

HMI Software

HMI Software in the TIA Portal

Introduction

Overview

SIMATIC HMI – Efficient to a new level

Innovative, efficient, scalable and open software for the machine-level area and for SCADA solutions.

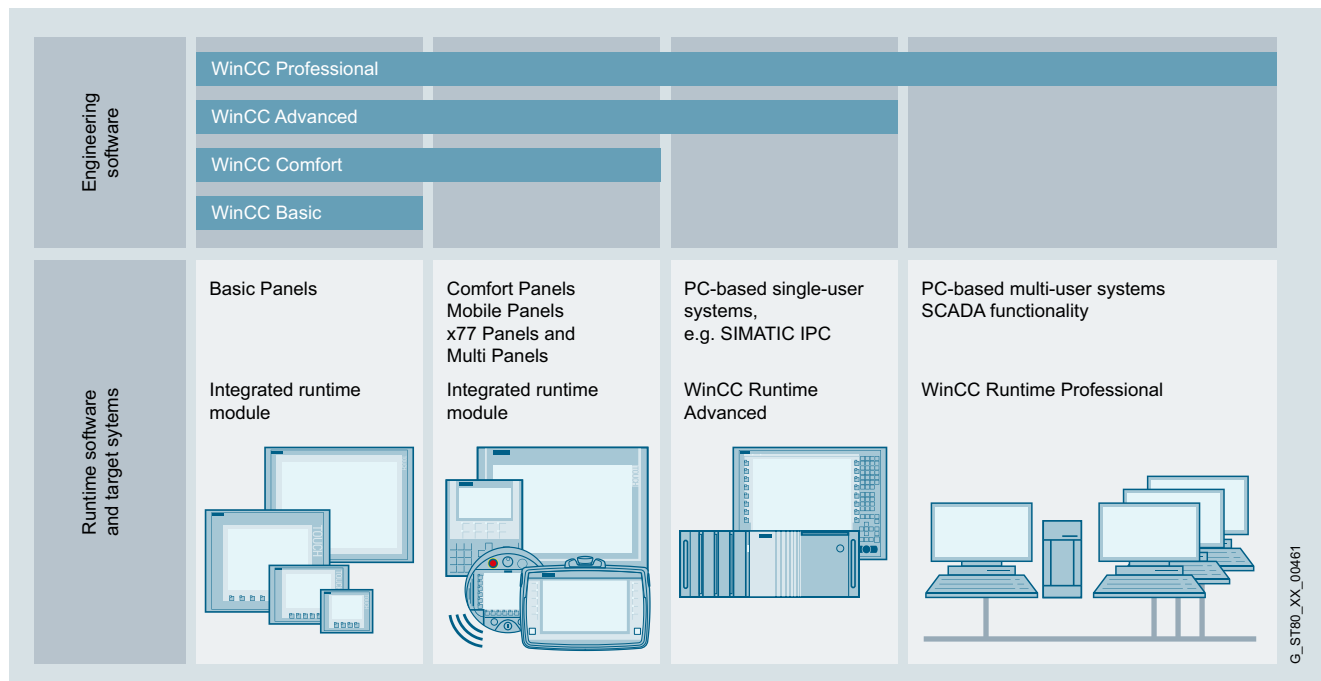
With the SIMATIC WinCC (TIA Portal), SIMATIC WinCC and SIMATIC WinCC Open Architecture product families, SIMATIC HMI offers visualization and configuration software for the entire HMI spectrum, from the machine-level area right up to SCADA systems:

- **SIMATIC WinCC (TIA Portal)**
Creation of applications in the machine-level area and of process visualization or SCADA systems
- **SIMATIC WinCC flexible**
Maintenance of visualization solutions in the machine-level area:

- **SIMATIC WinCC V7 SCADA system**
Creation of process visualization or SCADA systems
- **SIMATIC WinCC Open Architecture SCADA system**
Creation of applications with a high demand for customer-specific adaptations, large and/or complex applications, as well as projects that demand special system requirements and functions.

<http://www.siemens.com/hmi-software>

SIMATIC WinCC (TIA Portal)



WinCC (TIA Portal) is based on the central engineering framework Totally Integrated Automation Portal (TIA Portal) which offers users a uniform, efficient and intuitive solution to all their automation tasks. SIMATIC WinCC (TIA Portal) covers applications in the machine-level area and applications in the process visualization or SCADA environment. WinCC (TIA Portal) offers the uniform and scalable configuration tools WinCC Basic, Comfort, Advanced and Professional for configuring the current SIMATIC HMI operator panels:

- SIMATIC Basic Panels (without Key Panel)
- SIMATIC Comfort Panels
- SIMATIC Mobile Panels
- PC-based systems for the machine-level area
 - SIMATIC WinCC Runtime Advanced
 - SIMATIC WinCC Runtime Professional

In addition, WinCC (TIA Portal) offers:

- Intuitive user interface with maximum degree of operator friendliness
- Clear configuration of devices and network topologies
- Shared data management and uniform symbols via controller and HMI
- Optimum interaction with the controller and HMI in a working environment
- Powerful editors for efficient engineering
- Integrated mass data operations for efficient configuration
- System diagnostics as an integral component
- Comprehensive library concept

<http://www.siemens.com/wincc-tia-portal>

Overview (continued)

SIMATIC SCADA Systems

The data volume in modern industrial plants is growing continuously – and along with it the challenges faced by the SCADA solutions used: Enormous data volumes must be administered and archived for the long term. This is accompanied by increasing demands on performance. Technologies, including some from the consumer environment, are finding their way into industry. Globalization calls for higher-level SCADA systems that can be used worldwide – and the need for mobile access to plant information is also growing.

On top of all these requirements – in these times of ever increasing (energy) costs – is the need to improve energy efficiency and productivity.

With SIMATIC SCADA systems, you are fit for the future
Efficiency

As a key to greater productivity, SIMATIC SCADA systems combine efficient engineering with high-performance archiving and maximum data security. These features provide the basis for efficient operations management and intelligent production analyses.

Scalability

We offer stationary and mobile solutions to cover increasing demands – security guaranteed. In this area, we apply more than 15 years of SCADA know-how from all industry sectors. No matter how large or small your request is – we have the right answer.

Innovation

Stay informed with mobile SCADA solutions anywhere and at any time – including with existing tablet and smartphone hardware. The use of multi-touch gestures in the industrial environment opens the door for modern operating concepts.

Openness

Since international standards and system-internal script and programming interfaces are supported, it is easy to implement special requests.

<http://www.siemens.com/scada>

SIMATIC WinCC V7 SCADA system

The process visualization or SCADA system for visualizing and operating processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems with redundant servers and cross-location solutions with web clients. WinCC is the information hub for company-wide, vertical integration (process visualization and platform for IT & business integration).

- All HMI functions on-board with industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration and visualization (WinCC basic software).
- Company-wide, flexible client/server structures with operator stations on the web, distributed servers and data integrity thanks to redundancy
- Easy to integrate over standard interfaces such as OPC (OLE for Process Control), WinCC OLE DB, VBA (Visual Basic for Applications), VB script, C-API (ODK)
- Integration platform in the company thanks to the Historian functionality integrated into WinCC based on the Microsoft SQL Server, standard and programming interfaces and tools and clients for evaluation
- Modular expansion with options and add-ons as well as individual functional expansions with VB Script, Visual Basic for Applications, C-API (ODK) and integration of ActiveX elements.

<http://www.siemens.com/wincc-v7>

HMI Software

HMI Software in the TIA Portal

Introduction

Overview (continued)

SIMATIC WinCC Open Architecture SCADA system

The SIMATIC WinCC Open Architecture (WinCC OA) SCADA system is designed for applications with high demand for customer-specific adaptations, large and/or complex applications, as well as projects that demand special system requirements and functions.

SIMATIC WinCC Open Architecture demonstrates its high performance in networked and redundant high-end control systems in particular. From the field level to the control station, from the machine to the company headquarters – integrated, high-performance communication is ensured. In every situation, a high level of availability, reliable information, fast interaction and user friendliness are guaranteed. Applications can also be changed without interrupting the process. Profitability, efficiency and safety are therefore always in equilibrium.

With its hot-standby redundancy and disaster recovery system, SIMATIC WinCC Open Architecture demonstrates its reliability in a wide range of business-critical applications. SIMATIC WinCC Open Architecture can be used on any platform and is available for Windows, Linux, iOS and Android.

SIMATIC WinCC Open Architecture is open for independent in-house developments, which means that ideas can be turned into new applications quickly and easily.

- Object-orientation supports efficient engineering and flexible plant expansion
- For large, distributed systems with up to 2 048 servers
- Scalable – from a small single-user system up to a networked, redundant high-end system
- WinCC OA can be used on any platform, and is available for Windows, Linux, iOS and Android
- Hot-standby redundancy and disaster recovery system assure maximum fail-safety and availability
- WinCC OA offers a platform for customer-specific solutions
- Extensive driver and interfacing options: S7, SINAUT, OPC, OPC UA, Modbus, IEC 60870-5-101/104, DNP3, BACnet, and more than 25 native drivers available
- Flexible logging of data either in file-based value archive or in a relational database (ORACLE)
- Create and reuse your own libraries – working with already existing object libraries and easy, individual modifications (customer design, specific changes)
- Modular expansion using options and add-ons as well as individual functional expansions by means of own script language CONTROL, API (C++) and integration of ActiveX elements
- Integration of TIA Projects using TIA Importer for S7-1200 and S7-1500

<http://www.siemens.com/wincc-open-architecture>

PC-based HMI solutions (machine-level / SCADA) with SIMATIC industrial PCs

Our reliable and innovative SIMATIC IPC industrial PCs are the optimal PC hardware platforms. SIMATIC industrial PCs are offered with low-cost software packages. For runtime versions with SIMATIC WinCC V7, WinCC Runtime Professional or WinCC Runtime Advanced visualization software products, as well as the SIMATIC WinAC RTX (F) software controller. The simultaneous purchase of industrial PC and software package results in a price advantage.

SIMATIC SCADA and SIMATIC IPCs

Perfect interaction for optimum productivity.

- Price advantage as "Package" comprising hardware and software
- System-tested solutions reduce testing overhead
- Simple ordering and synchronized logistics

Only if ordered together with the SIMATIC IPC.

<http://www.siemens.com/scada-ipc>

Overview

Much more than visualization software

From machine-level visualization all the way to the high-performance SCADA system, SIMATIC WinCC in the TIA Portal and its efficient tools covers the entire engineering and visualization software spectrum – integrated across all performance classes.

The following software is currently offered:

- ***SIMATIC WinCC Unified (TIA Portal)***
 - SIMATIC WinCC Unified Engineering
 - SIMATIC WinCC Unified Runtime
 - SIMATIC WinCC Unified options
- ***SIMATIC WinCC (TIA Portal)***
 - SIMATIC WinCC (TIA Portal) Runtime
 - SIMATIC WinCC (TIA Portal) options
- ***TIA Portal options***
 - SIMATIC Visualization Architect
 - SIMATIC ProDiag

HMI Software

HMI Software in the TIA Portal

SIMATIC WinCC Unified (TIA Portal)

Overview

SIMATIC WinCC Unified (TIA Portal)

SIMATIC WinCC Unified is the new visualization system which permits users to competently meet the challenges of digitalization in machine and plant construction. SIMATIC WinCC Unified combines the know-how accumulated from more than 30 years of experience in the area of Human Machine Interface with state-of-the-art hardware and software technologies.

Highlights:

- The latest technology with proven engineering
 - The runtime of the newly developed SIMATIC WinCC Unified visualization software uses native web technologies such as HTML5, SVG, and JavaScript.
 - Visualization is created simply and efficiently with SIMATIC WinCC Unified Engineering in the proven Totally Integrated Automation Portal (TIA Portal).
- Simple and unlimited scalability
 - Simple and consistently scalable for all applications, from the operator panel directly on the machine through to the complex SCADA solution.
 - SIMATIC Unified Comfort Panels and SIMATIC IPCs are provided to ensure optimum utilization of the performance capability of WinCC Unified.
 - Expandable to meet every demand and diverse possibilities for the implementation of requirements using open interfaces.
 - Through flexible data exchange, the system facilitates the interaction of all devices during operation and allows direct access to authorized users from any modern web browser – without the need for any additional installation.

<https://intranet.entry.siemens.com>

Overview

SIMATIC WinCC Unified Engineering

- Proven engineering in the TIA Portal allows a consistent, efficient, and intuitive solution for all automation tasks.
- Together with the STEP 7 (TIA Portal) products, WinCC (TIA Portal) forms the optimum solution for integrated engineering.
- WinCC Unified Engineering is the configuration software for all applications, from the operator panel directly on the machine through to the complex SCADA solution.
- WinCC Unified Engineering also supports configuration of the SIMATIC Basic Panel, SIMATIC Comfort Panel and WinCC Runtime Advanced.

Application

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

- WinCC Unified Comfort Engineering
 - Unified Comfort Panels
 - Additionally Basic Panels, Comfort Panels and Mobile Panels from WinCC Comfort
- WinCC Unified PC Engineering
 - WinCC Unified PC and Unified Comfort Panels
 - Additionally the Basic Panels, Comfort Panels, Mobile Panels and WinCC Runtime Advanced

Design

The engineering tools of the SIMATIC WinCC (TIA Portal) family build on one another with regard to their respective capacities. The available editors are largely determined by the respective configurable target systems and their function.

The larger edition, such as WinCC Unified PC Engineering, always offers the additional possibilities of configuring the target devices of smaller editions (e.g. Unified Comfort Panels).

WinCC Unified Engineering also includes configuration of the Basic Panels, Comfort Panels, Mobile Panels, and the WinCC Runtime Advanced.

A Powerpack can be used to upgrade from a smaller edition to a larger one.

The functional scope of the WinCC engineering tools already includes the configuration support for available runtime options, regardless of the RT licenses purchased.

Ordering data

Article No.

SIMATIC WinCC Unified Engineering System

SIMATIC WinCC Unified Engineering System

Base packages

Data storage medium

- WinCC Unified Comfort V16 **6AV2151-0XB01-6AA5**
- WinCC Unified PC (10k) ES V16 **6AV2153-2FB01-6AA5**
- WinCC Unified PC (100k) ES V16 **6AV2153-2GB01-6AA5**
- WinCC Unified PC (max.) ES V16 **6AV2153-0XB01-6AA5**

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- WinCC Unified Comfort V16 **6AV2151-0XB01-6LA5**
- WinCC Unified PC (10k) ES V16 **6AV2153-2FB01-6LA5**
- WinCC Unified PC (100k) ES V16 **6AV2153-2GB01-6LA5**
- WinCC Unified PC (max.) ES V16 **6AV2153-0XB01-6LA5**

SIMATIC WinCC Unified Engineering System

PowerPacks

Data storage medium

- WinCC Comfort -> WinCC Unified PC (10k) **6AV2153-2FB21-6AB5**
- WinCC Unified PC (10k) -> WinCC Unified PC (100k) **6AV2153-2GB21-6AB5**
- WinCC Unified PC (100k) -> WinCC Unified PC (max.) **6AV2153-0XB21-6AB5**

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- WinCC Comfort -> WinCC Unified PC (10k) **6AV2153-2FB21-6LB5**
- WinCC Unified PC (10k) -> WinCC Unified PC (100k) **6AV2153-2GB21-6LB5**
- WinCC Unified PC (100k) -> WinCC Unified PC (max.) **6AV2153-0XB21-6LB5**

Software Update Service

WinCC Unified Comfort ES Software Update Service

- Data storage medium **6AV2151-0XB00-0LL5**
- Download ¹⁾ **6AV2151-0XB00-0LY5**

WinCC Unified PC (100k) ES Software Update Service

- Data storage medium **6AV2153-2GB00-0LL5**
- Download ¹⁾ **6AV2153-2GB00-0LY5**

WinCC Unified PC (10k) ES Software Update Service

- Data storage medium **6AV2153-2FB00-0LL5**
- Download ¹⁾ **6AV2153-2FB00-0LY5**

WinCC Unified PC (max.) ES Software Update Service

- Data storage medium **6AV2153-0XB00-0LL5**
- Download ¹⁾ **6AV2153-0XB00-0LY5**

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC Unified (TIA Portal)

SIMATIC WinCC Unified Runtime

Overview

SIMATIC WinCC Unified Runtime

A simple and consistently scalable PC-based visualization system for all applications, from single-user solutions directly on the machine through to complex SCADA solutions.

