Overview

- Integrated family of engineering tools for configuring SIMATIC HMI operator panels, as well as for the PC-based visualization systems WinCC Runtime Advanced and WinCC Runtime Professional.
- WinCC (TIA Portal) is based on the new central engineering framework Totally Integrated Automation Portal (TIA Portal), which offers the user a uniform, efficient and intuitive solution to all automation tasks.
- WinCC (TIA Portal) also offers uniform engineering from the Basic Panel through to the SCADA application.
- Together with the STEP 7 (TIA Portal) products, WinCC (TIA Portal) forms the optimum solution for integrated, efficient engineering.

Current version:

- SIMATIC WinCC Basic V13
- SIMATIC WinCC Comfort V13
- SIMATIC WinCC Advanced V13
- SIMATIC WinCC Professional V13

Benefits

- The integrated configuration software reduces training, maintenance and service overhead and protects the customer's investments.
- Minimized engineering overhead and reduction of lifecycle costs thanks to Totally Integrated Automation (TIA)
- Minimized configuration overhead due to reuse of scalable and dynamizable objects
- Intelligent tools for efficient and simple configuration:
  - Wizard for defining the basic structure of the HMI project
  - Table-based editors simplify the generation and processing of similar types of object, e.g. for tags, texts, or alarms.
  - Complex configuration tasks such as the definition of paths of motion or the creation of the fundamental operator prompting are simplified by means of graphical configuration.
- Comprehensive support of multi-language configurations for worldwide use
  - Selectable views for entering configuration data in several languages
  - System and user-specific text lexicons
  - Export/import of language-dependent texts
- Investment protection due to
  - Import of the configuration from WinCC flexible 2008 SP2 and 2008 SP3
  - Transfer of the configuration from WinCC V7.0 SP3

Application

SIMATIC WinCC in the editions Basic, Comfort, Advanced and Professional are innovative engineering tools for configuring SIMATIC HMI operator panels, as well as for the PC-based visualization systems WinCC Runtime Advanced and WinCC Runtime Professional.

Depending on the selected product, various target systems can be configured:

WinCC Basic

- Basic Panels (1st Generation): KP300 Basic, KTP400 Basic, KTP600 Basic, KTP1000 Basic, TP1500 Basic
- Basic Panels (2nd Generation): KTP400 Basic, KTP700 Basic, KTP900 Basic, KTP1200 Basic

WinCC Comfort

As WinCC Basic, plus:

- Comfort Panels
- Mobile Panels: Mobile Panel 177, Mobile Panel 277
- Panels of the 70 series: OP 73, OP 77A, OP 77B
- Panels of the 170 series: TP 177A, TP 177B, OP 177B
- Panels of the 270 series: TP 277, OP 277
- Multi Panels: MP 177, MP 277, MP 377

WinCC Advanced

As WinCC Comfort, plus:

- SIMATIC PCs with WinCC Runtime Advanced:
  - SIMATIC Rack PC: Rack PC 547B, IPC547C, IPC547D, IPC547E, Rack PC 647B, IPC647C, IPC647D, Rack PC 847B, IPC847C, IPC847D
  - SIMATIC Box PC: IPC227D, Box PC 427B, IPC427C, IPC427D, Box PC 627B, IPC627C, IPC627D, Box PC 827B, IPC827C
  - SIMATIC Panel PC: IPC277D, Panel PC 477B, IPC477C, IPC477D, Panel PC 577B, IPC577C, Panel PC 677B, IPC677C, IPC677D
  - SIMATIC modular Embedded Controller: EC31
  - Industrial Flat Panel (Multi Touch)
- Standard PC with WinCC Runtime Advanced
- SINUMERIK PC: PCU 50.3, PCU 50.5

WinCC Professional

As WinCC Advanced, plus:

