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TIA Portal options
information and customer benefits

siemens.com/tia-portal

Agenda

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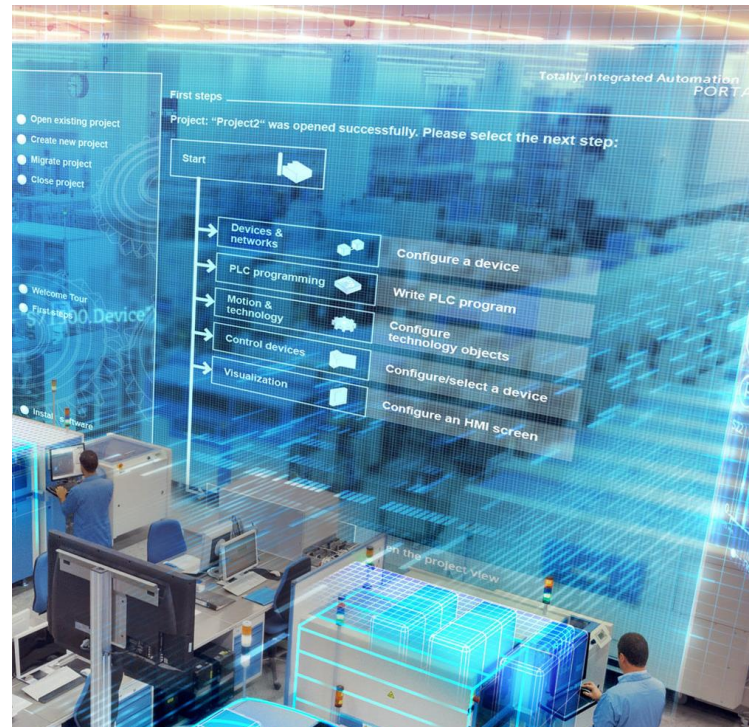*Ingenuity for life*

TIA Portal
Even more than an engineering framework

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Open, virtual and networked working
Digital workflow with TIA Portal

Reduce your time to market
Integrated engineering with TIA Portal

Increase your productivity!
Transparent operation with TIA Portal

Your gateway to automation in the Digital Enterprise

TIA Portal core functions to fulfill requirements of machine builders and system integrators as well as plant operators

TIA Portal Engineering and Runtime options

SIMATIC S7-PLCSIM Advanced	SIMATIC ODK 1500S	SIMATIC OPC UA
TIA Portal Cloud Connector	SIMATIC STEP 7 Safety	SIMATIC Energy Suite / S7-EE-Monitor
TIA Portal Teamcenter Gateway	SiVArc	SIMATIC ProDiag
SIMATIC Target 1500S for SIMULINK		WinCC/WebUX[1]
TIA Portal Multiuser Engineering		TIA User Management Component

Work open, virtual and networked!
Digital workflow with TIA Portal

Reduce your time to market!
Integrated engineering with TIA Portal

Increase your productivity!
Transparent operation with TIA Portal

1) Component of WinCC Runtime Professional

TIA Portal
Product overview with engineering and runtime options

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Totally Integrated Automation Portal

	SIMATIC **STEP 7**	SIMATIC **WinCC**	SINAMICS **Startdrive**	SIMOTION **SCOUT TIA**	SIRIUS **SIMOCODE**
Engineering-options	TIA Portal Multiuser Engineering				💿⬇
	TIA Portal Teamcenter Gateway				💿⬇
	TIA Portal Cloud Connector			💿⬇	
	TIA User Management Component			💿⬇	
	SIMATIC Energy Suite ES	💿⬇			
	SIMATIC S7-PLCSIM Advanced 💿⬇				
	SIMATIC STEP 7 Safety 💿⬇				
	SIMATIC ODK 1500S 💿⬇				
	SIMATIC Target 1500S for SIMULINK ⬇	SiVArc 💿⬇			
Runtime-options	SIMATIC ProDiag 💿⬇				
	SIMATIC Energy Suite RT / S7-EE-Monitor 💿⬇				
	SIMATIC OPC UA 💿⬇				
		WinCC/WebUX[1] 💿⬇			

1) Component of WinCC Runtime Professional

💿 DVD   ⬇ Download

Agenda

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1	Overview TIA Portal options
2	**Engineering options**
3	Runtime options

TIA Portal Multiuser Engineering
Coordinated work within a team

Information

- Server-oriented engineering in the team
  for PLC and HMI
- Device or function-based work sharing
- System-assisted synchronization of changes
- License type: Floating (Engineering) / UCL
- TRIAL concept: Local multiuser server (Download)
- Current version: V14 SP1

Documents

- Manual: STEP 7/WinCC V15 (section 17.3)
- Application: Multiuser engineering in the TIA Portal
- Automation task: TIA Portal Multiuser
- Product page: TIA Portal Multiuser

Use cases and scope of application

- Configuring of TIA Portal projects in the team (taking into account the network performance, access over VPN is possible)
- Versioning of changes in the project for traceability and transparency
- Who benefits? Machine and plant construction with at least 2 project engineers / programmers; teams with the requirement for more effective team work

Functional enhancements with TIA Portal V15

- Automatic marking of changed objects
- Working without a server connection (offline mode)
- More focus on server functionality
- Extended change management (increase in number of revisions, saving revisions such as project milestones, change history and user comments during check-in and on the server)

TIA Portal Multiuser Engineering
Questions and customer benefits

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What are the essential customer benefits?

