SIEMENS
Ingenuity for life

Your gateway to automation in the Digital Enterprise

Totally Integrated Automation Portal

siemens.com/tia-portal

Digital Workflow

Integra Engine

Totally Integrated Automation
PORTAL

fully. Please select the next step:

Configure a device

Write PLC program

Configure
technology objects

Configure/select a device

Configure an HMI screen

Open the project view

EnergyObject1
=M1+ABC_N02

+1.089 kW

(E) +321.089 kWh

-5 min

out of range

1/29/2016 2:03 PM

ted
ering

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 TIA Portal and the possibilities offered by the new Version V14, machine manufacturers and system integrators as well as plant operators 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

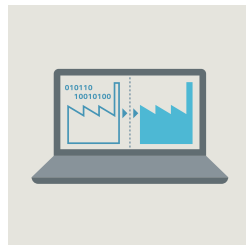- greater flexibility thanks to coordinated teamwork

Open, virtual and connected
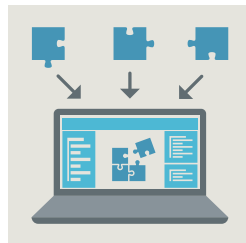
Digital workflow with TIA Portal

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

Rainer Feuchter,
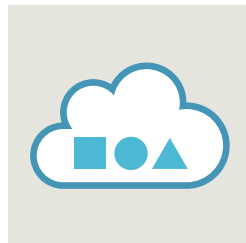CEO Optima Consumer GmbH

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.

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.

Cloud solution

You can connect to the cloud to increase flexibility in your everyday work. The new TIA Portal Cloud Connector lets you access the system controller from your private cloud. No installation on the engineering workstation is necessary. MindSphere – Siemens Cloud for Industry can be used for additional digital services.

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.
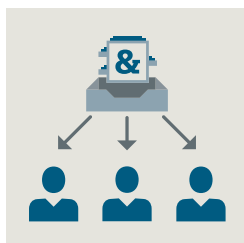
Reliably avoid errors

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.

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.
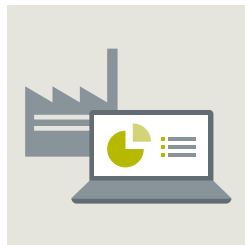
Handle know-how safely and efficiently

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.

Increase your productivity
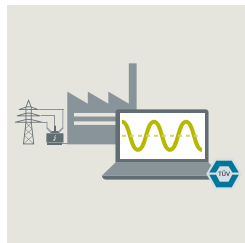
Transparent operation with TIA Portal

> "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.
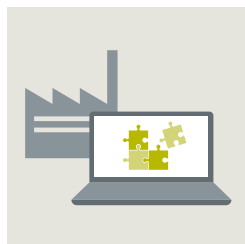
Energy management

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.

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. IndustrialData-Bridge is used for bidirectional, cross-system communication via standard interfaces, without any programming work.

Easy access to the TIA Portal

Action packages

Trial user

TIA Portal V14 TRIAL download collections
STEP 7: https://support.industry.siemens.com/cs/de/de/view/109740158
WinCC: https://support.industry.siemens.com/cs/de/de/view/109740228
Startdrive: https://support.industry.siemens.com/cs/de/de/view/68034568
Trial period: limited (21 days)

Upgraders

Software – STEP 7 V5.5 to SIMATIC STEP 7 Professional V14 Combo
Scope: Upgrade and power pack from STEP 7 V5.5 to STEP 7 V14 Professional / Prof. 2010; SUS contract also required
Product no.: 6ES7822-1AA04-0XC2
SUS product no.: 6ES7810-5CC04-0YE2
Trial period: unlimited; prerequisites: STEP 7 V5.5 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.
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.
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.
siemens.com/comfort-panel-starter-kits

Software – SIMATIC STEP 7 V14 power pack: V14 Trial 365 → V14 (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.: 6ES7822-1BE04-0YC5
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 & 2010), WinCC Professional (TIA Portal & flexible 2008),
STEP 7 Safety Advanced (TIA Portal & Distributed Safety)
Product no.: 6ES7823-1GE04-0YA5
Trial period: 50 hours of actual use

Good to know

Software Update Services (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. **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.
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. **siemens.com/readiness-check**
- Compatibility tool: The tool allows you to assemble a compatible selection of software products or to check existing configurations for compatibility. **siemens.com/kompatool**

Individual modernization support

On request, Siemens can provide you with personal support for very specific requirements:
siemens.com/industry/contact