The basic package includes visualization, communication, alarms/messages, report creation, system structuring, and user administration. Furthermore, a client for local operation and an additional WinCC Unified Client for remote operator control and monitoring are also included in the basic package. Additional clients can be enabled with a license.

SIMATIC WinCC Unified uses native web technologies such as HTML5, SVG, and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation. Open interfaces and option packages allow the expansion and implementation of industry-specific application cases. Once created, components can be used comprehensively on all platforms, whether Panel or PC.

Benefits

Functions for all visualization tasks:

- Operator functions
- Graphics and trend displays
- Alarm logging
- Archiving (optional)
- Management of parameter sets (optional)
- Report creation
- User administration
- Flexible runtime

Functionality with Java scripts:

- Consistently scalable expandable from single-user station to distributed systems
- Process visualization using any modern HTML5-capable web browser

Part of the Totally Integrated Automation Portal:

- Support of the SIMATIC S7-1200/1500 and the SIMATIC S7-300/400 Controllers
 - Access to tags with symbolic and absolute addressing
 - Full text alarms of the SIMATIC S7-1500 Controller

Open standards for easy integration:

- Efficient real-time database (option)
- Application Program Interface (API)
- OpenPipe interface
- Integration of your own HTML5 controls in the user interface of WinCC Unified

Design

SIMATIC WinCC Unified PC is available as a software package with 150, 500, 1 000, 2 500, 5 000, 10 000, 50 000 or 100 000 PowerTags. Additionally, a license for the maximum number of PowerTags within the system limit is also available. Data points with an external connection are designated as PowerTags. At the same time, internal tags which are exempt from the PowerTag license are provided at no charge.

The basic system can be extended as required with option packages.

Ordering data

Article No.

SIMATIC WinCC Unified Runtime System

Base packages

Data storage medium

- WinCC Unified PC (150) RT **6AV2154-3DB01-6AA0**
- WinCC Unified PC (500) RT **6AV2154-1EB01-6AA0**
- WinCC Unified PC (1 000) RT **6AV2154-2EB01-6AA0**
- WinCC Unified PC (2 500) RT **6AV2154-2MB01-6AA0**
- WinCC Unified PC (5 000) RT **6AV2154-1FB01-6AA0**
- WinCC Unified PC (10k) RT **6AV2154-2FB01-6AA0**
- WinCC Unified PC (50k) RT **6AV2154-1GB01-6AA0**
- WinCC Unified PC (100k) RT **6AV2154-2GB01-6AA0**
- WinCC Unified PC (max.) RT **6AV2154-0XB01-6AA0**

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- WinCC Unified PC (150) RT **6AV2154-3DB01-6LA0**
- WinCC Unified PC (500) RT **6AV2154-1EB01-6LA0**
- WinCC Unified PC (1 000) RT **6AV2154-2EB01-6LA0**
- WinCC Unified PC (2 500) RT **6AV2154-2MB01-6LA0**
- WinCC Unified PC (5 000) RT **6AV2154-1FB01-6LA0**
- WinCC Unified PC (10k) RT **6AV2154-2FB01-6LA0**
- WinCC Unified PC (50k) RT **6AV2154-1GB01-6LA0**
- WinCC Unified PC (100k) RT **6AV2154-2GB01-6LA0**
- WinCC Unified PC (max.) RT **6AV2154-0XB01-6LA0**

PowerPacks

Data storage medium

- WinCC Unified PC (150->500) RT Powerpack (V16) **6AV2154-1EB21-6AB0**
- WinCC Unified PC (500->1k) RT Powerpack (V16) **6AV2154-2EB21-6AB0**
- WinCC Unified PC (1k->2.5k) RT Powerpack (V16) **6AV2154-2MB21-6AB0**
- WinCC Unified PC (2.5k->5k) RT Powerpack (V16) **6AV2154-1FB21-6AB0**
- WinCC Unified PC (5k->10k) RT Powerpack (V16) **6AV2154-2FB21-6AB0**
- WinCC Unified PC (10k->50k) RT Powerpack (V16) **6AV2154-1GB21-6AB0**
- WinCC Unified PC (50k->100k) RT Powerpack (V16) **6AV2154-2GB21-6AB0**
- WinCC Unified PC (100k->max.) RT Powerpack (V16) **6AV2154-0XB21-6AB0**

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- WinCC Unified PC (150->500) RT Powerpack (V16) **6AV2154-1EB21-6LB0**
- WinCC Unified PC (500->1k) RT Powerpack (V16) **6AV2154-2EB21-6LB0**
- WinCC Unified PC (1k->2.5k) RT Powerpack (V16) **6AV2154-2MB21-6LB0**
- WinCC Unified PC (2.5k->5k) RT Powerpack (V16) **6AV2154-1FB21-6LB0**
- WinCC Unified PC (5k->10k) RT Powerpack (V16) **6AV2154-2FB21-6LB0**
- WinCC Unified PC (10k->50k) RT Powerpack (V16) **6AV2154-1GB21-6LB0**
- WinCC Unified PC (50k->100k) RT Powerpack (V16) **6AV2154-2GB21-6LB0**
- WinCC Unified PC (100k->max.) RT Powerpack (V16) **6AV2154-0XB21-6LB0**

¹⁾ Current information and availability regarding the new type of delivery can be found at:

<http://www.siemens.com/tia-online-software-delivery>

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

Overview**WinCC Unified Clients**

The WinCC Unified Client is the graphical interface for the WinCC Unified Runtime.

The WinCC Unified Client accesses the WinCC Unified Runtime via web mechanisms (on the Runtime Station itself or via a network) to operate and monitor machines and plants. Using the standard web mechanisms, the WinCC Unified images can be displayed on any PCs or mobile devices in the HTML5-capable browser.

No additional know-how of the web is necessary for engineering of the WinCC Unified screens in the TIA Portal.

Licensing:

A (server-based) license of WinCC Unified Runtime is required for the WinCC Unified Client.

This WinCC Unified Runtime licensing contains two WinCC Unified Client licenses – for local operation on the runtime station and for operation using an additional independent client.

The client licenses are provided on the runtime station (the server) and are graded in accordance with the number of simultaneous WinCC Unified Web Client access operations. The number can be increased at any time via additive WinCC Unified Client licenses (countable licenses). The version-independent license packages are divided into 1, 3, 10, 30 and 100 WinCC Unified Clients.

BenefitsWinCC Unified Client

- Parallel, global web-based operator control and monitoring
- Highest level of flexibility
 - Independent of browser and platform (PCs, tablets, smartphones)
 - No installation of software required on the client device, a web browser is generally present
- Minimized maintenance costs with central software administration on the server
 - No maintenance workload on the client
 - No engineering on the client side
- Scalability
 - Supplementation of new operating stations without installation
 - Central license management on the runtime station (the server)
- Independent of version between WinCC Unified PC Runtime and WinCC Unified Client
- High Internet security standards
- Fast update rates (e.g. after value change, picture change)
- Efficient remote diagnostics for production plant through web access
- Future-proof due to the utilization of accepted standards (HTML5, SVG)

Ordering data**Article No.***SIMATIC WinCC Unified options***WinCC Unified Clients**

Data storage medium

- WinCC Unified Clients Operate (1) **6AV2157-1JW00-0AB0**
- WinCC Unified Clients Operate (3) **6AV2157-3JW00-0AB0**
- WinCC Unified Clients Operate (10) **6AV2157-2CW00-0AB0**
- WinCC Unified Clients Operate (30) **6AV2157-6CW00-0AB0**
- WinCC Unified Clients Operate (100) **6AV2157-2DW00-0AB0**

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- WinCC Unified Clients Operate (1) **6AV2157-1JW00-0LB0**
- WinCC Unified Clients Operate (3) **6AV2157-3JW00-0LB0**
- WinCC Unified Clients Operate (10) **6AV2157-2CW00-0LB0**
- WinCC Unified Clients Operate (30) **6AV2157-6CW00-0LB0**
- WinCC Unified Clients Operate (100) **6AV2157-2DW00-0LB0**

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/mobile-panels>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC Unified (TIA Portal) options

WinCC Unified Database option

Overview

WinCC Unified Database Storage

WinCC Unified PC uses a file-based database (SQLite) in the basic system for the archiving of process values and messages.

The WinCC Unified Databased Storage option is available for use with greater quantity frameworks or lengthy archiving periods. All archive data is stored in an MS SQL server after installing the option and the license.

Licensing:

WinCC Unified PC:

- One license per WinCC Unified PC Runtime is required for activating the functionality.

Ordering data

Article No.

WinCC Unified Database option

Data storage medium

- WinCC Unified Database option

6AV2154-0BS01-6AA0

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- WinCC Unified Database option

6AV2154-0BS01-6LA0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

Overview**WinCC Unified Logging**

Option for WinCC Unified for archiving of process values and messages. Process value archiving for the recording, compression and storage of measured values and alarm logging to record events.

Online evaluation of process value archives and alarm logs with display and possible operations, for example representation of trends and display of tables, as well as further processing. Powerful standard functions permit user-friendly and flexible utilization of the logs.

Licensing:

SIMATIC Unified Comfort Panels:

- Messages can be logged without an additional license.
- Process values (tags) can be archived without an additional license.
- Utilization of file-based archiving, with the possibility of a maximum 5 000 logging tags

WinCC Unified PC:

- Messages can be logged without an additional license.
- Graded licenses for the number of logging tags used are available for the archiving of process values (tags). This number can be increased at any time via additive WinCC Unified logging tags (countable licenses).
- The licenses are divided into 100, 500, 1 000, 5 000, 10 000 and 30 000 logging tags.
- A maximum of 5 000 logging tags are possible with utilization of the file-based archiving (default)
- When using the database-based archiving (optional), the number of logging tags is limited by the performance capability of the PC system being used.

BenefitsWinCC Unified Logging

- Process value logging is used to record and archive process data from the plant.
- The alarm log archives any alarms which are issued in the monitored process.
- This archiving can be used to analyze fault states and to document the process.
- A subsequent evaluation of the archived process data then provides you with essential information regarding the operating state of a plant.
- The logs allow hazardous conditions and faults to be identified in good time, known as predictive diagnostics, which in turn avoids downtimes
- Increase of product quality and productivity due to regular evaluation of the logs

Ordering data**Article No.****WinCC Unified Logging**

Data storage medium

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|-------------------------------------|---------------------------|
| • WinCC Unified Logging Tags (100) | 6AV2157-2DA00-0AB0 |
| • WinCC Unified Logging Tags (500) | 6AV2157-1EA00-0AB0 |
| • WinCC Unified Logging Tags (1000) | 6AV2157-2EA00-0AB0 |
| • WinCC Unified Logging Tags (5000) | 6AV2157-1FA00-0AB0 |
| • WinCC Unified Logging Tags (10k) | 6AV2157-2FA00-0AB0 |
| • WinCC Unified Logging Tags (30k) | 6AV2157-6FA00-0AB0 |

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|-------------------------------------|---------------------------|
| • WinCC Unified Logging Tags (100) | 6AV2157-2DA00-0LB0 |
| • WinCC Unified Logging Tags (500) | 6AV2157-1EA00-0LB0 |
| • WinCC Unified Logging Tags (1000) | 6AV2157-2EA00-0LB0 |
| • WinCC Unified Logging Tags (5000) | 6AV2157-1FA00-0LB0 |
| • WinCC Unified Logging Tags (10k) | 6AV2157-2FA00-0LB0 |
| • WinCC Unified Logging Tags (30k) | 6AV2157-6FA00-0LB0 |

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

HMI Software

HMI Software in the TIA Portal SIMATIC WinCC Unified (TIA Portal) options

WinCC Unified Parameter Control, WinCC Unified Report Execution, WinCC Unified Collaboration

Overview

WinCC Unified Parameter Control

Option for SIMATIC WinCC Unified for the generation and management of parameter sets which contain associated machine or production data.

The structure of a user data type (PLC UDT or HMI UDT) can be adopted for one or more parameter set types and can be changed automatically using a new user data type version.

Licensing:

SIMATIC Unified Comfort Panels:

- No license is required

WinCC Unified PC:

- One license per WinCC Unified PC Runtime is required for activating the functionality.

Benefits

WinCC Unified Parameter Control

- An expansive selection of parameters can be exchanged between the operator panel and control system manually or automatically in order to convert production to another product variant.
- Simple operator guidance due to configurable image object
- Export/import of parameter sets for creation or further processing with other tools (e.g. MS Excel)

Ordering data

Article No.

Ordering data	Article No.
WinCC Unified Parameter Control	
Data storage medium	
• WinCC Unified Parameter Control (PC)	6AV2154-0BP01-6AB0
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• WinCC Unified Parameter Control (PC)	6AV2154-0BP01-6LB0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Overview

WinCC Unified Report Execution

Excel Addin is included in the scope of delivery of WinCC Unified to connect WinCC Unified tags, logging tags and alarms with an Excel report template. The report templates are imported into the WinCC Unified Runtime without the engineering system at runtime, and connected with execution parameters. Reports are automatically created cyclically, dependent on requirements and events, and then stored in Excel or PDF format.

Licensing:

No license is required for the creation of reports in Excel and manual execution of the reports in Excel or from the Report Runtime Control. A WinCC Unified Report Execution license is required for the automated cyclic report dependent on requirements and events.

Benefits

WinCC Unified Report Execution

- Full transparency via WinCC Unified tags, logging tags and alarms
- Filter mechanism for the selection of alarms and tags
- Insertion of individual values and time series data
- Automatic insertion of predefined formulas for time series data
- Individual creation of report templates with the familiar MS Excel and Excel Online
- Activation of created report templates during the runtime without Engineering System
- Automated cyclic report creation based on requirements or events
- Individual reports in Excel format without Excel installation
- Individual reports in PDF format with Excel or LibreOffice-Calc installation

Ordering data

Article No.

Ordering data	Article No.
WinCC Unified Reporting	
Data storage medium	
• WinCC Unified Report	6AV2157-0BQ01-6AB0
Download ¹⁾	
• WinCC Unified Report	6AV2157-0BQ01-6LB0

Ordering data

Article No.

Ordering data	Article No.
WinCC Unified Collaboration	
Data storage medium	
• WinCC Unified Collaboration (PC)	6AV2154-0BR01-6AB0
• WinCC Unified Collaboration (Panel)	6AV2151-0BR01-6AB0
Download ¹⁾	
• WinCC Unified Collaboration (PC)	6AV2154-0BR01-6LB0
• WinCC Unified Collaboration (Panel)	6AV2151-0BR01-6LB0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

Overview

Plant Intelligence options

With the SIMATIC WinCC Unified Plant Intelligence options, it is possible to expand SIMATIC WinCC Unified Runtime in line with the requirements on the production plant and visualize it in HMI.

The options enable planning of production processes as well as analysis and optimization of the overall effectiveness of the plant.

Furthermore, flexible production sequences can be designed, and complex and chained production sequences in the plant can be coordinated.

WinCC Unified Calendar:

Planning, configuration and management of events and actions in one general calendar in WinCC Unified (including connection of tags or scripts).

WinCC Unified Line Coordination:

Coordination and monitoring of complex processes in the production line. Control and management of recipe-controlled procedures and orders for the production of various end products.

WinCC Unified Performance Insight:

Definition, calculation and analysis of plant-specific KPIs for individual plant units, machines or entire production lines in machine or line-oriented production plants.

Note:

The SIMATIC WinCC Unified Plant Intelligence options can be used on a PC system. The technological plant hierarchy is a prerequisite for using the SIMATIC WinCC Unified Plant Intelligence options.

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC Unified Plant Intelligence options

WinCC Unified Calendar

Overview

WinCC Unified Calendar

Recurring, calendar-related working times (shifts) and processes (switching commands) can be planned and modified in advance using the WinCC Unified Calendar.

Planning is based on predefined templates and a time model. This time model is used equally for the "WinCC Unified Calendar" and "WinCC Unified Performance Insight" options.

A technological system hierarchy for the project is created in the TIA Portal. One main calendar is assigned to one branch (main node or root node) within this hierarchy. For runtime (within WinCC Unified Runtime), templates can be created for this main calendar and planning for working times and processes can be defined. Planning takes effect automatically for its "hierarchical children"; they can be supplemented or modified there.

