

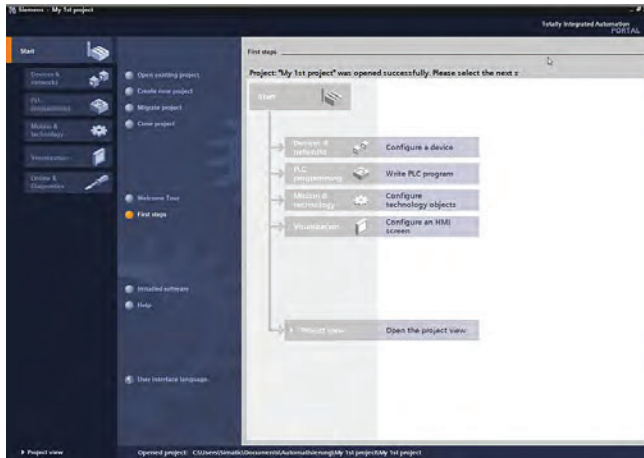
# Software for SIMATIC Controllers

TIA Portal

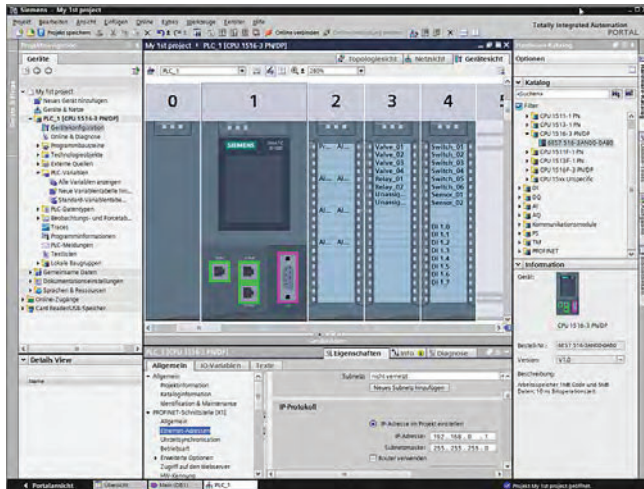
PLC programming

## STEP 7 Professional (TIA Portal)

### Overview



STEP 7 Professional V17 (TIA Portal), portal view



STEP 7 Professional V17 (TIA Portal), device view: Configuring and parameterizing in realistic photo-quality representation

### *Intuitive, efficient and future-oriented - the engineering software for programming the SIMATIC Controllers*

SIMATIC STEP 7 Professional V17 is the engineering system for the SIMATIC S7-1200, S7-1500, S7-300, S7-400 Controllers, WinAC and Software Controllers.

STEP 7 V17 is based on the Totally Integrated Automation Portal (TIA Portal) central engineering framework which offers users a uniform, efficient and intuitive solution to all automation tasks.

#### **New with V17**

- New programming language Cause Effect Matrix (CEM) for efficient and fast programming in a connection matrix
- Download and upload of the folder structure for program blocks, PLC data types and PLC tags to the PLC
- Extended functions for the cross-references (freeze the display, show access to higher-level structures, improved display of PLC tags with overlapping input or output addresses)
- Extended functions for TIA Portal Openness
- Improved performance and support of new CPUs in PLCSIM
- Offline/offline comparison of the hardware configuration up to the parameter level
- Innovated type instance and versioning concept for blocks in TIA Portal libraries
- Extended functions of TIA Portal user management: Introduction of engineering function rights, anonymous users without password, locking of open projects, ...

#### **Licenses**

- STEP 7 Professional V17 is supplied with a STEP 7 Professional V17 floating license. The floating license allows the software to be used on any number of computers. This means one user per license can use the software independently of the computer used and without being tied to a specific workstation. The number of licenses acquired determines the number of computers on which the software can be used simultaneously.
- Existing STEP 7 Professional licenses of versions V11-V16 can be upgraded to V17. This requires an upgrade license.
- The user receives a combo license when upgrading from STEP 7 V5.x. The combo license enables engineering to be performed both on the STEP 7 V 5.x and the STEP 7 V17 platform.
- The STEP 7 Basic V17 license can be upgraded to a STEP 7 Professional V17 license with a PowerPack.