From consultation and implementation to final project completion, Siemens offers comprehensive modernization services: **siemens.com/fa-migration**

Details are available at:
siemens.com/tia-migration

Documentation

Migration guides:
From SIMATIC S7-300/400 to S7-1500:
siemens.com/s7-300/400-s7-1500

From SIMATIC S5 to S7-1500: **siemens.com/s5-s7-1500**

From SIMATIC WinAX RTX to S7-1500 software controller:
siemens.com/winax-rtx-s7-1500

Digital workflow with the TIA Portal

Simulation

	Product no.
SIMATIC S7-PLCSIM Advanced V1.0	Download: 6ES7823-1FE00-0YA5 DVD: 6ES7823-1FA00-0YA5

Cloud connectivity

	Product no.
TIA Portal Cloud Connector V1.0	Download: 6ES7823-1CE00-0YA0 DVD: 6ES7823-1CA00-0YA0
Siemens MindSphere	On request MindSphere – Siemens Cloud for Industry siemens.com/mindsphere

Openness

	Product no.
TIA Portal Openness	http://support.automation.siemens.com/WW/view/de/109739072
SIMATIC Target 1500S™ for Simulink® V1.0	Download: 6ES7823-1BE00-0YA5

Team center

	Product no.
TIA Portal Teamcenter Gateway V14	Download: 6ES7823-1EE00-0YA5 DVD: 6ES7823-1EA00-0YA5

Integrated engineering with the TIA Portal

PLC programming

	Product no.
SIMATIC STEP 7 V14 Professional	Download: 6ES7822-1AE04-0YA5 DVD: 6ES7822-1AA04-0YA5
SIMATIC STEP 7 V14 Basic	Download: 6ES7822-0AE04-0YA5 DVD: 6ES7822-0AA04-0YA5
SIMATIC STEP 7 V14 Safety Advanced	Download: 6ES7833-1FA14-0YH5 DVD: 6ES7833-1FA14-0YA5
SIMATIC STEP 7 V14 Safety Basic	Download: 6ES7833-1FB14-0YH5 DVD: 6ES7833-1FB14-0YA5
SCOUT / SCOUT TIA V4.5 (SIMOTION)	Download: 6AU1810-1BA45-0XH5 DVD: 6AU1810-1BA45-0XA0 to be released December 2016

Visualization

	Product no.
SIMATIC WinCC Basic V14	Download: 6AV2100-0AA04-0AH5 DVD: 6AV2100-0AA04-0AA5
SIMATIC WinCC Comfort V14	Download: 6AV2101-0AA04-0AH5 DVD: 6AV2101-0AA04-0AA5
SIMATIC WinCC Advanced V14	Download: 6AV2102-0AA04-0AH5 DVD: 6AV2102-0AA04-0AA5
SIMATIC WinCC Professional with 512 or more PowerTags V14	Download: 6AV2103-0DA04-0AH5 DVD: 6AV2103-0DA04-0AA5
SIMATIC Visualization Architect V14	Download: 6AV2107-0PX04-0AH5 DVD: 6AV2107-0PX04-0AA5

Motion Control

	Product no.
SINAMICS Startdrive V14	Download: 6SL3072-4EA02-0XG0 DVD: 6SL3072-4EA02-0XA0

Motor Management

	Product no.
SIMOCODE ES V14 Basic	Download: 3ZS1322-4CE12-0YB5 DVD: 3ZS1322-4CC12-0YA5
SIMOCODE ES V14 Standard	Download: 3ZS1322-5CE12-0YB5 DVD: 3ZS1322-5CC12-0YA5
SIMOCODE ES V14 Premium	Download: 3ZS1322-6CE12-0YB5 DVD: 3ZS1322-6CC12-0YA5

Soft Starter

	Product no.
SIRIUS Soft Starter ES V14 Basic	Download: 3ZS1320-4CE10-0YB5 DVD: 3ZS1320-4CC10-0YA5
SIRIUS Soft Starter ES V14 Standard	Download: 3ZS1320-5CE10-0YB5 DVD: 3ZS1320-5CC10-0YA5
SIRIUS Soft Starter ES V14 Premium	Download: 3ZS1320-6CE10-0YB5 DVD: 3ZS1320-6CC10-0YA5

Working on a team

	Product no.
TIA Portal Multiuser Engineering V14	Download: 6ES7823-1AE04-0YA5 DVD: 6ES7823-1AA04-0YA5