- SIMATIC PCs with WinCC Runtime Professional:
  - SIMATIC Rack PC: Rack PC 547B, IPC547C, IPC547D, IPC547E, Rack PC 647B, IPC647C, Rack PC 847B, IPC847C, IPC647D, IPC847D
  - SIMATIC Box PC: IPC427C, IPC427D, Box PC 627B, IPC627C, IPC827C, IPC627D
  - SIMATIC Panel PC: IPC477C, IPC477D, Panel PC 577B, IPC577C, Panel PC 677B, IPC677C, IPC677D
  - Industrial Flat Panel (Multi Touch)
- Standard PC with WinCC Runtime Professional

Design

The functionalities of the engineering tools of the SIMATIC WinCC family are based on each other. The available editors are largely determined by the respective configurable target systems and their function. A more comprehensive engineering tool such as WinCC Advanced can always be used to configure lower-level target devices as well (e.g. Basic Panels)

A Powerpack can be used to upgrade from a smaller edition to a larger one. This does not apply to WinCC Basic.

The functionality of WinCC engineering tools already contains the configuration support of the available Runtime options for SIMATIC Panels, WinCC Runtime Advanced or WinCC Runtime Professional, irrespective of the purchased RT licenses. A separate license is required for the target system when using the configured Runtime options.

Function

Integration into automation systems

Integration into the SIMATIC Totally Integrated Automation Portal (TIA Portal)

- Shared data management and uniform symbols via the controller and HMI
- Optimum interaction between the controller and HMI in a working environment
- System diagnostics as an integral component
- Shared use of communication settings and process point definitions
- Simple dragging and dropping of tags from STEP 7 to an HMI device, e.g. onto a screen
- Excellent support for the new SIMATIC S7-1500 controller
  - With symbolic addressing
  - Access to the new memory-optimized data blocks
  - New alarm and diagnostics concept

Configuration interface

- Intuitive user interfaces with maximum degree of user friendliness
- Comprehensive and fast access to editors and project data
- Adaptive user interface of engineering tools depending on configured target system
- User-definable user interface settings, e.g. layout, toolbars
- Integrated mass data operations for efficient configuration

Project handling

- Device-independent configuration data can be used on a variety of target systems without the need for conversion. The interface adapts itself to the functional possibilities of the target device.
- Cross-device utilization of common configuration data (e.g. alarm classes, text library) in multi-device projects
- Wizard-assisted definition of basic structure of HMI projects (e.g. display layout, operator prompting)

Screen editor with comprehensive options for efficient and fast screen configuration

- Generation of interconnected screen objects via Drag&Drop, e.g. tags for the creation of input/output fields with process interfacing or buttons with screen selection function
- Definition of screen templates and functions (comparable with the Slide Master in MS PowerPoint)
- User-friendly editor for the creation of faceplates with defined external interface from screen objects
- Graphics-based configuration of motion paths
- Layer technology with up to 32 layers
- Tools for the Align, Rotate and Mirror functions

Import/export

- Of tags, links, text lists, and alarms

Tabular editors

- Quick and easy generation and modification of configuration objects of the same type, e.g. tags, texts or messages, in tabular editors
- Intelligent default settings depending on previously configured data, e.g. automatic incrementing of addresses when generating consecutive tags
- Simple access to the properties of an object without superfluous user intervention
- Simultaneous modification of common object properties

Object-based data management with user-friendly search and edit options

- Configuration of alarms and logs directly on the HMI tag, no switching between different editors
- Cross-reference list with direct access to all objects, e.g. for editing or selection
- Search for objects in entire project
- Text search and replace functions

Project documentation

- Selective project documentation, the following contents can be printed:
  - An entire project
  - One or more project-associated devices
  - Contents of an editor
  - Libraries

Libraries for predefined/user-defined configuration objects

- Storage of all configuration objects in the library, e.g. blocks and even entire screens or tags
- Faceplates can be constructed from simple screen objects on a customer-specific or project-specific basis. Changes to these faceplates can be made centrally (block definition).
- A large number of scalable and dynamizable screen objects is included in the scope of delivery
- Size-scalable graphics for industrial applications are included in the scope of delivery
- Preview function for library objects

Function (continued)