- Reduction of the coordination effort during project planning in the team

- System-aided synchronization of changes including traceability

- Multiuser for HMI and PLC (as well as other components in the server context)

- User rights allocation (assignment of users to server projects with read/write rights)

- Traceability of changes across projects

- Full integration into TIA Portal interface

Which questions can be interesting or will be answered?

- Does the customer already use a central project management tool?

- How many colleagues of the customer work together on the automation project for a machine/plant?

- How are the changes, made by the various colleagues in the company of the customer, synchronized?

- How is it ensured that changes made on site are mirrored back to the standard of the customer?

- How does the customer centrally synchronize the changes over several projects?

TIA Portal Multiuser Engineering
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
TIA Portal Multiuser Engineering V15	6ES7823-1AE05-0YA5	6ES7823-1AA05-0YA5
Upgrade TIA Portal Multiuser Engineering V14 -> V15	6ES7823-1AE05-0YE5	6ES7823-1AA05-0YE5
SUS TIA Portal Multiuser Engineering	6ES7823-1AE00-0YL5	6ES7823-1AA00-0YL5

TIA Portal Teamcenter Gateway
Integration of automation into the central data management

Information

- Integration of TIA Portal into Teamcenter
- Storage and management of TIA Portal projects and libraries in Teamcenter
- License type: Floating (Engineering)
- TRIAL concept: 21 days (Download)
- Current version: V14 SP1

Documents

- Manual: TIA Portal Teamcenter Gateway
- Automation Task: PLM integration
- Application: PLM integration
- Product website: Teamcenter
- Product website: TIA Portal Teamcenter Gateway

Use cases and scope of application

- Integrating TIA Portal automation projects into central data management of Teamcenter
- Using Teamcenter versioning on TIA Portal project basis
- Interaction of TIA Portal users in PLM process of the company
- Who benefits? Existing Teamcenter customers who are also using TIA Portal, especially special-purpose machine manufacturing

Functional enhancements with TIA Portal V15

- Compatibility with Teamcenter V11.2 and V11.3
- Support of working in a team in parallel with TIA Portal Multiuser (planned with V15 SP1)

TIA Portal Teamcenter Gateway
Questions and customer benefits

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What are the essential customer benefits?

- Direct Teamcenter connection in the TIA Portal user interface

- Data consistency and data transparency thanks to central storage of data from all supplied machines, including TIA Portal projects and libraries

- Consistent workflows, for example, for changes and releases

- Improved cooperation of project team members at different locations

- Avoid time-consuming searches

- Reduction of errors thanks to consistent engineering data

Which questions can be interesting or will be answered?

- Where does the customer store the engineering data in the company?

- Do you waste time searching for engineering data?

- How are your colleagues in mechanical engineering, electrical engineering and automation working on one project as a team?

- How do you synchronize mechanical and electrical data as well as the automation project across the machine and plant life cycle?

- How do you implement change management? (for example, rewiring during commissioning of the plant, how do you ensure updating the circuit diagram after changes?)

- Which global TIA library was used for a specific project?

TIA Portal Teamcenter Gateway
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
TIA Portal Teamcenter Gateway V15	6ES7823-1EE05-0YA5	6ES7823-1EA05-0YA5
Upgrade TIA Portal Teamcenter Gateway V14 -> V15	6ES7823-1EE05-0YE5	6ES7823-1EA05-0YE5
SUS TIA Portal Teamcenter Gateway	6ES7823-1EE00-0YL5	6ES7823-1EA00-0YL5

TIA Portal Cloud Connector
TIA Portal engineering in the private cloud

Information

- Operating TIA Portal in a private cloud over remote desktop with access to SIMATIC hardware connected locally on the client
- Installation-free clients with central software maintenance
- License type: Floating license (Engineering)
- Trial concept: no
- Current version: V1.1 SP1

Documents

- Automation Task: Cloud based engineering
- Application: Working with Cloud Connector
- Manual: TIA Portal Cloud Connector
- Product page: TIA Portal Cloud Connector

Use cases and scope of application

- Central management of the engineering software in a private cloud
- Access to machines/plants beyond network boundaries
- Who benefits?
  - End customers with own maintenance/service personnel
  - OEM

Functional enhancements with TIA Portal V15

New functions with V1.1 SP1
- More flexible TIA Portal license handling through floating license
- Licenses stored on the client locally can be used

TIA Portal Cloud Connector
Questions and customer benefits

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What are the essential customer benefits?

- Reduces installation time and maintenance to a minimum
- Use of standard devices as engineering PC (low performance requirements)
- Integration of tablets in diagnostic scenarios with central engineering
- Access to various TIA Portal installation in virtual machines

Which questions can be interesting or will be answered?

- Is it time-consuming for the customer to manage different TIA Portal versions on his local PC?
- Does the customer use virtual machines to make use of various TIA Portal versions on the local PC?
- Does the customer use virtual machines to manage various TIA Portal versions on a server?
- How often does the customer work with different TIA Portal versions?
- Does the customer offer his end customers remote services?
- How many different TIA Portal licenses the customer has to manage in his company?