High-level language integration

	Product no.
SIMATIC ODK 1500S V2.0	Download: 6ES7806-2CD02-0YG0 DVD: 6ES7806-2CD02-0YA0

Transparent operation with the TIA Portal

Transparent operation

	Product no.
WinCC WebUX Monitor with one or more clients	**Download: 6AV6362-2AB00-0AH0** **DVD: 6AV6362-2AB00-0BB0**
SIMATIC WinCC Sm@rtServer **for SIMATIC Basic Panels**	**Download: 6AV2107-0CR00-0BH0** **DVD: 6AV2107-0CR00-0BB0**
SIMATIC WinCC Sm@rtServer **for SIMATIC Comfort / Mobile Panels**	**Download: license-free** **DVD: license-free**
SIMATIC WinCC Sm@rtServer **for Runtime Advanced**	**Download: 6AV2107-0CA00-0BH0** **DVD: 6AV2107-0CA00-0BB0**

Energy Management

	Product no.
Engineering **SIMATIC Energy Suite V14 Engineering incl. 10 Energy Objects (2x5 EnO)**	**Download: 6AV2108-0AA04-0AH5** **DVD: 6AV2108-0AA04-0AA5**
Energy Suite Runtime	
SIMATIC Energy Suite S7-1500, from 5 Energy Objects up (1x5 EnO)	**Download: 6AV2108-0CF00-0BH0** **DVD: 6AV2108-0CF00-0BB0**

Communication

	Product no.
SIMATIC OPC UA S7-1500 small **[ET 200SP to S7-1513(F) + 1505S(F)]**	**Download: 6ES7823-0BE00-1BA0** **DVD: 6ES7823-0BA00-1BA0**
SIMATIC OPC UA S7-1500 medium **[S7-1515 / S7-1516(F) + 1507S(F)]**	**Download: 6ES7823-0BE00-1CA0** **DVD: 6ES7823-0BA00-1CA0**
SIMATIC OPC UA S7-1500 large **[S7-1517 / S7-1518(T) (F) (ODK)]**	**Download: 6ES7823-0BE00-1DA0** **DVD: 6ES7823-0BA00-1DA0**

Machine and plant diagnostics

	Product no.
Runtime **SIMATIC ProDiag S7-1500 for 250 supervisions**	**Download: 6ES7823-0AE00-1AA0** **DVD: 6ES7823-0AA00-1AA0**
SIMATIC ProDiag for SIMATIC Comfort / Mobile Panels	**Download: 6AV2107-0UP00-0BH0** **DVD: 6AV2107-0UP00-0BB0**
SIMATIC ProDiag for WinCC Runtime Advanced	**Download: 6AV2107-0UA00-0BH0** **DVD: 6AV2107-0UA00-0BB0**
SIMATIC ProDiag for WinCC Runtime Professional	**Download: 6AV2107-0UB00-0BH0** **DVD: 6AV2107-0UB00-0BB0**

More information at: siemens.com/energysuite
and Webux: siemens.com/wincc-webux

Software packages and options

	SIMATIC STEP 7 V14 / STEP 7 Safety	SIMATIC WinCC	SINAMICS Startdrive	SIMOTION SCOUT TIA	SIRIUS SIMOCODE
Scope of services	Software Controller – SIMATIC S7-1500 (F)	SCADA	S120 FW4.8 and later, Booksize	SIMOTION D	Lists and graphic parametrization; online functions via SIRIUS PtP, PB/PN
	Advanced Controller – SIMATIC S7-1500 and SIMATIC S7-300/400 (F)	Single PC workstation		SIMOTION P	Lists and graphic parametrization; online functions via SIRIUS PtP
	Distributed Controller – SIMATIC ET 200CPUs (F)	Comfort Panels and X77 and Mobile (without Micro)	V90 / G120 family incl. G110M, FW4.4 and later	SIMOTION C	List parametrization and online functions via SIRIUS PtP
	Basic Controller – SIMATIC S7-1200 (F)	Basic Panels and 2nd Generation		SINAMICS S120	List parametrization via PN/PB; parametrization during startup

(Scope of services column labels: Basic, Basic, Professional, Advanced | Basic, Comfort, Advanced, Professional | Professional, Startdrive | Professional | STEP 7 integrated, Basic, Standard, Premium)

Engineering options

- TIA Portal Multiuser Engineering
- TIA Portal Teamcenter Gateway
- TIA Portal Cloud Connector
- SIMATIC Energy Suite ES
- SIMATIC 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