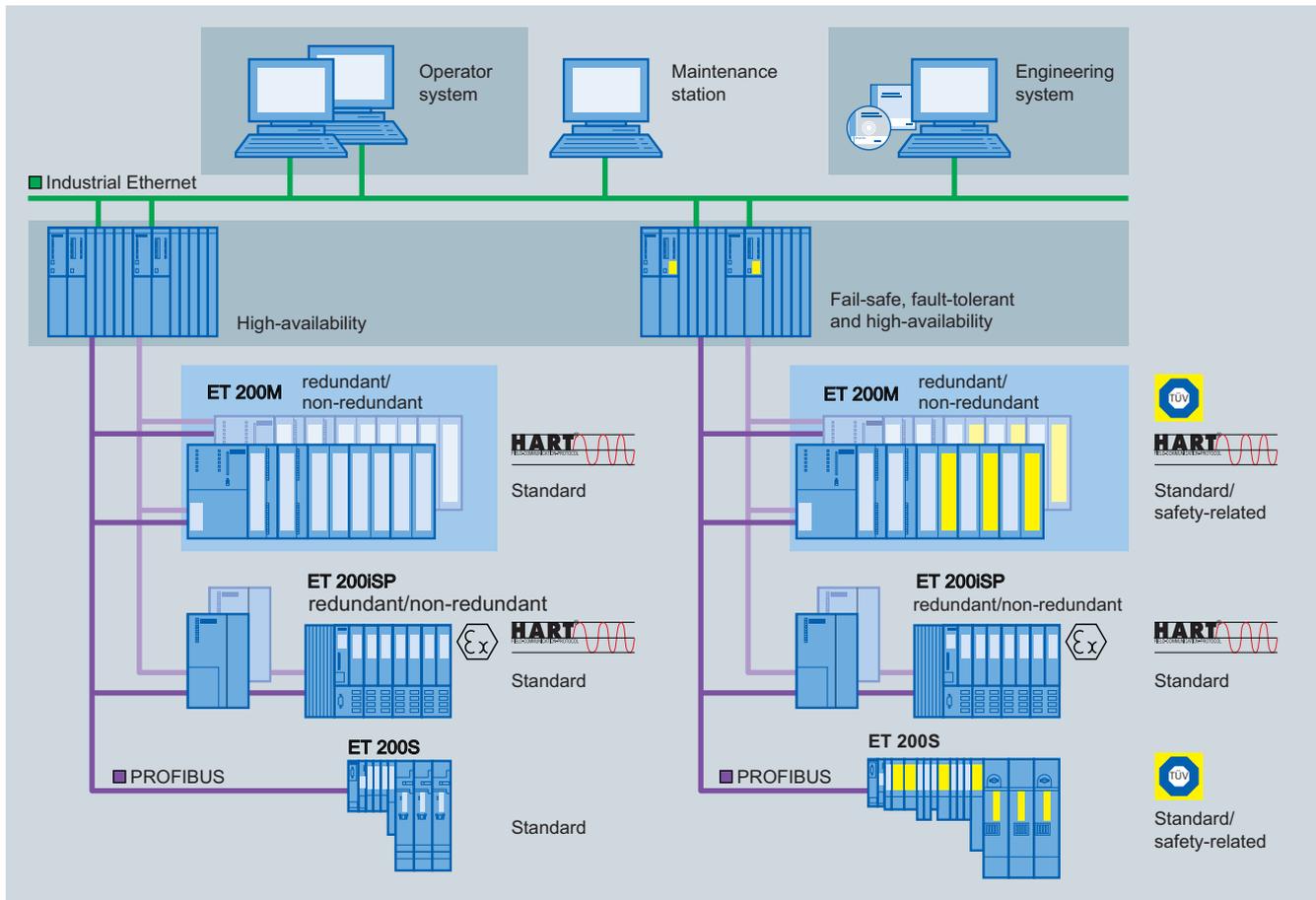
**6ES7 833-1FC02-0YE5**

##### Single license for "fail-safe function blocks for burner systems" V 5.4

License for one controller

**9AL3 100-1AD54**

## 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 automation systems 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:

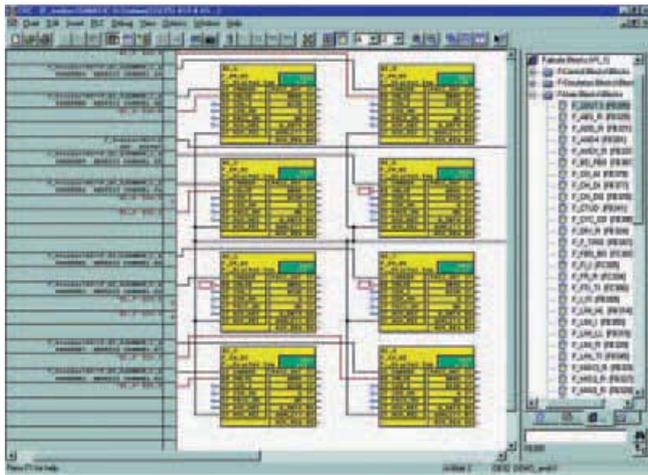
- Single-channel (with one CPU, safety-related)
- High-availability (with redundant CPUs, safety-related and fault-tolerant)

# SIMATIC Software

## Engineering Tools

### S7-F/FH Systems: S7 F Systems

#### 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

#### Order No.

##### S7 F Systems RT license

6ES7 833-1CC00-6YX0

For processing safety-related application programs, for one AS 412F/FH, AS 414F/FH or AS 417F/FH

##### S7 F Systems V6.0

6ES7 833-1CC01-0YA5

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, Windows 2000 SP4, Windows Server 2003 SP1/SP2  
2 languages (German, English)

*Type of supply:*  
Certificate of license as well as software and electronic documentation on CD

##### S7 F Systems Upgrade from V5.x to V6.0

6ES7 833-1CC01-0YE5

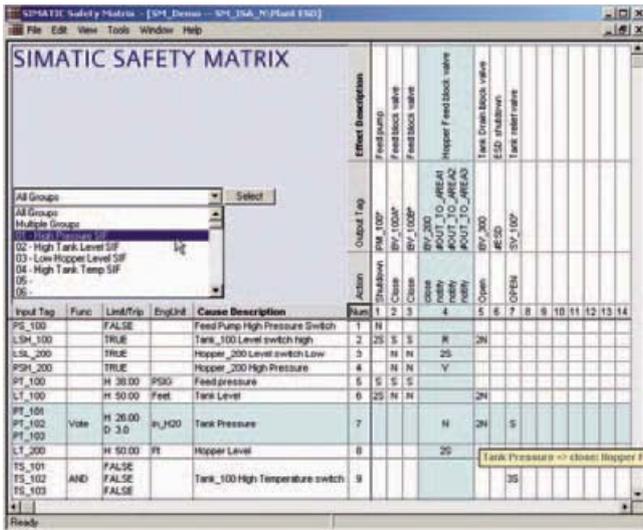
2 languages (German, English), floating license for 1 user

*Type of supply:*  
Certificate of license as well as software and electronic documentation on CD

#### Note:

In the case of an S7 F Systems Upgrade from V5.x to V6.0, the type of S7 F Systems license changes from single license to floating license.

### 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

### Order No.

#### SIMATIC Safety Matrix Tool V6.1

B8

6ES7 833-1SM01-0YA5

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 Professional, Single License for 1 installation

Type of supply: Certificate of License and authorization diskette for Safety Matrix Tool and Safety Matrix Viewer; software and electronic documentation on CD

#### Upgrade SIMATIC Safety Matrix Tool V6.1

B8

6ES7 833-1SM01-0YE5

From V5.2 to V6.1

#### SIMATIC Safety Matrix Editor

B8

6ES7 833-1SM41-0YA5

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 2000 Professional or Windows XP Professional, single license for 1 installation

Type of supply: Certificate of License and authorization diskette; software and electronic documentation on CD

#### SIMATIC Safety Matrix Viewer 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 2000 Professional or Windows XP Professional, Windows 2003 Server  
Type of supply: Certificate of License and authorization diskette; software and electronic documentation on CD

Floating License for 1 installation B8 6ES7 833-1SM61-0YA5

Floating License upgrade from V6.0 to V6.1 B8 6ES7 833-1SM61-0YE5

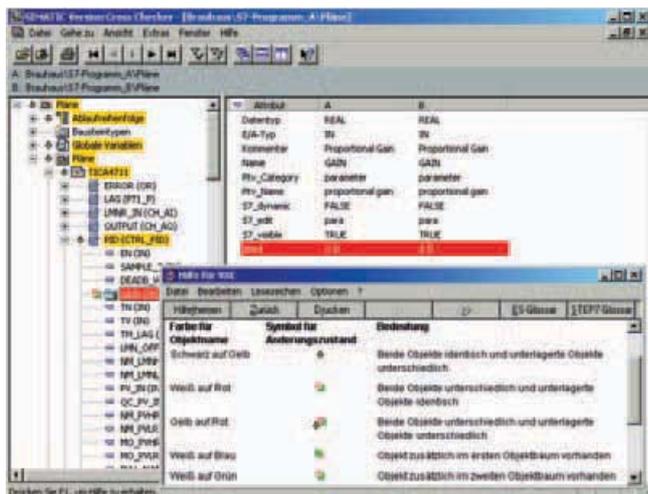
B8: Subject to export regulations: AL: N and ECCN: EAR99S

# SIMATIC Software

## Engineering Tools

### 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, technological hierarchy, CFC/SFC plans, SFC details, block types, alarms, global variables, 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

The SIMATIC Version Cross Manager is a SIMATIC product which was developed for the SIMATIC PCS 7 process control system but which can also be used together with other SIMATIC products in the context of Totally Integrated Automation (TIA).

#### Ordering Data

#### Order No.

##### SIMATIC Version Cross Manager V7.0

6ES7 658-1CX07-2YA5

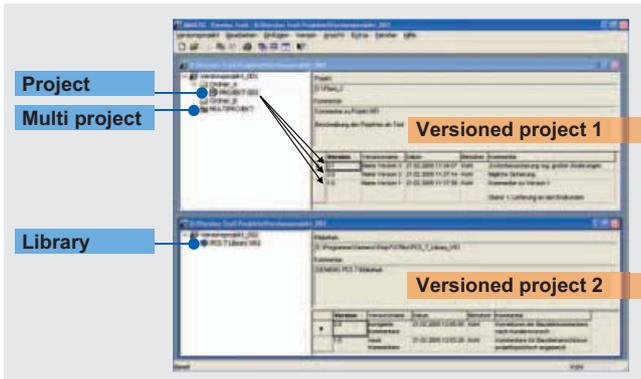
6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional, Windows XP Professional or Windows Server 2003, floating license for 1 user  
Type of delivery:  
License key disk, emergency key disk, certificate of license, terms and conditions as well as TIA toolset CD V7.0

##### SIMATIC Version Cross Manager Upgrade V7.0

6ES7 658-1CX07-2YE5

for upgrading from Version Cross Checker V6.0/V6.1 to Version Cross Manager V7.0  
6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional, Windows XP Professional or Windows Server 2003, floating license for 1 user  
Type of delivery:  
License key disk, emergency key disk, certificate of license, terms and conditions as well as TIA toolset CD V7.0

## 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. It can be used within SIMATIC PCS 7 or also in the context of Totally Integrated Automation with SIMATIC.

## Ordering Data

## Order No.

### SIMATIC Version Trail V7.0

6ES7 658-1FX07-2YA5

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional, Windows XP Professional or Windows Server 2003, floating license for 1 user  
 Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions as well as TIA toolset CD V7.0

### SIMATIC Version Trail Upgrade V7.0

6ES7 658-1FX07-2YE5

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional, Windows XP Professional or Windows Server 2003, floating license for 1 user  
 Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions as well as TIA toolset CD V7.0



Ordering Data	Order No.	Order No.
<i>Minimum configuration SIMATIC PDM Single Point</i>		<i>Components for individual configuration</i>
<p><b>SIMATIC PDM Single Point V6.0</b> for operation and parameterization of one field device; communication via PROFIBUS DP/PA or HART modem, including 1 TAG, cannot be expanded with respect to functions or with TAG option/PowerPack</p> <p>6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional</p> <p>Floating license for 1 user</p> <p>Type of delivery: License key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library</p>	<p><b>6ES7 658-3HX06-0YA5</b></p>	<p><b>SIMATIC PDM Basic V6.0</b> for operation and parameterization of field devices and components, communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS) and Modbus, including 4 TAGs</p> <p>6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library</p> <ul style="list-style-type: none"> <li>• Floating license for 1 user</li> <li>• Rental license for 50 hours</li> </ul> <p><b>6ES7 658-3AX06-0YA5</b> <b>6ES7 658-3AX06-0YA6</b></p>
<i>Predefined SIMATIC PDM V6.0 product configurations for special applications</i>		<i>Integration in STEP 7 / SIMATIC PCS 7</i>
<p><b>SIMATIC PDM Service V6.0</b> Complete package for stand-alone users for servicing, with</p> <ul style="list-style-type: none"> <li>• SIMATIC PDM Basic V6.0</li> <li>• Option "128 TAGs"</li> </ul> <p>6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools</p>	<p><b>6ES7 658-3JX06-0YA5</b></p>	<p>Only required if integration of SIMATIC PDM into HW-Config is to be used</p> <p>6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions</p> <ul style="list-style-type: none"> <li>• Floating license for 1 user</li> </ul> <p><b>6ES7 658-3BX06-2YB5</b></p>
<p><b>SIMATIC PDM S7 V6.0</b> Complete package for use in a SIMATIC S7 configuration environment, with</p> <ul style="list-style-type: none"> <li>• SIMATIC PDM Basic V6.0</li> <li>• Option "Integration in STEP 7/PCS 7"</li> <li>• Option "128 TAGs"</li> </ul> <p>6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools</p>	<p><b>6ES7 658-3KX06-0YA5</b></p>	<p><b>Routing through S7-400</b> 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions</p> <ul style="list-style-type: none"> <li>• Floating license for 1 user</li> </ul> <p><b>6ES7 658-3CX06-2YB5</b></p>
<p><b>SIMATIC PDM S7 V6.0</b> Complete package for use in a SIMATIC S7 configuration environment, with</p> <ul style="list-style-type: none"> <li>• SIMATIC PDM Basic V6.0</li> <li>• Option "Integration in STEP 7/PCS 7"</li> <li>• Option "128 TAGs"</li> </ul> <p>6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools</p>	<p><b>6ES7 658-3KX06-0YA5</b></p>	<p><b>Communication via standard HART multiplexer</b> 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional</p> <p>Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions</p> <ul style="list-style-type: none"> <li>• Floating license for 1 user</li> </ul> <p><b>6ES7 658-3EX06-2YB5</b></p>

# SIMATIC Software

## Engineering Tools

### SIMATIC PDM Process Device Manager

#### Ordering Data (continued)

#### Order No.

#### Order No.

##### *TAG options / PowerPacks*

##### **SIMATIC PDM TAG option**

for TAG expansion, additive to SIMATIC PDM Basic V6.0

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional

Floating license for 1 user

Type of delivery:

License key disk, certificate of license, terms and conditions

- Up to 128 TAGs
- Up to 512 TAGs
- Up to 1024 TAGs
- Up to 2048 TAGs

**6ES7 658-3XA06-2YB5**

**6ES7 658-3XB06-2YB5**

**6ES7 658-3XC06-2YB5**

**6ES7 658-3XD06-2YB5**

##### **SIMATIC PDM PowerPack**

for subsequent TAG expansion of all SIMATIC PDM V6.0 product configurations

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional

Floating license for 1 user

Type of delivery:

License key disk, certificate of license, terms and conditions

- From 128 TAGs to 512 TAGs
- From 512 TAGs to 1024 TAGs
- From 1024 TAGs to 2048 TAGs
- From 2048 TAGs to unlimited TAGs

**6ES7 658-3XB06-2YD5**

**6ES7 658-3XC06-2YD5**

**6ES7 658-3XD06-2YD5**

**6ES7 658-3XH06-2YD5**

##### *Demonstration software*

##### **SIMATIC PDM Demo V6.0**

without online communication and storage functionality

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional

Type of delivery:

2 CDs with SIMATIC PDM V6.0 and device library

**6ES7 658-3GX06-0YC8**

##### *SIMATIC PDM Upgrade/Update Service*

##### **SIMATIC PDM Upgrade from V5.x to V6.0**

for all product versions and combinations

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user

Type of delivery:

License key disk, emergency key disk, certificate of license, terms and conditions;  
2 CDs with SIMATIC PDM V6.0 and device library

**6ES7 651-5CX06-0YE5**

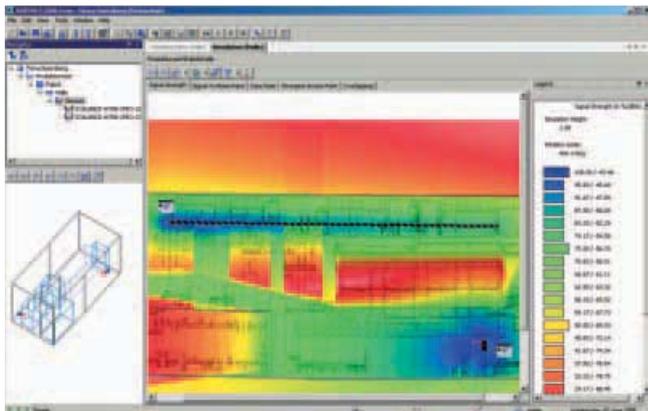
##### **SIMATIC PDM Software Update Service**

Subscription for 1 year with automatic extension

Requirement: current software version

**6ES7 658-3XX00-0YL8**

### Overview



- Engineering tool for support with planning, configuration, simulation and measurement of an IWLAN radio field on site (Site Survey) according to the IEEE 802.11 a/b/g/h standard
- Automatic determination of the WLAN infrastructure for new and existing networks
- Optimization functions for minimization of channel interference
- Visualization and analysis of WLAN networks according to signal strength, data rate, signal-to-noise ratio, overlapping and applications (PROFINET, TCP/IP, Voice over WLAN)
- Configuration of single and multiple devices as well as uploading/downloading of IWLAN device parameters
- Site survey functions (measurements) for the acquisition, conditioning, evaluation and visualization of measured WLAN signals
- Integrated and expandable catalog entries for WLAN devices, antennas and radio hindrances as well as standard graphics formats for importing layout plans
- Report function for documenting the configured and measured WLAN infrastructure

