

Your gateway to automation in the Digital Enterprise

Totally Integrated Automation
Portal

siemens.com/tia-portal

Intro

Added values

Options

Easy access to the
TIA Portal

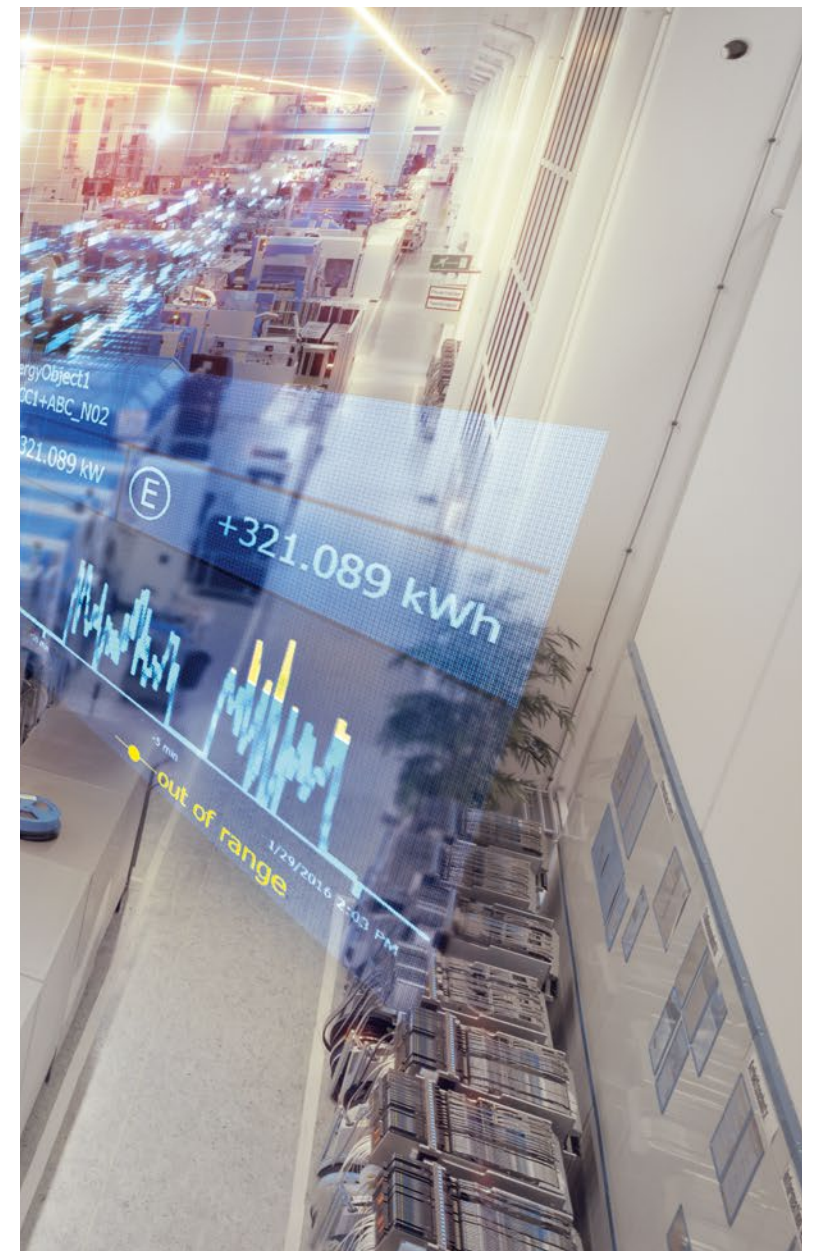
Software packages and
options



Digital Workflow



Integrated Engineering



Transparent Operation

TIA Portal – more than an engineering framework



The Totally Integrated Automation Portal (TIA Portal) enables complete access to the entire digitalized automation, from digital planning and integrated engineering to transparent operation. As part of the Digital Enterprise Software Suite, it joins PLM and MES in rounding out the comprehensive offering from Siemens for companies on the path to Industrie 4.0, making it the perfect access to automation in the Digital Enterprise.