TIA Portal Cloud Connector
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
TIA Portal Cloud Connector V1.1 SP1	6ES7823-1CE00-0YA0	6ES7823-1CA00-0YA0

TIA User Management Component
Central User Management for UMAC

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Information

- UMAC: »User Management and Access Control«
- Built-in functionality in TIA Portal allows personalized access to TIA Portal projects
- Define project users, roles and assign them
- UMC: User Management Component (Option) manages users/groups outside TIA Portal projects
- License type: Rental license 365 days (Engineering)
- Trial concept: no (Download)
- Current version: V1

Documents

- Video: Industrial Security from Siemens
- Product website: Industrial Security
- Product website: User Management Component
- Topic page Plant Security (Online Support)

Use cases and scope of application

- Use cases:
  - OEM Integrator scenarios
  - Access control
- Who benefits?
  - Automotive
  - Plant manufacturer
  - Special engine builder

functional enhancements with TIA Portal V15

- New component with V15

TIA User Management Component
Questions and customer benefits

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What are the essential customer benefits?

Security:

- Personalized access instead of password
- Avoiding of unauthorized access

Efficiency: Central Management of

- User in one or several projects
- Roles with Rights of different products
- Assignment of user/groups to roles
- Replaces local product-related solutions

Which questions can be interesting or will be answered?

- How important is Security for your plant/machine?
- Do you offer Remote Services with access control?
- Should the access of user be traceable?
- Is it benefiting to manage access rights of user plant-wide?
- How time-consuming is the management of user in your plant/for your machine?

TIA User Management Component
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
TIA User Management Component V1 - 4000 Users	6ES7823-1UE10-0YA0	n/A

SIMATIC Energy Suite
Easy and integrated energy transparency

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Information

- Linking energy management with automation and introduces energy transparency to production
- Automatic generation of the plc program for energy acquisition
- License type: Engineering (Floating)
                 Runtime (per measuring point EnO)
- TRIAL concept: 21 days (Download)
- Current version: V15

Documents

- SIMATIC Energy Suite V15 manual
- Applications: SIMATIC Energy Suite
- Automation Task: SIMATIC Energy Suite
- Brochure: SIMATIC Energy Suite
- Product website: SIMATIC Energy Suite

Use cases and scope of application

- Easy entry into automation with Energy Suite
- Wide range of sensors that can be integrated automatically, such as SIMATIC DP/Energymeter, SENTRON, SIMOCODE, SINAMICS, SIRIUS
- Use at end customers, machine manufacturers, system integrators and energy-related industries, such as F&B, chemical, glass, steel, sintering technology, etc.
- Strengthen customer loyalty due to variety of products that can be used, such as Panel, SIMATIC DP, various Sensors and expansion options

Functional enhancements with TIA Portal V15

- No additional PowerTags in WinCC Professional for energy data visualization
- Additional integration of SENTRON PAC with MDD

SIMATIC Energy Suite
Questions and customer benefits

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What are the essential customer benefits?

- Time and cost savings through integration of energy efficiency in production
- Easy engineering thanks to automatic generation of the energy program
- No programming know-how is required
- Support of matching Siemens hardware (and matching components from third parties) for energy measurement
- Standardized data preparation and buffering for energy values
- Standard-compliant logging of energy curves

Which questions can be interesting or will be answered?

- Is the customer interested in energetic transparency of his production?
- Is a reduction of energy costs in production relevant for the customer?
- Is the customer interested in realizing an energy-related evaluation of his product costs by combining production and energy data?
- Is the customer already using Siemens components (e.g. SINAMICS …) that include energy data but that are not yet visualized in consolidated form?
- Does the customer wants an easy entry into energy management, with the option to grow to an enterprise-wide solution?

SIMATIC Energy Suite
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
SIMATIC Energy Suite V15 Engineering, incl. 10 Energy Objects (2x5 EnO)	6AV2108-0AA05-0AH5	6AV2108-0AA05-0AA5
Upgrade SIMATIC Energy Suite Engineering, V14 -> V15	6AV2108-3AA05-0AK5	6AV2108-3AA05-0AE5
SUS SIMATIC Energy Suite Engineering	6AV2108-0AA00-0AY0	6AV2108-0AA00-0AL0
SIMATIC Energy Suite S7-1500, 5 Energy Objects (1 x 5 EnO)	6AV2108-0CF00-0BH0	6AV2108-0CF00-0BB0
SIMATIC Energy Suite S7-1500, 10 Energy Objects (1 x 10 EnO)	6AV2108-0CH00-0BH0	6AV2108-0CH00-0BB0
SIMATIC Energy Suite S7-1500, 10 Energy Objects (2 x 5 EnO)	6AV2108-0DF00-0BH0	6AV2108-0DF00-0BB0
SIMATIC Energy Suite S7-1500, 50 Energy Objects (5 x 10 EnO)	6AV2108-0FH00-0BH0	6AV2108-0FH00-0BB0
SIMATIC Energy Suite S7-1500,100 Energy Objects (10 x 10 EnO)	6AV2108-0HH00-0BH0	6AV2108-0HH00-0BB0

SIMATIC S7-PLCSIM Advanced
Extensive simulation of functions of the SIMATIC S7-1500