### Ordering Data

### Order No.

#### SINEMA E

Engineering software for planning, configuring, simulating and measuring (Site Survey) industrial WLAN applications in office and industrial environments on PG/PC in accordance with the 802.11 a/b/g/h standard; software and electronic manual on CD-ROM, license key on diskette, Class A, for 32-bit Windows XP Professional +SP2; German/English

- |  |    |                            |
|--|----|----------------------------|
| • <b>SINEMA E 2006 Lean</b>  | B3 | <b>6GK1 781-0AA00-6AA0</b> |
| Planning, configuring and simulating WLAN applications   |    |                            |
| • <b>SINEMA E 2006 Standard</b>  | B3 | <b>6GK1 782-0AA00-6AA0</b> |
| Extended planning, configuring, simulating and measuring (site survey) of WLAN applications (automatic placement, application profile, contour presentation, storage/comparison of simulations, extended filter options) |    |                            |
| • <b>SINEMA E 2006 Powerpack</b>   | B3 | <b>6GK1 782-4AA00-6AC0</b> |
| Software upgrade from SINEMA E Lean to SINEMA E Standard   |    |                            |

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Engineering Tools

### Technical specifications Engineering Tools

#### Technical specifications Engineering Tools

Engineering Tool	S7-SCL	S7-GRAPH
Current version	V5.3	V5.3
Software class	A	A
<b>Applications</b>		
Used for	High-level language text programming of simple and complex calculations, CASE, loop, jump and comparison operations	Graphic programming of sequential controllers and sequencers
Marketing message	Program algorithms and calculations with ease!	The fast, elegant way to program sequential processes easily and transparently!
Advantages	<ul style="list-style-type: none"> <li>• Clear, easy to read programs</li> <li>• Functional, module-based programming</li> <li>• CASE instruction replaces numerous jump and comparison operations</li> <li>• Easily understood by PLC programmers, as the programming philosophy of LAD/FBD/STL is retained</li> <li>• Easy for PC programmers to become familiar with PLC programming</li> <li>• Exchangeability (porting) of subroutines in accordance with IEC 61131-3</li> <li>• A great deal of time is saved on engineering compared with LAD/FBD/STL: up to 20 % in the case of simple programs; at least 50 % in the case of demanding program structures</li> </ul>	<ul style="list-style-type: none"> <li>• Already ideal for use during the design phase</li> <li>• The time spent on configuration is reduced due to the graphic structure and programming</li> <li>• Familiarization is fast and easy</li> <li>• Exact fault localization thanks to comprehensive diagnosis in combination with ProAgent for ProTool/Pro and WinCC</li> <li>• A great deal of time is saved on engineering compared with LAD/FBD/STL: approx. 40 to 70 %</li> </ul>
Sectors	<ul style="list-style-type: none"> <li>• Labeling machines</li> <li>• Chemical plants (e.g. oxygen extraction, evaluation of measured values)</li> <li>• Rubber and plastic processing machines</li> <li>• Wood-processing machines</li> <li>• Storage and logistics systems</li> <li>• Paper machines and printing presses</li> <li>• Punching and cutting machines</li> <li>• Water industry</li> <li>• Winding machines</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive industry (e.g. body-in-white, final assembly)</li> <li>• Production of electrical appliances</li> <li>• Rubber and plastic processing machines</li> <li>• Handling machines</li> <li>• Wood-processing machines</li> <li>• Metal working machines</li> <li>• Paper machines and printing presses</li> <li>• Testing machines</li> <li>• Rolling mills</li> <li>• Winding machines</li> <li>• Leisure and entertainment facilities</li> </ul>
<b>Target systems</b>		
For use in	S7-300 (recommended from CPU 313 and CPU 312C onwards) S7-400 C7 (recommended from C7-626 onwards) WinAC	S7-300 (recommended from CPU 314 and CPU 312C onwards) S7-400 C7 (recommended from C7-626 onwards) WinAC
<b>System requirements</b>		
Operating system	Windows 2000 Professional Windows XP Professional	Windows 2000 Professional Windows XP Professional
Required hard drive memory in the PG/PC approx.	8 MB	15 MB
Required software	STEP 7 V5.3	STEP 7 V5.3
<b>Features</b>		
Observation of variables	Yes	Yes
Control of variables	Yes	Yes
Single-step processing	Yes	Yes
Integration in CFC	Yes	-
<b>Program runtimes</b>		
with S7-300 (typical)	Similar to LAD/FBD/STL	3 ms per block + 1 ms per active step
with S7-400 (typical)	Similar to LAD/FBD/STL	0.4 ms per block + 0.06 ms per active step

### Technical specifications Engineering Tools (continued)

Engineering Tool	S7-SCL	S7-GRAPH
<b>Diagnosis</b>		
Integration of diagnostic data in ProAgent	-	Yes
Integration of diagnostic data in ProTool/Pro	-	Via ProAgent
Integration of diagnostic data in WinCC	-	Via ProAgent
<b>Compliance with standards</b>		
IEC 61131-3	PLCopen certification <ul style="list-style-type: none"> <li>• Base level ST available</li> <li>• Conformity and reusability level ST (available soon)</li> </ul>	PLCopen certification <ul style="list-style-type: none"> <li>• Base level ST available"</li> </ul>
Status of PLCopen activities	Test profile for conformity and reusability level ST available	-
<b>Available versions/licenses</b>		
Floating license	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License Product information	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License Product information
Upgrade (Floating License)	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License Product information	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License Product information
Software Update Service (SUS)		
<b>Also part of</b>		
STEP 7 Professional	Yes	Yes
S7 Trainer Package	Yes	Yes
PCS 7	Yes	-
D7-SYS	-	-

Engineering Tool	S7-HiGraph	CFC
Current version	V5.3	V7.0
Software class	A	A
<b>Applications</b>		
Used for	The graphic, flexible state description of functional units and coordination functions	The graphic creation, interconnection and configuration of (prefabricated) modules and functions
Marketing message	One common language for technicians, programmers, commissioning personnel, operators and maintenance staff!	Simply interconnect and configure instead of programming!

# SIMATIC Software

## Engineering Tools

### Technical specifications Engineering Tools

#### Technical specifications Engineering Tools (continued)

Engineering Tool	S7-HiGraph	CFC
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Already ideal for use during the design phase</li> <li>• Clear overview of mechanical functions</li> <li>• Graphic programming reduces the time spent on configuration</li> <li>• High degree of reusability of functions already described, such as the behavior of valves, motors, clamping devices, etc.</li> <li>• Familiarization is fast and easy</li> <li>• Short program runtimes</li> <li>• Exact fault localization thanks to comprehensive diagnosis in combination with ProAgent for ProTool/Pro</li> <li>• A great deal of time is saved on engineering compared with LAD/FBD/STL: Up to 50 %</li> </ul>	<ul style="list-style-type: none"> <li>• Already ideal for use during the design phase</li> <li>• Graphic interconnection reduces the time spent on configuration</li> <li>• High degree of reusability of previously created plans</li> <li>• Familiarization is fast and easy</li> <li>• Fast, clear interconnection of prefabricated functions</li> <li>• Technological creation of the program as a whole</li> <li>• Clear presentation of technical control structures</li> <li>• Short startup time</li> <li>• High plant availability</li> <li>• A great deal of time is saved on engineering compared with LAD/FBD/STL: Up to 50 %</li> </ul>
<b>Sectors</b>	<ul style="list-style-type: none"> <li>• Automotive industry (e.g. engine building, axle production, transmission production)</li> <li>• Chemical plants (e.g. oxygen extraction)</li> <li>• Rubber and plastic processing machines</li> <li>• Food and beverage machines</li> <li>• Packaging machines</li> <li>• Machine tools</li> <li>• Winding machines</li> <li>• Customized machines</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive industry (e.g. thermostats, tire production processes)</li> <li>• Chemicals</li> <li>• Energy technology and supply</li> <li>• Rubber and plastic processing machines</li> <li>• Metal working machines</li> <li>• Food and beverage machines</li> <li>• Petrochemicals</li> <li>• Rolling mills</li> <li>• Water industry</li> <li>• Winding machines</li> </ul>
<b>Target systems</b>		
For use in	S7-300 S7-400 C7 WinAC	S7-300 S7-400 F/H systems WinAC
<b>System requirements</b>		
Operating system	Windows 2000 Professional Windows XP Professional	Windows 2000 Professional from SP4 or later, Windows Server 2003, Windows XP Professional
Required hard drive memory in the PG/PC approx.	10 MB	approx. 60 MB
Required software	STEP 7 V5.3	STEP 7 V5.3 or later S7-SCL V5.1 SP 3 or later
<b>Features</b>		
Observation of variables	Yes	Yes
Control of variables	Yes	Yes
Single-step processing	-	-
Integration in CFC	Yes	Yes
<b>Program runtimes</b>		
with S7-300 (typical)	0.1 ms per graph group + 0.1 ms per state graph	Depending on the connected modules
with S7-400 (typical)	0.1 ms per graph group + 0.01 ms per state graph	Depending on the connected modules
<b>Diagnosis</b>		
Integration of diagnostic data in ProAgent	Yes	-
Integration of diagnostic data in ProTool/Pro	Via ProAgent	-
Integration of diagnostic data in WinCC	Via ProAgent (available soon)	-

### Technical specifications Engineering Tools (continued)

Engineering Tool	S7-HiGraph	CFC
<b>Compliance with standards</b>		
IEC 61131-3	Conforms to and exceeds the IEC standard	Based on the IEC standard
Status of PLCopen activities	-	-
<b>Available versions/licenses</b>		
Floating License (S7-HiGraph) or Single License (CFC)	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> License key disk Terms and Conditions Certificate of License
Upgrade (floating license (S7-HiGraph) or single license (CFC))	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> Authorization disk Certificate of License Product information	CD ROM with <ul style="list-style-type: none"> <li>• Tool</li> <li>• Electronic manual</li> <li>• Getting Started and</li> <li>• Examples</li> </ul> License key disk Emergency key disk Certificate of License Terms and Conditions Product information
Software Update Service (SUS)		
<b>Also part of</b>		
STEP 7 Professional	-	-
S7 Trainer Package	Yes	-
PCS 7	-	Yes
D7-SYS	-	Yes

Engineering Tool	S7-PDIAG	S7-PLCSIM
Type of license	Floating License	Floating License
Software class	A	A
Current version	V5.3	V5.4
Target system (recommended)	SIMATIC S7-300 (CPU 314 onwards) SIMATIC S7-400	SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7
Operating system	Windows 2000 Professional Windows XP Professional	Windows 2000 Professional Windows XP Professional
Required software packages	STEP 7 V5.3 SP3 or later	STEP 7 V5.4 SP1 or later
Required hard drive memory in the PG/PC	6 MB	5 MB

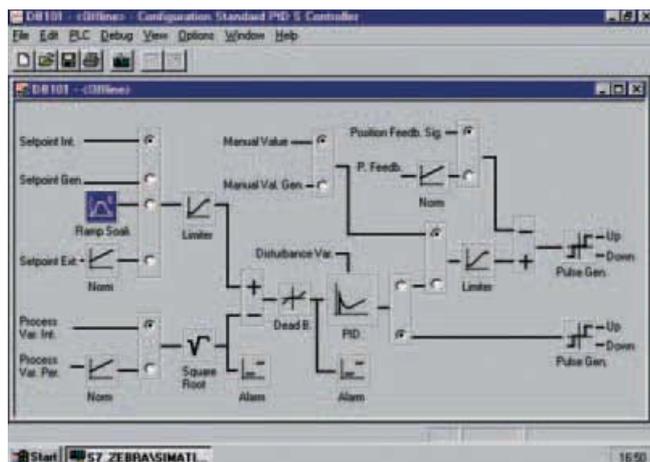
Engineering Tool	TeleService	DOCPRO
Type of license	Floating License	Floating License
Software class	A	A
Current version	V6.1	V5.4
Target system (recommended)	SIMATIC S7-300/400 SIMATIC C7	SIMATIC S7-300/400 SIMATIC C7
Operating system	Windows 2000 Windows XP Home Windows XP Professional	Windows 2000 Professional Windows XP Professional Windows Vista Business/Ultimate
Required software packages	-	STEP 7 as of V5.4 in Windows Vista as of V5.4 SP3
Required hard drive memory in the PG/PC	2 MB	5 MB

# SIMATIC Software

## Runtime software

### Standard PID Control

#### Overview



- For integrating continuous PID controllers, pulse controllers and step controllers in the application program
- Reduces engineering costs thanks to space-saving parameterization and optimization of the controller
- For use in SIMATIC S7-300 (CPU 313 or higher), S7-400 and C7

#### Technical specifications

##### Parameterization tool data

Requirements STEP 7 V5.2 or newer

Standard function blocks	PID_CP (FB 1)		PID_ES (FB 2)		LP_SCHED (FC 1)	
	Load memory	RAM	Load memory	RAM	Load memory	RAM
Memory requirements						
• FB length in memory	8956 byte	7796 byte	9104 Byte	7982 byte	1064 byte	976 byte
• DB length in memory	1168 byte	510 byte	1124 Byte	484 byte	184 byte <sup>2)</sup>	100 byte <sup>2)</sup>
Runtimes						
• in S7-300/C7 <sup>1)</sup>	0.18 - 4.4 ms		0.2 - 5.1 ms		0.03 - 0.3 ms	
• in S7-400 <sup>1)</sup>	0.13 - 0.35 ms		0.16 - 0.35 ms		0.03 - 0.08 ms	
Target system	SIMATIC S7-300, S7-400, C7					

1) Dependent on CPU

2) With 5 control loops

#### Ordering Data

##### Parameterization tool Standard PID Control, V5.1

*Task:* Parameterization tool for standard closed-loop controls

*Requirement:* STEP 7 V5.2 and higher

*Delivery package:* With electronic manual/Getting Started English, German; incl. authorization diskette

Single license

**6ES7 830-2AA21-0YX0**

Software Update Service (requires current software version)

**6ES7 830-2AA00-0YX2**

Single license upgrade from V5.0 to V5.1

**6ES7 830-2AA21-0YX4**

##### Standard function blocks Standard PID Control, V5.1

*Task:* Standard FBs for standard closed-loop controls

*Target system:* SIMATIC S7-300 (CPU 313 and higher), S7-400, C7

*Delivery package:* With electronic manual/Getting Started English, German

Single license

**6ES7 860-2AA21-0YX0**

Single license without software and documentation

**6ES7 860-2AA21-0YX1**

#### Ordering Data

##### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

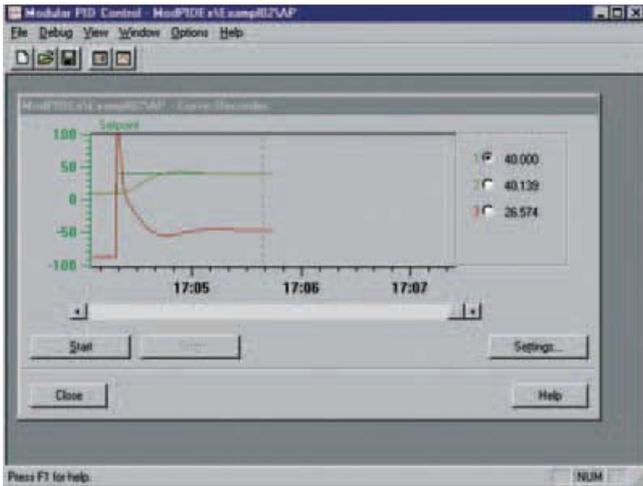
B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## 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 newer), S7-400 and C7

## Technical specifications

Startup software	
Requirements	STEP 7 V3.1 or higher
Main memory expansion	16 MB
Processor, at least	486
Windows swap area, approx.	20 MB (largest possible)

Standard Function Blocks	A_DEAD_B		CRP_IN		CRP_OUT	
	Load memory	RAM	Load memory	RAM	Load memory	RAM
Memory requirements						
• FB length in memory	898 byte	692 byte	182 byte	70 byte	206 byte	96 byte
• DB length in memory	186 byte	44 byte	122 byte	20 byte	114 byte	14 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	DEAD_T		DEAD_BAND		DIF	
	Load memory	RAM	Load memory	RAM	Load memory	RAM
Memory requirements						
• FB length in memory	532 byte	394 byte	232 byte	120 byte	410 byte	268 byte
• DB length in memory	142 byte	22 byte	114 byte	16 byte	158 byte	30 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

# SIMATIC Software

## Runtime software

### Modular PID Control

#### Technical specifications (continued)

Standard Function Blocks	ERR_MON		INTEG		LAG1ST	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	558 byte	360 byte	488 byte	314 byte	534 byte	368 byte
• DB length in memory	206 byte	52 byte	168 byte	36 byte	156 byte	30 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	LAG2ND		LIMALARM		LIMITER	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	690 byte	516 byte	390 byte	240 byte	262 byte	140 byte
• DB length in memory	190 byte	46 byte	152 byte	28 byte	124 byte	20 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	LMNGEN_C		LMNGEN_S		NONLIN	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	1576 byte	1280 byte	2578 byte	2152 byte	826 byte	672 byte
• DB length in memory	276 byte	80 byte	360 byte	110 byte	138 byte	18 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	NORM		OVERRIDE		PARA_CTL	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	234 byte	122 byte	362 byte	214 byte	406 byte	232 byte
• DB length in memory	130 byte	24 byte	146 byte	28 byte	234 byte	82 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	PID		PULSEGEN		RMP_SOAK	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	1560 byte	1242 byte	1110 byte	872 byte	1706 byte	1500 byte
• DB length in memory	340 byte	98 byte	190 byte	34 byte	212 byte	62 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