The "WinCC Unified Calendar" option is only available for the WinCC Unified PC system.

Benefits

- Definition of uniform time categories and the selection of usable process tags as a switching command in the TIA Portal
- Planning of working times and processes during runtime
 - Management of shift and day templates, as well as switching actions relative to shift events (start, end)
 - Creation of planning based on templates
 - Modification of planning of hierarchically subordinate system components
 - Definition of recurring, cyclic shifts
- Import and export of templates and planning
- Runtime openness (API) interface
- Use of maintained shifts as criteria for calculating indicators via the "WinCC Unified Performance Insight" option

Application

WinCC Unified Calendar serves user groups which have structured a plant via a plant hierarchy and want to define recurring events within this hierarchy.

Design

With WinCC Unified Calendar licensing, it is possible to manage templates and the use/planning within a main node via the option. Modifications and adaptations of planning hierarchically subordinate system components is possible. The license is stored on the assigned WinCC Unified runtime station. If other main nodes are created and managed on this WinCC Unified runtime station, additional extension licenses for each additional main node are necessary. These extension licenses are additive (countable licenses).

The necessary runtime and engineering components are supplied with the licenses.

Ordering data

Article No.

WinCC Unified Calendar

Data storage medium

- WinCC Unified Calendar Base
- WinCC Unified Calendar Extension (1)

6AV2156-0BC01-6AA0
6AV2156-1JC00-0AB0

Download¹⁾

- WinCC Unified Calendar Base
- WinCC Unified Calendar Extension (1)

6AV2156-0BC01-6LA0
6AV2156-1JC00-0LB0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Overview**WinCC Unified Line Coordination**

With WinCC Unified Line Coordination, recipe- and batch-controlled production processes like those used in the food and beverages industry, but also in other industries, can be automated.

Complex sequences of chained machines in the production line can hereby be coordinated, synchronized and monitored based on SIMATIC S7-1500 and WinCC Unified.

Together with WinCC Unified, WinCC Unified Line Coordination is coordinated to the technological requirements and offers corresponding standard functions. For example, a technological plant hierarchy in line with ISA-88 can be created in the TIA Portal. Moreover, recipe management and controls for visualization are available.

Benefits

- Reliable operation of the plant based on robust, tried-and-tested standard industrial components such as SIMATIC S7-1500
- Flexible and efficient engineering based on the TIA Portal
- Definition of standardized procedures for reduced workload; standardization based on ISA-88
- Reproducibility of recipes to ensure consistent product quality
- Planning and management of orders in a central location
- Various monitoring options for improved transparency and control of planning or running production processes
- Logging of production data for transparency and traceability in production

Application

WinCC Unified Line Coordination is suitable for all user groups that wish to structure a plant using a technological hierarchy and standardize production processes using a recipe system.

Design

WinCC Unified Line Coordination is a software package containing the required Engineering and Runtime components which can be installed in addition to WinCC Unified Engineering and WinCC Unified Runtime (PC system).

A basic license (WinCC Unified Line Coordination Base) containing the basic functionalities such as recipe management, order definition and material definition, as well as three units for synchronization within a recipe, is available for WinCC Unified Line Coordination. In addition, the number of units to be synchronized can be increased (countable licenses) at any time by means of additive licenses (WinCC Unified Line Coordination Extension).

Ordering data**Article No.****WinCC Unified Line Coordination**Data storage medium

- | | |
|--|---------------------------|
| • WinCC Unified Line Coordination V16 Base (incl. 3 Units) | 6AV2156-0BL01-6AA0 |
| • WinCC Unified Line Coordination Extension (5) | 6AV2156-1CL00-0AB0 |
| • WinCC Unified Line Coordination Extension (10) | 6AV2156-2CL00-0AB0 |
| • WinCC Unified Line Coordination Extension (50) | 6AV2156-1DL00-0AB0 |

Download¹⁾

- | | |
|--|---------------------------|
| • WinCC Unified Line Coordination V16 Base (incl. 3 Units) | 6AV2156-0BL01-6LA0 |
| • WinCC Unified Line Coordination Extension (5) | 6AV2156-1CL00-0LB0 |
| • WinCC Unified Line Coordination Extension (10) | 6AV2156-2CL00-0LB0 |
| • WinCC Unified Line Coordination Extension (50) | 6AV2156-1DL00-0LB0 |

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC Unified Plant Intelligence options

WinCC Unified Performance Insight

Overview

WinCC Unified Performance Insight

The WinCC Unified Performance Insight can be used to calculate and analyze plant-specific indicators for individual plant units, machines or entire production lines in machine or line-oriented production plants with WinCC Unified PC systems.

Benefits

Demonstration of weak points in production processes and deriving optimization potential.

- Flexible - individual calculation of plant-specific indicators in WinCC Unified
- Creating relationships - recognizing indicators in context, e.g. availability per shift
- Optimally informed - analyzing indicators in WinCC Unified Runtime as a bar graph, Gantt chart or table even via Web
- Expandable - adding indicators in existing plants without production losses
- Getting results fast - short configuration time and familiarization time thanks to integration in WinCC Unified

Application

All user groups benefit from the Performance Insight, from the application engineer to management-level evaluators.

The engineer can use the application environment integrated in WinCC Unified to derive individual formulas for calculating performance indicators.

KPIs and operands from Performance Insight are automatically created in event- or time-controlled Excel reports and used by management for production analysis and documentation.

For maintenance, the web client of the WinCC Unified can be used for analysis with the bar (for performance), progression (Gantt) and table controls.

Performance indicators can be displayed on local user interfaces using standard WinCC Unified resources to keep machine operators up to date.

Design

Fault analyses provide information about the frequency and duration of machine or plant downtimes. The included controls can be effortlessly be integrated in WinCC Unified process pictures.

The determined data gives information on the effectiveness of individual machines and of entire production plants. The transparency of the data allows for a quick response and countermeasures in the event of faults, which increases the availability of the machine. Structuring of the production plant constituting central elements for evaluation (equipment efficiency)

- Can be used for individual machines or even complete production plants
- Easy integration in existing WinCC Unified plants
- Cyclic or event-controlled calculation of indicators (KPIs)

All of the analysis results are integrated in the form of controls in WinCC Unified screens. Bar (performance), trend (Gantt) and table views are available in WinCC-Unified process pictures. Complete transparency throughout the machine park as the basis for optimizing plant productivity via automatic execution of reports.

- Recognition of production relationships
- Calculation of downtimes and localization of sources
- Weak-point analysis in production processes.

Ordering data

Article No.

WinCC Unified Performance Insight

Data storage medium

- WinCC Unified Performance Insight (PC) Base incl. 3 analyzed plant objects
- 10 analyzed plant objects
- 30 analyzed plant objects
- 100 analyzed plant objects
- 300 analyzed plant objects

6AV2156-0BP01-6AA0

6AV2156-2CP00-0AB0

6AV2156-6CP00-0AB0

6AV2156-2DP00-0AB0

6AV2156-0XP00-0AB0

Download

- WinCC Unified Performance Insight (PC) Base incl. 3 analyzed plant objects
- 10 analyzed plant objects
- 30 analyzed plant objects
- 100 analyzed plant objects
- 300 analyzed plant objects

6AV2156-0BP01-6LA0

6AV2156-2CP00-0LB0

6AV2156-6CP00-0LB0

6AV2156-2DP00-0LB0

6AV2156-0XP00-0LB0

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-unified-system>

Overview



SIMATIC WinCC Runtime Professional visualization software

- PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients. WinCC Runtime Professional is the information hub for corporation-wide vertical integration.
- Industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration, can be expanded flexibly with VB and C scripts
- Basic package expandable by means of option packages
- Also included are APIs for the Runtime to utilize the open programming interfaces

<http://www.siemens.com/wincc-professional>

3

SIMATIC WinCC (TIA Portal) engineering software

Family of configuration systems with WinCC Basic, Comfort, Advanced and Professional for SIMATIC operator panels, as well as for the WinCC Runtime Advanced and WinCC Runtime Professional PC-based visualization systems.

SIMATIC WinCC Runtime Advanced visualization software

- PC-based HMI solution for single-user systems directly at the machine
- Basic package for visualization, reporting and logging, user administration, can be expanded flexibly with VB scripts
- Basic package expandable by means of option packages
- Can be integrated into automation solutions based on TCP/IP networks
- Expanded service concepts with remote operation, diagnostics and administration over the intranet and Internet in combination with email communication

<http://www.siemens.com/wincc-advanced>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal)

SIMATIC WinCC (TIA Portal) Engineering

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 SCADA applications.
- Together with the STEP 7 (TIA Portal) products, WinCC (TIA Portal) forms the optimum solution for integrated, efficient engineering.

Current version:

- SIMATIC WinCC Basic V16
- SIMATIC WinCC Comfort V16
- SIMATIC WinCC Advanced V16
- SIMATIC WinCC Professional V16

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 objects, 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
- Security of investment due to
 - Import of the configuration from WinCC flexible 2008 SP2, 2008 SP3 and 2008 SP5
 - Import of the configuration from WinCC V7.3, V7.4 and V7.5

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
- Basic Panels 2nd Generation

WinCC Comfort

As WinCC Basic, plus:

- Comfort Panels
- Mobile Panels 2nd Generation
- Mobile Panels x77 Series

WinCC Advanced

As WinCC Comfort, plus:

- SIMATIC PCs with WinCC Runtime Advanced:
 - SIMATIC Rack PCs
 - SIMATIC Box PCs
 - SIMATIC Panel PCs
 - SIMATIC S7 Open Controllers
- 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 PCs
 - SIMATIC Box PCs
 - SIMATIC Panel PCs
- 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 controllers
 - 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. message 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

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal)

SIMATIC WinCC (TIA Portal) Engineering

Function (continued)

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 supply
- Size-scalable graphics for industrial applications are included in the scope of supply
- Preview function for library objects

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)	Intel® Core™ i5-6440EQ (2.7 GHz)
RAM (recommended)	16 GB or more (32 GB for large projects)
Hard disk	SSD with at least 50 GB storage space available
Operating systems	64-bit operating systems <ul style="list-style-type: none"> • Windows 7 Home Premium SP1 (WinCC Basic only) • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 • Windows 10 Home Version 1703 (WinCC Basic only) • Windows 10 Professional Version 1703 • Windows 10 Enterprise Version 1703 • Windows 10 Enterprise 2016 LTSB • Windows Server 2012 R2 StdE • Windows Server 2016 Standard
Screen resolution	Recommended 1 920 x 1 080
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.	Article No.
<i>SIMATIC WinCC Basic software</i>		<i>Upgrades</i>
SIMATIC WinCC Basic V16 • Data storage medium • Download ¹⁾	6AV2100-0AA06-0AA5 6AV2100-0AA06-0AH5	WinCC V11..V15.1 -> WinCC V16 Data storage medium • SIMATIC WinCC Basic • SIMATIC WinCC Comfort • SIMATIC WinCC Advanced • SIMATIC WinCC Professional 512 PowerTags • SIMATIC WinCC Professional 4 096 PowerTags • SIMATIC WinCC Professional max. PowerTags Download ¹⁾ • SIMATIC WinCC Basic • SIMATIC WinCC Comfort • SIMATIC WinCC Advanced • SIMATIC WinCC Professional 512 PowerTags • SIMATIC WinCC Professional 4 096 PowerTags • SIMATIC WinCC Professional max. PowerTags
SIMATIC WinCC Comfort V16 • Data storage medium • Download ¹⁾	6AV2101-0AA06-0AA5 6AV2101-0AA06-0AH5	6AV2100-3AA06-0AE5 6AV2101-3AA06-0AE5 6AV2102-3AA06-0AE5 6AV2103-3DA06-0AE5
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<i>SIMATIC WinCC V16 Trial Licenses</i>		WinCC flexible 2008 to WinCC V16 • WinCC flexible Compact to WinCC Comfort • WinCC flexible Standard to WinCC Comfort • WinCC flexible Advanced to WinCC Advanced As download ¹⁾ • WinCC flexible Compact to WinCC Comfort • WinCC flexible Standard to WinCC Comfort • WinCC flexible Advanced to WinCC Advanced
SIMATIC WinCC Basic/Comfort/Advanced V16, Trial License on data storage medium	6AV2102-0AA06-0AA7	6AV2101-4AB06-0AE5 6AV2101-4BB06-0AE5 6AV2102-4AA06-0AE5
SIMATIC WinCC Professional V16, Trial License on data storage medium	6AV2103-0AA06-0AA7	6AV2101-4AB06-0AK5 6AV2101-4BB06-0AK5 6AV2102-4AA06-0AK5
<i>Powerpacks</i>		
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SIMATIC WinCC Advanced V16 • Data storage medium • Download ¹⁾	6AV2102-2AA06-0BD5 6AV2102-2AA06-0BJ5	
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¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal)

SIMATIC WinCC (TIA Portal) Engineering

Ordering data	Article No.	Article No.	
<p><i>SIMATIC WinCC Basic software</i></p> <p>SIMATIC WinCC Basic V15.1</p> <ul style="list-style-type: none"> Data storage medium Download ¹⁾ 	<p>6AV2100-0AA05-0AA5 6AV2100-0AA05-0AH5</p>	<p><i>Powerpacks (without version change)</i></p> <p>SIMATIC WinCC Basic to WinCC Comfort V15.1 ²⁾</p> <ul style="list-style-type: none"> Data storage medium Download ¹⁾ 	<p>6AV2101-2AA05-0BD5 6AV2101-2AA05-0BJ5</p>
<p>SIMATIC WinCC Comfort V15.1</p> <ul style="list-style-type: none"> Data storage medium Download ¹⁾ 	<p>6AV2101-0AA05-0AA5 6AV2101-0AA05-0AH5</p>	<p>SIMATIC WinCC Comfort to WinCC Advanced V15.1</p> <ul style="list-style-type: none"> Data storage medium Download ¹⁾ 	<p>6AV2102-2AA05-0BD5 6AV2102-2AA05-0BJ5</p>
<p>SIMATIC WinCC Advanced V15.1</p> <p>Engineering software in the TIA Portal; for configuring SIMATIC Panels, WinCC Runtime Advanced; runs with Windows 7 (64-bit), Windows 10 (64-bit), WinSrv 2012 R2/2016 (64-bit), Class A; 6 languages: en, de, fr, es, it, zh</p> <ul style="list-style-type: none"> Floating license; software and documentation on DVD; license key on USB flash drive Floating license; software, documentation and license key for downloading ¹⁾; E-mail address required for delivery 	<p>6AV2102-0AA05-0AA5 6AV2102-0AA05-0AH5</p>	<p>SIMATIC WinCC Advanced to WinCC Professional V15.1</p> <ul style="list-style-type: none"> 512 PowerTags Download ¹⁾; 512 PowerTags 	<p>6AV2103-2AD05-0BD5 6AV2103-2AD05-0BJ5</p>
<p>SIMATIC WinCC Professional V15.1</p> <p>Data storage medium</p> <ul style="list-style-type: none"> 512 PowerTags 4 096 PowerTags Max. PowerTags <p>Download ¹⁾</p> <ul style="list-style-type: none"> 512 PowerTags 4 096 PowerTags Max. PowerTags 	<p>6AV2103-0DA05-0AA5 6AV2103-0HA05-0AA5 6AV2103-0XA05-0AA5 6AV2103-0DA05-0AH5 6AV2103-0HA05-0AH5 6AV2103-0XA05-0AH5</p>	<p>SIMATIC WinCC Professional V15.1</p> <ul style="list-style-type: none"> 512 PowerTags -> 4 096 PowerTags 4 096 PowerTags -> max. PowerTags <p><u>Download</u>¹⁾</p> <ul style="list-style-type: none"> 512 PowerTags -> 4 096 PowerTags 4 096 PowerTags -> max. PowerTags 	<p>6AV2103-2DH05-0BD5 6AV2103-2HX05-0BD5 6AV2103-2DH05-0BJ5 6AV2103-2HX05-0BJ5</p>
<p><i>SIMATIC STEP 7/SIMATIC WinCC Trial Licenses</i></p> <p>On DVD, 21 day trial</p>		<p><i>Software Update Service</i></p> <p>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.</p>	
<p>SIMATIC STEP 7 Basic/Professional SIMATIC WinCC Basic/Comfort/Advanced V15.1, trial license</p>	<p>6AV2102-0AA05-0AA7</p>	<p>Software Update Service (Standard Edition)</p> <p>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.)</p> <ul style="list-style-type: none"> SIMATIC WinCC Comfort SIMATIC WinCC Advanced SIMATIC WinCC Professional 512 PowerTags SIMATIC WinCC Professional 4 096 PowerTags SIMATIC WinCC Professional max. PowerTags 	<p>6AV6612-0AA00-0AL0 6AV6613-0AA00-0AL0 6AV2103-0DA00-0AL0</p>
<p>SIMATIC STEP 7 Professional SIMATIC WinCC Professional V15.1, trial license</p>	<p>6AV2103-0AA05-0AA7</p>		
<p>License: SIMATIC 50 h engineering with STEP 7 Professional Combo, WinCC Professional (incl. WinCC flexible 2008) and STEP 7 Safety Advanced (incl. Distributed Safety)</p>	<p>6ES7823-1GE05-0YA5</p>		