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Information

- Virtual controller of the S7-1500
- Core element of virtual commissioning
- Supports S7-1500 firmware 1.8 and newer
- License type: Floating (Engineering)
- TRIAL concept: 21 days (Download)
- Current version: V2.0

Use cases and scope of application

- Flexible function simulation and program code validation including communication and web server
- Simulation of multiple controllers in interaction
- Virtual commissioning in combination with co-simulations (e.g. NX MCD via SIMIT)
- Who benefits? Mechanical and plant engineering with a strategic focus on digitization and/or focus on efficient function testing and software quality

Documents

- Application: S7-PLCSIM Advanced - Co-simulation via API
- Application: Automatic testing with S7-PLCSIM Advanced
- Application: Testing and simulation of HMI with PLCSIM
- Application: VC by basic behavior modeling
- Product page: Virtual commissioning with TIA Portal
- Product page: S7-PLCSIM Advanced

Functional enhancements with TIA Portal V15

New functions with V2.0
- direct coupling of S7-PLCSIM Advanced to NX MCD 12 and newer
- Support of alarms and events through acyclic communication
- Access to inputs/outputs via API also with process image partitions (e.g. for motion control)
- Change of licensing concept with support of up to 2 PLCSIM Advanced instances with one single license

SIMATIC S7-PLCSIM Advanced
Questions and customer benefits

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What are the essential customer benefits?

- Test with full-scale S7-1500 portfolio from CPU 1510SP to CPU1517TF and CPU1518F

- Function test in the office network (distributed architecture)

- Increase quality of the user program through early detection of errors

- Early-stage operator training without real hardware in combination with the simulation of SIMATIC HMI

- (Partially) automatic function test for software blocks

- Validation of automation in the context of machine/plant through connection of the PL tools such as NX MCD or TECNOMATIX Process Simulate

- Shorter development times due to parallel working

- Reduced risk for real commissioning

Which questions can be interesting or will be answered?

- How do colleagues in automation test their control program for functionality?

- Does the customer have S7-1500 test hardware for all machine configurations?

- Has the OEM already dealt with topics such as code quality or programming style guides for end customers?

- Does the OEM already use digital models for acquisition at the end customer (operator training, 3D model of an example machine)?

- Which CAD systems does the OEM work with and is there an interest in scenarios for virtual commissioning?

- How important is it for the OEM to test the automation program in the context of machines prior to commissioning?

S7-PLCSIM Advanced
Order numbers

SIEMENS
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Product	Order numbers (Download)	Order numbers (Package)
SIMATIC S7-PLCSIM Advanced V2.0	6ES7823-1FE01-0YA5	6ES7823-1FA01-0YA5
Upgrade SIMATIC S7-PLCSIM Advanced V1.0 -> V2.0	6ES7823-1FE01-0YE5	6ES7823-1FA01-0YE5
SUS SIMATIC S7-PLCSIM Advanced	6ES7823-1FE00-0YL5	6ES7823-1FA00-0YL5

SIMATIC Visualization Architect (SiVArc)
Automatic generation of visualizations

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Information

- Automatic generation of visualization solutions
- Basics: Standardization (HMI & PLC)
- Scalable use for HMI Panels up to SCADA RT
- License type: Floating (Engineering)
- TRIAL concept: 21 days (Download)
- Current version: V15

Documents

- Manual: SiVArc
- Getting Started: SiVArc
- Automation task: SiVArc
- Product page: SiVArc

Use cases and scope of application

- Automatic, rule-based generation
  of standard visualization elements
- Based on HMI libraries (e.g. valves, motors, conveyor belts) including
  their integration in the process
- Who benefits? Customers with modular plants and recurring visualization
  solutions who also have to respond rapidly to changes in
  their PLC program

Functional enhancements with TIA Portal V15

- Alarm generation including classes and alarm groups
- Trend view control with interconnection of the trend lines
- Interconnection / generation of template screens

SIMATIC Visualization Architect (SiVArc)
Questions and customer benefits

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What are the essential customer benefits?

- Creating consistent and uniform visualization solutions

- Generating instead of programming in the SIMATIC HMI environment, no knowledge of high-level programming languages necessary

- Error avoidance through automatic interconnection of visualization objects with associated PLC blocks

- Essential time saving compared to manual picture configuration

- Automatic adjustment of the visualization for changes in the control program

Which questions can be interesting or will be answered?

- How important is the standardization of the automation solution for the customer?

- Does the customer have machines and plants with several distributed control locations?

- How important is standardized visualization for the customer?

- How much configuration time does the customer set aside for visualization?

- To what extent is the control program already standardized and what does visualization look like?

- Does the customer use his own-developed visualization instead of a standardized product like SIMATIC WinCC?

- How dynamic are the requirements of the customer for visualization and how does he react on it?