### Technical specifications (continued)

Standard Function Blocks	ROC_LIM		SCALE		SP_GEN	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	1242 byte	980 byte	136 byte	32 byte	658 byte	484 byte
• DB length in memory	222 byte	50 byte	114 byte	16 byte	164 byte	40 byte
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

Standard Function Blocks	SPLT_RAN		SWITCH		LP_SCHED	
Memory requirements	Load memory	RAM	Load memory	RAM	Load memory	RAM
• FB length in memory	304 byte	180 byte	238 byte	116 byte	1104 byte	972 byte <sup>1)</sup>
• DB length in memory	138 byte	28 byte	118 byte	18 byte	234 byte	64 byte <sup>1)</sup>
Runtimes in S7-300/C7	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 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7		SIMATIC S7-300 (from CPU 313), S7-400, C7	

1) With 5 control loops

6

### Ordering Data

Ordering Data	Order No.	Order No.
<b>Start-up tool</b> <b>Modular PID Control, V5.0 for SIMATIC S7 and C7</b> <i>Task:</i> Start-up tool for modular PID controllers <i>Requirement:</i> STEP 7 V5.2 and higher <i>Delivery package:</i> With electronic manual, English, German; incl. authorization diskette Single license Software Update Service (requires current software version)	<b>6ES7 830-1AA10-0YX0</b> <b>6ES7 830-1AA00-0YX2</b>	<b>SIMATIC Manual Collection</b> B3 <b>6ES7 998-8XC01-8YE0</b> Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET <b>SIMATIC Manual Collection update service for 1 year</b> B3 <b>6ES7 998-8XC01-8YE2</b> Current "Manual Collection" DVD and the three subsequent updates
<b>Standard function blocks</b> <b>Modular PID Control, V5.0</b> <i>Task:</i> Standard FBs for modular PID controllers <i>Target system:</i> SIMATIC S7-300 (CPU 313 and higher), S7-400, C7 <i>Delivery package:</i> English, German; with electronic manual Single license Single license, without software and documentation	<b>6ES7 860-1AA10-0YX0</b> <b>6ES7 860-1AA10-0YX1</b>	

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Runtime software

### PID Self-Tuner

#### Overview

- PID Self-Tuner: For extending existing PID controllers into self-setting 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
- Ideal application is in temperature controllers, but also suitable for level and flow controllers
- Used with SIMATIC S7-300 (CPU 313 upwards), SIMATIC S7-400 and SIMATIC C7; 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

PID Self-Tuner	TUN_EC		TUN_ES	
	Load memory	RAM	Load memory	RAM
Memory requirements				
• FB length in memory	approx. 6542 bytes	approx. 5956 bytes	6332 bytes	5714 bytes
• DB length in the memory	644 bytes	294 bytes	638 bytes	288 bytes
Runtimes				
• in S7-300, C7	1.0 to 1.5 ms <sup>1)</sup>		1.0 to 1.5 ms <sup>1)</sup>	
• in S7-400	0.6 to 0.9 ms <sup>1)</sup>		0.06 to 0.19 ms <sup>1)</sup>	

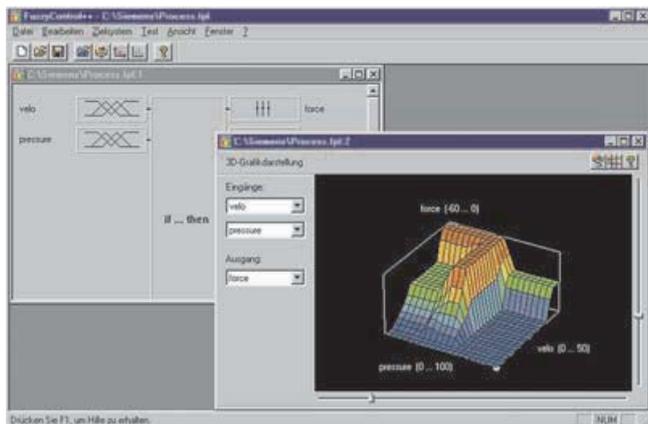
1) Depending on the selected CPU

#### Ordering Data

	Order No.		Order No.
<b>PID Self Tuner V5.0</b>		<b>SIMATIC Manual Collection</b>	B3 <b>6ES7 998-8XC01-8YE0</b>
<i>Task:</i> Online optimization for PID controller		Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET	
<i>Target system:</i> SIMATIC S7-300 (CPU 313 and higher), S7-400, C7		<b>SIMATIC Manual Collection update service for 1 year</b>	B3 <b>6ES7 998-8XC01-8YE2</b>
<i>Delivery package:</i> Standard function blocks, electronic manual and Getting Started German/English;		Current "Manual Collection" DVD and the three subsequent updates	
Single license	<b>6ES7 860-4AA01-0YX0</b>		
Single license, without software and documentation	<b>6ES7 860-4AA01-0YX1</b>		

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

#### Overview



- For creating Fuzzy systems for SIMATIC S7 and SIMATIC WinCC
- For use at all levels of automation from the standalone controller through to plant optimization
- Can be combined with classical PID controllers to utilize the advantages of both systems for optimized closed-loop control

#### Technical specifications

##### Technical specifications for the configuring tool

Processor	PC or PG with 80486 processor (or higher)
Main memory, min.	16 MB RAM
Hard disk	5 MB free storage space on the hard disk
Operating system	Windows 95 or Windows NT 4.0

##### Technical specifications for standard function blocks

	<b>FUZZY_4K (FB 30)</b>	<b>FUZZY_20K (FB 31)</b>	<b>FUZZY_WinCC</b>
Target system	SIMATIC S7-300 from CPU 314, SIMATIC S7-400	SIMATIC S7-400	SIMATIC WinCC
Communication between PC/PG and S7	MPI bus, Softnet S7 for PROFIBUS	MPI bus, Softnet S7 for PROFIBUS	Not required
Runtimes	Depending on the number of rules, inputs and outputs: 13 to 180 ms (S7 300) 1.8 to 22 ms (S7-400)	Depending on the number of rules, inputs and outputs: 1.8 to 150 ms (S7-400)	Cannot be measured
Memory requirements	<ul style="list-style-type: none"> <li>• FB: 1524 byte</li> <li>• DB: 4228 byte</li> </ul>	<ul style="list-style-type: none"> <li>• FB: 1524 byte</li> <li>• DB: 20612 byte</li> </ul>	Cannot be measured
Number of inputs	8 with up to 7 membership functions each	8 with up to 7 membership functions each	8 with up to 7 membership functions each
Number of outputs	4 with up to 9 membership functions each	4 with up to 9 membership functions each	4 with up to 9 membership functions each
Number of rules, max.	200	2000	2000

#### Ordering Data

##### Fuzzy Control++ configuration tool

Function blocks for S7-300/400 CPU 314 and higher incl. SmartObject for SIMATIC WinCC, manual; single license

Basic license	B8	<b>2XV9 450-1WC10-0AA1</b>
Copy license	B8	<b>2XV9 450-1WC11-4XA0</b>

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

##### SIMATIC Manual Collection

B3  
Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

##### SIMATIC Manual Collection update service for 1 year

B3  
Current "Manual Collection" DVD and the three subsequent updates

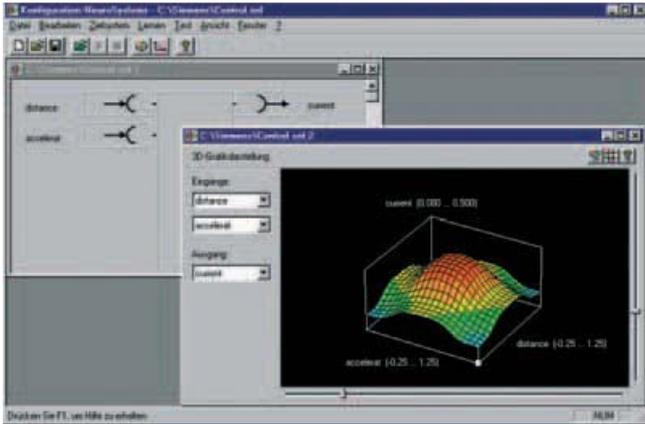
B8: Subject to export regulations: AL: N and ECCN: EAR99S

# SIMATIC Software

## Runtime software

### NeuroSystems

#### Overview



- For creating and teaching neuronal networks
- For use with problems whose structure and solution are only partially known
- Applications:
  - Data-based optimization
  - Identification of characteristics or processes
  - Filtering of data
  - Data evaluation and interpretation
  - Non-linear single and multiple-variable closed-loop control
  - Pattern recognition and diagnostics

#### Technical specifications

Configuring tool	Requirements
Processor	PC or PG with 80486 processor (or higher)
Main memory, min.	16 MB RAM
Hard disk	5 MB free storage space on the hard disk
Operating system	Windows 95 or Windows NT 4.0

Function blocks	NEURO_4K (FB 100)	NEURO_20K (FB 101)	NEURO_WinCC
Target system	SIMATIC S7-300 from CPU 314, SIMATIC S7-400	SIMATIC S7-400	SIMATIC WinCC
Communication PC/PG – S7	MPI bus, Softnet S7 for PROFIBUS	MPI bus, Softnet S7 for PROFIBUS	Not required
Runtimes	Depending on the number of inputs, outputs and neurons: 6.5 to 270 ms (S7-300) 3.3 to 140 ms (S7-400)	Depending on the number of rules, inputs and outputs: 3.3 to 260 ms (S7-400)	Cannot be measured
Memory requirements			
• FB	2246 byte	2210 byte	Cannot be measured
• DB	4278 byte	20612 byte	
Number of inputs, max.	4	100	10
Number of outputs, max.	4	10	10
Types of network	MLP, RBF, Neuro-fuzzy	MLP, RBF, Neuro-fuzzy	MLP, RBF, Neuro-fuzzy

#### Ordering Data

	Order No.
<b>NeuroSystems configuration tool</b>	
Function blocks for S7-300/-400 CPU 314 and higher incl. SmartObject for SIMATIC single license	
Basic license	B8 <b>2XV9 450-1WC15-0AA0</b>
Copy license	B8 <b>2XV9 450-1WC16-4XA0</b>

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

	Order No.
<b>SIMATIC Manual Collection</b>	B3 <b>6ES7 998-8XC01-8YE0</b>
Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET	
<b>SIMATIC Manual Collection update service for 1 year</b>	B3 <b>6ES7 998-8XC01-8YE2</b>
Current "Manual Collection" DVD and the three subsequent updates	

B8: Subject to export regulations: AL: N and ECCN: EAR99S

### Loadable drivers for CP 441-2 and CP 341

#### Overview

- Driver for MODBUS protocol with RTU message format; communication as master or slave
- Driver for full-duplex protocol for Data Highway Asynchronous Link from Allen Bradley
- Loadable on CP 341 and CP 441-2 (6ES7 441-2AA03-0AE0)

#### Technical specifications

	<b>MODBUS Master</b>
	<ul style="list-style-type: none"> <li>• MODBUS protocol with RTU format</li> <li>• Master/slave coupling: SIMATIC S7 is master</li> <li>• Implemented function codes: 01, 02, 03, 04, 05, 06, 07, 08, 11, 12, 15, 16</li> <li>• No V.24 control and signaling lines</li> <li>• CRC polynomial: <math>x^{16} + x^{15} + x^2 + 1</math></li> <li>• Interfaces: TTY (20 mA); V.24 (RS 232 C); X.27 (RS 422/485) two-wire or four-wire</li> <li>• Inbox specified on BRCV</li> <li>• Delay time 3.5 characters or multiple thereof</li> <li>• Broadcast message possible</li> </ul>
Adjustable parameters	<ul style="list-style-type: none"> <li>• Data transmission rate 300 bit/s up to 76800 bit/s; (TTY to 19200 bit/s)</li> <li>• Character frame</li> <li>• With/without RS 485 mode for two-wire connections</li> <li>• With/without modem mode (ignore scratch character)</li> <li>• Response timer 100 ms to 25.5 s in steps of 100 ms</li> <li>• Factor for character delay time 1-10</li> <li>• Default input of receive line when using X.27 interface module</li> </ul>
	<b>MODBUS slave</b>
	<ul style="list-style-type: none"> <li>• MODBUS protocol with RTU format</li> <li>• Master/slave coupling: SIMATIC S7 is slave</li> <li>• Implemented function codes: 01, 02, 03, 04, 05, 06, 08, 15, 16</li> <li>• No V.24 control and signaling line</li> <li>• CRC polynomial: <math>x^{16} + x^{15} + x^2 + 1</math></li> <li>• Interfaces: TTY (20 mA), V.24 (RS 232C), X.27 (RS 422/485) two-wire or four-wire</li> <li>• Communication FB 180, instance DB 180 (use of a multi-instance)</li> </ul>

#### MODBUS Slave

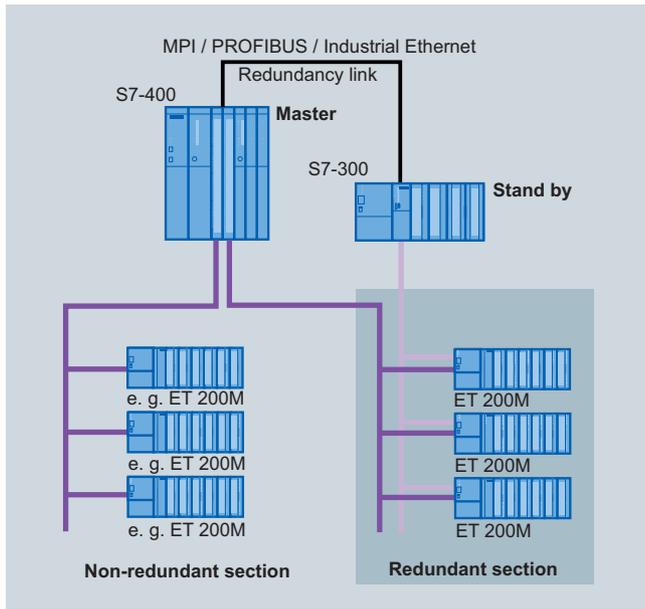
	<ul style="list-style-type: none"> <li>• Conversion of MODBUS data address to S7 data areas. Processed data areas: DB, bit memories, outputs, inputs, timers, counters</li> <li>• Delay time 3.5 characters or multiple thereof</li> </ul>
Adjustable parameters	<ul style="list-style-type: none"> <li>• Data transmission rate 300 bit/s up to 76800 bit/s; (TTY to 19200 bit/s)</li> <li>• Character frame</li> <li>• Slave address of CP (1 to 255)</li> <li>• With/without RS 485 mode for two-wire connection</li> <li>• With/without modem mode (ignore scratch character)</li> <li>• Factor for character delay time 1-10</li> <li>• Number of work DB (for FB processing)</li> <li>• Enabling of memory areas for writing by master</li> <li>• Default input of receive line when using X.27 interface module</li> <li>• Conversion of MODBUS addresses to S7 data areas</li> </ul>

#### Data Highway

	<ul style="list-style-type: none"> <li>• Data Highway full duplex (DF1) protocol</li> <li>• Interfaces: TTY (20 mA), V.24 (RS 232C), RS 422/485 (four-wire)</li> <li>• No "embedded responses"</li> </ul>
Adjustable parameters	<ul style="list-style-type: none"> <li>• Data Highway full duplex (DF1) protocol</li> <li>• Interfaces: TTY (20 mA), V.24 (RS 232C), RS 422/485 (four-wire)</li> <li>• No "embedded responses"</li> <li>• Data transmission rate 300 bit/s up to 76800 bit/s; (TTY to 19200 bit/s)</li> <li>• Character frame: 7/8 bit; 1/2 stop bits; even/odd/no parity</li> <li>• Inbox DB and data word</li> <li>• Timeout for acknowledgment character: 30 ms to 10 s</li> <li>• Number of repeats with NAK: 0 to 5</li> </ul>



### 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

Technical specifications	
<b>Hardware requirements</b>	
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
<b>Software requirements</b>	
Configuring/programming	STEP 7 V4.0
Communication configuration for redundant PROFIBUS DP	NCM S7 for PROFIBUS

### Ordering Data

### Order 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)

**6ES7 862-0AC01-0YA0**

Single license, without software and documentation

**6ES7 862-0AC01-0YA1**

#### SIMATIC Manual Collection

B3

**6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

#### SIMATIC Manual Collection update service for 1 year

B3

**6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

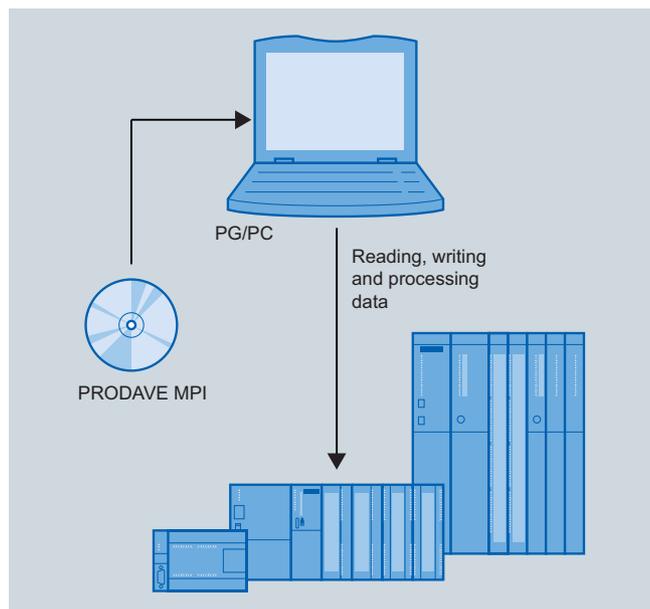
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## Runtime software

### PRODAVE MPI

#### Overview



- The toolbox for exchange of process data between SIMATIC S7, SIMATIC M7, SIMATIC C7 and a PG/PC
- For autonomous handling of data traffic over MPI/PPI, PROFIBUS and Industrial Ethernet

#### Ordering Data

#### Order No.

##### **PRODAVE MPI/IE 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) or Industrial Ethernet

###### *Requirements:*

Windows 2000 Prof./XP Prof.; CP 5611, integrated MPI or PC adapter

###### *Delivery package:*

CD incl. electr. documentation (German, English)

Single license B8 **6ES7 807-4BA01-0YA0**

Copy license, without software and documentation B8 **6ES7 807-4BA01-0YA1**

##### **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 over MPI (S7-200 over 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 B8 **6ES7 807-3BA01-0YA0**

Copy license, without software and documentation B8 **6ES7 807-3BA01-0YA1**

**SIMATIC Manual Collection** B3 **6ES7 998-8XC01-8YE0**

Electronic manuals on DVD, five languages: S7-200/300/400, C7, LOGO!, SIMATIC DP, PC, PG, STEP 7, engineering software, runtime software, PCS 7, SIMATIC HMI, SIMATIC NET

**SIMATIC Manual Collection update service for 1 year** B3 **6ES7 998-8XC01-8YE2**

Current "Manual Collection" DVD and the three subsequent updates

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B8: Subject to export regulations: AL: N and ECCN: EAR99S

#### Overview

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

#### Technical specifications

##### Supported hardware:

Easy Motion Control is runnable on the following CPUs:

- S7-300.
- S7-400.
- C7.
- WinAC.