With the TIA Portal, machine builders and system integrators as well as plant operators will benefit from:

- shorter time to market thanks to innovative simulation tools, among other things
- increased plant productivity thanks to additional diagnostic and energy management functions
- greater flexibility thanks to coordinated teamwork

Open, virtual and connected

Digital workflow with TIA Portal

“The ability to simulate machines gives me security in design, security in sales and security in machine configuration.”

Rainer Feuchter,
CEO Optima Consumer GmbH



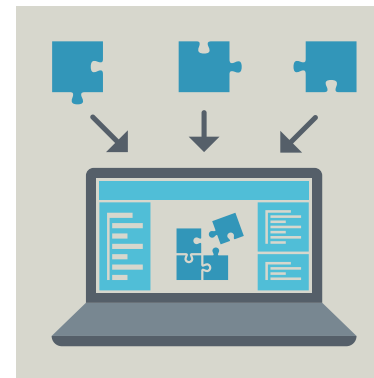
Flexible simulation

By simulating the entire installation, including the controller and HMI, and by evaluating it based on a virtual model, local commissioning time is reduced thanks to PLCSIM Advanced, the controller's digital twin.



Seamless connectivity

The cloud offers new possibilities in engineering as well as for the operation of plants. The TIA Portal Cloud Connector makes it possible to work with the TIA Portal regardless of the location or device. For you, this means greater flexibility and less installation effort. During operation, you can benefit from additional digital services thanks to the connection of plants to the Siemens MindSphere Cloud.



Open system

TIA Portal allows you to efficiently create your project using software generators, thus reducing the number of redundant workflows. With Teamcenter, you also merge the project versions from planning, engineering and design.

Shorten your time to market

Integrated engineering with TIA Portal

“You work with a team-enabled, fully integrated tool landscape with access to a complete portfolio of necessary control and drive components.”

Andreas Martin Linck,
Head of E-Technik



One for all

With TIA Portal, you integrate all important components of your automation project: safety, security, control, HMI, drives, distributed I/O and now even motion control and power distribution. With only a few multiple entries, a shared database and a standard interface across all tasks, your engineering time is reduced.



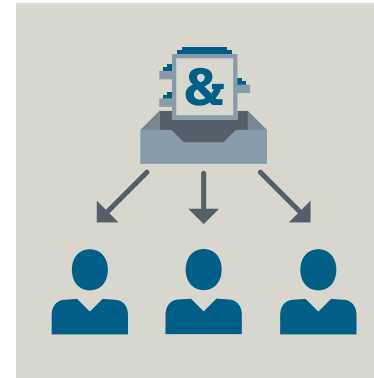
Coordinated teamwork

With TIA Portal Multiuser Engineering, multiple people can access a project at the same time. Synchronization is automatic. You can flexibly process tasks and complete them simultaneously – both device-oriented and task-based.



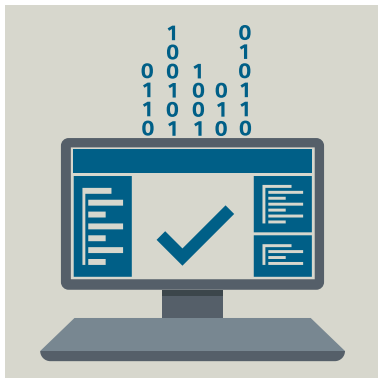
Reliably avoid errors

You reduce the amount of extra work by reliably identifying errors and quickly correcting them with numerous programming code templates. Many new and efficient diagnostic tools as well as cyclical system test recordings provide help in analyzing sporadic errors during commissioning.



Handle know-how safely and efficiently

Thanks to the comprehensive library concept, you can easily reuse all project objects and thus avoid extra work. Safeguard your specialist knowledge over the long term with know-how-protected blocks, and easily further develop existing systems and projects in TIA Portal.