SIMATIC Visualization Architect (SiVArc)
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
SIMATIC Visualization Architect V15	6AV2107-0PX05-0AH5	6AV2107-0PX05-0AA5
SIMATIC Visualization Architect V15 Rental	6AV2107-0PX05-0AH6	6AV2107-0PX05-0AA6
Upgrade SIMATIC Visualization Architect, V14 -> V15	6AV2107-3PX05-0AH5	6AV2107-3PX05-0AA5
SUS SIMATIC Visualization Architect	6AV2107-0PX00-0AY0	6AV2107-0PX00-0AL0

SIMATIC ODK 1500S
Development of high-level language functions for SIMATIC controller

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Information

- Open Development Kit for combination of PLC programming with programming of complex high-level languages such as C++
- Easy integration into the SIMATIC controller
- License type: Floating license (Engineering)
- TRIAL concept: 21 days (Download)
- Current version: V2.5

Documents

- Manual: ODK 1500S
- Manual: Supplement for ODK1500S
- Application: ODK 1500S examples
- Product page: ODK 1500S
- Industry Mall: Ready-to-use ODK applications

Use cases and scope of application

- Integration of code from model-based development tools
- Creation of control functions with C++ high-level programming language
- Use of Windows functions and software (e.g. file system, databases) for the control task of software controllers
- Ready-to-use standard applications (e.g. SQL driver, file server, etc.)
- Who benefits? Mechanical engineering with high-level programming language integration, model-based development as well as end customers with flexible connection to IT-related services

Functional enhancements with TIA Portal V15

New functions with V2.5
- C# and Visual Basic for the development of functions under Windows
- Optimized data transfer to Windows applications

SIMATIC ODK 1500S
Questions and customer benefits

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What are the essential customer benefits?

- Reuse of existing C/C++ control code with a SIMATIC CPU
- Multi-vendor re-use of control software implemented in C++
- Use of model-based development environments to generate control code (example: SIMATIC Target 1500S)
- Efficient integration of Windows and Windows functions in the control task

Which questions can be interesting or will be answered?

- Are you using embedded systems in addition to the S7 controller for special applications and would you like to integrate their functionality in the controller without having to reprogram everything?
- Are you using model-based development tools and do you want to use the C/C++ code generated there exactly as is in a SIMATIC controller?
- Do you want to efficiently integrate Windows or Windows software in your control task, for example, through easy access to SQL databases, use of the Windows file system or access to PC-specific I/O such as printers or barcode scanners?

SIMATIC ODK 1500S
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
SIMATIC ODK 1500S V2.5	6ES7806-2CD03-0YG0	6ES7806-2CD03-0YA0
Target 1500S + ODK 1500S Bundle	6ES7823-1BE11-0YA0	n/A

SIMATIC Target 1500S
Model-based software development for SIMATIC CPUs

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Information

- Model-based software development for SIMATIC thanks to integration into the MATLAB / Simulink tool landscape
- Automatic generation of executable SIMATIC code
- License type: Single license (Engineering), V15 floating
- TRIAL concept: 21 days (Download)
- Current version: V2.0
- SSN User group "Simulink @ SIMATIC"

Use cases and scope of application

- Users who are already using Simulink and want to generate code for a standard controller (e.g. when designing complex control algorithms)
- Current application areas: Motor test stands (Siemens in-house), multi-platen presses, foundries
- Who benefits? OEM and end customers who want to use MATLAB Simulink models based on an S7-1500

Documents

- Manual: SIMATIC Target 1500S
- Application: Calling Simulink® models
- Automation task: SIMATIC Target 1500S
- Product page: SIMATIC Target 1500S
- MathWorks Connections Program

Functional enhancements with TIA Portal V15

New function with V2.0
- Direct import of generated blocks in TIA Portal
- Introduction of an ALM floating license (allows for upgrade licenses and trial licenses in the future)
- Fine-tuning (based on user feedback, e.g. for external mode, extended debug options)

SIMATIC Target 1500S
Questions and customer benefits

What are the essential customer benefits?

- Permits model-based software development for SIMATIC CPUs

- Easy to continue using models developed in Simulink

- No high-level programming language expertise or ODK know-how required

- Fewer prototypes / hardware thanks to simulation of the control behavior in Simulink

- Support of Simulink debug options, such as Simulink External Mode

- Different functions unified in one hardware (PLC application + safety + control)

- Scalable product range with ODK capability (Software Controller, Open Controller, CPU 1518 ODK) including fail-safe versions

Which questions can be interesting or will be answered?

- Are you already using Simulink for model-based software development (e.g. to design complex control algorithms)?

- Would you like to run the code generated from Simulink models on a SIMATIC controller (in real-time) instead of a PC system?

- Are you currently using separate hardware platforms (e.g. IPCs) to implement model-based development mechanisms?

- How do you transfer the model developed in Matlab Simulink to productive operation of the plant?

- Did you know that integration of the fail-safe program in controllers with ODK capability is also possible?

SIMATIC Target 1500S
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
SIMATIC Target 1500S™ for Simulink® V2.0	6ES7823-1BE01-0YA5	n/A
Upgrade SIMATIC Target 1500S™ for Simulink® V1.0 -> V2.0	6ES7823-1BE01-0YE5	n/A
Target 1500S + ODK 1500S Bundle	6ES7823-1BE11-0YA0	n/A

Agenda

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1	Overview TIA Portal options
2	Engineering options
3	**Runtime options**

SIMATIC ProDiag
Standardized machine and plant diagnostics

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Information

- Efficient diagnostics of faults without engineering
- Automatic generation of monitoring
- Clear information about the error condition, cause and remedy in clear text messages and code viewer
- 3-language messages directly in the PLC
- License type: Paper license (Floating)
- TRIAL concept: 25 supervisions free of charge