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.
- Other modules for measuring actual values (using free driver).

Supported modules for setpoint output:

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

Supported drives using PROFIBUS DP:

- MM4

##### 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

##### Runtime load

Typical runtimes of the blocks in µs				
Block	CPU 416-2 DP 6ES7 416-2XK02-AB0	CPU 314C 6ES7 314-6CF00-0AB0	CPU 315-2 DP 6ES7 315-2AF03-0AB0	WinLC RTX 3.1 on AMD, 1333 MHz
MC_Init	53	967	2203	21
MC_MoveAbsolute <sup>1)</sup>	67	908	2138	18
MC_MoveRelative <sup>1)</sup>	67	911	2143	18
MC_MoveJog <sup>1)</sup>	48	605	1387	15
MC_Home <sup>1)</sup>	49	592	1332	15
MC_StopMotion <sup>1)</sup>	23	309	696	8
MC_Control	27	343	819	11
MC_Simulation	23	259	584	6
MC_GearIn	66	931	2130	21
Input driver	50	662	1323	44
Output driver	20	223	413	31

1) The highlighted travel blocks require more runtime once at the start of a trip. For more information please consult the manual.

# SIMATIC Software

## Runtime software

### Easy Motion Control

Ordering Data	Order No.
<b>Easy Motion Control V2.1</b> <i>Task:</i> Controlled positioning with standard drives with variable speed <i>Requirement:</i> STEP 7 V5.3 SP2 <i>Delivery package:</i> incl. documentation (German, English), Single license Single license, without software and documentation	<b>6ES7 864-0AC01-0YX0</b> <b>6ES7 864-0AF01-0YX0</b>

#### Technical specifications Runtime Software

Runtime software				
Parameterization software	Standard PID Control	Modular PID Control	PID Self-Tuner	Fuzzy Control++
License form	Single license	Single license	-	Single license
Software class	A	A	-	
Current version	V 5.1	V 4.0	-	
Target system	SIMATIC S7-300 (CPU 313 and higher) SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 (CPU 313 and higher) SIMATIC S7-400 SIMATIC C7	-	SIMATIC S7-300 (CPU 314 and higher) SIMATIC S7-400
Operating system			-	Windows 95 / NT
Required software packages	STEP 7 V5.2 or higher	STEP 7 V3.1/V3.2 or higher	-	
Main memory configuration in PG/PC	16 MB	16 MB	-	16 MB
Disk space required in PG/PC	1.85 MB	1.85 MB	-	5 MB
<b>Standard FBs</b>				
Required libraries	Standard PID Control FBs V5.1	Modular PID Control FBs V4.0	PID Self-Tuner-FBs V5.0	Fuzzy Control++ FBs
License types	Single license and 1 runtime license; 1 runtime license	Single license and 1 runtime license; 1 runtime license	-	Single license
Software class	A	A	A	A
Current version	V 5.0	V 4.1	V5.0	V 4.0
Target system	SIMATIC S7-300 (CPU 313 and higher) SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 (CPU 313 and higher) SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 (CPU 313 and higher) SIMATIC S7-400 SIMATIC C7	SIMATIC S7-300 (CPU 314 and higher) SIMATIC S7-400
Operating system				Windows 95 / NT
Required software packages	STEP 7 V5.2 or higher	STEP 7 V3.1/V3.2 or higher	STEP 7 V3.2 or higher	Windows 95 / NT
Main memory configuration in PG/PC	16 MB	16 MB	-	16 MB on PG/PC
Disk space required in PG/PC	1.85 MB	1.85 MB	-	5 MB

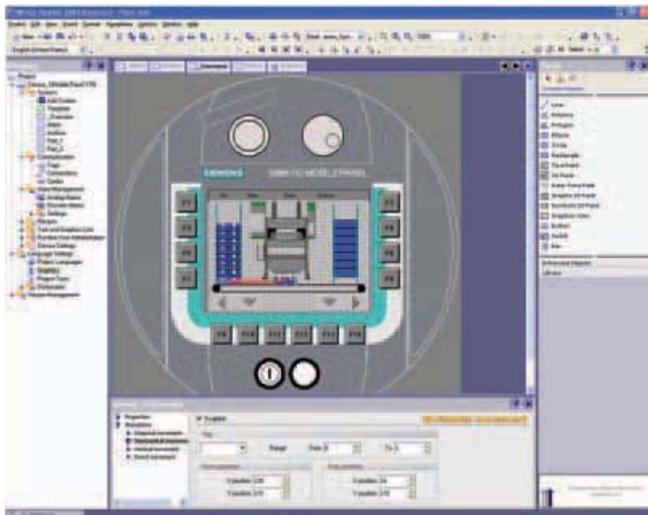
Runtime software				
Parameterization software	Neuro Systems	Loadable drivers for CP 441-2 and CP 341	Software redundancy	PRODAVE MPI
License form	Single license	Single license, copy license	Single license, copy license	Single license, copy license
Software class				A
Current version				V6.0
Target system	SIMATIC S7-300 (CPU 314 and higher) SIMATIC S7-400	SIMATIC CP 341, SIMATIC CP 441-2	SIMATIC S7-300 (CPU 315-2 DP only), SIMATIC S7-400	SIMATIC S7-200 SIMATIC S7-300 SIMATIC S7-400 SIMATIC C7
Operating system	Windows 95 / NT			Windows 2000 Prof./XP
Required software packages			STEP 7 V4.0	-
Main memory configuration in PG/PC	16 MB			8 MB on PG/PC
Disk space required in PG/PC	5 MB			2 MB
<b>Standard FBs</b>				
Required libraries	Neuro Systems FBs			-
License types	Single license			
Software class				
Current version				
Target system	SIMATIC S7-300 (CPU 314 and higher) SIMATIC S7-400			
Operating system	Windows 95 / NT			
Required software packages				
Main memory configuration in PG/PC	16 MB on PG/PC			
Disk space required in PG/PC	5 MB			

# SIMATIC Software

## HMI software

### SIMATIC WinCC flexible ES

#### Overview



- Integrated family of **engineering tools** for configuring SIMATIC HMI Operator Panels, the operating device of SIMATIC C7 units, SIMOTION/SINUMERIK Panel PCs as well as the PC-based visualization software WinCC flexible Runtime.
- Runs under Windows XP Professional/Windows VISTA Business, Ultimate
- **Current version:**
  - SIMATIC WinCC flexible 2008 Advanced
  - SIMATIC WinCC flexible 2008 Standard
  - SIMATIC WinCC flexible 2008 Compact
  - SIMATIC WinCC flexible 2008 Micro

6

#### Ordering Data

#### Order No.

**WinCC flexible 2008 Advanced** B3 **6AV6 613-0AA51-3CA5**

Floating license, on DVD incl. license key, includes:

- Engineering software for configuring WinCC flexible Runtime on basic PCs/Panel PCs as well as Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636
- SW for WinCC flexible/ ChangeControl engineering option <sup>1)</sup>
- Simulation software for WinCC flexible Runtime as well as Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636
- Native drivers
- Electronic documentation (.pdf) in German, English, French, Italian, Spanish, simplified Chinese, traditional Chinese, Korean, Japanese

#### Order No.

**WinCC flexible 2008 Standard** B3 **6AV6 612-0AA51-3CA5**

Floating license, on DVD incl. license key, includes:

- Engineering software for configuring Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636
- SW for WinCC flexible/ ChangeControl engineering option <sup>1)</sup>
- Simulation software for Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636
- Native drivers
- Electronic documentation (.pdf) in German, English, French, Italian, Spanish, simplified Chinese, traditional Chinese, Korean, Japanese

**WinCC flexible 2008 Compact** B3 **6AV6 611-0AA51-3CA5**

Floating license, on DVD incl. license key, includes:

- Engineering software for configuring Micro Panels, Basic Panels and 70/170 series Panels incl. C7-635
- SW for WinCC flexible/ ChangeControl engineering option <sup>1)</sup>
- Simulation software for Micro Panels, Basic Panels and 70/170 series Panels incl. C7-635
- Native drivers
- Electronic documentation (.pdf) in German, English, French, Italian, Spanish, simplified Chinese, traditional Chinese, Korean, Japanese

<sup>1)</sup> A separate license for WinCC flexible/ChangeControl must be purchased for each engineering station.

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

Ordering Data (continued)	Order No.	Order No.
<b>WinCC flexible 2008 Micro</b> Floating license, on DVD without license key, includes: <ul style="list-style-type: none"> <li>• Engineering software for configuration Micro Panels</li> <li>• Electronic documentation (.pdf) in English, German, French, Italian, Spanish</li> </ul>	B3 <b>6AV6 610-0AA01-3CA8</b>	
<b>WinCC flexible/ChangeControl for WinCC flexible 2008 Compact/Standard/Advanced<sup>1)3)</sup></b> Floating license, option, license key only	B3 <b>6AV6 613-6AA01-3AB5</b>	
<b>Power Packs</b>		
<b>SIMATIC WinCC flexible Power Packs</b> Single license, license key only <ul style="list-style-type: none"> <li>• WinCC flexible 2008 Standard to 2008 Advanced</li> <li>• WinCC flexible 2008 Compact to 2008 Advanced</li> <li>• WinCC flexible 2008 Compact to 2008 Standard</li> </ul>	B3 <b>6AV6 613-2CD01-3AD5</b> B3 <b>6AV6 613-2BD01-3AD5</b> B3 <b>6AV6 612-2BC01-3AD5</b>	
<b>Software Update Service</b>		
<b>Software Update Service SIMATIC WinCC flexible<sup>2) 4)</sup></b> <ul style="list-style-type: none"> <li>• WinCC flexible Advanced</li> <li>• WinCC flexible Standard</li> <li>• WinCC flexible Compact</li> </ul>	B3 <b>6AV6 613-0AA00-0AL0</b> B3 <b>6AV6 612-0AA00-0AL0</b> B3 <b>6AV6 611-0AA00-0AL0</b>	
<b>Upgrades</b>		
<b>SIMATIC ProTool to SIMATIC WinCC flexible 2008</b> <ul style="list-style-type: none"> <li>• ProTool/Lite to WinCC flexible 2008 Compact</li> <li>• ProTool to WinCC flexible 2008 Standard</li> <li>• ProTool/Pro to WinCC flexible 2008 Advanced</li> </ul>	B3 <b>6AV6 611-3AA51-3CE5</b> B3 <b>6AV6 612-3AA51-3CE5</b> B3 <b>6AV6 613-3AA51-3CE5</b>	
<b>SIMATIC WinCC flexible 2004/2005/2007 to SIMATIC WinCC flexible 2008</b> <ul style="list-style-type: none"> <li>• Upgrade to WinCC flexible 2008 Compact, incl. ChangeControl option<sup>1)</sup></li> <li>• Upgrade to WinCC flexible 2008 Standard, incl. ChangeControl option<sup>1)</sup></li> <li>• Upgrade to WinCC flexible 2008 Advanced, incl. ChangeControl option<sup>1)</sup></li> <li>• Upgrade to WinCC flexible 2008 Micro<sup>4)</sup></li> </ul>	B3 <b>6AV6 611-0AA51-3CE5</b> B3 <b>6AV6 612-0AA51-3CE5</b> B3 <b>6AV6 613-0AA51-3CE5</b> B3 <b>6AV6 610-0AA01-3CE8</b>	
<b>SIMATIC WinCC flexible ASIA 2004/2005/2007 to SIMATIC WinCC flexible ASIA 2008</b> <ul style="list-style-type: none"> <li>• Upgrade to WinCC flexible 2008 ASIA Standard, incl. ChangeControl option<sup>1)</sup></li> <li>• Upgrade to WinCC flexible 2008 ASIA Advanced, incl. ChangeControl option<sup>1)</sup></li> </ul>	B3 <b>6AV6 612-0AA11-3CE5</b> B3 <b>6AV6 613-0AA11-3CE5</b>	
<b>Versions for China/Taiwan/Korea/Japan</b>		
<b>WinCC flexible 2008 ASIA Standard</b> Floating license, on DVD incl. license key, includes: <ul style="list-style-type: none"> <li>• Engineering software for configuring Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636</li> <li>• Simulation software for Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636</li> <li>• Native drivers</li> <li>• Electronic documentation (.pdf) in German, English, French, Italian, Spanish, simplified Chinese, traditional Chinese, Korean, Japanese</li> </ul>	B3 <b>6AV6 612-0AA11-3CA5</b>	
<b>WinCC flexible 2008 ASIA Advanced</b> Floating license, on DVD incl. license key, includes: <ul style="list-style-type: none"> <li>• Engineering software for configuring WinCC flexible Runtime as well as Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636</li> <li>• SW for WinCC flexible/ChangeControl engineering option<sup>1)</sup></li> <li>• Simulation software for WinCC flexible Runtime as well as Micro Panels, Basic Panels and 70/170/270/370 series Panels incl. C7-635/636</li> <li>• Native drivers</li> <li>• Electronic documentation (.pdf) in German, English, French, Italian, Spanish, simplified Chinese, traditional Chinese, Korean, Japanese</li> </ul>	B3 <b>6AV6 613-0AA11-3CA5</b>	
<b>Documentation (must be ordered separately)</b>		
<b>User Manual WinCC flexible Communication</b> <ul style="list-style-type: none"> <li>• German</li> <li>• English</li> <li>• French</li> <li>• Italian</li> <li>• Spanish</li> </ul>	<b>6AV6 691-1CA01-3AA0</b> <b>6AV6 691-1CA01-3AB0</b> <b>6AV6 691-1CA01-3AC0</b> <b>6AV6 691-1CA01-3AD0</b> <b>6AV6 691-1CA01-3AE0</b>	
1) A separate license for WinCC flexible/ChangeControl must be purchased for each engineering station. 2) 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 WinCC flexible engineering system or option. The contract is automatically extended by a further year unless canceled up to 12 weeks prior to expiration. 3) The ChangeControl option has not been released for integrated operation with STEP 7. 4) Original delivery note or Certificate of License (CoL) from previous WinCC flexible Micro required B3: Subject to export regulations: AL: N and ECCN: 5D992B1		

# SIMATIC Software

## HMI software

### SIMATIC WinCC flexible ES

#### Ordering Data (continued)

##### WinCC flexible Micro User Manual

- German
- English
- French
- Italian
- Spanish

#### Order No.

**6AV6 691-1AA01-3AA0**  
**6AV6 691-1AA01-3AB0**  
**6AV6 691-1AA01-3AC0**  
**6AV6 691-1AA01-3AD0**  
**6AV6 691-1AA01-3AE0**

##### User Manual WinCC flexible Compact/ Standard/Advanced

- German
- English
- French
- Italian
- Spanish

**6AV6 691-1AB01-3AA0**  
**6AV6 691-1AB01-3AB0**  
**6AV6 691-1AB01-3AC0**  
**6AV6 691-1AB01-3AD0**  
**6AV6 691-1AB01-3AE0**

#### Order No.

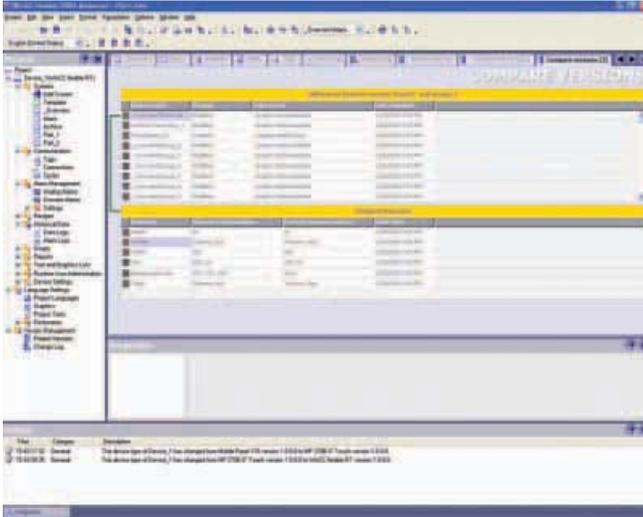
##### SIMATIC HMI Manual Collection B8

Electronic documentation, on DVD  
 5 languages (English, French, German, Italian, Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI

**6AV6 691-1SA01-0AX0**

B8: Subject to export regulations: AL: N and ECCN: EAR99S

#### Overview



- Options for the versioning of configuration data and for tracing configuration changes (e.g. as verification in regulated sectors)
- For the engineering tool SIMATIC WinCC flexible Compact/Standard/Advanced
- One license is required for each configuration computer

#### Ordering Data

#### Order No.

##### WinCC flexible/ChangeControl for WinCC flexible 2008 Compact/Standard/Advanced <sup>1)</sup>

Floating License, option, license key only

B3 **6AV6 613-6AA01-3AB5**

1) The ChangeControl option has not been released for integrated operation with STEP 7.