Ordering data	Article No.	Article No.
<p>Software Update Service (Compact Edition)</p> <p>The delivery items are combined. For several contracts, only 1 package with 1 data storage medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of CoLs will be supplied.</p> <p>Delivery items to be combined must be ordered as one item.</p> <ul style="list-style-type: none"> • SIMATIC WinCC Comfort • SIMATIC WinCC Advanced • SIMATIC WinCC Professional 512 PowerTags • SIMATIC WinCC Professional 4 096 PowerTags • SIMATIC WinCC Professional max. PowerTags <p>Download ¹⁾</p> <p>E-mail address required for delivery</p> <ul style="list-style-type: none"> • SIMATIC WinCC Comfort • SIMATIC WinCC Advanced • SIMATIC WinCC Professional 512 PowerTags • SIMATIC WinCC Professional 4 096 PowerTags • SIMATIC WinCC Professional max. PowerTags 	<p>6AV6612-0AA00-0AM0</p> <p>6AV6613-0AA00-0AM0</p> <p>6AV2103-0DA00-0AM0</p> <p>6AV2103-0HA00-0AM0</p> <p>6AV2103-0XA00-0AM0</p> <p>6AV6612-0AA00-0AY0</p> <p>6AV6613-0AA00-0AY0</p> <p>6AV2103-0DA00-0AY0</p> <p>6AV2103-0HA00-0AY0</p> <p>6AV2103-0XA00-0AY0</p>	<p>Upgrades</p> <p>Data storage medium</p> <p>WinCC V11..V14 -> WinCC V15.1</p> <ul style="list-style-type: none"> • SIMATIC WinCC Basic 6AV2100-3AA05-0AE5 • SIMATIC WinCC Comfort 6AV2101-3AA05-0AE5 • SIMATIC WinCC Advanced 6AV2102-3AA05-0AE5 • SIMATIC WinCC Professional 512 PowerTags 6AV2103-3DA05-0AE5 • SIMATIC WinCC Professional 4 096 PowerTags 6AV2103-3HA05-0AE5 • SIMATIC WinCC Professional max. PowerTags 6AV2103-3XA05-0AE5 <p>Download ¹⁾</p> <ul style="list-style-type: none"> • SIMATIC WinCC Basic 6AV2100-3AA05-0AK5 • SIMATIC WinCC Comfort 6AV2101-3AA05-0AK5 • SIMATIC WinCC Advanced 6AV2102-3AA05-0AK5 • SIMATIC WinCC Professional 512 PowerTags 6AV2103-3DA05-0AK5 • SIMATIC WinCC Professional 4 096 PowerTags 6AV2103-3HA05-0AK5 • SIMATIC WinCC Professional max. PowerTags 6AV2103-3XA05-0AK5 <hr/> <p>WinCC flexible 2008 to WinCC V15.1</p> <ul style="list-style-type: none"> • WinCC flexible Compact to WinCC Comfort 6AV2101-4AB05-0AE5 • WinCC flexible Standard to WinCC Comfort 6AV2101-4BB05-0AE5 • WinCC flexible Advanced to WinCC Advanced 6AV2102-4AA05-0AE5 <p>As download ¹⁾</p> <ul style="list-style-type: none"> • WinCC flexible Compact to WinCC Comfort 6AV2101-4AB05-0AK5 • WinCC flexible Standard to WinCC Comfort 6AV2101-4BB05-0AK5 • WinCC flexible Advanced to WinCC Advanced 6AV2102-4AA05-0AK5

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

²⁾ Valid only for Article No.'s 6AV2100-0AA05-0AA5 or 6AV2100-0AA05-0AH5

Additional information is available on the Internet at:

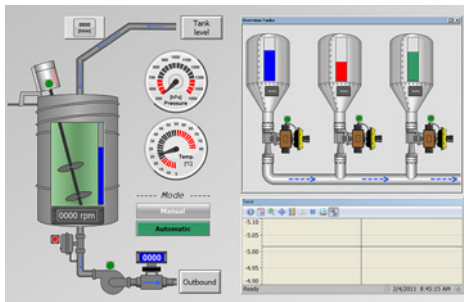
<http://www.siemens.com/wincc-unified-system>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

Introduction

Overview



SIMATIC WinCC Runtime Advanced visualization software

- PC-based operator control and monitoring solution for single-user systems directly at the machine
- Basic package for visualization, reporting and logging, user administration, can be expanded flexibly with VB scripts
- Basic package expandable by means of option packages
- Can be integrated into automation solutions based on TCP/IP networks
- Expanded service concepts with remote operation, diagnostics and administration over the intranet and Internet in combination with email communication

<http://www.siemens.com/wincc-advanced>

SIMATIC WinCC Runtime Professional visualization software

- PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients. WinCC Runtime Professional is the information hub for corporation-wide vertical integration.
- Industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration, can be expanded flexibly with VB and C scripts
- Basic package expandable by means of option packages
- Also included are APIs for the Runtime to utilize the open programming interfaces

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-professional>

Overview

PC-based operator control and monitoring system for single-user systems directly at the machine. SIMATIC WinCC Runtime Advanced is configured with the SIMATIC WinCC Advanced or SIMATIC WinCC Professional configuration software.

Benefits

- Functions for all visualization tasks:
 - Operator functions
 - Graphics and trend displays
 - Alarm logging
 - Report system
 - Archiving (option)
 - Recipe management (option)
 - Audit Trail (option)
- Flexible runtime functionality due to Visual Basic scripts
- Service concepts with remote operation, diagnostics and administration via intranet/Internet as well as email communication increase availability (option)
- Support for simple distributed automation solutions based on TCP/IP networks at the machine-level (option)
- Part of the Totally Integrated Automation Portal
 - Direct access to the tag and message configuration of the SIMATIC controller
 - Excellent support of the new SIMATIC S7-1500 controller With symbolic addressing
 - Access to the new memory-optimized data blocks
 - New alarm and diagnostics concept (incl. ProDiag)
 - Integrated diagnostic functions for increasing productivity

Application

SIMATIC WinCC Runtime Advanced is the high-performance visualization software for simple, machine-oriented visualization tasks. It can be used as a single-user solution for all automation applications in production automation, process automation and building services automation.

SIMATIC WinCC Runtime Advanced can be used in combination with the following operator panels:

- SIMATIC Rack PC:
 - IPC347, IPC547, IPC647, IPC847
- SIMATIC Box PC:
 - IPC227, IPC427, IPC627, IPC827
- SIMATIC Panel PC:
 - IPC277, IPC477, IPC677, Panel PC Ex OG
- SIMATIC S7 Open Controller: ET 200SP Open Controller
- SINUMERIK PC: PCU 50.3, PCU 50.5
- Standard PCs with resolutions (W x H in pixels) of:
 - 4:3 format: 640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200
 - Widescreen format: 800 x 480, 1280 x 800, 1366 x 768, 1440 x 900, 1680 x 1050, 1920 x 1080, 1920 x 1200, 1980 x 1080

Design

SIMATIC WinCC Runtime Advanced is available as a software package with 128, 512, 2 048, 4 096, 8 192 and 16 384 PowerTags.

The term PowerTags is used to identify process tags and area pointers that have a process link to the controller. Tags without process links, constant limit values of tags, and messages (up to 4 000 bit-triggered messages) are also available for additional system performance. The range of functions of WinCC Runtime Advanced includes the centralized HMI components for visualizing and reporting, and it can be expanded to suit requirements and costs by using optional packages.

SIMATIC WinCC Runtime Advanced is configured with the SIMATIC WinCC Advanced or SIMATIC WinCC Professional configuration software.

Function

Visualization via Windows-compliant user interface

Made up of parameterizable screen objects and faceplates created on a project-specific basis:

- Numeric and alphanumeric input/output fields
- Static text and graphic display plus vector graphics
- Dynamizable graphics from HMI symbol library
- Bar graph, trend curve graph with scroll and zoom function as well as read line
- Signal-specific text and graphic lists
- Buttons and switches for operator-process communication
- Editing fields for process values (signals)
- Analog display, slider as example for further screen objects
- Project-specific faceplates created from basic objects of the system
- Graphic displays for various standard graphic formats, e.g. bitmaps, .jpg, .wmf

Alarms and messages

- Discrete alarms and analog alarms as well as event-driven Alarm-S/Alarm-D message procedure with SIMATIC S7
- The new ProDiag alarm and diagnostics concept of the S7-1500 controller is also supported
- Freely-definable message classes for definition of acknowledgment response and display of alarm events

Logging of alarms and process values¹⁾

- Logging in files (e.g. CSV or TXT file) and Microsoft SQL databases
- Online evaluation of process value and alarm logs
- Evaluation of process value and alarm logs using standard Microsoft tools such as Excel

Recipes¹⁾

- Generation of data records for machine data or production data
- Display or entry of data records via a configurable screen object or via process screens distributed within the project
- Transmission of data records from or to the controller
- Import/export of data records from/to CSV files for further processing with other tools (e.g. MS Excel)

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Advanced

Function (continued)

Documentation of process data, alarm events, and recipes

- Time or event-driven report output
- User-definable layout

Flexible expansion of integrated system function using Visual Basic script

Language support for multilingual projects

- Up to 32 online languages
- Language-dependent texts and graphics
- Language selection during runtime

User-oriented access protection according to requirements of regulated sectors

- Authentication with user ID and password
- User group-specific rights
- Central system-wide user administration based on SIMATIC Logon¹⁾
- Monitoring of changes by operators in runtime operation¹⁾
- Recording of operator actions in an Audit Trail¹⁾

Onboard controller connection to many different controllers

- Communication via native drivers and standard OPC channel
- Simultaneous connection using several protocols: OPC client and SIMATIC HMI HTTP protocol are additive, i.e. they can be used in conjunction with other controller connections

Open communication between HMI systems and with higher-level systems

- OPC servers
 - Use of the visualization system as a data server (OPC server) for higher-level automation components, e.g. control systems or systems in the office area
 - OPC-DA server: tags, e.g. process values
- Communication between HMI systems is established on the basis of Ethernet networks, or via the intranet/Internet
 - Read and write access to tags.
 - The WinCC Runtime Advanced or SIMATIC Panels provide other SIMATIC HMI systems or office applications with data (tags)
- Sending of emails on demand or event-driven
 - e.g. to maintenance personnel via SMTP server (Simple Mail Transfer Protocol)
 - The optional use of email/SMS gateways enables access to standard networks (external service provider required)
- System diagnostics via device-specific HTML pages. The following functions are available:
 - Starting and stopping the HMI runtime for maintenance
 - Remote access to recipe data records, passwords and information specific to the HMI system
 - Access to the HMI system files via a file explorer
 - Download of configuration data via the intranet/Internet
 - Supplement with own HTML pages

WinCC Sm@rtServer for the remote control via the intranet and Internet¹⁾

- Display and control of process screens on remote PC or Panel
- A SIMATIC HMI system can be used to control or monitor another system remotely; entry level for client/server configurations for distributed operator stations or for solutions with head-end stations or control rooms

¹⁾ Option for SIMATIC WinCC Runtime Advanced; runtime licenses must be purchased separately. Additional information is available under "WinCC options".

System requirements

	SIMATIC WinCC Runtime Advanced
Processor type (min.)²⁾	32-bit operating system: at least Intel® Atom™ 1.3 GHz or comparable 64-bit operating system: at least Intel® Celeron™ 1.4 GHz or comparable
RAM (min.)³⁾	4 GB or more
Hard disk	8 GB disk space available
Operating systems	32-bit operating systems: • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 • Windows Embedded Standard Edition 7 SP1 (SIMATIC IPC only) 64-bit operating systems: • Windows 7 Professional SP1 • Windows 7 Enterprise SP1 • Windows 7 Ultimate SP1 • Windows Embedded Standard Edition 7 SP1 (SIMATIC IPC only) • Windows 8.1 Professional • Windows 8.1 Enterprise • Windows Embedded 8.1 Industry • Windows 10 Professional Version 1703 • Windows 10 Enterprise Version 1703 • Windows 10 Enterprise 2016 LTSC • Windows Server 2008 R2 Standard Edition SP1 • Windows Server 2012 R2 Standard Edition • Windows Server 2016 Standard Edition
Optical drive	DVD-ROM

²⁾ In combination with options, more powerful systems may be required

³⁾ The required RAM is determined primarily by the size of the graphics used.

Note:

In addition to WinCC, Windows also requires space on the hard disk; e.g. free storage 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.

Technical specifications

The following tables of system limitations provide assistance in estimating whether a specific project is still within the system limitations for WinCC Runtime Advanced. The stated maximum values are not additive.

We cannot guarantee proper functioning of configurations that make full use of all system limits on the HMI devices. In addition to the limitations specified, allowances must be made for restrictions in configuration memory resources.

SIMATIC WinCC Runtime Advanced	
Tags	
Number of tags in the project	24 576
Number of PowerTags	128–16 384
Number of elements per array	1 600
Number of local tags	8 192
Alarms	
Number of alarm classes	32
Number of discrete alarms	6 000
Number of analog alarms	500
Length of an alarm in characters	80
Number of process values per alarm	8
Size of the alarm buffer	2 048
Number of queued alarm events	500
Screens	
Number of screens	750
Number of fields per screen	600
Number of tags per screen	400
Number of complex objects per screen ¹⁾	40
Recipes	
Number of recipes	1 000
Number of elements per recipe ²⁾	2 000
User data length in KB per data record	512
Number of data records per recipe	5 000
Logs	
Number of logs	100
Number of entries per log (including all log segments) ³⁾	500 000
Number of log segments	400
Cyclical trigger for tag logging	1 s
Number of tags that can be logged per log	24 576

SIMATIC WinCC Runtime Advanced	
Trends	
Number of trends	800
Text lists and graphics lists	
Number of graphic lists	500
Number of text lists	500
Number of entries per text or graphic list	3 500
Number of graphic objects	24 576
Number of text elements	40 000
Scripts	
Number of scripts	200
Communication	
Number of connections	8
Number of connections based on "SIMATIC HMI HTTP"	16
Maximum number of connected Sm@rtClients (including a service client)	4 ⁴⁾
Help system	
Number of characters in a help text	500
Languages	
Number of runtime languages	32
Scheduler	
Time-triggered tasks ⁵⁾	48
User administration	
Number of user groups	50
Number of user rights	32
Number of users	100

- 1) Complex objects are: Bars, sliders, symbol library, clock, and all objects from the Controls area.
- 2) When using arrays, each array element represents a recipe element
- 3) For the "segmented circular log" logging method, the number of entries for all sequence logs is valid. The product derived from the number of circular logs times the number of data records in this log may not be exceeded.
- 4) Up to three Sm@rtClients can interconnect with the Sm@rtServer on Panel PC 477.
- 5) Event-triggered tasks are not relevant for the system limits.