You can find more information on the Software Update Service, license types, Online Software Delivery and handling your SW licenses with the Automation License Manager here:

<http://www.siemens.com/simatic-licenses>

Ordering data	Article No.	Article No.	
<b>STEP 7 Professional V17</b> Target system: SIMATIC S7-1200, S7-1500, S7-300, S7-400, WinAC Requirement: Windows 10 (64-bit) <ul style="list-style-type: none"> <li>• Windows 10 Professional Version 1909, 2004, 20H2</li> <li>• Windows 10 Enterprise Version 1909, 2004, 20H2</li> <li>• Windows 10 IoT Enterprise 2016 LTSC</li> <li>• Windows 10 IoT Enterprise 2019 LTSC</li> </ul> Windows Server (64-bit) <ul style="list-style-type: none"> <li>• Windows Server 2016 Standard (full installation)</li> <li>• Windows Server 2019 Standard (full installation)</li> </ul> Type of delivery: 9 languages: de, en, zh included, fr, sp, it, ru, jp, kr as download		<b>Upgrade from STEP 7 Professional V11...16 to STEP 7 Professional V17 or STEP 7 Professional V11...V16/201x Combo to V17/2021 Combo or STEP 7 Professional 2006...2010 to V17/2021 Combo, floating license</b>  <b>Upgrade from STEP 7 Professional V11...16 to STEP 7 Professional V17 or STEP 7 Professional V11...V16/201x Combo to V17/2021 Combo or STEP 7 Professional 2006...2010 to V17/2021 Combo, floating license Software download including license key<sup>1)</sup></b>  Consignee email address required for delivery	<b>6ES7822-1AA07-0YE5</b>  <b>6ES7822-1AE07-0YE5</b>
<b>STEP 7 Professional V17, floating license</b>	<b>6ES7822-1AA07-0YA5</b>	<b>PowerPack STEP 7 Professional V17 Trial 365 to STEP 7 Prof. V17, floating license.</b>  Only valid if ordered together with Software Update Service 6ES7 822-1AE00-0YY0 (STEP 7 Professional V1x) Prerequisite is a STEP 7 V17 Trial 365 license. License key download <sup>1)</sup> Consignee email address required for delivery	<b>6ES7822-1BE07-0YC5</b>
<b>STEP 7 Professional V17, floating license, software download including license key <sup>1)</sup></b>  Consignee email address required for delivery	<b>6ES7822-1AE07-0YA5</b>		
<b>STEP 7 Professional V17/2021 Combo, floating license</b>	<b>6ES7810-5CC14-0YA5</b>		
<b>STEP 7 Professional V17/2021 Combo, floating license, software download incl. license key <sup>1)</sup></b>  Consignee email address required for delivery	<b>6ES7810-5CE14-0YB5</b>		
<b>STEP 7 Professional V17, trial license</b>	<b>6ES7822-1AA07-0YA7</b>	<b>50 hours of engineering with STEP 7 Professional Combo, WinCC Professional (incl. WinCC flexible 2008) and STEP 7 Safety Advanced (incl. Distributed Safety), floating license Software download incl. license key <sup>1)</sup></b>  Consignee email address required for delivery	<b>6ES7823-1GE07-0YA5</b>
<b>Conversion package STEP 7 Professional V17</b>  Only valid if ordered together with Software Update Service 6ES7 810-5CC04-0YE2 (STEP 7 Professional and STEP 7 Professional in TIA Portal). <ul style="list-style-type: none"> <li>• PowerPack &amp; upgrade from STEP 7 V5.7 to STEP 7 Professional V17/2021 Combo, floating license. STEP 7 Software Update Service is a prerequisite.</li> <li>• PowerPack &amp; upgrade from STEP 7 V5.7 to STEP 7 Professional V17/2021 Combo, floating license. STEP 7 Software Update Service is a prerequisite. Software download including license key <sup>1)</sup> Consignee email address required for delivery</li> </ul>	<b>6ES7822-1AA07-0XC2</b>  <b>6ES7822-1AE07-0XC2</b>	<b>PowerPack &amp; upgrade from STEP 7 V5.3...V5.7 to STEP 7 Professional V17/2021 Combo, floating license</b>  <b>PowerPack &amp; upgrade from STEP 7 V5.43...V5.7 to STEP 7 Professional V17/2021 Combo, floating license Software download including license key <sup>1)</sup></b>  Consignee email address required for delivery	<b>6ES7822-1AA07-0XC5</b>  <b>6ES7822-1AE07-0XC5</b>