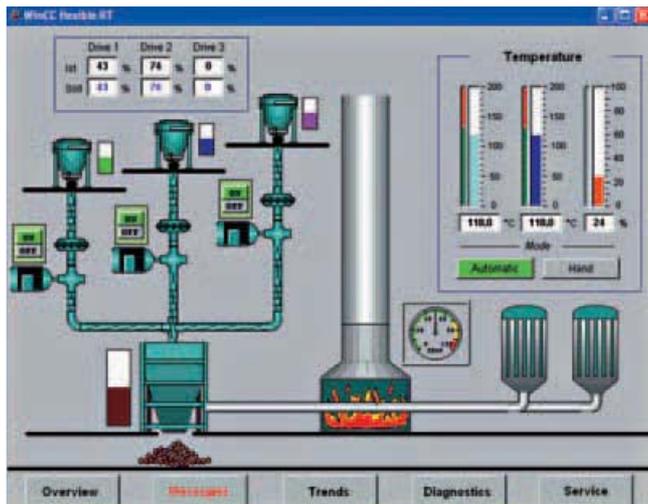
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

# SIMATIC Software

## HMI software

### SIMATIC WinCC flexible RT

#### Overview



- **PC-based visualization software** for single-user systems directly at the machine
  - Runs under Windows XP Professional and Windows Vista Business/Ultimate
  - **Current version:** SIMATIC WinCC flexible 2008 Runtime with 128, 512, 2048 or 4096 PowerTags
- SIMATIC WinCC flexible Runtime is configured with the SIMATIC WinCC flexible Advanced configuration software.

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#### Technical specifications

Type	SIMATIC WinCC flexible Runtime
	The specifications are maximum values
<b>Displays</b>	500
• Fields per screen	400
• Variables per screen	400
• Static text	30.000
• Graphics objects	2.000
• Complex objects per display (e.g. bars)	40
• Trends	800
• Graphics lists <sup>1)</sup>	500
• Text lists <sup>1)</sup>	500
• Number of entries in symbol tables	3.500
<b>Variables</b>	4.096 <sup>3)</sup>
<b>Messages bit-triggered / analog</b>	4.000 / 500
• Message text (number of characters)	80
• Number of process values per message	8
• Size of message buffer	1.024
• Pending message events	500
<b>Archives <sup>4)</sup></b>	100
• Archivable data	Process data, messages
• Max. number of entries per archive (incl. sequence archive)	500.000
• Archive types	Short-term archive, sequence archive (max. 400 per archive)
• Data storage format	CSV ( <b>C</b> omma <b>S</b> eparated <b>V</b> ariable), RDB ( <b>R</b> untime <b>D</b> ata <b>B</b> ase), interface to ODBC database (database not included in scope of delivery)

Type	SIMATIC WinCC flexible Runtime
<b>Recipes<sup>4)</sup></b>	1,000
• Elements per recipe	2,000 <sup>3)</sup>
• Data records per recipe	5,000 <sup>2)</sup>
<b>Password protection</b>	
• User rights	32
• Number of user groups	50
<b>Visual Basic scripts</b>	200
<b>Online languages, max.</b>	16
<b>Communication</b>	
SIMATIC S7 MPI interface/ PROFIBUS DP interface	
• Number of connectable stations, max.	Depending on the scope of the configuration (communication) from the point of view of WinCC flexible Runtime, as many as 8 connections are possible
SIMATIC S7 PPI interface	
• Number of connectable stations, max.	1 from viewpoint of WinCC flexible Runtime
SIMATIC S5 PROFIBUS DP interface	
• Number of connectable stations, max.	1 from viewpoint of WinCC flexible Runtime
Multi-protocol operation	Yes, OPC Client or SIMATIC HMI HTTP protocol are additive, i.e. can be used in conjunction with other PLC links

1) Together only 500 text and graphics lists

2) Dependent on memory medium used

3) Dependent on number of licensed PowerTags

4) Options for SIMATIC WinCC flexible Runtime

Ordering Data	Order No.	Order No.	
<b>SIMATIC WinCC flexible 2008 Runtime</b> for PC systems; incl. SW for PC systems options <sup>1)</sup> Single license, on CD-ROM incl. licensing, for: <ul style="list-style-type: none"> <li>• 128 PowerTags (RT 128) B3 <b>6AV6 613-1BA51-3CA0</b></li> <li>• 512 PowerTags (RT 512) B3 <b>6AV6 613-1DA51-3CA0</b></li> <li>• 2048 PowerTags (RT 2048) B3 <b>6AV6 613-1FA51-3CA0</b></li> <li>• 4096 PowerTags (RT 4096) B3 <b>6AV6 613-1GA51-3CA0</b></li> </ul>			
<b>Power Packs</b>			
<b>SIMATIC WinCC flexible 2008 Runtime</b> Single license, only license key for PowerTags, from <ul style="list-style-type: none"> <li>• 128 to 512 PowerTags B3 <b>6AV6 613-4BD01-3AD0</b></li> <li>• 128 to 2048 PowerTags B3 <b>6AV6 613-4BF01-3AD0</b></li> <li>• 512 to 2048 PowerTags B3 <b>6AV6 613-4DF01-3AD0</b></li> <li>• 128 to 4096 PowerTags B3 <b>6AV6 613-4BG01-3AD0</b></li> <li>• 512 to 4096 PowerTags B3 <b>6AV6 613-4DG01-3AD0</b></li> <li>• 2048 to 4096 PowerTags B3 <b>6AV6 613-4FG01-3AD0</b></li> </ul>			
<b>Upgrades</b>			
<b>SIMATIC ProTool/Pro RT to SIMATIC WinCC flexible 2008</b> <ul style="list-style-type: none"> <li>• ProTool/Pro Runtime 128 PowerTags to WinCC flexible 2008 Runtime 128 PowerTags <sup>2)</sup> B3 <b>6AV6 613-3BB51-3CE0</b></li> <li>• ProTool/Pro Runtime 256 PowerTags to WinCC flexible 2008 Runtime 512 PowerTags <sup>2)</sup> B3 <b>6AV6 613-3CD51-3CE0</b></li> <li>• ProTool/Pro Runtime 512 PowerTags to WinCC flexible 2008 Runtime 512 PowerTags <sup>2)</sup> B3 <b>6AV6 613-3DD51-3CE0</b></li> <li>• ProTool/Pro Runtime 2048 PowerTags to WinCC flexible 2008 Runtime 2048 PowerTags <sup>2)</sup> B3 <b>6AV6 613-3FF51-3CE0</b></li> </ul>			
<b>SIMATIC WinCC flexible 2004/2005/2007 Runtime to SIMATIC WinCC flexible 2008 Runtime</b> <ul style="list-style-type: none"> <li>• Upgrade to SIMATIC WinCC flexible Runtime 2008 PowerTags incl. Runtime Options for:               <ul style="list-style-type: none"> <li>- WinCC flexible/Sm@rtAccess</li> <li>- Sm@rtService</li> <li>- OPC server</li> <li>- Archives</li> <li>- Recipes</li> <li>- ProAgent</li> <li>- Audit</li> </ul> </li> </ul>	B3 <b>6AV6 613-1XA51-3CE0</b>		
		<b>SIMATIC WinCC flexible 2004/2005/2007 Runtime to SIMATIC WinCC flexible 2008 Runtime (continued)</b> <ul style="list-style-type: none"> <li>• Upgrade of the SIMATIC WinCC B3 flexible Panel options:               <ul style="list-style-type: none"> <li>- WinCC flexible /Sm@rtAccess for SIMATIC Panel</li> <li>- WinCC flexible /Sm@rtService for SIMATIC Panel</li> <li>- WinCC flexible OPC server for SIMATIC Multi Panel</li> <li>- WinCC flexible ProAgent for SIMATIC Multi Panel</li> <li>- WinCC flexible Audit for SIMATIC Panel</li> </ul> </li> </ul>	<b>6AV6 618-7XX01-3AF0</b>
		<b>Documentation (must be ordered separately)</b>	
		<b>User Manual WinCC flexible Runtime</b> <ul style="list-style-type: none"> <li>• German <b>6AV6 691-1BA01-3AA0</b></li> <li>• English <b>6AV6 691-1BA01-3AB0</b></li> <li>• French <b>6AV6 691-1BA01-3AC0</b></li> <li>• Italian <b>6AV6 691-1BA01-3AD0</b></li> <li>• Spanish <b>6AV6 691-1BA01-3AE0</b></li> </ul>	
		<b>User Manual WinCC flexible Communication</b> <ul style="list-style-type: none"> <li>• German <b>6AV6 691-1CA01-3AA0</b></li> <li>• English <b>6AV6 691-1CA01-3AB0</b></li> <li>• French <b>6AV6 691-1CA01-3AC0</b></li> <li>• Italian <b>6AV6 691-1CA01-3AD0</b></li> <li>• Spanish <b>6AV6 691-1CA01-3AE0</b></li> </ul>	
		<b>SIMATIC HMI Manual Collection B8</b> <b>6AV6 691-1SA01-0AX0</b> Electronic documentation, on DVD 5 languages (English, French, German, Italian, Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI	

1) Runtime licenses for WinCC flexible Runtime options must be purchased separately for each target system.

2) each including a single license WinCC flexible/Archives and WinCC flexible/Recipes

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B8: Subject to export regulations: AL: N and ECCN: EAR99S

# SIMATIC Software

## HMI software

### SIMATIC WinCC flexible RT

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#### Ordering Data (continued)

##### Communication via Industrial Ethernet

###### CP 1613-A2

PCI card (32 bit) for connecting a PG/PC to Industrial Ethernet (communications software must be ordered separately)

**6GK1 161-3AA01**

###### S7-1613 Edition 2007

Software for S7 and open communication, incl. PG/OP communication, OPC server and NCM PC; up to 120 connections, runtime software, software and electronic manual on CD-ROM, license key on a USB stick, Class A, for 32-bit Windows XP Professional SP1, 2; Windows 2003 Server SP1, R2, SP2; Windows Vista Business/Ultimate for CP 1613/CP 1613 A2/CP 1623; German/English

- Single license for 1 installation B3 **6GK1 716-1CB70-3AA0**
- Software Update Service for one year, with automatic extension; requirement: Current software version **6GK1 716-1CB00-3AL0**
- Upgrade S7-1613 from V6.4 to S7-1613 Edition 2007 B3 **6GK1 716-1CB00-3AE0**
- Upgrade S7-1613 from V6.0, V6.1, V6.2 or V6.3 to S7-1613 Edition 2007 B3 **6GK1 716-1CB00-3AE1**

##### Communication via PROFIBUS

###### CP 5613-A2

PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately).

**6GK1 561-3AA01**

###### CP 5614-A2

PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately).

**6GK1 561-4AA01**

##### S7-5613 Edition 2007

Software for S7 communication, incl. PG and FDL protocol, OPC server and NCM PC; runtime software, software and electronic manual on a USB stick, license key on diskette, Class A, for 32-bit Windows XP Professional SP1, 2; Windows 2003 Server SP1, R2, SP2; Windows Vista Business/Ultimate for CP 5613, CP 5613 A2, CP5613 FO, CP 5614, CP5614 A2; German/English

- Single license for 1 installation B3 **6GK1 713-5CB70-3AA0**
- Software Update Service for one year, with automatic extension; requirement: Current software version **6GK1 713-5CB00-3AL0**
- Upgrade S7-5613 from V6.4 to S7-5613 Edition 2007 B3 **6GK1 713-5CB00-3AE0**
- Upgrade S7-5613 from V6.0, V6.1, V6.2 or V6.3 to S7-5613 Edition 2007 B3 **6GK1 713-5CB00-3AE1**

###### CP 5512

PCMCIA card (32-bit CARDBUS) for connecting a PG/Notebook to PROFIBUS or MPI (communications software included in WinCC flexible).

**6GK1 551-2AA00**

###### CP 5611-A2

PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC flexible basic package)

**6GK1 561-1AA01**

###### CP 5611 MPI

Comprising CP 5611 A2 (32-bit) and MPI cable, 5 m

B7

**6GK1 561-1AM01**

###### CP 5621

PCI Express X1 card (32-bit) for connecting a PG/PC to PROFIBUS or MPI

C2

**6GK1 562-1AA00**

###### PC/PPI adapter

RS 232, 9-pin; male with RS 232/PPI converter, max. 19.2 kbit/s

**6ES7 901-3CB30-0XA0**

###### PC/MPI adapter

RS 232, 9-pin; male with RS 232/MPI converter

**6ES7 972-0CA23-0XA0**

###### PC adapter USB

For use with Windows 2000/XP

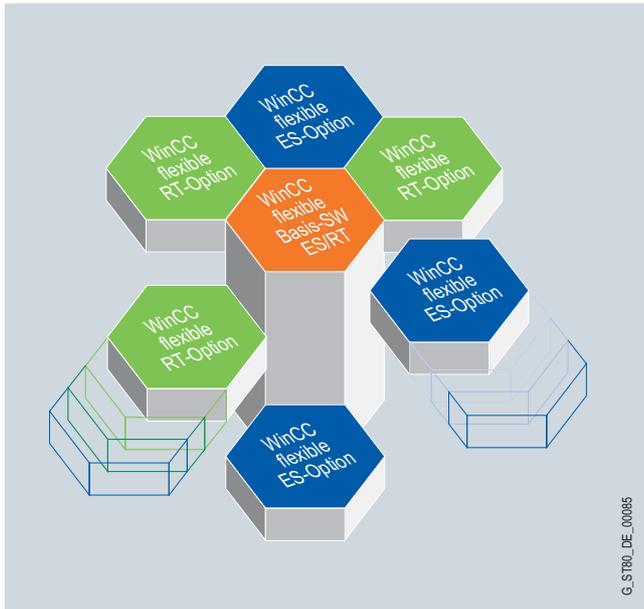
**6ES7 972-0CB20-0XA0**

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B7: Subject to export regulations: AL: N and ECCN: EAR99H

C2: Subject to export regulations: AL: 5A002A1A2 and ECCN: 5A002A1A

#### Overview



#### Options for SIMATIC Panels/Multi Panels and SIMATIC WinCC flexible Runtime

##### SIMATIC WinCC flexible/Archives

- Option for SIMATIC WinCC flexible Runtime for archiving process values and messages.
- Archiving of process values and messages supports the acquisition and processing of process data from an industrial plant or machine. Evaluation of the archived process data provides information about the operating states of the plant or machine.
- One license is required for each operator station. (a license is not required for Simatic Panels/Multi Panels).

##### SIMATIC WinCC flexible/Recipes

- Option for SIMATIC WinCC flexible Runtime for managing data records in recipes that contain related machine or production data.
- The data in a data set can be transferred, for example, from the control unit to the PLC to switch production to a different product variant.
- One license is required for each operator station. (a license is not required for Simatic Panels/Multi Panels).

##### SIMATIC WinCC flexible/Audit

- Option for SIMATIC WinCC flexible Runtime as well as SIMATIC Panels for recording operations in an audit trail, and electronic signature.
- A convenient configuration process, which is included as standard in WinCC flexible 2005, is used to define the following:
  - Which user actions should be recorded in the audit trail during runtime.
  - Which important operator actions during execution time require electronic signature/commentary.
- The audit option combined with the WinCC flexible ES ChangeControl option supports the user with plant validation.

- Available for the following SIMATIC HMI systems:
  - TP/OP270, TP/OP277
  - MP270B, MP277
  - MP370, MP377
  - WinCC flexible Runtime
- A license is required for every operator station (Panel and PC Runtime).

##### SIMATIC WinCC flexible/SIMATIC Logon

Option for connecting PCs with SIMATIC WinCC flexible Runtime and SIMATIC Panels to central user administration.

- Creates user administration on a central computer to which one or more WinCC flexible stations can be connected over Ethernet.
- With each logging-on/off of a user on one of the connected stations, SIMATIC Logon checks whether a user password has been created and that the required privileges exist.
- SIMATIC Logon for WinCC flexible supports the user in combination with the /Audit and /ChangeControl options in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 177, Mobile Panel 277
  - TP/OP 177B PN/DP
  - TP/OP 277
  - MP 177, MP 277, MP 377
  - WinCC flexible Runtime

- Licensing: SIMATIC Logon (basic license) and SIMATIC Logon Remote Access (3-pack license) for connection of 3 WinCC flexible stations to the central user administration. Additional stations can be connected by using further SIMATIC Logon Remote Access licenses (3-pack/10-pack).

##### SIMATIC WinCC flexible/Sm@rtAccess

Option for SIMATIC WinCC flexible Runtime plus SIMATIC Panels for communication between various SIMATIC HMI systems.

- Available for the following SIMATIC HMI systems:
  - Mobile Panel 177 PN, Mobile Panel 277
  - TP/OP 177B PN/DP
  - TP/OP 270, TP/OP 277
  - MP 177, MP 270B, MP 277, MP 370, MP 377
  - WinCC flexible Runtime
- Communication between HMI systems is established on the basis of Ethernet networks, or via the intranet/Internet:
  - Read and write access to variables; WinCC flexible Runtime or SIMATIC Panels make data (variables) available to other SIMATIC HMI systems or Office applications.
  - A SIMATIC HMI system can be used to control or monitor another system remotely; entry level for client/server configurations for distributed operator stations or for solutions with headend or control room.
- Local operation, visualization and data processing is as possible as plant-wide access to information or central archiving of process data. Integrated information flows ensure an overview of the status of all processes.

One license is required for each operator station.

**Overview** (continued)**SIMATIC WinCC flexible/Sm@rtService**

Option for SIMATIC WinCC flexible Runtime and SIMATIC Panels for remote maintenance and servicing of machines/plant via the Internet/intranet.

- Event-driven sending of e-mails.
- System diagnostics visualized via device-specific html pages.
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 177 PN, Mobile Panel 277
  - TP/OP 177B PN/DP
  - TP/OP 270, TP/OP 277
  - MP 177, MP 270B, MP 277, MP 370, MP 377
  - WinCC flexible Runtime
- One license is required for each operator station.