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Advanced

Ordering data	Article No.	Article No.		
SIMATIC WinCC Runtime Advanced V16 Basic software <u>Data storage medium</u> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 16 384 PowerTags <u>As download¹⁾</u> E-mail address required for delivery <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 16 384 PowerTags 		6AV2104-0BA06-0AA0 6AV2104-0DA06-0AA0 6AV2104-0FA06-0AA0 6AV2104-0HA06-0AA0 6AV2104-0KA06-0AA0 6AV2104-0LA06-0AA0	Upgrades SIMATIC WinCC Runtime Advanced V11..15.1 to V16 <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 - 16 384 PowerTags <u>As download¹⁾</u> E-mail address required for delivery <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 - 16 384 PowerTags 	6AV2104-3BB06-0AE0 6AV2104-3DD06-0AE0 6AV2104-3FF06-0AE0 6AV2104-3HH06-0AE0 6AV2105-3KK06-0AE0
SIMATIC WinCC Runtime Advanced V16 <u>Data storage medium</u> <ul style="list-style-type: none"> • 128 PowerTags to 512 PowerTags • 512 PowerTags to 2 048 PowerTags • 2 048 PowerTags to 4 096 PowerTags • 4 096 PowerTags to 8 192 PowerTags • 8 192 PowerTags to 16 384 PowerTags <u>As download¹⁾</u> E-mail address required for delivery <ul style="list-style-type: none"> • 128 PowerTags to 512 PowerTags • 512 PowerTags to 2 048 PowerTags • 2 048 PowerTags to 4 096 PowerTags • 4 096 PowerTags to 8 192 PowerTags • 8 192 PowerTags to 16 384 PowerTags 		6AV2104-2BD06-0BD0 6AV2104-2DF06-0BD0 6AV2104-2FH06-0BD0 6AV2104-2HK06-0BD0 6AV2104-2KL06-0BD0	SIMATIC WinCC flexible 2008 to SIMATIC WinCC Runtime Advanced V16 <ul style="list-style-type: none"> • 128 PowerTags to 128 PowerTags²⁾ • 512 PowerTags to 512 PowerTags²⁾ • 2 048 PowerTags to 2 048 PowerTags²⁾ • 4 096 PowerTags to 4 096 PowerTags²⁾ • 8 000 PowerTags to 8 192 PowerTags²⁾ <u>As download¹⁾</u> E-mail address required for delivery <ul style="list-style-type: none"> • 128 PowerTags to 128 PowerTags²⁾ • 512 PowerTags to 512 PowerTags²⁾ • 2 048 PowerTags to 2 048 PowerTags²⁾ • 4 096 PowerTags to 4 096 PowerTags²⁾ • 8 000 PowerTags to 8 192 PowerTags²⁾ 	6AV2104-4BB06-0AE0 6AV2104-4DD06-0AE0 6AV2104-4FF06-0AE0 6AV2104-4HH06-0AE0 6AV2104-4KK06-0AE0
SIMATIC WinCC Runtime Advanced V16 <u>Data storage medium</u> <ul style="list-style-type: none"> • 128 PowerTags to 512 PowerTags • 512 PowerTags to 2 048 PowerTags • 2 048 PowerTags to 4 096 PowerTags • 4 096 PowerTags to 8 192 PowerTags • 8 192 PowerTags to 16 384 PowerTags <u>As download¹⁾</u> E-mail address required for delivery <ul style="list-style-type: none"> • 128 PowerTags to 512 PowerTags • 512 PowerTags to 2 048 PowerTags • 2 048 PowerTags to 4 096 PowerTags • 4 096 PowerTags to 8 192 PowerTags • 8 192 PowerTags to 16 384 PowerTags 		6AV2104-2BD06-0BJ0 6AV2104-2DF06-0BJ0 6AV2104-2FH06-0BJ0 6AV2104-2HK06-0BJ0 6AV2104-2KL06-0BJ0	6AV2104-4BB06-0AK0 6AV2104-4DD06-0AK0 6AV2104-4FF06-0AK0 6AV2104-4HH06-0AK0 6AV2104-4KK06-0AK0	

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

²⁾ Each including 1 upgrade license to the WinCC Runtime Advanced options

Ordering data	Article No.	Article No.
<p>SIMATIC WinCC Runtime Advanced V15.1</p> <p>Basic software Software and documentation on DVD, including options software ¹⁾ Single license, license key on USB flash drive for</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 16 384 PowerTags <p>As download³⁾ Single license, software and license key download. E-mail address required for delivery</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 16 384 PowerTags 	<p>6AV2104-0BA05-0AA0 6AV2104-0DA05-0AA0 6AV2104-0FA05-0AA0 6AV2104-0HA05-0AA0 6AV2104-0KA05-0AA0 6AV2104-0LA05-0AA0</p>	<p>SIMATIC WinCC flexible 2008 to SIMATIC WinCC Runtime Advanced V15.1</p> <p>Software and documentation on DVD, including options software Single license, license keys on USB flash drive for</p> <ul style="list-style-type: none"> • 128 PowerTags to 128 PowerTags ²⁾ • 512 PowerTags to 512 PowerTags ²⁾ • 2 048 PowerTags to 2 048 PowerTags ²⁾ • 4 096 PowerTags to 4 096 PowerTags ²⁾ • 8 000 PowerTags to 8 192 PowerTags ²⁾ <p>As download³⁾ Single license, software and license key download. E-mail address required for delivery</p> <ul style="list-style-type: none"> • 128 PowerTags to 128 PowerTags ²⁾ • 512 PowerTags to 512 PowerTags ²⁾ • 2 048 PowerTags to 2 048 PowerTags ²⁾ • 4 096 PowerTags to 4 096 PowerTags ²⁾ • 8 000 PowerTags to 8 192 PowerTags ²⁾
<p>Powerpacks</p> <p>SIMATIC WinCC Runtime Advanced V15.1 (without version change) Single license, license key only on USB flash drive for PowerTags from</p> <p><u>Data storage medium</u></p> <ul style="list-style-type: none"> • 128 PT to 512 PT • 512 PT to 2 048 PT • 2 048 PT to 4 096 PT • 4 096 PT to 8 192 PT • 8 192 PT to 16 384 PT <p>As download³⁾ Single license, software and license key download. E-mail address required for delivery</p> <ul style="list-style-type: none"> • 128 PT to 512 PT • 512 PT to 2 048 PT • 2 048 PT to 4 096 PT • 4 096 PT to 8 192 PT • 8 192 PT to 16 384 PT 	<p>6AV2104-2BD05-0BD0 6AV2104-2DF05-0BD0 6AV2104-2FH05-0BD0 6AV2104-2HK05-0BD0 6AV2104-2KL05-0BD0</p>	<p>SIMATIC WinCC flexible Panel Options to SIMATIC WinCC (TIA Portal) Panel Options</p> <ul style="list-style-type: none"> • WinCC flexible /Audit for SIMATIC Panels to SIMATIC WinCC Audit for SIMATIC Comfort/Mobile Panels • WinCC flexible /Sm@rtAccess for SIMATIC Panel to SIMATIC WinCC Sm@rtServer for SIMATIC Panels • WinCC flexible /Sm@rtService for SIMATIC Panels to SIMATIC WinCC Sm@rtServer for SIMATIC Panels • WinCC flexible/ProAgent for Panels to SIMATIC ProDiag for Comfort/Mobile Panel <p>• Data storage medium</p> <p>• As download³⁾ Single license, software and license key download. E-mail address required for delivery</p>
<p>Upgrades</p> <p>SIMATIC WinCC Runtime Advanced V11..14 to V15.1 Software and documentation on DVD, including options software Single license, license keys on USB flash drive for</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 - 16 384 PowerTags <p>As download³⁾ Single license, software and license key download. E-mail address required for delivery</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 - 16 384 PowerTags 	<p>6AV2104-3BB05-0AE0 6AV2104-3DD05-0AE0 6AV2104-3FF05-0AE0 6AV2104-3HH05-0AE0 6AV2105-3KK05-0AE0</p>	<p>6AV2107-4XP00-0BF0 6AV2107-4XP00-0BK0</p>

¹⁾ Runtime licenses for WinCC Runtime Advanced options must be purchased separately for each target system

²⁾ Each including 1 upgrade license to the WinCC Runtime Advanced options

³⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-advanced>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Professional

Overview

PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients.

SIMATIC WinCC Runtime Professional is the information hub for corporation-wide vertical integration. SIMATIC WinCC Runtime Professional is configured with the SIMATIC WinCC Professional configuration software.

Benefits

- Functions for all visualization tasks:
 - Operator functions
 - Graphics and trend displays
 - Alarm logging
 - Report system
 - Archiving (option)
 - Recipe management (option)
- Universally scalable
 - Expandable from single station to client-server configurations
 - Process visualization via the web with the WinCC WebNavigator
- Open standards for easy integration
 - Efficient real-time database MS SQL Server
 - Open for application modules with ActiveX controls
 - Visual Basic for Applications for individual expansions
 - OPC for cross-vendor communication
- Part of the Totally Integrated Automation Portal
 - Direct access to the tag and message configuration of the SIMATIC controller
 - Excellent support of the new SIMATIC S7-1500 controller
 - With symbolic addressing
 - Access to the new memory-optimized data blocks
 - New ProDiag alarm and diagnostics concept
 - Integrated diagnostic functions for increasing productivity

Application

SIMATIC WinCC Runtime Professional is designed for visualization and operator control of processes, production flows, machines and plants. With its powerful process interface, especially to the SIMATIC family, and the secure data logging, WinCC Runtime Professional enables solutions for the process control.

The sector-neutral basic system enables universal usage in all automation applications.

SIMATIC WinCC Runtime Professional can be used in combination with the following operator panels:

SIMATIC PCs:

- SIMATIC Rack PC: IPC547, IPC647, IPC847
- SIMATIC Box PC: IPC427, IPC627, IPC827
- SIMATIC Panel PC: IPC477, IPC677
- Standard PC

Design

SIMATIC WinCC Runtime Professional is available as a software package with 128, 512, 2 048, 4 096, 8 192, 65 536, 102 400, 153 600 and 262 144 PowerTags.

PowerTags are data points that are connected to controllers or other data sources via a WinCC Runtime Professional channel. Up to 32 alarms can be obtained from one data point. Moreover, internal tags without coupling are available for additional system performance. WinCC Runtime Professional also contains 500 archive tags. Additional archive licenses can be obtained for greater quantity structures.

Licenses for a multi-user configuration

The system software with the required number of PowerTags and additionally the SIMATIC WinCC Server for Runtime Professional option must be installed on the server. For the clients in the basic configuration, a SIMATIC WinCC Client for Runtime Professional license is sufficient.

Function

Visualization via Windows-compliant user interface

Made up of parameterizable screen objects and faceplates created on a project-specific basis:

- Numeric and alphanumeric input/output fields
- Static text and graphic display plus vector graphics
- Dynamizable graphics from HMI symbol library
- Bar graph, trend curve graph with scroll and zoom function as well as read line
- Signal-specific text and graphic lists
- Buttons and switches for operator-process communication
- Editing fields for process values (signals)
- Analog display, slider as example for further screen objects
- Project-specific faceplates created from basic objects of the system
- Graphic displays for various standard graphic formats, e.g. bitmaps, .jpg, .wmf, .svg

Alarms and messages

- Discrete alarms and analog alarms, as well as event-driven Alarm-S/Alarm-D message procedure with SIMATIC S7
- The new ProDiag alarm and diagnostics concept of the S7-1500 controller is also supported
- Freely-definable message classes for definition of acknowledgment response and display of alarm events

Logging of messages and process values ¹⁾

- Signaling system for detecting and archiving events with display and control options according to DIN 19235
- Process logging for the acquisition, compression and storage of measured values
- Online evaluation of process value and alarm logs

Recipes ¹⁾

- Generation of data records for machine data or production data
- Display or entry of data records via a configurable screen object or via process screens distributed within the project
- Transmission of data records from or to the controller
- Import/export of data records for further processing with other tools (e.g. MS Excel)

Documentation of process data, alarm events, and recipes

- Time or event-driven report output
- User-definable layout

Flexible expansion by means of Visual Basic Script and ANSI-C

- Programming interfaces for individual access to data and functions of WinCC Runtime Professional and for the integration in user programs with VBA, VB Script, C-API, C-Script (ANSI-C)

Open communication between HMI systems and with higher-level systems

- OPC server/client
Use of the visualization system as a data server (OPC server) for higher-level automation components such as control systems or systems in the office area
 - OPC DA server: tags, e.g. process values
 - OPC HDA server: logged process values
 - OPC A&E server: Alarms
 - OPC XML DA server: tags, e.g. process values
 - OPC XML DA server: tags, e.g. process values
 - OPC UA DA client Tags, e.g. process values

- OLE DB server
 - Standardized and user-friendly access to WinCC log data (MS SQL Server 2005).
 - Access via the OLE DB Provider supplies all WinCC log data available along with the accompanying process values, as well as alarm and user texts.
 - The WinCC OLE DB Provider also supports analysis functions such as minimum, maximum, alarm hit list, etc.
- WinCC WebUX for Runtime Professional ¹⁾
 - The WebUX option enables platform and browser-independent operator control and monitoring via the Internet or the in-house intranet or LAN.
 - Installation on the terminal is unnecessary – an HTML5-compatible browser is sufficient. WebUX can then also be used on mobile terminals.
- WinCC WebNavigator for Runtime Professional ¹⁾
 - Option for SIMATIC WinCC Runtime Professional for operating and monitoring plants over the Internet, company Intranet or LAN.
 - Configuration from a web server with the SIMATIC WinCC Runtime Professional software as a single-user, client or server version and a web client that enables operator control and monitoring of a current WinCC Runtime Professional project via an Internet browser with ActiveX support.
The WinCC basic system does not have to be installed on the client computer.
- WinCC DataMonitor for Runtime Professional ¹⁾
 - The WinCC DataMonitor is used for displaying and evaluating current process states and historical data on office PCs using standard tools such as Microsoft Internet Explorer or Microsoft Excel.
The DataMonitor client is supported by a web server with current and historic process data and alarms.
All staff ranging from machine operators to corporate managers can use the DataMonitor to obtain information.

Option for SIMATIC WinCC Runtime Professional; runtime licenses must be purchased separately. Additional information is available under "WinCC options".

Language support for multilingual projects

- Language-dependent texts and graphics
- Language selection during runtime

Onboard controller connection to many different controllers

- Communication via native drivers and standard OPC channel
- For communication with subordinate controls (SIMATIC protocols, PROFIBUS DP, PROFIBUS FMS, DDE and OPC server included in the scope of supply)

Note:

The SIMATIC Net V16 SP1 included in the delivery must be installed for communication. Before installing SIMATIC WinCC RT Professional, please always ensure compatibility with the add-on packages and options you require and use.

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Professional

Function (continued)

System prerequisites	SIMATIC WinCC Runtime Professional
Processor type (min.) ¹⁾	<ul style="list-style-type: none"> Intel Celeron Dual Core 2.2 GHz (Ivy/Sandy Bridge)
RAM (min.) ²⁾	4 GB
Free hard disk space ³⁾	8 GB on system drive "C:"
Operating systems	All 32-bit operating systems 64-bit operating systems: <ul style="list-style-type: none"> Windows 8.1 (Professional, Enterprise) Windows Embedded 8.1 Industry Windows 7 SP1 (Professional, Enterprise, Ultimate) Windows Embedded Standard Edition 7 SP
Graphics card	32 MB RAM, 24-bit color depth
Network	Ethernet 10 Mbps or higher
Optical drive	DVD-ROM

¹⁾ In combination with options, more powerful systems may be required

²⁾ The required RAM is determined primarily by the size of the graphics used.

³⁾ Without taking archives into account.

Note:

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.

Integration

Integration in company-wide solutions (IT and business integration)

WinCC Runtime Professional is strictly based on Microsoft technology, which provides for the greatest possible compatibility and integration ability.

Cross-manufacturer communication is also a simply exercise. The reason: WinCC Runtime Professional can be used as an OPC client and server, and in addition to access to current process values, it also supports standards such as OPC HDA (Historical Data Access), OPC Alarm & Events, OPC UA Data Access and OPC XML Data Access.

Just as important: Visual Basic Scripting (VBS) as an easy-to-learn, open Runtime language. If desired, professional application developers can also use ANSI-C.

WinCC Runtime Professional integrates a powerful and scalable Historian function based on the Microsoft SQL Server in the basic system.

Thus the user is given all possibilities: from high-performance archiving of current process data, to long-term archiving with high data compression, through to a central information hub in the form of a company-wide Process Historian. Open interfaces form the basis for an effective IT and business integration.