Use cases and scope of application

- Diagnostics of the machine sequence at the HMI
- Simplified configuration of application messages
- Who benefits? End customers requiring diagnostics without an engineering PC on site, machine and plant engineering with focus on simplified generation of diagnostic mechanisms and messages

Documents

- Manual: STEP 7/WinCC V15 (section 12.23)
- Application: Machine/plant diagnostics with ProDiag
- Automation task: SIMATIC ProDiag
- Product page: SIMATIC ProDiag

Functional enhancements with TIA Portal V15

- First-fault operand for S7-Graph and ProDiag alarms
- Quantity increase up to 1000 alarms per unit
- Monitoring for failsafe I/O DBs
- Multilingual capability for step names in S7 Graph
- S7 Graph Control: Display previous and next step

SIMATIC ProDiag
Questions and customer benefits

What are the essential customer benefits?

- All necessary information and texts are already available on the S7-1500

- Monitoring concept with ProDiag does not interact with the control program of the user

- Adaptations in the control program do not require compiling/loading the HMI

- Alarms are time-stamped directly in PLC

- Easy acknowledgment with distributed operating structures

- Easiest embedding of accompanying process values

- Messages can be imported Excel-based directly from planning

- Module of a control program also contains associated module messages (structure)

- Statistical evaluation of errors in the control program

Which questions can be interesting or will be answered?

- Is the OEM interested in extending the diagnostic options directly on the HMI device?

- Would the OEM like to diagnose sequencers directly on the HMI device without the need of a computer?

- How does the customer integrate process values in messages?

- Does the OEM have a lot of work implementing the acknowledgment concepts for his plant?

- Does the customer have any problems with his machines/plants with regard to the suppression of signal surges?

- How much work does the customer schedule to create application diagnostics and test them during commissioning?

- Is there potential for optimization of diagnostic functions?

SIMATIC ProDiag
Order numbers

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Product	Order numbers (Download)	Order numbers (Package)
SIMATIC ProDiag S7-1500 for 250 Supervisions	6ES7823-0AE00-1AA0	6ES7823-0AA00-1AA0
SIMATIC ProDiag S7-1500 for Unlimited Supervisions	6ES7823-0AE00-1DA0	6ES7823-0AA00-1DA0
SIMATIC ProDiag for SIMATIC Comfort/Mobile Panels	6AV2107-0UP00-0BH0	6AV2107-0UP00-0BB0
SIMATIC ProDiag for WinCC Runtime Advanced	6AV2107-0UA00-0BH0	6AV2107-0UA00-0BB0
SIMATIC ProDiag for WinCC Runtime Professional	6AV2107-0UB00-0BH0	6AV2107-0UB00-0BB0

SIMATIC Energy Suite
Easy and integrated energy transparency

SIEMENS
Ingenuity for life

Information

- Linking energy management with automation and introduces energy transparency to production
- Automatic generation of the plc program for energy acquisition
- License type: Engineering (Floating)
  Runtime (per measuring point EnO)
- TRIAL concept: 21 days (Download)
- Current version: V15

Documents

- SIMATIC Energy Suite V15 manual
- Applications: SIMATIC Energy Suite
- Automation Task: SIMATIC Energy Suite
- Brochure: SIMATIC Energy Suite
- Product website: SIMATIC Energy Suite

Use cases and scope of application

- Easy entry into automation with Energy Suite
- Wide range of sensors that can be integrated automatically, such as SIMATIC DP/Energymeter, SENTRON, SIMOCODE, SINAMICS, SIRIUS
- Use at end customers, machine manufacturers, system integrators and energy-related industries, such as F&B, chemical, glass, steel, sintering technology, etc.
- Strengthen customer loyalty due to variety of products that can be used, such as Panel, SIMATIC DP, various Sensors and expansion options

Functional enhancements with TIA Portal V15

- No additional PowerTags in WinCC Professional for energy data visualization
- Additional integration of SENTRON PAC with MDD

SIMATIC Energy Suite
Questions and customer benefits

What are the essential customer benefits?

- Time and cost savings through integration of energy efficiency in production
- Easy engineering thanks to automatic generation of the energy program
- No programming know-how is required
- Support of matching Siemens hardware (and matching components from third parties) for energy measurement
- Standardized data preparation and buffering for energy values
- Standard-compliant logging of energy curves

Which questions can be interesting or will be answered?

- Is the customer interested in energetic transparency of his production?
- Is a reduction of energy costs in production relevant for the customer?
- Is the customer interested in realizing an energy-related evaluation of his product costs by combining production and energy data?
- Is the customer already using Siemens components (e.g. SINAMICS …) that include energy data but that are not yet visualized in consolidated form?
- Does the customer wants an easy entry into energy management, with the option to grow to an enterprise-wide solution?