Generation instead of programming

Develop your solutions even faster thanks to automatic generation of HMI visualization with SiVArc, fast and easy machine and plant diagnostic, efficient energy management system implementation as well as automatic program creation using software generators that are linked via the TIA Portal Openness interface.

Increase your productivity

Transparent operation with TIA Portal

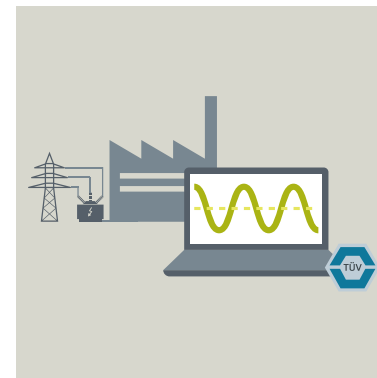
“A standard engineering platform is desirable for engineering energy efficiency systems: consistently from the device to the configuration to data storage, all the way to the customer’s desk.”

Stephan Vömel,
Proprietor and managing director, Quintec Automatisierungs- und Datentechnik GmbH



Information management

The greatest possible transparency through consistent data storage in production lets you make the right decisions quickly. You can prepare data according to specific target groups with the SIMATIC Information Server locally or on a mobile device when you are in the field. The system supports WinCC/WebUX as well as WebNavigator for remote access and control.



Energy management

The integrated SIMATIC Energy Suite automation solution and the universally connected Energy Manager PRO energy management system help you get a handle on your energy costs at all times. The Energy Suite makes energy data record easy and efficient and gives you the transparency you need to save energy according to ISO 50001.



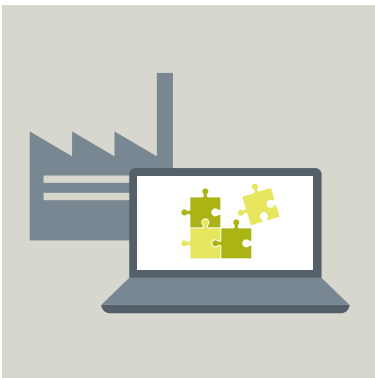
Diagnosis management

Efficient and integrated diagnosis of process errors reduce production downtimes and increase the availability of your machines and plants. The standardized ProDiag machine and plant diagnostic function gives you efficient analyses of process errors. Integrated system diagnosis helps you quickly identify errors in the automation system across all system components.



User management

Efficient user management is a key part of every security concept. User management in the TIA Portal enables system-wide, central maintenance of users, including an optional connection to Windows Active Directories. The person-specific assignment of roles and authorizations minimizes maintenance effort while achieving a high degree of transparency. This provides a solid foundation for efficient and consistent administration of personalized access rights in the plant, which significantly reduces security risks.



Open communication

Connecting automation and IT level by means of open communication makes it easy to integrate higher-level MES/ERP solutions. The standardized OPC UA communication protocol lets you forward production data to systems of other manufacturers. Industrial Data-Bridge is used for bidirectional, cross-system communication via standard interfaces, without any programming work.

Digitalization and the TIA Portal cluster

TIA Portal options provide answers to customer requirements

TIA Portal options

SIMATIC S7-PLCSIM Advanced

Comprehensive simulation of the controller functionality including interaction with virtual plant and machine models

TIA Portal Cloud Connector

Boost the flexibility in your daily work through engineering in your private cloud

TIA Portal Teamcenter Gateway

Safeguarding projects plant-wide with the storage of TIA Portal projects in Teamcenter

SIMATIC Target 1500S for SIMULINK

The software development can be integrated directly into the STEP 7 program through the automatic generation of executable code

TIA Portal Multiuser Engineering

Work together on a project as a team and manage it flexibly on a server. Centrally track changes with user comments and versions in one location

SIMATIC ODK 1500S

Supports the development of Windows and real-time functions and provides for the integration of high-level languages

SIMATIC STEP 7 Safety

Provides for the seamless integration of machine safety into the SIMATIC automation system