Technical specifications

The following tables of system limits provide assistance in estimating whether a specific project is still within the system limitations for WinCC Runtime Professional. The stated maximum values are not additive.

We cannot guarantee proper functioning of configurations that make full use of all system limits on the HMI devices.

In addition to the limitations specified, allowances must be made for restrictions in configuration memory resources.

	SIMATIC WinCC Runtime Professional
Alarms	
Configurable alarms per server/ single user	150,000
PowerTags per alarm line	10
User text blocks per alarm line	10
Message classes	256
Alarm types	16
Alarm priorities	17 (0...16)
Alarms in Runtime	
Alarms per alarm log	Unlimited ¹⁾
Alarms per short-term log list	1,000
Alarms per long-term log list	1,000 ²⁾
Alarms per alarm display	5,000 ³⁾
Screens	
Objects per screen ⁴⁾	Unlimited ⁵⁾
Levels per screen	32
Screens per project	Unlimited ⁵⁾
Instances of fixed faceplates in a process screen	31 instances of the same picture type
Screen size in pixels	10 000 x 10 000
Nesting levels of screen objects	20
Recipes	
Number of recipes	Unlimited ⁵⁾
Number of recipe elements	500 ⁶⁾
Number of recipe data records	10,000 ⁶⁾
Number of views	Unlimited ⁵⁾
Logs	
Trend views per screen	25
Trends per trend view	80
Tables per screen	25
Columns per table	12
Values per table	30,000
Logs per single-user station/server	100
Log tags per single-user station/ server ⁷⁾	80,000

	SIMATIC WinCC Runtime Professional
Trends	
Trend views per image	25
Trends per trend view	80
User administration	
Number of user groups	128
Number of user rights	999
Number of users	128
Configurations – Quantity structure in a multi-user system	
WinCC clients in a system	32 ^{8) 9)}
Web clients in a system	150 ¹⁰⁾

- 1) Limited by system resources.
- 2) On single-user station or server or on client per server if "LongTimeArchiveConsistency" is set to "No". On single-user station, server, or client if "LongTimeArchiveConsistency" is set to "Yes".
- 3) On single-user station or server or on client per server.
- 4) The number and complexity of the objects affect the performance.
- 5) Limited by system resources.
- 6) The sum of the number of recipe elements and number of data records must not exceed a value of 1,000,000
- 7) Dependent on the Logging PowerPack used for the log tags. 500 log tags are contained in the basis version.
- 8) If the server is also used as an operating unit, the number of clients for this server is reduced to four.
- 9) Mixed configuration: 32 clients + 3 web clients
- 10) Mixed configuration: 50 web clients + 1 WinCC client

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Professional

Ordering data

Article No.

Article No.

SIMATIC WinCC Runtime Professional V16

Basic software

- 128 PowerTags
- 512 PowerTags
- 2 048 PowerTags
- 4 096 PowerTags
- 8 192 PowerTags
- 65 536 PowerTags
- 102 400 PowerTags
- 153 600 PowerTags
- 262 144 PowerTags
- Client for Runtime Professional Incl. 500 archive tags each

As download¹⁾

E-mail address required for delivery.

- 128 PowerTags
- 512 PowerTags
- 2 048 PowerTags
- 4 096 PowerTags
- 8 192 PowerTags
- 65 536 PowerTags
- 102 400 PowerTags
- 153 600 PowerTags
- 262 144 PowerTags
- Client for Runtime Professional Incl. 500 archive tags each

6AV2105-0BA06-0AA0
6AV2105-0DA06-0AA0
6AV2105-0FA06-0AA0
6AV2105-0HA06-0AA0
6AV2105-0KA06-0AA0
6AV2105-0MA06-0AA0
6AV2105-0PA06-0AA0
6AV2105-0RA06-0AA0
6AV2105-0TA06-0AA0
6AV2107-0DB06-0AA0

6AV2105-0BA06-0AH0
6AV2105-0DA06-0AH0
6AV2105-0FA06-0AH0
6AV2105-0HA06-0AH0
6AV2105-0KA06-0AH0
6AV2105-0MA06-0AH0
6AV2105-0PA06-0AH0
6AV2105-0RA06-0AH0
6AV2105-0TA06-0AH0
6AV2107-0DB06-0AH0

SIMATIC WinCC Runtime Professional ASIA V16

- 128 PowerTags
- 512 PowerTags
- 2 048 PowerTags
- 4 096 PowerTags
- 8 192 PowerTags
- 65 536 PowerTags
- 102 400 PowerTags
- 153 600 PowerTags
- 262 144 PowerTags
- Client for Runtime Professional Incl. 500 archive tags each

6AV2105-0BA16-0AA0
6AV2105-0DA16-0AA0
6AV2105-0FA16-0AA0
6AV2105-0HA16-0AA0
6AV2105-0KA16-0AA0
6AV2105-0MA16-0AA0
6AV2105-0PA16-0AA0
6AV2105-0RA16-0AA0
6AV2105-0TA16-0AA0
6AV2107-0DB16-0AH0

Powerpacks

SIMATIC WinCC Runtime Professional V16 and SIMATIC WinCC Runtime Professional ASIA V16

- 128 to 512 PowerTags
- 512 to 2 048 PowerTags
- 2 048 to 4 096 PowerTags
- 4 096 to 8 192 PowerTags
- 8 192 to 65 536 PowerTags
- 65 536 to 102 400 PowerTags
- 102 400 to 153 600 PowerTags
- 153 600 to 262 144 PowerTags

As download¹⁾

E-mail address required for delivery.

- 128 to 512 PowerTags
- 512 to 2 048 PowerTags
- 2 048 to 4 096 PowerTags
- 4 096 to 8 192 PowerTags
- 8 192 to 65 536 PowerTags
- 65 536 to 102 400 PowerTags
- 102 400 to 153 600 PowerTags
- 153 600 to 262 144 PowerTags

6AV2105-2BD06-0BD0
6AV2105-2DF06-0BD0
6AV2105-2FH06-0BD0
6AV2105-2HK06-0BD0
6AV2105-2KM06-0BD0
6AV2105-2MP06-0BD0
6AV2105-2PR06-0BD0
6AV2105-2RT06-0BD0

6AV2105-2BD06-0BJ0
6AV2105-2DF06-0BJ0
6AV2105-2FH06-0BJ0
6AV2105-2HK06-0BJ0
6AV2105-2KM06-0BJ0
6AV2105-2MP06-0BJ0
6AV2105-2PR06-0BJ0
6AV2105-2RT06-0BJ0

Upgrades V11..15.1 to WinCC V16

SIMATIC WinCC Runtime Professional V11..15.1 and

SIMATIC WinCC Runtime Professional ASIA V11..V15.1 to V16

- SIMATIC WinCC Runtime Professional 128 PowerTags
 - SIMATIC WinCC Runtime Professional 512 PowerTags
 - SIMATIC WinCC Runtime Professional 2 048 PowerTags
 - SIMATIC WinCC Runtime Professional 4 096 PowerTags
 - SIMATIC WinCC Runtime Professional 8 192 PowerTags
 - SIMATIC WinCC Runtime Professional 64k to 256k PowerTags
 - Client for Runtime Professional
- As download¹⁾
E-mail address required for delivery.

6AV2105-3BB06-0AE0

6AV2105-3DD06-0AE0

6AV2105-3FF06-0AE0

6AV2105-3HH06-0AE0

6AV2105-3KK06-0AE0

6AV2105-3MM06-0AE0

6AV2107-3DB06-0AE0

6AV2105-3BB06-0AK0

6AV2105-3DD06-0AK0

6AV2105-3FF06-0AK0

6AV2105-3HH06-0AK0

6AV2105-3KK06-0AK0

6AV2105-3MM06-0AK0

6AV2107-3DB06-0AK0

Upgrades

to SIMATIC WinCC RT Professional V16

- SIMATIC WinCC Runtime Professional 128 PowerTags
 - SIMATIC WinCC Runtime Professional 512 PowerTags
 - SIMATIC WinCC Runtime Professional 2 048 PowerTags
 - SIMATIC WinCC Runtime Professional 8 192 PowerTags
 - SIMATIC WinCC Runtime Professional 64k to 256k PowerTags
 - Client for Runtime Professional
- As download¹⁾
E-mail address required for delivery.
- SIMATIC WinCC Runtime Professional 128 PowerTags
 - SIMATIC WinCC Runtime Professional 512 PowerTags
 - SIMATIC WinCC Runtime Professional 2 048 PowerTags
 - SIMATIC WinCC Runtime Professional 8 192 PowerTags
 - SIMATIC WinCC Runtime Professional 64k to 256k PowerTags
 - Client for Runtime Professional

6AV2105-4BB06-0AE0

6AV2105-4DD06-0AE0

6AV2105-4FF06-0AE0

6AV2105-4KK06-0AE0

6AV2105-4MM06-0AE0

6AV2107-4DB06-0AE0

6AV2105-4BB06-0AK0

6AV2105-4DD06-0AK0

6AV2105-4FF06-0AK0

6AV2105-4KK06-0AK0

6AV2105-4MM06-0AK0

6AV2107-4DB06-0AK0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

Ordering data	Article No.	Article No.
<p>SIMATIC WinCC Runtime Professional V15.1</p> <p>Basic software For PC systems; incl. software options ¹⁾, language/script versions: en, de, fr, it, es Single license, on DVD incl. licensing, on USB flash drive, for:</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 65 536 PowerTags • 102 400 PowerTags • 153 600 PowerTags • 262 144 PowerTags <p>Incl. 500 archive tags each</p> <p>As download³⁾ Single License, software and license key download. E-mail address required for delivery.</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 65 536 PowerTags • 102 400 PowerTags • 153 600 PowerTags • 262 144 PowerTags <p>Incl. 500 archive tags each</p>	<p>6AV2105-0BA05-0AA0</p> <p>6AV2105-0DA05-0AA0</p> <p>6AV2105-0FA05-0AA0</p> <p>6AV2105-0HA05-0AA0</p> <p>6AV2105-0KA05-0AA0</p> <p>6AV2105-0MA05-0AA0</p> <p>6AV2105-0PA05-0AA0</p> <p>6AV2105-0RA05-0AA0</p> <p>6AV2105-0TA05-0AA0</p>	<p>Powerpacks</p> <p>SIMATIC WinCC Runtime Professional V15.1 and SIMATIC WinCC Runtime Professional ASIA V15.1 Single license, license key only on USB flash drives for PowerTags from</p> <ul style="list-style-type: none"> • 128 to 512 PowerTags • 512 to 2 048 PowerTags • 2 048 to 4 096 PowerTags • 4 096 to 8 192 PowerTags • 8 192 to 65 536 PowerTags • 65 536 to 102 400 PowerTags • 102 400 to 153 600 PowerTags • 153 600 to 262 144 PowerTags <p>As download³⁾ Single License, software and license key download. E-mail address required for delivery.</p> <ul style="list-style-type: none"> • 128 to 512 PowerTags • 512 to 2 048 PowerTags • 2 048 to 4 096 PowerTags • 4 096 to 8 192 PowerTags • 8 192 to 65 536 PowerTags • 65 536 to 102 400 PowerTags • 102 400 to 153 600 PowerTags • 153 600 to 262 144 PowerTags
<p>SIMATIC WinCC Runtime Professional ASIA V15.1 For PC systems; incl. software options ¹⁾, language/script versions: en, zh-CHS, zh-CHT, ko, ja Single license, on DVD incl. licensing, for:</p> <ul style="list-style-type: none"> • 128 PowerTags • 512 PowerTags • 2 048 PowerTags • 4 096 PowerTags • 8 192 PowerTags • 65 536 PowerTags • 102 400 PowerTags • 153 600 PowerTags • 262 144 PowerTags <p>Incl. 500 archive tags each</p>	<p>6AV2105-0BA15-0AA0</p> <p>6AV2105-0DA15-0AA0</p> <p>6AV2105-0FA15-0AA0</p> <p>6AV2105-0HA15-0AA0</p> <p>6AV2105-0KA15-0AA0</p> <p>6AV2105-0MA15-0AA0</p> <p>6AV2105-0PA15-0AA0</p> <p>6AV2105-0RA15-0AA0</p> <p>6AV2105-0TA15-0AA0</p>	<p>Upgrades V11..14 to WinCC V15.1</p> <p>SIMATIC WinCC Runtime Professional V11..14 and SIMATIC WinCC Runtime Professional ASIA V11..V14 to V15.1 Single license, on DVD including licensing on USB flash drive: The upgrades include WinCC RT Prof. upgrade licenses for the options (WebNavigator, DataMonitor, WebDiag Client, excluding WinCC Upgrade Client)</p> <ul style="list-style-type: none"> • SIMATIC WinCC Runtime Professional 128 PowerTags • SIMATIC WinCC Runtime Professional 512 PowerTags • SIMATIC WinCC Runtime Professional 2 048 PowerTags • SIMATIC WinCC Runtime Professional 4 096 PowerTags • SIMATIC WinCC Runtime Professional 8 192 PowerTags • SIMATIC WinCC Runtime Professional 64k to 256k PowerTags • SIMATIC WinCC Client for Runtime Professional V15.1 <p>As download³⁾ Single License, software and license key download. E-mail address required for delivery.</p> <ul style="list-style-type: none"> • SIMATIC WinCC Runtime Professional 128 PowerTags • SIMATIC WinCC Runtime Professional 512 PowerTags • SIMATIC WinCC Runtime Professional 2 048 PowerTags • SIMATIC WinCC Runtime Professional 4 096 PowerTags • SIMATIC WinCC Runtime Professional 8 192 PowerTags • SIMATIC WinCC Runtime Professional 64k to 256k PowerTags • SIMATIC WinCC Client for Runtime Professional V15.1
<p>SIMATIC WinCC Client for Runtime Professional V15.1</p> <ul style="list-style-type: none"> • WinCC Client for Runtime Professional • WinCC Client for Runtime Professional (as download ³⁾) • WinCC Client for Runtime Professional ASIA 	<p>6AV2107-0DB05-0AA0</p> <p>6AV2107-0DB05-0AH0</p> <p>6AV2107-0DB15-0AA0</p>	<p>6AV2105-2BD05-0BD0</p> <p>6AV2105-2DF05-0BD0</p> <p>6AV2105-2FH05-0BD0</p> <p>6AV2105-2HK05-0BD0</p> <p>6AV2105-2KM05-0BD0</p> <p>6AV2105-2MP05-0BD0</p> <p>6AV2105-2PR05-0BD0</p> <p>6AV2105-2RT05-0BD0</p> <p>6AV2105-2BD05-0BJ0</p> <p>6AV2105-2DF05-0BJ0</p> <p>6AV2105-2FH05-0BJ0</p> <p>6AV2105-2HK05-0BJ0</p> <p>6AV2105-2KM05-0BJ0</p> <p>6AV2105-2MP05-0BJ0</p> <p>6AV2105-2PR05-0BJ0</p> <p>6AV2105-2RT05-0BJ0</p> <p>6AV2105-3BB05-0AE0</p> <p>6AV2105-3DD05-0AE0</p> <p>6AV2105-3FF05-0AE0</p> <p>6AV2105-3HH05-0AE0</p> <p>6AV2105-3KK05-0AE0</p> <p>6AV2105-3MM05-0AE0</p> <p>6AV2107-3DB05-0AE0</p> <p>6AV2105-3BB05-0AK0</p> <p>6AV2105-3DD05-0AK0</p> <p>6AV2105-3FF05-0AK0</p> <p>6AV2105-3HH05-0AK0</p> <p>6AV2105-3KK05-0AK0</p> <p>6AV2105-3MM05-0AK0</p> <p>6AV2107-3DB05-0AK0</p>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Professional

Ordering data

SIMATIC WinCC Software Update Service (SUS) RT Professional ^{4) 5) 6)}

Software Update Service for
WinCC RT Professional Software

- WinCC RT Professional Client (SUS)
- WinCC RT Professional (SUS) As download ³⁾
- WinCC RT Professional Client (SUS)
- WinCC RT Professional (SUS)

Article No.

6AV2107-0DB00-0AL0

6AV2105-0XA00-0AL0

6AV2107-0DB00-0AY0

6AV2105-0XA00-0AY0

Article No.