SIMATIC Energy Suite
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
SIMATIC Energy Suite V15 Engineering, incl. 10 Energy Objects (2x5 EnO)	6AV2108-0AA05-0AH5	6AV2108-0AA05-0AA5
Upgrade SIMATIC Energy Suite Engineering, V14 -> V15	6AV2108-3AA05-0AK5	6AV2108-3AA05-0AE5
SUS SIMATIC Energy Suite Engineering	6AV2108-0AA00-0AY0	6AV2108-0AA00-0AL0
SIMATIC Energy Suite S7-1500, 5 Energy Objects (1 x 5 EnO)	6AV2108-0CF00-0BH0	6AV2108-0CF00-0BB0
SIMATIC Energy Suite S7-1500, 10 Energy Objects (1 x 10 EnO)	6AV2108-0CH00-0BH0	6AV2108-0CH00-0BB0
SIMATIC Energy Suite S7-1500, 10 Energy Objects (2 x 5 EnO)	6AV2108-0DF00-0BH0	6AV2108-0DF00-0BB0
SIMATIC Energy Suite S7-1500, 50 Energy Objects (5 x 10 EnO)	6AV2108-0FH00-0BH0	6AV2108-0FH00-0BB0
SIMATIC Energy Suite S7-1500,100 Energy Objects (10 x 10 EnO)	6AV2108-0HH00-0BH0	6AV2108-0HH00-0BB0

S7 Energy Efficiency-Monitor for machines
Status-based energy analytsis for machines

SIEMENS
Ingenuity for life

Information

- Rating the energy efficiency of machines and equipment
- Standard function blocks for S7-1200 / S7-1500
- EE acceptance report, visualization on HMI panel
- Long-term evaluation and archiving with EnMPRO
- License Type: Paper License (FB related)
- Current version: V15

Documents

- Applications: S7 Energy Efficiency-Monitor
- Brochure : S7 Energy Efficiency-Monitor

Use cases and scope of application

- Generating an energy acceptance report according to VDMA 34179
- Monitoring efficiency changes (e.g. wear and tear, leaks, ...)
- Displaying the value-added / non-value added energy
- Calculation of the energetic footprint per product
- Optimization of machine operation
- Who benefits? Serial machine manufacturers / machine operators - production machines with changing operating modes (off, standby, on, ...)

Functional enhancements with TIA Portal V15

- New instruction with V15

S7 Energy Efficiency-Monitor for machines
Questions and customer benefits

SIEMENS
Ingenuity for life

What are the essential customer benefits?

- Production-related energy transparency, having the overall status of the machine in view

- Easy integration into existing S7 project (S7 instruction)

- Vendor-independent - according to measuring specification VDMA 34179

- No additional installation necessary

- Machine builders can make their machine "Ready for Energy Management", the licencing can be done by the customer

Which questions can be interesting or will be answered?

- Has the OEM already been contacted by customers to see if their machine provides an energy footprint?

- Have customers of machine builders already demanded a standardized energy acceptance report?

- Is the customer aware of the amount of non-value added energy in relation to "standby"?

- Does the customer have an overview of the energy input of the different sorts of energy per machine?

- Can the customer identify a change in machine efficiency (based on ISO 50006) and prove it during the machine life cycle?

S7 Energieeffizienz-Monitor für Maschinen
Order numbers

SIEMENS
Ingenuity for life

Product	Order numbers (Download)	Order numbers (Package)
S7 EE-Monitor for Machines S7-1500/1200	6AV2108-1CF00-0BH0	6AV2108-1CF00-0BB0

SIMATIC OPC UA
Maximum connectivity through open communication standards

SIEMENS
Ingenuity for life

Information

- Symbolic access from any device to S7-1500 data
- S7-1500 functions as OPC UA data server
- Integrated security during access to the S7-1500
- Available for all S7-1500, S7-1500 Software Controllers as well as PLCSIM Advanced
- License type: Floating

Use cases and scope of application

- Integration of the machine into the end customer plant
- Integration of various aggregates within a machine
- Vertical coupling of the S7-1500 to (third-party) visualization and MES
- Secure access to PLC data for authenticated partners
- Who benefits? Machine manufacturing and plant engineering as well as end customers with their own control systems, system integrators

Documents

- Manual: STEP 7/WinCC V15 (section 11.1.4.1.14)
- Application: OPC UA .NET client
- Application: SIMATIC Modelling Editor (SiOME)
- Automation task: In 10 min. or less
- Brochure: SIMATIC OPC UA
- Product page: SIMATIC OPC UA

Functional enhancements with TIA Portal V15

- Self-defined OPC UA server methods for the state-of-the-art communication between machines/devices and to the IT level
- Freely definable OPC UA server address areas to meet specific standards (Companion Specifications) such as OMAC PackML or Weihenstephan
- SIMATIC OPC UA Modelling Editor (SiOME) for easy configuration of communication free of charge

SIMATIC OPC UA
Questions and customer benefits

What are the essential customer benefits?

- Time saving during machine integration in plants
- Multi-vendor, standardized communication
- Full symbolic access to S7-1500 data
- High-performance access to large amounts of data
- Error-free access through type validation during access
- Security Integrated through state-of-the-art visualization and signature
- Authentication through certificates and/or passwords

Which questions can be interesting or will be answered?

- How is data exchanged between the PLC and potential communication partners (HMI, PLC, IT level, etc.)?
- Would you like to reduce the time and effort required for integration of your machines in plants?
- Would you like to prevent errors during communication as best you can?
- How important is standardization of communication for you?
- Do you test communication already during the design phase using a virtual model?
- How is the PLC protected against data manipulation from unauthorized clients?