SIMATIC Visualization Architect SiVArC

Implement standardized HMI visualizations with even greater efficiency through automatic generation

SIMATIC OPC UA

Open communication standard for the communication concepts of Industrie 4.0

SIMATIC Energy Suite

Energy transparency in production thanks to automatic creation and intuitive configuration

SIMATIC ProDiag

Diagnosis of application errors reduces production downtimes and increases the availability of your machines and plants

WinCC/WebUX¹

Diagnosis of application errors reduces production downtimes and increases the availability of your machines and plants

TIA User Management Component

Reduction of security risks thanks to the efficient and consistent administration of personalized access rights in the plant



**Open, virtual, and networked
Digital workflow with TIA Portal**

¹Part of WinCC Runtime Professional



**Shorten your time to market
Integrated engineering with TIA Portal**



**Increase your productivity
Transparent operation with TIA Portal**

Easy access to the TIA Portal

Action packages



Trial user

TIA Portal V14 TRIAL download collections

www.siemens.com/tia-portal-trial

Trial period: limited (21 days)

Upgraders

Software – STEP 7 V5.5 to SIMATIC STEP 7 Professional V15 Combo

Scope: Upgrade and power pack from STEP 7 V5.x to STEP 7 V15 Professional / Prof. 2017; SUS contract also required

Product no.: 6ES7822-1AE05-0XC2

SUS product no.: 6ES7810-5CC04-0YY2

Trial period: unlimited; prerequisites: STEP 7 V5.x license, STEP 7 V5.5 SUS

Important: The package is linked with a mandatory SUS contract.

First-time users

Starter kit with S7-1500 hardware

The starter kit includes everything you need to immediately put the high-performance SIMATIC S7-1500 into use.

www.siemens.com/s7-1500-starter-kits

Starter kit with S7-1200 hardware

With the SIMATIC S7-1200 starter kits, you can quickly and easily implement your simple automation tasks.

www.siemens.com/s7-1200-starterkits

Starter kit with Comfort Panel hardware

With high-resolution wide-screen displays ranging from 4" to 22" and the option of touch operation or operating buttons, the starter kits include everything you need to use the hardware.

www.siemens.com/comfort-panel-starter-kits

Software – SIMATIC STEP 7 Professional V15 power pack: V15 Trial 365 → V15 (download)

After you purchase the SIMATIC S7-1500 starter kit, you can convert the included 365-day license to a full license of the same version with a power pack.

Product no.: 6ES7822-1BE05-0YC5

Prerequisites: S7-1500 starter kit

Temporary use

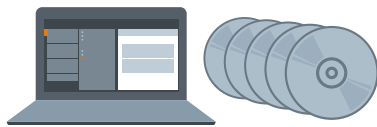
SIMATIC 50-h engineering license for infrequent use of the software (rental license)

Scope: STEP 7 Professional (TIA Portal & 2017), WinCC Professional (TIA Portal & WinCC flexible 2008), STEP 7 Safety Advanced (TIA Portal & Distributed Safety)

Product no.: 6ES7823-1GE05-0YA5

Trial period: 50 hours of actual use

Good to know



Software Update Service (SUS)

With the Software Update Service, you automatically receive all released versions of the software you use delivered right to your door – in other words, all upgrades and service packs.

www.siemens.com/SUS

Online Software Delivery (OSD)

The clever alternative to traditional software delivery! Downloading automation software reduces your administrative expense and storage costs, and ensures simple, reliable, and always clearly organized license management.

www.siemens.com/OSD

Your step into the future – migration made easy



Supporting documents and tools for migration

Migration to the TIA Portal is supported with several powerful tools and helpful documents, which you can simply download.

- TIA Portal readiness check tool: Check quickly and easily whether the hardware contained in your projects is supported by the TIA Portal.