**SIMATIC WinCC flexible/OPC Server**

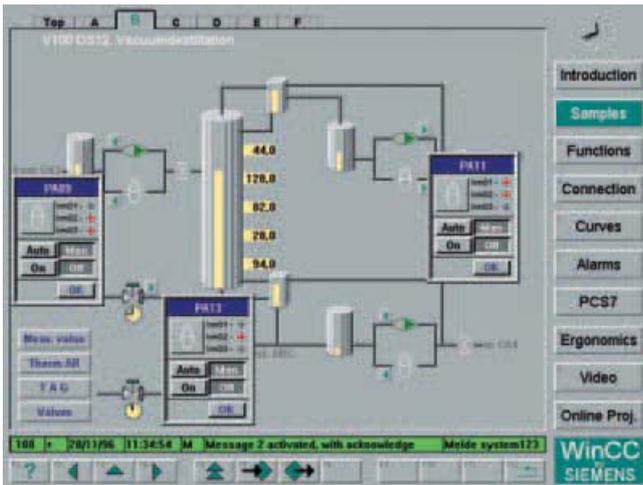
Option for SIMATIC WinCC flexible Runtime as well as Multi Panels for communication with applications from different vendors (e.g. MES, ERP, or applications in the office sector).

- Available for the following SIMATIC HMI systems:
  - MP 270B, MP 277, MP 370, MP 377 (use of OPC on XML basis)
  - WinCC flexible Runtime (use of OPC based on DCOM)
- One license is required for each operator station.

**SIMATIC WinCC flexible/ProAgent**

- Precise and rapid process fault diagnostics in plant and machines for SIMATIC S7 and SIMATIC HMI
- Standardized diagnostics concept for various SIMATIC components
- No further configuration overhead for diagnostics functionality
- Frees up PLC capacity with regard to memory and program execution time
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 277
  - TP/OP 270, TP/OP 277
  - MP 270B, MP 277, MP 370, MP 377
  - WinCC flexible Runtime

### Overview



- PC-based operator control and monitoring system for visualizing and operating processes, production flows, machines and plants in all sectors - from the simple single-user station through to distributed multi-user systems with redundant servers and cross-location solutions with Web clients. WinCC is the information hub for corporation-wide vertical integration.
- The basic system configuration (WinCC basic software) includes industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration and visualization.

- The WinCC basic software forms the core of a wide range of different applications. Based on the open programming interfaces, a wide range of WinCC options (from Siemens Industry Automation) and WinCC add-ons have been developed (by Siemens-internal and external partners).
- WinCC can be operated with every PC that meets the given HW requirements. The product range of the SIMATIC Panel PC and SIMATIC Rack PC is available in particular for the industrial usage of WinCC systems. SIMATIC PCs stand out due to their powerful PC technology, are designed for round-the-clock operation, and can be operated in both harsh industrial environments and office areas.

Current versions:

- **SIMATIC WinCC V7.0:**  
Executable with
  - Windows VISTA 32-bit Ultimate, Business and Enterprise
  - Windows XP Professional
  - Windows 2003 Server and Windows 2003 Server R2
  - Contains the Microsoft SQL Server 2005 SP2
- **SIMATIC WinCC V6.2 SP2:**  
Executable with
  - Windows XP Professional
  - Windows 2000 Professional
  - Windows Server 2003 and Windows Server 2003 R2
  - Contains the Microsoft SQL Server 2005 SP1

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### Technical specifications

Type	SIMATIC WinCC V6.2 SP2	SIMATIC WinCC V7.0
<b>Operating system</b>	<ul style="list-style-type: none"> <li>• Windows XP Professional SP2, Windows 2000 Professional SP4, Windows Server 2003 SP2, Windows Server 2003 R2 SP2</li> </ul>	<ul style="list-style-type: none"> <li>• Windows VISTA Ultimate, Business and Enterprise</li> <li>• Windows XP Professional SP2</li> <li>• Windows 2003 Server SP2 and Windows 2003 Server R2 SP2</li> </ul>
<b>PC hardware requirements</b>		
<b>Processor type</b> <sup>1)</sup>		
• Minimum	Single-user station/server: Pentium III, 1 GHz  Central Archive Server: Pentium 4, 2 GHz  Client: Pentium III, 600 MHz	Single-user station/server: Pentium 3, 1 GHz <sup>2)</sup>  Central Archive Server: Pentium 4, 2.5 GHz  Client: Pentium 3, 800 MHz <sup>2)</sup>  WebClient/DataMonitor Client: Pentium III, 600 MHz <sup>2)</sup>
• Recommended	Single-user station/server: Pentium 4, 2 GHz  Central Archive Server: Pentium 4, 2.5 GHz  Client: Pentium III, 1 GHz  WebClient/DataMonitor Client: Pentium III, 1 GHz	Single-user station/server: Pentium 4, 2.5 GHz <sup>2)</sup>  Central Archive Server: Pentium 4 or Dual Core, 3 GHz  Client: Pentium 4, 2 GHz <sup>2)</sup>  WebClient/DataMonitor Client: Pentium III, 1 GHz

1) An AMD system with comparable performance can also be used

2) Hardware requirement when using Microsoft XP Professional

# SIMATIC Software

## HMI software

### SIMATIC WinCC

#### Technical specifications (continued)

Type	SIMATIC WinCC V6.2 SP2	SIMATIC WinCC V7.0
<b>RAM</b>		
• Minimum	Single-user station: 512 MB, server: 1 GB Central Archive Server: 1 GB Client: 512 MB WebClient/DataMonitor Client: 256 MB	Single-user station/server: 1 GB <sup>2)</sup> Central Archive Server: 2 GB Client: 512 MB <sup>2)</sup> WebClient/DataMonitor Client: 256 MB
• Recommended	Single-user station: >= 1 GB, server: >1 GB Central Archive Server: ≥ 2 GByte Client: 512 MByte WebClient/DataMonitor Client: 512 MB	Single-user station/server: 2 GB <sup>2)</sup> Central Archive Server: ≥ 2 GByte Client: 1 GByte <sup>2)</sup> WebClient/DataMonitor Client: 512 MB <sup>2)</sup>
<b>Graphics card</b>		
• Minimum	16 MB, 800 x 600	16 MB, 800 x 600 <sup>2)</sup>
• Recommended	32 MB, 1280 x 1024	32 MB, 1280 x 1024 <sup>2)</sup>
<b>Hard disk</b>		
• Minimum	Single-user station/server: 20 GB Client: 5 GB Central Archive Server: 40 GB WebClient/DataMonitor Client: 5 GB	Single-user station/server: 20 GB Client: 5 GB Central Archive Server: 40 GB WebClient/DataMonitor Client: 5 GB
• Recommended	Single-user station/server: 80 GB Client: 20 GByte Central Archive Server: 2 x 80 GB WebClient/DataMonitor Client: 10 GB	Single-user station/server: 80 GB Client: 20 GByte Central Archive Server: 2 x 80 GB WebClient/DataMonitor Client: 10 GB
• Hard disk (free memory space for installation)		
- Minimum	Server: 1.5 GB Client: 1 GB	Server: > 1.5 GB Client: 1.5 GB
- Recommended	Server: > 10 GB Client: > 1.5 GB	Server: > 10 GB Client: > 1.5 GB
<b>CD ROM/DVD ROM/ diskette drive/USB interface</b>	for software installation	for software installation

2) Hardware requirement when using Microsoft XP Professional

### Technical specifications (continued)

Type	SIMATIC WinCC
<b>Functionality/quantity structure</b>	
Number of messages	150.000
• Message text (number of characters)	10 x 256
• Alarm log	> 500,000 messages <sup>1)</sup>
• Process values per message	10
• Constant load of messages, max.	Central Archive Server: 100/sec Server/single-user station: 10/s
• Message burst, max.	Server/single-user station: 2,000/10 s every 5 min
Archives	
• Archive data points	Max. 120,000 per server <sup>2)</sup>
• Archive types	Short-term archive with and without long-term archiving
• Data storage format	Microsoft SQL Server 2005
• Measured values per second, max.	Server/single-user station: 5,000/s
User archive	
• Archives and views	500 each
• Product consisting of data record and column per user archive	320.000
• Fields per user archive	500
Graphics system	
• Number of screens	System-limited <sup>1)</sup>
• Number of objects per screen	System-limited <sup>1)</sup>
• Number of controllable fields per screen	System-limited <sup>1)</sup>
PowerTags	256 K <sup>3)</sup>
Trends	
• Trend views per image	25
• Trends per trend view	80
User administration	
• User groups	128
• Number of users	128
• Authorization groups	999
Configuration languages	5 European (Eng., Fr., Ger., It., Sp.), 4 Asian (simpl.+trad. Chi/Kor/Jpn) <sup>5)</sup>
Protocols	
• Message sequence reports (simultaneously)	1 per server/single-user station
• Message archive reports (simultaneously)	3
• User reports	System-limited <sup>1)</sup>
• Report lines per group	66
• Variables per report	300 <sup>5)</sup>
Multi-user system	
• Server	12
• Clients for server with operator station	4
• Clients for server without operator station	32 clients + 3 WebClients or 50 WebClients + 1 client

1) Dependent on the available storage space

2) Dependent on the number of licensed archive variables

3) Dependent on number of licensed PowerTags

4) Asian versions for Version 7 SP1 or higher

5) The number of variables per report is dependent on process communication performance

# SIMATIC Software

## HMI software

### SIMATIC WinCC

#### Ordering Data

#### Order No.

#### Order No.

##### SIMATIC WinCC system software V7.0

#### Runtime packages on DVD

Language/script versions:  
DE/EN/FR/IT/ES; with license for

- 128 PowerTags (RT 128)
- 512 PowerTags (RT 512)
- 2048 PowerTags (RT 2048)
- 8192 PowerTags (RT 8192)
- 65536 PowerTags (RT 65536)
- 102400 PowerTags (RT 102400)
- 153600 PowerTags (RT 153600)
- 262144 PowerTags (RT 262144)

**6AV6 381-2BC07-0AX0**  
**6AV6 381-2BD07-0AX0**  
**6AV6 381-2BE07-0AX0**  
**6AV6 381-2BH07-0AX0**  
**6AV6 381-2BF07-0AX0**  
**6AV6 381-2BJ07-0AX0**  
**6AV6 381-2BK07-0AX0**  
**6AV6 381-2BL07-0AX0**

Incl. 512 archive tags each

#### Complete packages on DVD

Language versions:  
DE/EN/FR/IT/ES; with license for

- 128 PowerTags (RC 128)
- 512 PowerTags (RC 512)
- 2048 PowerTags (RC 2048)
- 8192 PowerTags (RC 8192)
- 65536 PowerTags (RC 65536)
- 102400 PowerTags (RT 102400)
- 153600 PowerTags (RT 153600)
- 262144 PowerTags (RT 262144)

**6AV6 381-2BM07-0AX0**  
**6AV6 381-2BN07-0AX0**  
**6AV6 381-2BP07-0AX0**  
**6AV6 381-2BS07-0AX0**  
**6AV6 381-2BQ07-0AX0**  
**6AV6 381-2BT07-0AX0**  
**6AV6 381-2BU07-0AX0**  
**6AV6 381-2BV07-0AX0**

##### SIMATIC WinCC V7.0 PowerPacks

For upgrading from:

#### Runtime packages

- 128 to 512 PowerTags
- 128 to 2048 PowerTags
- 128 to 8192 PowerTags
- 128 to 65536 PowerTags
- 512 to 2048 PowerTags
- 512 to 8192 PowerTags
- 512 to 65536 PowerTags
- 2048 to 8192 PowerTags
- 2048 to 65536 PowerTags
- 8192 to 65536 PowerTags
- 65536 to 102400 PowerTags
- 102400 to 153600 PowerTags
- 153600 to 262144 PowerTags

**6AV6 371-2BD07-0AX0**  
**6AV6 371-2BE07-0AX0**  
**6AV6 371-2BK07-0AX0**  
**6AV6 371-2BF07-0AX0**  
**6AV6 371-2BG07-0AX0**  
**6AV6 371-2BL07-0AX0**  
**6AV6 371-2BH07-0AX0**  
**6AV6 371-2BM07-0AX0**  
**6AV6 371-2BJ07-0AX0**  
**6AV6 371-2BN07-0AX0**  
**6AV6 371-2BP07-0AX0**  
**6AV6 371-2BQ07-0AX0**  
**6AV6 371-2BR07-0AX0**

#### Complete packages

- 128 to 512 PowerTags
- 128 to 2048 PowerTags
- 128 to 8192 PowerTags
- 128 to 65536 PowerTags
- 512 to 2048 PowerTags
- 512 to 8192 PowerTags
- 512 to 65536 PowerTags
- 2048 to 8192 PowerTags
- 2048 to 65536 PowerTags

**6AV6 371-2BD17-0AX0**  
**6AV6 371-2BE17-0AX0**  
**6AV6 371-2BK17-0AX0**  
**6AV6 371-2BF17-0AX0**  
**6AV6 371-2BG17-0AX0**  
**6AV6 371-2BL17-0AX0**  
**6AV6 371-2BH17-0AX0**  
**6AV6 371-2BM17-0AX0**  
**6AV6 371-2BJ17-0AX0**

##### SIMATIC WinCC V7.0 PowerPacks

For upgrading from:

#### Complete packages

- 8192 to 65536 PowerTags
- 65536 to 102400 PowerTags
- 102400 to 153600 PowerTags
- 153600 to 262144 PowerTags

**6AV6 371-2BN17-0AX0**  
**6AV6 371-2BP17-0AX0**  
**6AV6 371-2BQ17-0AX0**  
**6AV6 371-2BR17-0AX0**

##### SIMATIC WinCC V7.0 Archive

- 1500 archives
- 5000 archives
- 10000 archives
- 30000 archives
- 80000 archives
- 120000 archives

**6AV6 371-1DQ17-0AX0**  
**6AV6 371-1DQ17-0BX0**  
**6AV6 371-1DQ17-0CX0**  
**6AV6 371-1DQ17-0EX0**  
**6AV6 371-1DQ17-0GX0**  
**6AV6 371-1DQ17-0JX0**

##### SIMATIC WinCC V7.0 Archive PowerPacks

For upgrading archiving from

- 1500 to 5000 archive tags
- 5000 to 10000 archive tags
- 10000 to 30000 archive tags
- 30000 to 80000 archive tags
- 80000 to 120000 archive tags

**6AV6 371-1DQ17-0AB0**  
**6AV6 371-1DQ17-0BC0**  
**6AV6 371-1DQ17-0CE0**  
**6AV6 371-1DQ17-0EG0**  
**6AV6 371-1DQ17-0GJ0**

##### SIMATIC WinCC Upgrade/Comprehensive Support

#### SIMATIC WinCC V7 upgrade <sup>1)</sup>

For upgrading the RT version

- from V6.0 to V7.0 B8 **6AV6 381-2AA07-0AX4**
- from V6.2 to V7.0 B8 **6AV6 381-2AA07-0AX3**

For upgrading the Client RT version

- from V6.0 to V7.0 B8 **6AV6 381-2BC07-0AX4**
- from V6.2 to V7.0 B8 **6AV6 381-2BC07-0AX3**

For upgrading the RC version

- from V6.0 to V7.0 B8 **6AV6 381-2AB07-0AX4**
- from V6.2 to V7.0 B8 **6AV6 381-2AB07-0AX3**

#### SIMATIC WinCC Comprehensive Support <sup>2) 3)</sup>

Software Update Service for WinCC basic software and options:

- 1 license **6AV6 381-1AA00-0AX5**
- 3 licenses **6AV6 381-1AA00-0BX5**
- 10 licenses **6AV6 381-1AA00-0CX5**

1) According to licensing provisions, 1 upgrade package must be ordered for each WinCC station

2) Comprehensive Support runs for 1 year. The contract is automatically extended by 1 more year unless canceled 3 months prior to expiration. According to licensing provisions, 1 Comprehensive Support package must be ordered for each WinCC station.