Upgrades WinCC V7.0..V7.4 to WinCC V15.1

SIMATIC WinCC RC or RT V7.0..V7.4 to SIMATIC WinCC RT Professional V15.1 and

SIMATIC WinCC RC or RT V7.0..V7.4 ASIA to SIMATIC WinCC RT Professional ASIA V15.1

Single license, on DVD incl.
licensing on USB flash drive

- WinCC RC/RT 128 PowerTags to WinCC Runtime Professional 128 PowerTags²⁾ **6AV2105-4BB05-0AE0**
 - WinCC RC/RT 512 PowerTags to WinCC Runtime Professional 512 PowerTags²⁾ **6AV2105-4DD05-0AE0**
 - WinCC RC/RT 2 048 PowerTags to WinCC Runtime Professional 2 048 PowerTags²⁾ **6AV2105-4FF05-0AE0**
 - WinCC RC/RT 8 192 PowerTags to WinCC Runtime Professional 8 192 PowerTags²⁾ **6AV2105-4KK05-0AE0**
 - WinCC RC/RT 64k to 256k PowerTags to WinCC Runtime Professional 64k to 256k PowerTags²⁾ **6AV2105-4MM05-0AE0**
 - WinCC RC/RT 128 / RC/RT Client to WinCC RT Professional Client **6AV2107-4DB05-0AE0**
- As download³⁾
Single License, software
and license key download.
E-mail address required
for delivery.
- WinCC RC/RT 128 PowerTags to WinCC Runtime Professional 128 PowerTags²⁾ **6AV2105-4BB05-0AK0**
 - WinCC RC/RT 512 PowerTags to WinCC Runtime Professional 512 PowerTags²⁾ **6AV2105-4DD05-0AK0**
 - WinCC RC/RT 2 048 PowerTags to WinCC Runtime Professional 2 048 PowerTags²⁾ **6AV2105-4FF05-0AK0**
 - WinCC RC/RT 8 192 PowerTags to WinCC Runtime Professional 8 192 PowerTags²⁾ **6AV2105-4KK05-0AK0**
 - WinCC RC/RT 64k to 256k PowerTags to WinCC Runtime Professional 64k to 256k PowerTags²⁾ **6AV2105-4MM05-0AK0**
 - WinCC RC/RT 128 / RC/RT Client to WinCC RT Professional Client **6AV2107-4DB05-0AK0**

¹⁾ Runtime licenses for WinCC Runtime Professional options must be purchased separately for each target system

²⁾ Each including 1 upgrade license to the WinCC Runtime Professional options

³⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

⁴⁾ Software Update Service valid for 1 year. Contract automatically extended by 1 more year unless canceled 3 months prior to expiration. According to license agreement, 1 Software Update Service must be ordered for each WinCC station

⁵⁾ Requires the current software version.

⁶⁾ SUS available as download.

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-professional>

Overview

Communication – SIMATIC WinCC Runtime Advanced

WinCC Advanced is an open visualization system and offers the option of connecting the most diverse control systems.

Number of connectable controllers

WinCC Advanced permits the parallel coupling of up to 8 controllers.

Connection to third-party controllers.

The following "Connection overview" table includes lists of third-party protocols and controllers which are directly supported by WinCC Advanced.

Generally it is also possible to connect third-party controllers via OPC (OLE for Process Control).

Current notes and information about OPC servers from many different suppliers can be found at:
<http://www.opcfoundation.org/>

WinCC Advanced supports the standards:

- OPC Data Access 2.05a
- OPC UA Data Access 1.01
- OPC XML Data Access 1.00 (client via DCOM/XML gateway)

Coupling overview for WinCC Runtime Advanced

Protocol	Description	PC interface
SIMATIC HMI		
Ethernet TCP/IP (HTTP communication)	HTTP communication for data exchange between SIMATIC HMI (client + server) ¹⁾	CP 1612 A2
SIMATIC S7		
Ethernet TCP/IP (S7 communication)	Channel for communication via Ethernet TCP/IP with max. 8 x SIMATIC S7 controllers S7-1200, S7-1500 S7-300, S7-400, S7-200 with CP 243-1	CP 1612 A2 CP 1613 A2 CP 1623
MPI, PROFIBUS (S7 communication)	Channel for communication via MPI, PROFIBUS with max. 8 x SIMATIC S7 controllers S7-1200 with CM 1243-5 (DP master), S7-1500 S7-300, S7-400, S7-200 (passive S7-200 only)	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
PPI (PPI protocol)	Channel for communication via PPI with 1 x SIMATIC S7-200 (network operation, e.g. parallel PG possible)	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
Software interface (S7 communication)	Channel for communication via software interface with WinAC	
SINUMERIK ²⁾		
Ethernet TCP/IP (S7 communication)	Channel for communication via Ethernet TCP/IP with SINUMERIK 840D sl	CP 1612 A2 CP 1613 A2 CP 1623
MPI (S7 communication)	Channel for communication via MPI with SINUMERIK 840D sl	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

WinCC Runtime Communication

Overview (continued)

Protocol	Description	PC interface
Third-party controllers (WinCC V11.0 and higher) ³⁾		
Allen Bradley Ethernet IP	Channel for communication with max. 4 x Allen Bradley controllers via Ethernet TCP/IP with Allen Bradley Ethernet IP protocol The ControlLogix / CompactLogix, SLC500 / MicroLogix and PLC5 controllers are supported	CP 1612 A2
Allen Bradley DF1	Channel for communication with Allen Bradley controllers via DF1 protocol The controllers SLC500 / MicroLogix and PLC5 are supported ³⁾	COM1/COM2
Mitsubishi MC TCP/IP	Channel for communication with max. 4 x Mitsubishi controllers via Ethernet TCP/IP with Mitsubishi MC TCP/IP protocol The FX3, Q, and iQ/QnUD controller series are supported	CP 1612 A2
Mitsubishi FX	Channel for communication with Mitsubishi controllers via FX protocol The FX1N, FX2N controllers are supported	COM1/COM2
Modbus TCP/IP	Channel for communication with max. 4 x Modicon controllers via Ethernet TCP/IP using the Modbus TCP/IP protocol The Quantum, Momentum, Premium, TSX Micro, Compact and M340 controllers are supported	CP 1612 A2
Modbus RTU	Channel for communication with Modicon controllers via the Modbus RTU protocol The Quantum, Momentum, and Compact controllers are supported	COM1/COM2
Omron Link / Multi Link	Channel for communication with Omron controllers via the Link/Multi protocol The CP1x, CJ1x, CJ2H, CS1x, and CP2MC controllers are supported	COM1/COM2
Cross-vendor		
OPC client ^{1) 4)} for OPC DA, OPC UA DA, XML DA	Channel for OPC communication, WinCC can acquire data from OPC server applications	CP 1612 A2
OPC server for OPC DA	Server applications for OPC communication; WinCC provides process data to OPC clients	CP 1612 A2

¹⁾ HTTP and OPC communication can be used in combination with the other couplings; regarding SIMATIC Panels that support HTTP or OPC communication, see the overview under "System interfaces (WinCC V11)".

²⁾ "SINUMERIK Operate WinCC RT Advanced" license required; for further information, see NC 60 Catalog.

³⁾ For detailed information regarding supported controllers, see "System interfaces (WinCC V11)"

⁴⁾ Application note:

Parallel use of the OPC client channel allows, for example, connection to an SNMP OPC server for visualization of the data present there. The SNMP OPC server enables monitoring of any network components (e.g. switches) that support the SNMP protocol. Further information can be found under SIMATIC NET communications systems/SNMP OPC server.

Communication – SIMATIC WinCC Runtime Professional

WinCC Professional is an open process visualization system and offers the option of connecting the most diverse control systems.

Released communication software

Only communication software with the listed (or higher) product versions should be used. Corresponding SIMATIC NET upgrades are available for the upgrading of older versions.

Number of connectable controllers

With CP 1613 A2/CP 1623, a maximum of 64 S7 controllers can be connected via Industrial Ethernet; with CP 5612/CP 5622 a maximum of 8 and with CP 5613 A3 a maximum of 44 S7 controllers via PROFIBUS. With approx. 10 or more controllers, the use of Industrial Ethernet is recommended.

Client-server communication

Communication between the clients and the server is implemented using the TCP/IP protocol. The construction of a separate PC-LAN is recommended. For small projects with correspondingly small message frame advent, a SIMATIC NET Industrial Ethernet can be used for both process communication (WinCC/server ↔ PLC) and for PC-PC communication (WinCC/client ↔ WinCC/server)

Connection to third-party controllers

The following "Connection overview" table includes lists of third-party protocols and controllers which are directly supported by WinCC Professional. Generally it is also possible to connect third-party controllers via OPC (OLE for Process Control).

Current notes and information about OPC servers from many different suppliers can be found at:
<http://www.opcfoundation.org/>

WinCC Professional supports the standards:

- OPC Data Access 2.05a
- OPC Data Access 3.00
- OPC UA Data Access 1.01
- OPC XML Data Access 1.00
- OPC HDA 1.20
- OPC A&E 1.10

Overview (continued)**Coupling overview for WinCC Runtime Professional**

Protocol	Description	PC interface
SIMATIC S7		
SIMATIC S7	Protocol Suite with channel units for communication with SIMATIC S7 via <ul style="list-style-type: none"> • Ethernet TCP/IP (S7 communication) to S7-1200, S7-1500, S7-300, S7-400 • MPI, PROFIBUS (S7 communication) to S7-1200 with CM 1243-5 (DP master), S7-1500, S7-300, S7-400 • Software interface (S7 communication) to Win AC 	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
Non-Siemens controllers (WinCC V11.0 and higher)		
Allen Bradley Ethernet IP	Channel for communication with Allen Bradley controllers via Ethernet TCP/IP with Ethernet IP protocol The ControlLogix / CompactLogix, SLC500 / MicroLogix, and PLC5 controllers are supported	CP 1612 A2
Mitsubishi MC TCP/IP	Channel for communication with Mitsubishi controllers via Ethernet TCP/IP with Mitsubishi MC TCP/IP protocol The FX3, Q, and iQ/QnUD controller series are supported	CP 1612 A2
Modbus TCP/IP	Channel for communication with Modicon controllers via Ethernet TCP/IP using the Modbus TCP/IP protocol The Quantum, Momentum, Premium, TSX Micro, Compact and M340 controllers are supported	CP 1612 A2
Cross-vendor		
OPC client ¹⁾ for OPC DA, OPC XML DA	Channel for OPC communication, WinCC can acquire data from OPC server applications	CP 1612 A2
OPC server for OPC DA, OPC UA DA, OPC XML DA, OPC A&E, OPC HDA	Server applications for OPC communication; WinCC provides process data to OPC clients	CP 1612 A2

¹⁾ Application note:

Parallel use of the OPC client channel allows, for example, connection to an SNMP OPC server for visualization of the data present there. The SNMP OPC server enables monitoring of any network components (e.g. switches) that support the SNMP protocol. Further information can be found under SIMATIC NET communications systems/SNMP OPC server.

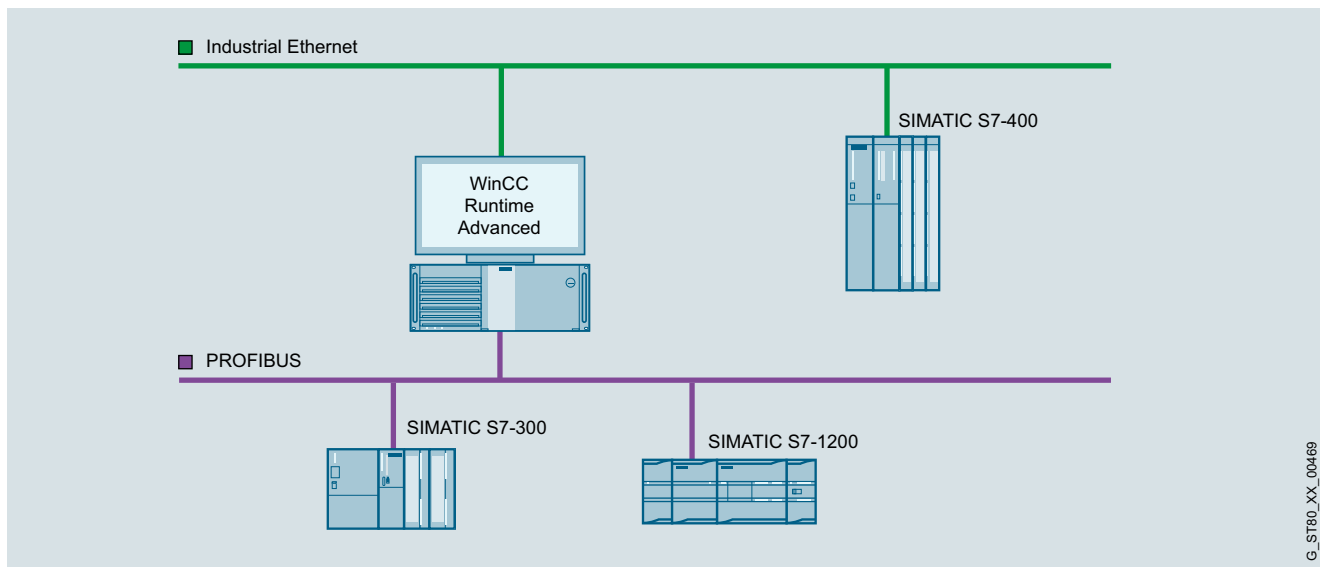
HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) Runtime

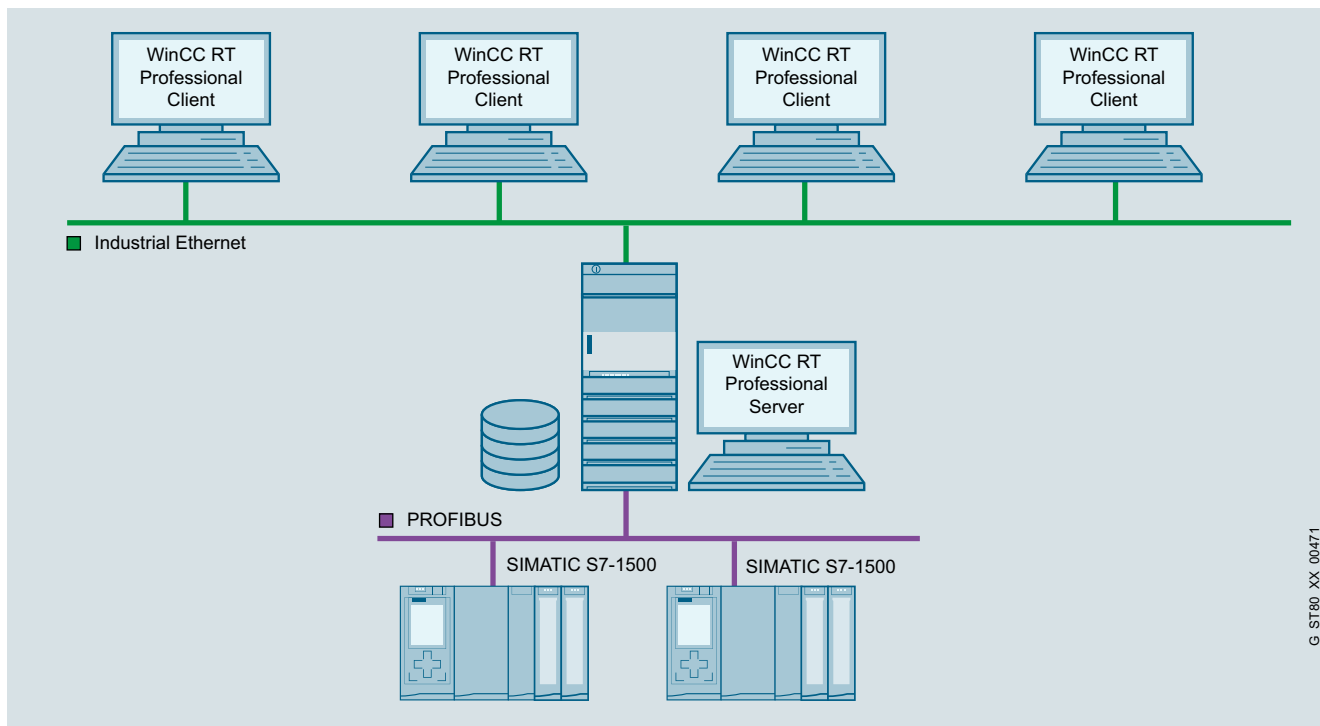
WinCC Runtime Communication

Overview (continued)