<sup>1)</sup> For up-to-date information and download availability, see:  
<http://www.siemens.com/tia-online-software-delivery>

# Software for SIMATIC Controllers

TIA Portal

PLC programming

## STEP 7 Professional (TIA Portal)

### Software Update Service

For a period of 12 months and for a fixed price, the customer is automatically provided with all upgrades and Service Packs for each installed software package. The contract is automatically extended by a further year unless canceled at least 12 weeks prior to expiration. Requires the current software version

### Software Update Service (Standard Edition)<sup>2)</sup>

The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.)

- STEP 7 Professional in the TIA Portal
- STEP 7 Professional and STEP 7 Professional in the TIA Portal

**6ES7822-1AA00-0YL5**  
**6ES7810-5CC04-0YE2**

### Software Update Service (Compact Edition)<sup>2)</sup>

The delivery items are combined. For several contracts, only 1 package with 1 data storage medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of CoLs will be supplied.

Delivery items to be combined must be ordered as one item.

- STEP 7 Professional in the TIA Portal
- STEP 7 Professional and STEP 7 Professional in the TIA Portal

**6ES7822-1AA00-0YM5**  
**6ES7810-5CC00-0YM2**

### Software Update Service (Download)<sup>2)</sup>

Upgrades and Service Packs are available for downloading.

Consignee email address required for delivery

- STEP 7 Professional V1x
- STEP 7 Professional and STEP 7 Professional in the TIA Portal

**6ES7822-1AE00-0YY0**  
**6ES7810-5CC04-0YY2**

<sup>1)</sup> For up-to-date information and download availability, see: <http://www.siemens.com/tia-online-software-delivery>

<sup>2)</sup> For more information on the Software Update Service, see page 12/2

### Technical specifications

STEP 7 Professional V17 (TIA Portal)	
Type of license	Floating license
Software class	A
Current version	V17
Target system	SIMATIC S7-1200, S7-1500, S7-300, S7-400, WinAC, Software Controllers
Operating systems	Windows 10 (64-bit) <ul style="list-style-type: none"> <li>• Windows 10 Professional Version 1909, 2004, 20H2</li> <li>• Windows 10 Enterprise Version 1909, 2004, 20H2</li> <li>• Windows 10 IoT Enterprise 2016 LTSC</li> <li>• Windows 10 IoT Enterprise 2019 LTSC</li> </ul> Windows Server (64-bit) <ul style="list-style-type: none"> <li>• Windows Server 2016 Standard (full installation)</li> <li>• Windows Server 2019 Standard (full installation)</li> </ul>
<b>Recommended PC hardware</b>	
Computer	SIMATIC Field PG M6 Advanced or higher (or comparable PC)
Processor	Intel Core i5-8400H (up to 4.2 GHz)
RAM	16 GB or more (min. 8 GB, 32 GB for large projects)
Hard disk	SSD with at least 50 GB storage space available
Network	1 Gbit (for multi-user)
Screen	15.6" Full HD display (1 920 x 1 080 or higher)

### Compatibility with other SIMATIC products

STEP 7 V17 can be installed on a PC in parallel with other versions of STEP 7 V13 SP2 to V16 and STEP 7 V5.6.

As of TIA Portal project version V13 SP1, projects can be directly upgraded to V17. Upgrading of projects from previous project versions (V11 ... V13) is carried out on the basis of the TIA Portal products (e.g. STEP 7) used in the project in version V13 SP1 or V13 SP2 (latest update recommended).

### Important note

TIA Portal project versions V13 SP1.. V16 are upgraded with TIA Portal V17 to the project version V17. If you need to edit a TIA Portal project version V13 SP1.. V16, we recommend an additional installation of the corresponding software to TIA Portal V17. The license purchased for V17 is also valid for all older TIA Portal versions.

Program code and hardware configuration from STEP 7 V5.4 SP5 can be migrated directly to a TIA Portal V17 project with STEP 7 V17.