3) Requires the current software version

B8: Subject to export regulations: AL: N and ECCN: EAR99S

Ordering Data (continued)	Order No.	Order No.
<b>SIMATIC WinCC V6.2 SP2 system software</b>		
<b>Runtime packages on CD-ROM</b> Language/script versions: DE/EN/FR/IT/ES; with license for		
• 128 PowerTags (RT 128)	<b>6AV6 381-1BC06-2AX0</b>	
• 256 PowerTags (RT 256)	<b>6AV6 381-1BD06-2AX0</b>	
• 1024 PowerTags (RT 1024)	<b>6AV6 381-1BE06-2AX0</b>	
• 8192 PowerTags (RT 8192)	<b>6AV6 381-1BH06-2AX0</b>	
• 65536 PowerTags (RT 65536)	<b>6AV6 381-1BF06-2AX0</b>	
Incl. 512 archive tags each		
<b>Complete packages on CD-ROM</b> Language versions: DE/EN/FR/IT/ES; with license for		
• 128 PowerTags (RC 128)	<b>6AV6 381-1BM06-2AX0</b>	
• 256 PowerTags (RC 256)	<b>6AV6 381-1BN06-2AX0</b>	
• 1024 PowerTags (RC 1024)	<b>6AV6 381-1BP06-2AX0</b>	
• 8192 PowerTags (RC 8192)	<b>6AV6 381-1BS06-2AX0</b>	
• 65536 PowerTags (RC 65536)	<b>6AV6 381-1BQ06-2AX0</b>	
<b>SIMATIC WinCC V6.2 SP2 ASIA system software</b>		
<b>Runtime packages on CD-ROM</b> Language versions: English/simplified and traditional Chinese/Korean/Taiwanese/Japanese; with license for		
• 128 PowerTags (RT 128)	<b>6AV6 381-1BC06-2AV0</b>	
• 256 PowerTags (RT 256)	<b>6AV6 381-1BD06-2AV0</b>	
• 1024 PowerTags (RT 1024)	<b>6AV6 381-1BE06-2AV0</b>	
• 8192 PowerTags (RT 8192)	<b>6AV6 381-1BH06-2AV0</b>	
• 65536 PowerTags (RT Max)	<b>6AV6 381-1BF06-2AV0</b>	
Incl. 512 archive tags each		
<b>Complete packages on CD-ROM</b> Language versions: English/simplified and traditional Chinese/Korean/Taiwanese, Japanese; with license for		
• 128 PowerTags (RC 128)	<b>6AV6 381-1BM06-2AV0</b>	
• 256 PowerTags (RC 256)	<b>6AV6 381-1BN06-2AV0</b>	
• 1024 PowerTags (RC 1024)	<b>6AV6 381-1BP06-2AV0</b>	
• 8192 PowerTags (RC 8192)	<b>6AV6 381-1BS06-2AV0</b>	
• 65536 PowerTags (RC Max)	<b>6AV6 381-1BQ06-2AV0</b>	
Incl. 512 archive tags each		
<b>SIMATIC WinCC V6.2 PowerPacks</b>		
For upgrading from:		
<b>Runtime packages</b>		
• 128 to 256 PowerTags	<b>6AV6 371-1BD06-2AX0</b>	
• 128 to 1024 PowerTags	<b>6AV6 371-1BE06-2AX0</b>	
• 128 to 8192 PowerTags	<b>6AV6 371-1BK06-2AX0</b>	
• 128 to 65536 PowerTags	<b>6AV6 371-1BF06-2AX0</b>	
• 256 to 1024 PowerTags	<b>6AV6 371-1BG06-2AX0</b>	
• 256 to 8192 PowerTags	<b>6AV6 371-1BL06-2AX0</b>	
• 256 to 65536 PowerTags	<b>6AV6 371-1BH06-2AX0</b>	
• 1024 to 8192 PowerTags	<b>6AV6 371-1BM06-2AX0</b>	
• 1024 to 65536 PowerTags	<b>6AV6 371-1BJ06-2AX0</b>	
• 8192 to 65536 PowerTags	<b>6AV6 371-1BN06-2AX0</b>	
<b>Complete packages</b>		
• 128 to 256 PowerTags	<b>6AV6 371-1BD16-2AX0</b>	
• 128 to 1024 PowerTags	<b>6AV6 371-1BE16-2AX0</b>	
• 128 to 8192 PowerTags	<b>6AV6 371-1BK16-2AX0</b>	
• 128 to 65536 PowerTags	<b>6AV6 371-1BF16-2AX0</b>	
• 256 to 1024 PowerTags	<b>6AV6 371-1BG16-2AX0</b>	
• 256 to 8192 PowerTags	<b>6AV6 371-1BL16-2AX0</b>	
• 256 to 65536 PowerTags	<b>6AV6 371-1BH16-2AX0</b>	
• 1024 to 8192 PowerTags	<b>6AV6 371-1BM16-2AX0</b>	
• 1024 to 65536 PowerTags	<b>6AV6 371-1BJ16-2AX0</b>	
• 8192 to 65536 PowerTags	<b>6AV6 371-1BN16-2AX0</b>	
<b>SIMATIC WinCC V6.2 Archive</b>		
• 1500 archives	<b>6AV6 371-1DQ16-2AX0</b>	
• 5000 archives	<b>6AV6 371-1DQ16-2BX0</b>	
• 10000 archives	<b>6AV6 371-1DQ16-2CX0</b>	
• 30000 archives	<b>6AV6 371-1DQ16-2EX0</b>	
• 80000 archives	<b>6AV6 371-1DQ16-2GX0</b>	
• 120000 archives	<b>6AV6 371-1DQ16-2JX0</b>	
<b>SIMATIC WinCC V6.2 Archive PowerPacks</b>		
For upgrading archiving from		
• 1500 to 5000 archive tags	<b>6AV6 371-1DQ16-2AB0</b>	
• 5000 to 10000 archive tags	<b>6AV6 371-1DQ16-2BC0</b>	
• 10000 to 30000 archive tags	<b>6AV6 371-1DQ16-2CE0</b>	
• 30000 to 80000 archive tags	<b>6AV6 371-1DQ16-2EG0</b>	
• 80000 to 120000 archive tags	<b>6AV6 371-1DQ16-2GJ0</b>	
<b>SIMATIC WinCC V6.2 upgrade <sup>1)</sup></b>		
For upgrading the RT version		
• from V5.x to V6.2 SP2	B8	<b>6AV6 381-1AA06-2AX4</b>
• from V6.x to V6.2 SP2	B8	<b>6AV6 381-1AA06-2AX3</b>
• from V5.x ASIA to V6.2 SP2 ASIA	B8	<b>6AV6 381-1AA06-2AV4</b>
• from V6.x ASIA to V6.2 SP2 ASIA	B8	<b>6AV6 381-1AA06-2AV3</b>
For upgrading the RC version		
• from V5.x to V6.2 SP2	B8	<b>6AV6 381-1AB06-2AX4</b>
• from V6.x to V6.2 SP2	B8	<b>6AV6 381-1AB06-2AX3</b>
• from V5.x ASIA to V6.2 SP2 ASIA	B8	<b>6AV6 381-1AB06-2AV4</b>
• from V6.x ASIA to V6.2 SP2 ASIA	B8	<b>6AV6 381-1AB06-2AV3</b>

1) According to licensing provisions, 1 upgrade package must be ordered for each WinCC station.

B8: Subject to export regulations: AL: N and ECCN: EAR99S

## Ordering Data (continued)

## Order No.

## Order No.

*SIMATIC WinCC documentation (to be ordered separately)***SIMATIC WinCC V6  
Communication Manual**

Communication manual for process communication and OPC communication from WinCC V6

- German
- English

**6AV6 392-1CA06-0AA0****6AV6 392-1CA06-0AB0***SIMATIC WinCC communication**Communication via Industrial Ethernet***SOFTNET-S7 Edition 2007**

Software for S7 and S5-compatible communication, incl. OPC server, PG/OP communication and NCM PC; up to 64 connections, single license for 1 installation, runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, VISTA Ultimate/Business; for CP 1612; German/English

- Single license for 1 installation B3 **6GK1 704-1CW70-3AA0**
- Upgrade package for SIMATIC NET Edition 2006 B3 **6GK1 704-1CW00-3AE0**
- Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 **6GK1 704-1CW00-3AE1**

**SOFTNET-S7 Lean Edition 2007  
(included in the scope of  
delivery of WinCC V7.0)**

Software for S7 and S5-compatible communication, incl. OPC server, PG/OP communication and NCM PC; up to 8 connections, single license for 1 installation, runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, VISTA Ultimate/Business; for CP 1612; German/English

- Single license for 1 installation B3 **6GK1 704-1LW70-3AA0**
- Upgrade package for SIMATIC NET Edition 2006 B3 **6GK1 704-1LW00-3AE0**
- Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 **6GK1 704-1LW00-3AE1**

**CP 1613 A2****6GK1 161-3AA01**

PCI card (32 bit) for the connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)

**CP 1623**

A8

**6GK1 162-3AA00**

PCI Express card (32 bits) for connecting a PG/PC to Industrial Ethernet (communications software must be ordered separately)

**S7-1613 Edition 2007**

Software for S7 and S5-compatible communication, incl. OPC server, PG/OP communication and NCM PC; up to 120 connections, single license for 1 installation, runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, Windows VISTA Ultimate/Business; for CP 1613, CP 1613 A2, CP1623; German/English

- Single license for 1 installation B3 **6GK1 716-1CB70-3AA0**
- Upgrade package for SIMATIC NET Edition 2006 B3 **6GK1 716-1CB00-3AE0**
- Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 **6GK1 716-1CB00-3AE1**

*Communication via PROFIBUS***CP 5611 A2****6GK1 561-1AA01**

PCI card (32 bit) for connecting a PG/PC to PROFIBUS (communications software included in the WinCC basic package)

**CP 5621**

C2

**6GK1 562-1AA00**

PCI Express card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in the WinCC basic package)

**CP 5611 MPI**

B7

**6GK1 561-1AM01**

Comprising CP 5611 A2 and MPI cable, 5 m

**CP 5621 MPI**

C2

**6GK1 562-1AM00**

Comprising CP 5621 (32-bit) and MPI cable, 5 m

**CP 5512****6GK1 551-2AA00**

PCMCIA card (CARDBUS 32 bit) for the connection of a PG/notebook to PROFIBUS or MPI (communications software included in WinCC basic package)

**PC/MPI adapter****6ES7 972-0CA23-0XA0**

RS 232, 9-pin; male with RS 232/MPI converter, max. 19.2 Kbit/s

**CP 5613 A2****6GK1 561-3AA01**

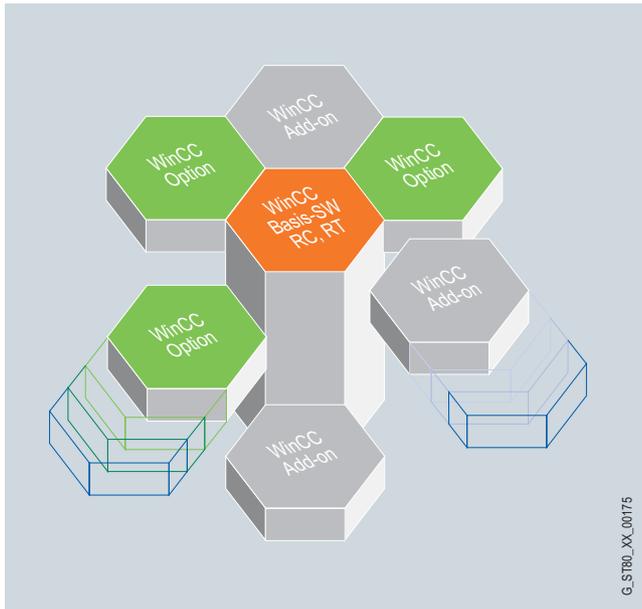
PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately).

A8: Subject to export regulations: AL: N and ECCN: 5A991X  
B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B7: Subject to export regulations: AL: N and ECCN: EAR99H  
C2: Subject to export regulations: AL: 5A002A1A2 and ECCN: 5A002A1A

Ordering Data (continued)	Order No.	Order No.
<p><b>S7-5613 Edition 2007</b></p> <p>Software for S7 Communication incl. PG/OP protocol, FDL, OPC server; runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, Windows VISTA Ultimate/Business; for CP 5613 A2; German/English</p> <ul style="list-style-type: none"> <li>• Single license for 1 installation B3 <b>6GK1 713-5CB70-3AA0</b></li> <li>• Upgrade package for SIMATIC NET Edition 2006 B3 <b>6GK1 713-5CB00-3AE0</b></li> <li>• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 <b>6GK1 713-5CB00-3AE1</b></li> </ul>		<p><b>FMS-5613 Edition 2007</b></p> <p>Software for FMS protocol incl. PG/OP communication, FDL, OPC server, runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, Windows VISTA Ultimate/Business; for CP 5613 A2; German/English</p> <ul style="list-style-type: none"> <li>• Single license for 1 installation B3 <b>6GK1 713-5FB70-3AA0</b></li> <li>• Upgrade package for SIMATIC NET Edition 2006 B3 <b>6GK1 713-5FB00-3AE0</b></li> <li>• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 <b>6GK1 713-5FB00-3AE1</b></li> </ul>
<p><b>DP-5613 Edition 2007</b></p> <p>Software for DP protocol incl. PG/OP communication, FDL, OPC server, runtime software, software and electronic manual on CD-ROM, license key on USB stick, Class A, for 32-bit: Windows XP Professional, Windows 2003 Server, Windows VISTA Ultimate/Business; for CP 5613 A2; German/English</p> <ul style="list-style-type: none"> <li>• Single license for 1 installation B3 <b>6GK1 713-5DB70-3AA0</b></li> <li>• Upgrade package for SIMATIC NET Edition 2006 B3 <b>6GK1 713-5DB00-3AE0</b></li> <li>• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005 B3 <b>6GK1 713-5DB00-3AE1</b></li> </ul>		<p><b>Hardware for process control functions</b></p> <p><b>DCF-77 receiver</b> for time synchronization</p> <ul style="list-style-type: none"> <li>• DCF77 (Europe) <b>2XV9 450-1AR14</b></li> <li>• GPS (worldwide) B5 <b>2XV9 450-1AR13</b></li> </ul> <p><b>Multi-VGA</b></p> <ul style="list-style-type: none"> <li>• 2 screens B7 <b>6ES7 652-0XX03-1XE0</b></li> <li>• 4 screens B7 <b>6ES7 652-0XX03-1XE1</b></li> </ul> <p>B3: Subject to export regulations: AL: N and ECCN: 5D992B1 B5: Subject to export regulations: AL: N and ECCN: 7A994A B7: Subject to export regulations: AL: N and ECCN: EAR99H</p> <p>Note: For further information about process control options, see Catalog ST PCS 7</p>

## Overview



G.STRB\_XX\_00175

- The universal WinCC basic software is the basis for modular expansions. These functional expansions can be obtained in the form of WinCC options and as WinCC Premium add-ons.
- WinCC options are created by WinCC Development and are Siemens Industry Automation products. You can obtain support from our Advisory Services and via the central hotline.

**Options for scalable plant configurations**

- WinCC/Server
  - To set up a powerful client/server system
- WinCC/Web Navigator
  - To control and monitor plants via the Internet, in-house intranet or LAN
- WinCC/Central Archive Server (CAS)
  - For configuring a central archive server

**Options for increasing the availability**

- WinCC/Redundancy;
  - For increased system availability through redundancy
- SIMATIC Maintenance Station
  - For system-integrated diagnostics and system-based asset management
- WinCC/ProAgent
  - For reliable process diagnostics

**Options for IT and Business Integration – Plant Intelligence**

- - WinCC/DataMonitor
  - For display and analysis of current process states and historical data on office PCs with standard tools
- WinCC/DowntimeMonitor
  - For the detection and analysis of standstill times for machines and systems
- WinCC/ProcessMonitor
  - Management information system and quality analysis

- WinCC/Connectivity Pack
  - Access to WinCC archive via OPC HDA, OPC A&E, OPC XML Server and WinCC OLE-DB/OLE-DB
- WinCC/Connectivity Station
  - Gateway to WinCC server data over OPC HDA, OPC A&E, OPC XML server and WinCC OLE-DB /OLE-DB from independent computers
- WinCC/IndustrialDataBridge
  - Configurable link to databases and IT systems

**Options for SCADA expansions**

- WinCC/User Archives
  - To manage data sets in user archives

**Options for sector-specific expansions**

- SIMATIC BATCH (for WinCC)
  - WinCC in combination with the SIMATIC BATCH products offers the solution for implementation of batch processes in accordance with ISA S88.
  - Batch processes which place heterogeneous demands on the interfacing of different types of PLC, such as S7-400/300, S5 and third-party PLCs, are automated using SIMATIC BATCH (for WinCC).
- WinCC/ChangeControl
  - Change and version management
  - Generation of audit trails for engineering
- WinCC/Audit
  - Change management
  - Generation of audit trails for engineering and runtime
- SIMATIC Logon
  - Central management of WinCC users, plant-wide (to CFR 21 Part 11)

**Options for individual system expansions**

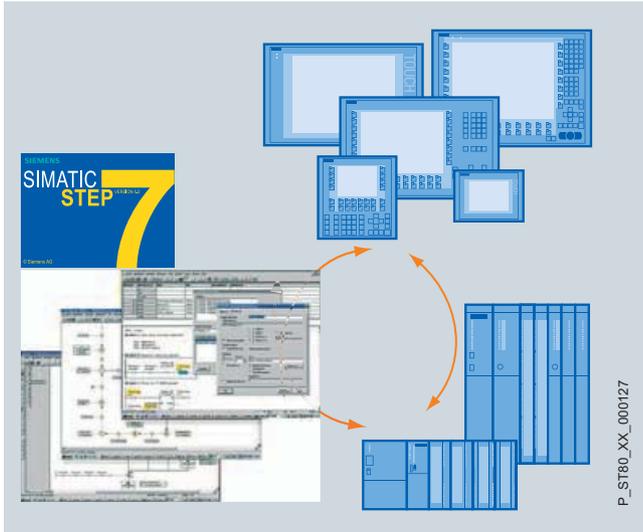
- WinCC/IndustrialX
  - For the creation of customized WinCC ActiveX objects in a VB development environment and .net.
- WinCC/ODK
  - For the use of open programming interfaces (Open Development Kit)

**Options for comprehensive support**

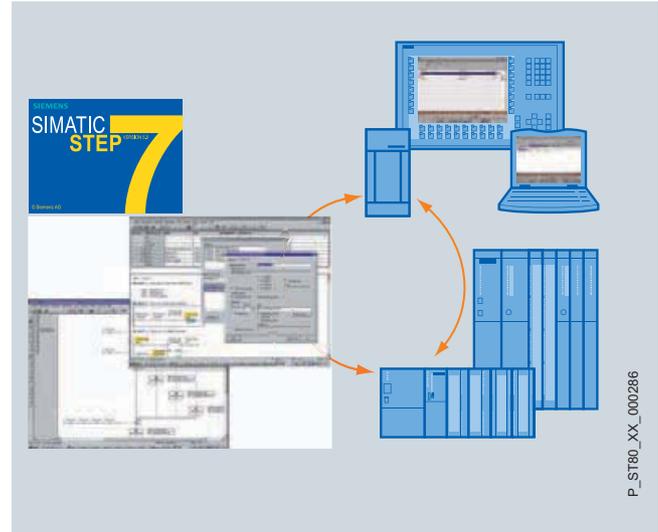
- WinCC/Comprehensive Support
  - Extensive support package; contains current updates/upgrades for WinCC basic software and options.