SIMATIC OPC UA
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
SIMATIC OPC UA S7-1500 small (ET 200SP to CPU-1513(F))	6ES7823-0BE00-1BA0	6ES7823-0BA00-1BA0
SIMATIC OPC UA S7-1500 medium (CPU-1515 / CPU-1516 (F))	6ES7823-0BE00-1CA0	6ES7823-0BA00-1CA0
SIMATIC OPC UA S7-1500 large (CPU-1517 / CPU-1518 (F))	6ES7823-0BE00-1DA0	6ES7823-0BA00-1DA0

WinCC/WebUX (Option of WinCC RT Professional)
Operation and monitoring to go – efficient, mobile and secure

SIEMENS
Ingenuity for life

Information

- 24/7 remote access to targeted information
- Maintenance free – "Zero Client" installation
- Device and browser independent HTML5-based)
- Secure communication (SSL, User Management)
- Option for WinCC RT Professional (& WinCC V7)
- License type: Monitoring / Operate
- Free start: 1 monitoring Client per Professional RT

Documents

- Live Demo: SCADA Demo Access (Web Options)
- Video (youtube): Link
- Product page: SIMATIC WinCC RT Professional WinCC/WebUX
- Manual: WinCC RT Professional Options

Use cases and scope of application

- **Management**: direct access to important production characteristics
- **Operations control:** Production information such as messages, trends and characteristics at a glance
- **Maintenance:** Time and cost savings through online access
- to error messages; secure remote operation (message
- acknowledgement, target value specification, etc.)
- **Display board**: Production characteristics for the staff (View-Only)

Functional enhancements V15

- Support of static SVG graphics (Scalable Vector Graphic)
- Scalable pictures with consistent quality

WinCC/WebUX (Option of WinCC RT Professional)
Questions and customer benefits

What are the essential customer **benefits?**

- Flexible remote access for any kind of device / browser

- Maintenance free - Zero-client installation

- User specific information due to individual settings

- Monitoring concept via "View only" access

- Operation concept enables remote control

- Use well-known WinCC engineering or existing screens (no additional know-how for web-programming)

- Remote access for many users (license counts simultaneous access only)

- Number of clients can be easily extended

- Consistent information and user management (for local and remote HMI)

Which questions can be interesting or will be answered?

- Does your customer need a flexible remote access to targeted plant information, e.g. via mobile phone

- Do different persons in the company need different facts, e.g. KPIs, Alarm messages, …)

- Is the end customer / OEM / maintenance staff interested in flexible remote access options using different devices (PCs, tablet, mobile phone) ?

- Does your customer try to avoid unnecessary ways ?

- Is the customer using info screens to provide information for the staff ?

- Is your OEM or customer responsible for machines / plants at different locations

SIMATIC WinCC RT Professional
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
WinCC RT Professional 128	6AV2105-0BA05-0AH0	6AV2105-0BA05-0AA0
WinCC RT Professional 512	6AV2105-0DA05-0AH0	6AV2105-0DA05-0AA0
WinCC RT Professional 2018	6AV2105-0FA05-0AH0	6AV2105-0FA05-0AA0
WinCC RT Professional 4096	6AV2105-0HA05-0AH0	6AV2105-0HA05-0AA0
WinCC RT Professional 8192	6AV2105-0KA05-0AH0	6AV2105-0KA05-0AA0
WinCC RT Professional 65536	6AV2105-0MA05-0AH0	6AV2105-0MA05-0AA0
WinCC RT Professional 102400	6AV2105-0PA05-0AH0	6AV2105-0PA05-0AA0
WinCC RT Professional 153600	6AV2105-0RA05-0AH0	6AV2105-0RA05-0AA0
WinCC RT Professional 262144	6AV2105-0TA05-0AH0	6AV2105-0TA05-0AA0
WinCC RT Professional Client	6AV2107-0DB05-0AH0	6AV2107-0DB05-0AA0

SIMATIC WinCC/WebUX
Order numbers

Product	Order numbers (Download)	Order numbers (Package)
WinCC WebUX Monitor 1 Client	6AV6362-2AB00-0AH0	6AV6362-2AB00-0BB0
WinCC WebUX Monitor 3 Clients	6AV6362-2AD00-0AH0	6AV6362-2AD00-0BB0
WinCC WebUX Monitor 10 Clients	6AV6362-2AF00-0AH0	6AV6362-2AF00-0BB0
WinCC WebUX Monitor 30 Clients	6AV6362-2AJ00-0AH0	6AV6362-2AJ00-0BB0
WinCC WebUX Monitor 100 Clients	6AV6362-2AM00-0AH0	6AV6362-2AM00-0BB0
WinCC WebUX Operate 1 Client	6AV6362-2BB00-0AH0	6AV6362-2BB00-0BB0
WinCC WebUX Operate 3 Clients	6AV6362-2BD00-0AH0	6AV6362-2BD00-0BB0
WinCC WebUX Operate 10 Clients	6AV6362-2BF00-0AH0	6AV6362-2BF00-0BB0
WinCC WebUX Operate 30 Clients	6AV6362-2BJ00-0AH0	6AV6362-2BJ00-0BB0
WinCC WebUX Operate 100 Clients	6AV6362-2BM00-0AH0	6AV6362-2BM00-0BB0

TIA Portal options

TIA Portal Market Launch Team

www.siemens.com/tia-portal