Readiness-check (weblink)

- Compatibility tool: The tool allows you to assemble a compatible selection of software products or to check existing configurations for compatibility.

www.siemens.com/kompatool

Individual modernization support

On request, Siemens can provide you with personal support for very specific requirements:

www.siemens.com/industry/contact

www.siemens.com/fa-services

From consultation and implementation to final project completion, Siemens offers comprehensive modernization services:

www.siemens.com/fa-migration

Details are available at:

www.siemens.com/tia-migration

Documentation

Migration guides (weblinks)

From SIMATIC S7-300/400 to S7-1500

From SIMATIC S5 to S7-1500

From SIMATIC WinAX RTX to
S7-1500 Software Controller

On the path to the digital enterprise – discover your potential with training courses for SIMATIC S7-1500 training in the TIA Portal

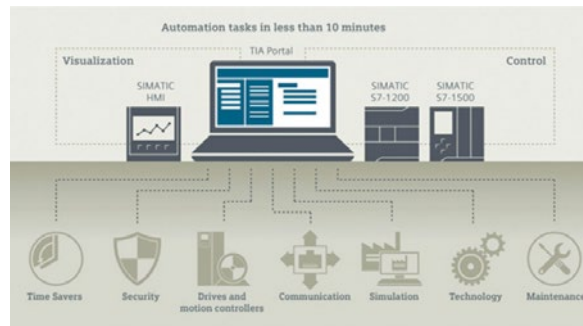


Industry is undergoing rapid developments that are being further accelerated by digitalization. The technologies today are so complex that continuous education and regular courses on training equipment are essential in order to keep skills up to date.

We offer you product training tailored to match all topic areas so that you can get the most from the capabilities of the extensive SIMATIC range of products. The training covers the entire life cycle of your plant. SIMATIC S7 service and programming training form the core of product training. The course content covers not only the main topics of SIMATIC S7-1500 in the TIA Portal but also includes programming languages, operator control and monitoring systems, drive technology, industrial communication and safety technology.

siemens.com/sitrain-tiaportal

Good to know

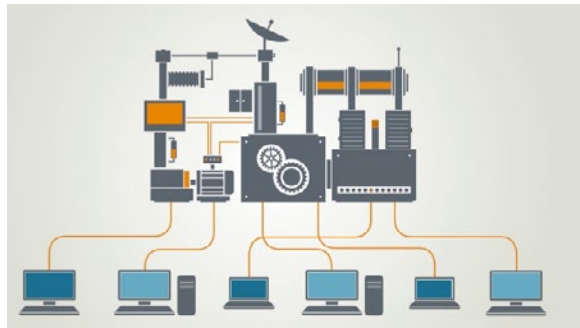


Siemens automation tasks

Efficient automation begins with efficient engineering. Consistent, end-to-end engineering enables savings with regard to time, costs, and effort. Based on specific tasks, our web tutorials show you how you can reduce your project planning time in your daily work. In addition, you can increase the profitability of engineering projects and improve your competitiveness. We ensure that step by step, you will arrive at a result in less than 10 minutes. We offer you a total of nine topics with more than 50 web tutorials. These include:

- TIA digitalization use cases
- Automatic generation of HMI visualizations with SiVArc
- Efficient teamwork with TIA Portal Multiuser
- Open communication standard OPC UA with SIMATIC S7

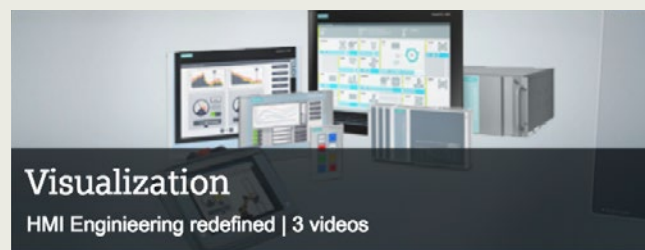
www.siemens.com/automation-tasks



TIA Portal Tutorial Center

The TIA Portal Tutorial Center gives you an overview of the functions and tools in the TIA Portal as well as how the configuration and programming tools work smoothly together. The tutorials are aimed at planners and project engineers as well as commissioning and service personnel. The videos mainly cover technical content and provide assistance for all stages of the machine and plant lifecycle. These include:

- Explanations regarding the SIMATIC S7 architecture
- Introduction to the programming languages
- Introduction to standardization with the TIA Portal libraries



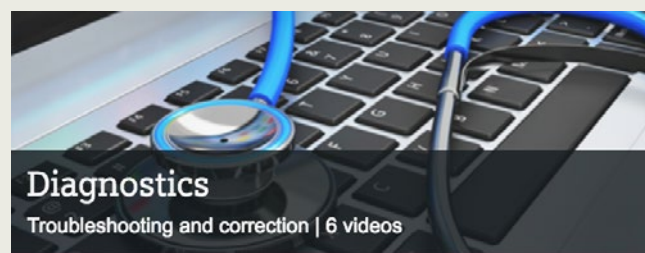
Visualization

HMI Engineering redefined | 3 videos



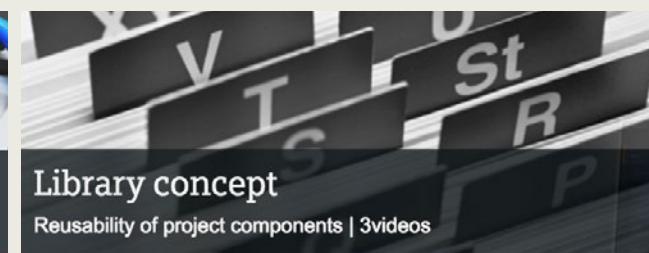
Industrial Security

Protect your plant effectively



Diagnostics

Troubleshooting and correction | 6 videos



Library concept

Reusability of project components | 3 videos

www.siemens.com/tia-portal-tutorial-center

Software packages and options

	SIMATIC STEP 7/ STEP 7 Safety				SIMATIC WinCC				SINAMICS Startdrive				SIMOTION SCOUT TIA				Soft Starter ES/ SIMOCODE ES			
Scope of services	Software Controller – SIMATIC S7-1500 (F)				SCADA				Convenient, guided acceptance of the Safety Integrated functions of the G120				SIMOTION D				Additional access via PROFIBUS/PROFINET			
	Advanced Controller – SIMATIC S7-1500 and SIMATIC S7-300/400 (F)				Single PC workstation				Commissioning, optimization, and diagnostics: G120 family, G130, G150, S120, S150, and medium voltage				SIMOTION P				Additional graphic parameterization and extended diagnostics			
	Distributed Controller – SIMATIC ET 200 CPUs (F)				Comfort Panels and Mobile Panels								SIMOTION C				Additional online functions via SIRIUS PtP			
	Basic Controller – SIMATIC S7-1200 (F)				Basic Panels				V90 PROFINET				SINAMICS S120				List parametrization via PN/PB; parametrization during start-up			
	Basic				Basic				STEP 7 integrated				Professional				STEP 7 integrated			
	Basic				Comfort				Basic (free)								Basic (free)			
	Professional				Advanced				Advanced								Standard			
	Advanced				Professional												Premium			

	SIMATIC STEP 7/ STEP 7 Safety	SIMATIC WinCC	SINAMICS Startdrive	SIMOTION SCOUT TIA	Soft Starter ES/ SIMOCODE ES
Engineering options	TIA Portal Multiuser Engineering				
	TIA Portal Teamcenter Gateway				
	TIA Portal Cloud Connector				
	SIMATIC Energy Suite ES				
	SIMATIC S7-PLCSIM Advanced				
	SIMATIC STEP 7 Safety				
	SIMATIC ODK 1500S				
	SIMATIC Target 1500S for SIMULINK				
	SIMATIC Visualization Architect				
Runtime options	SIMATIC ProDiag				
	SIMATIC Energy Suite RT				
	SIMATIC OPC UA		WinCC/WebUX		
	TIA User Management Component				

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which may undergo modification in the course of further
development of the products. The requested performance
features are binding only when they are expressly agreed
upon in the concluded contract.