Language support

- Multilingual project creation (max. 32 languages) in editors thanks to selectable views
- Central management of language-specific texts and graphics in libraries
- Edit, export and import of texts for translation
- Language-specific graphics

Visual Basic and C-Script Support

- IntelliSense function for fast programming of access to runtime objects
- Simple creation of control sequences in script code
- Visual Basic Script debugging in simulator and WinCC Runtime Advanced and WinCC Runtime Professional

Test and commissioning support

- Simulation of HMI projects on engineering PC
- Marking of incomplete or incorrect configuration directly in the respective editor
- Jump to error cause based on alarm messages in the Compiler

Migration of existing HMI projects

- Data transfer in projects from WinCC flexible
- Data transfer in projects from WinCC

System prerequisites

	WinCC engineering software
Processor type (recommended)	Core i5; 3.3 GHz or comparable
RAM (recommended)	8 GB
Free hard disk space	2 GB on system drive "C:"
Operating systems	32-bit operating systems • Windows 7 Home Premium SP1 (only WinCC Basic) • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 64-bit operating systems • Windows 7 Home Premium SP1 (only WinCC Basic) • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 • Windows 8.1 (only WinCC Basic) • Windows 8.1 Professional • Windows 8.1 Enterprise • Windows Server 2008 R2 StdE SP1 (not WinCC Basic) • Windows Server 2012 R2 StdE
Screen resolution	1920 x 1080 recommended
Optical drive	DVD-ROM

Note:

Opening several instances of WinCC on your engineering PC at the same time may result in more demanding hardware requirements.

In addition to WinCC, Windows also requires space on the hard disk; e.g. free disk space should be available for the swap file.

The following formula has proven itself in the past:
Size of swap file = 3 x size of RAM.

For further information, refer to your Windows documentation.

Ordering data	Article No.
PowerPacks	
SIMATIC WinCC V13 Engineering Powerpacks (without version change)	
Floating license, license key only on USB stick	
• SIMATIC WinCC Basic to SIMATIC WinCC Comfort [2]	**6AV2101-2AA03-0AC5**
• SIMATIC WinCC Comfort to SIMATIC WinCC Advanced	**6AV2102-2AA03-0BD5**
• SIMATIC WinCC Advanced to SIMATIC WinCC Professional 512 PowerTags	**6AV2103-2AD03-0AC5**
• SIMATIC WinCC Professional Powerpack 512 PowerTags to 4 096 PowerTags	**6AV2103-2DH03-0BD5**
• SIMATIC WinCC Professional Powerpack 4 096 PowerTags to max. PowerTags	**6AV2103-2HX03-0BD5**
as download [1], floating license, license key download only, e-mail address required for the delivery	
• SIMATIC WinCC Basic to SIMATIC WinCC Comfort [2]	**6AV2101-2AA03-0BJ5**
• SIMATIC WinCC Comfort to SIMATIC WinCC Advanced	**6AV2102-2AA03-0BJ5**
• SIMATIC WinCC Advanced to SIMATIC WinCC Professional 512 PowerTags	**6AV2103-2AD03-0BJ5**
• SIMATIC WinCC Professional Powerpack 512 PowerTags to 4 096 PowerTags	**6AV2103-2DH03-0BJ5**
• SIMATIC WinCC Professional Powerpack 4 096 PowerTags to max. PowerTags	**6AV2103-2HX03-0BJ5**
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 WinCC engineering system or option. The contract is automatically extended by a further year unless canceled at least 12 weeks prior to expiration.	
Software Update Service (Standard Edition)	
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.)	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AL0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AL0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AL0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AL0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AL0**
Software Update Service (Compact Edition)	
The delivery items are combined. For several contracts, only 1 package with 1 data 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.	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AM0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AM0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AM0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AM0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AM0**
Software Update Service (download) [1]	
E-mail address required for the delivery	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AY0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AY0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AY0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AY0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AY0**

[1] Current information and availability regarding the new form of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

[2] Valid only for Article No.'s 6AV2100-0AA03-0AA5 and 6AV2100-0AA03-0AH5