### Overview

- Process diagnostics software for quick, selective fault diagnostics in plants and machines for SIMATIC S7 and SIMATIC HMI
- A standardized diagnostics concept for various SIMATIC components:  
Optimum interaction between STEP 7 engineering tools and SIMATIC HMI
- Standard user interface



Prozess fault diagnostics with ProAgent for ProTool and WinCC flexible/ProAgent as well as the STEP 7 engineering tools



Prozess fault diagnostics with WinCC/ProAgent and the STEP 7 engineering tools

### Technical specifications

	WinCC/ProAgent	WinCC flexible/ProAgent
<b>Interfaces</b>		
• Can be used in conjunction with programmable controllers	SIMATIC S7: S7-300/S7-400; WinAC	SIMATIC S7: S7-300/S7-400; WinAC
• Types of connection	SIMATIC S7 Protocol Suite: MPI, PROFIBUS DP, Industrial Ethernet, TCP/IP	SIMATIC S7 Protocol Suite: MPI, PROFIBUS DP, PROFINET IO, Industrial Ethernet, TCP/IP
<b>Display units</b>		
Standard images for:		Standard displays for easy embedding in user displays, example project for MP 377
Number of languages for online language selection	3 (d/e/f)	5 (d/e/f/i/s)
<b>Functionality</b>		
Modification of HMI diagnostics data management in RT	WinCC/ProAgent V6.0 and higher	No
Unit overview	Yes	Yes
Message display	Yes	Yes
Sequencer operating display	Yes	Yes
Diagnostics detail display	Yes	Yes
• Display STL/LAD/signal list	Yes/Yes/Yes	Yes/Yes/Yes
• Display of operands with symbol and comment	Yes	Yes

# SIMATIC Software

## HMI software

### SIMATIC ProAgent

#### Technical specifications (continued)

	WinCC/ProAgent	WinCC flexible /ProAgent
Criteria analysis	When fault occurs/current status/ can be archived	When fault occurs/current status
Motion display		
• Number of viewable movements	6	6
• Directions of motion	2	2
• Number of viewable end positions per movement	16	16
<b>Documentation</b>		
In electronic format	de/en/fr; included in scope of delivery	de/en/fr/it/es; included in scope of delivery
<b>Requirements</b>		
HMI software	WinCC V6.2 (ProAgent V6.0 + SP4)	WinCC flexible 2008
Operating system: Configuration	<i>WinCC/ProAgent V6.0 + SP4:</i> Windows 2000 + SP3, Windows XP + SP2, Windows Server 2003 + SP1	Windows XP SP2/SP3 Windows Vista Business Windows Vista Ultimate
Operating system Runtime	<i>WinCC/ProAgent V6.0 + SP4:</i> Windows 2000 + SP3, Windows XP + SP2, Windows Server 2003 + SP1	<i>WinCC flexible/ProAgent for SIMATIC Panels:</i> <i>WinCC flexible/ProAgent for WinCC flexible Runtime:</i> Windows XP SP2/SP3 Windows Vista Business Windows Vista Ultimate
STEP 7	V5.3 and higher	V5.3 and higher
• S7-GRAPH	V5.3 and higher	V5.2 + SP3 and higher
• S7-PDIAG	V5.1 and higher	V5.1 and higher
• S7-HiGraph	No	V5.3 and higher
Type of delivery (one license is required for each target hardware)	CD-ROM/ Runtime license	Runtime license

#### Ordering Data

##### SIMATIC WinCC/ProAgent

Software option package for process error diagnosis based on S7 GRAPH V5 and higher and S7 PDIAG V5 and higher, functional enhancement for SIMATIC WinCC, electronic documentation in English, French and German; functions and standard screens for use on a PC (resolution 1024 x 768 pixels) and Panel PC 577/677/877 15" (resolution 1024 x 768 pixels) in English, French and German, runtime license (single license)

WinCC version:

- V7.0, V6.2 (ProAgent V6.0 SP4)

Upgrade

- to V6.0 (SP4)

#### Order No.

**6AV6 371-1DG06-0EX0**

**6AV6 371-1DG06-0EX4**

##### SIMATIC WinCC flexible /ProAgent

Software option package for process error diagnosis based on S7 PDIAG V5.1 and higher, S7 GRAPH V5.2 + SP3 and higher; S7 HiGRAPH V5.3 and higher.

Functional enhancement for SIMATIC WinCC flexible; electronic documentation in English, French, German, Italian and Spanish

- **WinCC flexible/ProAgent for SIMATIC Panels** B3 **6AV6 618-7DB01-2AB0**

Runtime license (Single License) executable on OP/TP/MP 270/277, MP 370/377

- **WinCC flexible /ProAgent for WinCC flexible Runtime** B3 **6AV6 618-7DD01-2AB0**

Runtime license (single license)

#### *Documentation (must be ordered separately)*

- **SIMATIC HMI Manual Collection** B8 **6AV6 691-1SA01-0AX0**

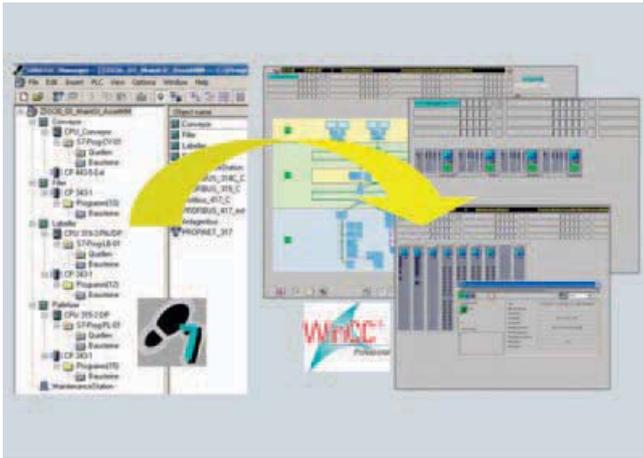
Electronic documentation, on CD-ROM

5 languages (English, French, German, Italian, Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

B8: Subject to export regulations: AL: N and ECCN: EAR99S

### Overview



#### System-integrated plant asset management system

- Automatic generation of a maintenance view in WinCC from the STEP 7 hardware configuration
- Plant-wide visualization of all automation components from the management level to the field level in ready linked, hierarchically arranged WinCC displays
- Mapping of central and distributed SIMATIC S7 components, PROFIBUS and PROFINET networks as well as associated bus nodes
- Ethernet network components and industrial PCs can be integrated through SIMATIC NET SNMP OPC Server
- Display of device status with group status generation in overview and detail displays
- The device statuses "Maintenance required" and "Maintenance request" are supported for status-based maintenance
- Provision of uniform faceplates showing detailed information for all components displayed
- Display of the device identification data (electronic rating plate)
- Integrated display of the status of the request

### Technical specifications

#### Hardware requirements

System	Clock frequency	Main memory	Free hard disk space
Engineering station	2.8 GHz	1 GB	15 GB
Maintenance Station Stand-alone / WinCC-Station "Single-user Workstation"	2.8 GHz	1 GB	15 GB
Maintenance Station Server / WinCC Server	2.8 GHz	1 GB	15 GB
Maintenance Station Client / WinCC Client	2.8 GHz	512 MB	3 GB

#### Software requirements

System	Operating system	System	Operating system
Engineering station "ES"	Windows XP Professional SP2 Windows Server 2003 SP1	Maintenance Station Server / WinCC Server	Windows Server 2003 SP1
Maintenance Station Stand-alone / WinCC-Station "Single-user Workstation"	Windows XP Professional SP2 Windows Server 2003 SP1	Maintenance Station Client / WinCC Client	Windows XP Professional SP2 Windows Server 2003 SP1
ES with Maintenance Station Stand-alone	Windows XP Professional SP2 Windows Server 2003 SP1		

#### Requirements for the integration of devices

Type	Integration	Comment
<b>SIMATIC S7 controllers / I/O</b>		
• S7-300 <sup>1)</sup>	Yes	
• S7-400	Yes	
• Win AC	Yes	
<b>Distributed devices</b>		
• ET 200	Yes	PROFIBUS DP and PROFINET IO according to STEP 7 hardware catalog
• PROFIBUS standard slaves	Yes	Integration using a GSD file
• PROFINET standard devices	Yes	Integration using a GSD file

# SIMATIC Software

## SIMATIC Maintenance Station

### SIMATIC Maintenance Station

#### Technical specifications (continued)

Type	Integration	Comment
<b>Network components</b>		
Ethernet network components	Yes	SIMATIC NET SNMP OPC Server and MIB also required
PROFINET network components	Yes	
PROFIBUS diagnostic repeater	Yes	
<b>Personal Computer</b>		
PC/Industrial PC	Yes	SIMATIC NET SNMP OPC Server also required
<b>Drives</b>		
Drives with PROFIBUS connection	Yes	For integrating devices designed to the PROFIDRIVE profile, Drive ES SIMATIC (V5.4 SP1 or higher) is required
Drives with PROFINET connection	Yes	For integrating devices designed to the PROFIDRIVE profile, Drive ES SIMATIC (V5.4 SP1 or higher) is required
<b>Accessory devices</b>		
Devices not configured in STEP 7 Hardware Config	Yes	Integrated via function block (asset proxy)

1) With S7-300, PROFIBUS/PROFINET systems are supported if they are connected to the internal CPU interfaces

#### Ordering Data

##### SIMATIC Maintenance Station 2007 SP1

Software for implementation of a plant-oriented asset management system

Basic package with engineering software (Floating License) and Runtime License for 100 devices

B3 **6ES7 840-0WD00-0YA0**

Powerpack 100 Runtime License for 100 additional devices

B3 **6ES7 840-0WD10-0YD0**

##### SIMATIC Maintenance Station 2007 SP1

Software for implementation of a plant-oriented asset management system

Powerpack 500 Runtime License for 500 additional devices

B3 **6ES7 840-0WD20-0YD0**

Powerpack 1000 Runtime License for 1000 additional devices

B3 **6ES7 840-0WD30-0YD0**

Basic demo package 2007 SP1

B3 **6ES7 840-0WD00-0YA7**

B3: Subject to export regulations: AL: N and ECCN: 5D992B1

## Overview



- Contains the most important engineering and runtime software packages for SIMATIC S7/C7, SIMATIC HMI, SIMATIC NET, SINUMERIK, SIRIUS and SIMATIC RFID on several data carriers (DVD)
- Permits the simultaneous, automatic installation of several software packages
- Permits the automatic updating of installed software packages
- Considerably reduces installation costs
- Optimal for company-wide rollout of identical engineering software versions using recording files of the master installation
- Supports company-wide rollout with simple installation options over the network
- General settings such as languages to be installed, installation path, etc. can be made using the Premium Studio Setup

### Note:

The Premium Studio does not contain any licenses. These must be ordered separately, either by means of existing licenses for the corresponding version or by the separate ordering of new licenses.

## Ordering Data

## Order No.

### Premium Studio 2008

*Task:*  
Installation/updating of software packages for engineering and runtime for SIMATIC S7/C7, SIMATIC HMI, SIMATIC NET, SINUMERIK, SIRIUS und SIMATIC RFID;  
without licenses;

*Target system:*  
Windows XP Professional SP2, Windows Vista Business, Windows Vista Ultimate

*Requirements:*  
PG/PC, PCU, S7-300/400, C7

*Type of delivery:*  
on DVD; without licenses for the software packages

DVD	B8	<b>6ES7 815-8CD06-0YA7</b>
Software Update Service (requires current software version)	B8	<b>6ES7 815-8CD00-0YL7</b>

B8: Subject to export regulations: AL: N and ECCN: EAR99S

# SIMATIC Software

## Supplementary Components

### ADDM - Data Management

#### Overview



With ADDM, you are completely in control of the SIMATIC and SINUMERIK 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

#### Order No.

##### ADDM

Software package  
Languages: English, German

##### ADDM Single User

- |  |    |                            |
|--|----|----------------------------|
| • Single license with CD-ROM of current software version | B4 | <b>6BQ3 030-1AA30-3AC0</b> |
| • Trial license with CD-ROM of current software version  | B8 | <b>6BQ3 030-1AA70-3AC0</b> |
| • Single user upgrade                                    | B4 | <b>6BQ3 030-1AB13-3AC0</b> |

##### ADDM Client

- |  |    |                            |
|--|----|----------------------------|
| • Single license without data carrier                    | B4 | <b>6BQ3 030-1AA20-1AC0</b> |
| • Single license with CD-ROM of current software version | B4 | <b>6BQ3 030-1AA10-0AC0</b> |
| • Client upgrade from V5.x to V6.1 with CD-ROM           | B4 | <b>6BQ3 030-1AB11-3AC0</b> |

##### ADDM Server

- |  |    |                            |
|--|----|----------------------------|
| • Single license with CD-ROM of current software version | B4 | <b>6BQ3 030-1AA00-3AC0</b> |
| • Server upgrade from V5.x to V6.1 with CD-ROM           | B4 | <b>6BQ3 030-1AB10-3AC0</b> |

##### ADDM Agent

- |  |    |                            |
|--|----|----------------------------|
| • Single license without data carrier                    | B4 | <b>6BQ3 030-1AA00-1AB0</b> |
| • Single license with CD-ROM of current software version | B4 | <b>6BQ3 030-4AA00-0AC0</b> |
| • Agent upgrade from V1.x to V1.2 with CD-ROM            | B4 | <b>6BQ3 030-1AB12-3AC0</b> |

B4: Subject to export regulations: AL: N and ECCN: 5D992B2

B8: Subject to export regulations: AL: N and ECCN: EAR99S

### Overview

- Technical product data for S7-300, S7-400 and ET 200
- For in use in CAD/CAE applications
- Consists of:
  - Component data as per ECAD component standard
  - Dimensioned drawings for CAD/CAE systems
  - Macros/Macro libraries

### Ordering Data

### Order No.

#### Technical product data for CAx applications

*Task:*  
Product data for use in CAD/CAE applications

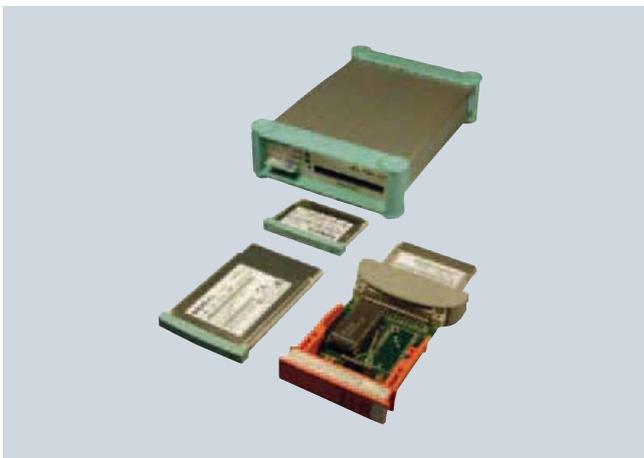
One Off License

**6ES7 991-0CD01-0YX0**

6

## External prommer

### Overview



- External EPROM programming device
- For programming SIMATIC memory cards, SIMATIC micro memory cards as well as SIMATIC EPROM and EEPROM modules
- For connection to the PC via the USB interface

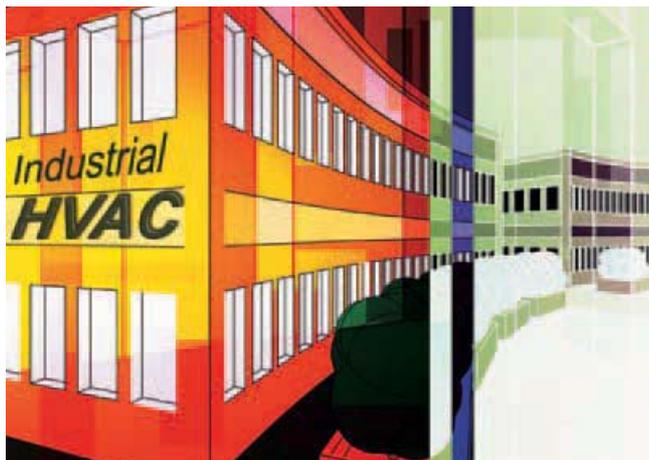
For further information see section 7, page 7/5.

# SIMATIC Software

## Supplementary Components

### HVAC Lite Library runtime software

#### Overview



The HVAC Lite Library runtime software features STEP 7 functions for all aspects of building automation, in particular for heating, ventilation, air conditioning and sanitary facilities as well as for the supply and distribution of media.

HVAC Lite Library provides users with the following features:

- Future-oriented thanks to constant updates and expansions
- Modifications in line with new SIMATIC components
- Use of all SIMATIC signal modules (input/output modules)
- Use of the new SIMATIC S7-300 central controller modules with Micro Memory Card (CPU 313 or later)
- Openness thanks to standardized and documented interfaces
- Expansion capability and flexibility thanks to bit-modular block concept
- Safety thanks to tested quality-assured software blocks
- Standardized software structure for easy expansion and modification
- Engineering guideline to support structured software generation
- Predefined safety and operating philosophy
- Documented block functionality
- Protection of user engineering through runtime license

Additional information is available in the Internet under:

<http://www.siemens.com/industrial-hvac>

#### Technical specifications

	HVAC Lite Library
<b>Basic hardware</b>	
SIMATIC S7	S7-300
Central processing units CPUs	CPU 313...317 (with MMC card and flag memory area 0...255)
Signal modules	All
Communication modules	PROFIBUS, Ethernet, AS-Interface
<b>Functionality</b>	
Input/output functions	Yes
Open-loop and closed-loop control functions	Yes
Optimization functions	Time switching

	HVAC Lite Library
<b>Human machine interface</b>	
SIMATIC HMI	Yes
Via S7 functions	
• WinCC	Yes
• SCADA systems	Yes
• Operator control and monitoring via S7 OPC server	Yes
<b>Communication</b>	
PROFIBUS DP as master	Yes
AS-Interface as master	Yes
PROFIBUS DP as slave	Yes
SR via Ethernet	(optional instead of operator control and monitoring)
FDL via PROFIBUS	
S7 functions via MPI, PROFIBUS, Ethernet	Yes
<b>Engineering</b>	
Automation software	STEP 7 STL (LAD/CSF)
HMI software	SIMATIC ProTool/WinCC flexible/WinCC

#### Ordering Data

#### Order No.

##### HVAC Lite Library

STEP 7 functions for building automation, e.g. for heating, ventilation, air-conditioning and sanitation engineering

- HVAC Lite Engineering Set; Module library, examples, documentation; license for 40 data points  
**6FL4 214-4ND47-0AA0**
- Runtime license for 1 SIMATIC-CPU; max 40 data points  
**6FL4 214-4ND40-0AB0**
- Runtime license for 1 SIMATIC-CPU; max. 125 data points  
**6FL4 214-4ND41-0AB0**
- Runtime license for 1 SIMATIC-CPU; unlimited data points  
**6FL4 214-4ND42-0AB0**
- Powerpack for 1 SIMATIC CPU; 40 to 125 data points  
**6FL4 214-4ND43-0AD0**
- Powerpack for 1 SIMATIC CPU; 125 data points and above  
**6FL4 214-4ND44-0AD0**
- Powerpack for 1 SIMATIC CPU; 40 data points and above  
**6FL4 214-4ND45-0AD0**