Communications examples



WinCC Runtime Advanced single-user system



WinCC Runtime Professional multi-user system with operable server

Ordering data	Article No.	Article No.
<p><i>SIMATIC WinCC (TIA Portal) Communication via Industrial Ethernet TCP/IP</i></p> <p>CP 1612 A2 PCI card (32-bit) for connecting a programming device or PC to Industrial Ethernet (10/100/1000 Mbps) with RJ45 connection via SOFTNET-S7 and SOFTNET PG.</p> <p>Software requirement: WinCC Runtime Advanced: No further installation is required (SOFTNET-S7)</p> <p>WinCC Runtime Professional: SOFTNET-S7 Lean (maximum of 8 connections) or SOFTNET-S7 (maximum of 64 connections) must be installed (SOFTNET-S7 Lean is included in the scope of delivery of WinCC Runtime Professional)</p>	6GK1161-2AA01	<p>SIMATIC NET HARDNET-IE S7 V16 Software for S7, open communication; OPC, PG/OP communication, project software; up to 120 connections; single license for one installation of runtime software, software and electronic manual on DVD; license key on USB flash drive; Class A</p> <ul style="list-style-type: none"> • Single license for 1 installation • Upgrade package for SIMATIC NET from Edition 2006 <p>6GK1716-1CB16-0AA0 6GK1716-1CB00-3AE0</p>
<p>SIMATIC NET SOFTNET-IE S7 V16 Software for S7 and S5-compatible communication, incl. OPC server, PG/OP communication and NCM PC, up to 64 connections, single license for 1 installation, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A</p> <ul style="list-style-type: none"> • Single license for 1 installation • Upgrade package for SIMATIC NET from Edition 2006 	6GK1704-1CW16-0AA0 6GK1704-1CW00-3AE0	<p>CP 1623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)</p> <p><i>Communication via PROFIBUS</i></p> <p>USB A2 PC adapter Can be used under Windows XP, Windows 7 32/64-bit</p> <p>6GK1162-3AA00</p>
<p>SOFTNET-IE S7 Extended V16 Software for S7-, S5-compatible communication, OPC; PG/OP communication, proj. SW up to 255 connections (S7) or 512 connections (S7-1200/S7-1500); single license for 1 installation</p>	6GK1704-1BW16-0AA0	<p>CP 5612 PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in the WinCC basic package)</p> <p>6GK1561-2AA00</p>
<p>SIMATIC NET SOFTNET-IE S7 LEAN V16 (included in the scope of delivery of WinCC Runtime Professional) Software for S7-compatible and S5-compatible communication incl. OPC server, PG/OP communication and NCM PC, up to 8 connections, single license for one installation of runtime software, software and electronic manual on CD-ROM, license key on USB flash drive; Class A</p> <ul style="list-style-type: none"> • Single license for 1 installation • Upgrade package for SIMATIC NET from Edition 2006 	6GK1704-1LW16-0AA0 6GK1704-1LW00-3AE0	<p>CP 5622 PCI Express X1 card (32-bit) for connection of PG/PC to PROFIBUS (communications software included in WinCC basic package)</p> <p>6GK1562-2AA00</p>
		<p>CP 5711 USB adapter (USB V2.0) for connecting a PG/notebook to PROFIBUS or MPI (communications software included in WinCC Basic package)</p> <p>6GK1571-1AA00</p>
		<p>CP 5613 A3 PCI Card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)</p> <p>6GK1561-3AA02</p>
		<p>CP 5623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)</p> <p>6GK1562-3AA00</p>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

SIMATIC WinCC (TIA Portal) options

Overview

Options for SIMATIC Panels, SIMATIC WinCC Runtime Advanced and SIMATIC WinCC Runtime Professional

SIMATIC ProDiag

- Fully-integrated TIA solution for machine and plant diagnostics
- Saves the need for programming diagnostics in the CPU during the engineering phase and provides support for troubleshooting directly on the HMI without an engineering system using diagnostic overviews and PLC code

SIMATIC Logon

- Creates user administration on a central computer to which one or more WinCC stations can be connected over Ethernet.
- With each user logon/logoff on one of the connected stations, SIMATIC Logon checks whether a user password has been created and that the required privileges exist.
- SIMATIC Logon supports the user in combination with the Audit option in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.

Options for SIMATIC WinCC Runtime Advanced and SIMATIC WinCC Runtime Professional

SIMATIC WinCC Logging

- Logging of messages and process values
- Online evaluation of process value logs and alarm logs
- Evaluation of process value and alarm logs using standard MS tools such as Excel

SIMATIC WinCC Recipes

- Generation and management of data records for machine or production data
- Display or entry of data records via a configurable screen object or via process pictures distributed within the project
- Transmission of data records from or to the controller
- Import/export of data records for further processing with other tools (e.g. MS Excel)

Options for SIMATIC Panels and SIMATIC WinCC Runtime Advanced

SIMATIC WinCC Audit

- Recording of operator actions in an audit trail
- Electronic signature for important user actions relevant to production
- Audit supports users in meeting special quality requirements, e.g.
 - Production plants requiring validation according to FDA 21 CFR Part 11
 - In respect of traceability according to EU 175/2002 (EU directive)

SIMATIC WinCC Sm@rtServer

- Flexible solution for location-independent access to HMI systems
- Remote maintenance of machines and plants via the Internet/intranet
- Reduced downtimes for machines and plants due to direct remote access
- Flexible solution for location-independent access to machines and plants

Options for SIMATIC WinCC Runtime Professional

SIMATIC WinCC DataMonitor

- Display and analysis of current process states and historical data on office PCs with standard tools.
- Information can be individually compiled online during runtime via the Internet/intranet.

WinCC IndustrialDataBridge for WinCC Runtime Professional (V13 SP1 and higher)

Using the SIMATIC WinCC IndustrialDataBridge, communication links between different data sources and data targets can be created by means of simple configuration/parameter assignment. The WinCC IndustrialDataBridge can either be integrated into WinCC or used as a stand-alone application (not in conjunction with WinCC).

SIMATIC Information Server 2014 SP3

The SIMATIC Information Server 2014 SP3 is an open, web-based reporting system for interactive areas. Reports can be used in Internet Explorer, for Excel, Word or PowerPoint, as well as for Adobe Reader (pdf).

The SIMATIC Information Server has access to archived process values and messages, and can be used either directly in conjunction with WinCC / WinCC RT Professional / PCS7 OS as well as with SIMATIC Process Historian 2014.

For more detailed information on the SIMATIC Information Server and Article No.'s, see SCADA System SIMATIC WinCC.

SIMATIC Process Historian 2014

The SIMATIC Process Historian 2014 is a powerful, long-term archive server solution that stores the WinCC process values and messages in a central database. The system offers full scalability for performance and scope. It records and stores data from one or more WinCC, WinCC RT Professional and PCS 7 projects. The number of connected single stations, servers, or redundant server pairs is unrestricted.

SIMATIC Process Historian is designed for use throughout your plant, and is positioned below the corporate management level (ERP, MES).

For more detailed information on the SIMATIC Process Historian and Article No.'s, see SCADA System SIMATIC WinCC.

SIMATIC WinCC Redundancy

For configuring a high-performance, fail-safe, client-server system. One WinCC/Redundancy package is required for each redundant pair of servers.

SIMATIC WinCC Server and SIMATIC WinCC Client

For setting up a high-performance client-server system

- A number of coordinated HMI stations can be operated in a single group with networked automation systems
- Client/server solution:
 - One server supplies up to 32 connected clients with process and archive data, messages, screens and reports.

Overview (continued)SIMATIC WinCC WebNavigator

- Operator control and monitoring of plants via the Internet or the in-house intranet/LAN
- Web Client permits the operator control and monitoring of a current WinCC Runtime Professional project via an Internet browser with ActiveX support

SIMATIC WinCC WebUX

- Mobile operator control and monitoring via the Internet or the in-house intranet/LAN, using commercially available mobile devices.
- Platform and browser can be used independently on HTML5-capable and SVG-capable data terminal equipment without installation on the client.

Overview of the individual options

Options	WinCC RT Advanced	WinCC RT Professional	SIMATIC Panels
SIMATIC ProDiag	•	•	•
SIMATIC Logon	•	•	•
WinCC Logging	•	•	• ¹⁾
WinCC Recipes	•	•	• ¹⁾
WinCC Audit	•	-	•
WinCC Sm@rtServer	• ¹⁾	-	• ¹⁾
WinCC DataMonitor	-	•	-
WinCC IndustrialDataBridge	-	•	-
SIMATIC Information Server	-	•	-
SIMATIC Process Historian	-	•	-
WinCC Redundancy	-	•	-
WinCC Server/WinCC Client	-	•	-
WinCC WebNavigator	-	•	-
WinCC WebUX	-	•	-

- possible

¹⁾ integrated in basic system

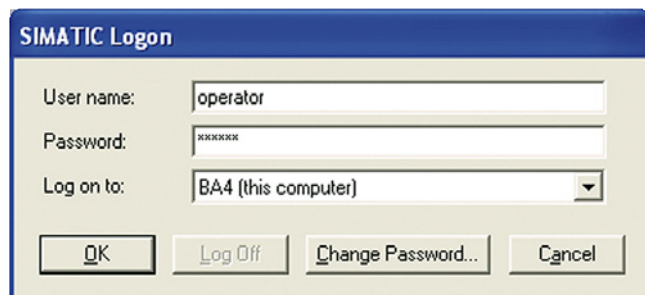
<http://www.siemens.com/wincc-tia-portal-options>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

SIMATIC Logon

Overview



- Option for connecting SIMATIC Panels and PCs with SIMATIC WinCC Runtime Advanced as well as WinCC Runtime Professional to a central user administration.
- Creates user administration on a central computer to which one or more panels or WinCC stations can be connected over Ethernet.
- With each logging-on/off of a user on one of the connected stations, SIMATIC Logon checks whether a user password has been created and that the required privileges exist.

SIMATIC Logon for Panels and WinCC Runtime Advanced

- All users of the SIMATIC Panels or WinCC Runtime Advanced stations can be managed plant-wide from a central location
- Supports the user in combination with the Audit option in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.
- Licensing:
SIMATIC Logon (basic license) and SIMATIC Logon Remote Access (3-pack license) for the connection of 3 panels or WinCC Runtime Advanced stations to a central user administration. Additional stations can be connected by using further SIMATIC Logon Remote Access licenses (3-pack/10-pack).

SIMATIC Logon for WinCC Runtime Professional

- All users of WinCC Runtime Professional can be managed plant-wide from a central location.
- The central user management with SL utilizes Windows mechanisms and must be installed on all participating WinCC Runtime Professional stations.
- Licensing:
SIMATIC Logon (basic license) is included in the basic package of WinCC Runtime Professional

Benefits

- Centralized configuration of all access authorizations of a distributed system avoids unnecessary travel times. Time-consuming multiple configurations for each individual local station become unnecessary. Accordingly, users can be easily configured from a central location.
- All access data apply throughout the plant on every connected station. Additional access data on local subsystems is no longer necessary.

Design

SIMATIC Logon for Panels and WinCC Runtime Advanced

SIMATIC Logon and SIMATIC Logon Remote Access are installed on a central station.

The following Runtime stations are connected to the central station via the Ethernet network:

- PCs with WinCC Runtime Advanced
- SIMATIC Panels from the 177 series or higher (with Ethernet interface)
- SIMATIC Mobile Panels from the 177 series or higher (with Ethernet interface)
- SIMATIC Multi Panels
- SIMATIC Comfort Panels

SIMATIC Logon for WinCC Runtime Professional

The SIMATIC Logon can be used for the central user management of several WinCC Runtime Professional stations. Operation in a Windows Workgroup or even in a domain is possible.

Function

Users receive a unique user ID, user name and password.

This information is encrypted and stored at a central point (for SIMATIC Logon in the Windows user management). Functions such as changing the password, automatic log-off after a predefined time and lockout after several incorrect entries of a password ensure maximum security of operation.

In addition, SIMATIC Logon allows setting up new users online, plant-wide and across applications, or blocking of existing users. SIMATIC Logon also supports electronic signature.

Ordering data	Article No.
SIMATIC Logon V1.6 Basic license ¹⁾ For Panels or WinCC Runtime Advanced stations, the corresponding number of additional SIMATIC Logon Remote Access licenses is required. No SIMATIC Logon Remote Access licenses are required for WinCC Runtime Professional	6ES7658-7BX61-0YA0
SIMATIC Logon upgrade to V1.6	6ES7658-7BX61-0YE0
SIMATIC Logon Remote Access (3 clients) Remote Access for 3 clients; single license for 3 SIMATIC Logon Remote Access clients; the number of licensed clients is determined from the sum of the installed SIMATIC Logon Remote Access licenses.	6ES7658-7BA00-2YB0
SIMATIC Logon Remote Access (10 clients) Remote Access for 10 clients; single license for 10 SIMATIC Logon Remote Access clients; the number of licensed clients is determined from the sum of the installed SIMATIC Logon Remote Access licenses.	6ES7658-7BB00-2YB0

¹⁾ SIMATIC Logon V1.5 included in scope of supply of WinCC Runtime Professional.

More information is available at:

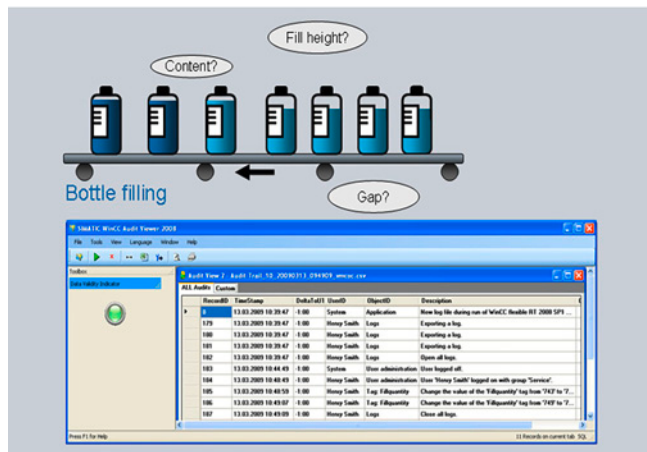
<http://www.siemens.com/simatic-logon>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC Audit

Overview



- Option for SIMATIC WinCC Runtime Advanced as well as SIMATIC Panels for recording operations in an audit trail, and electronic signature
- The audit trail is furnished with a security mechanism that displays subsequent manipulations.
- A user-friendly configuration function, which is included as standard in WinCC, is used to define the following:
 - Which user actions should be recorded in the audit trail during runtime
 - Which important operator actions during runtime require electronic signature/comments
- Available for the following SIMATIC HMI systems:
 - Comfort Panels
 - Mobile Panels
 - TP/OP 277
 - MP 277
 - MP 377
 - WinCC Runtime Advanced
- Licensing:
 - A license for SIMATIC WinCC Logging and SIMATIC WinCC Audit is required for every operator control unit (panel or PC).

Benefits

- Audit supports the user in meeting special quality requirements, e.g.
 - Production plant requiring validation according to 21 CFR Part 11 FDA ¹⁾
 - In respect of traceability according to EU 175/2002 ²⁾
- The entries in the audit trail are uniquely assigned to users. This means that responsibilities are clearly identifiable.
- The audit trail, stored as a CSV file ³⁾, can be checked via a security mechanism to find out if subsequent changes have been made.
- For particularly important user actions, e.g., starting production or loading new recipes, electronic signatures and comments can be configured and then called up and logged during runtime.

- The FDA (Food and Drug Administration) is the American public health body
- 21 CFR Part 11- law on plant validation
- CSV Comma Separated Values

Technical specifications

WinCC Audit	
Storage location for Audit Trail when used on the Panel	Plug-in Flash memory card or via Ethernet in the higher-level PC
Storage location for Audit Trail when using WinCC Runtime Advanced	Local hard disk or via Ethernet in the higher-level PC
Execution platform	
SIMATIC Panels	Mobile Panel 277, TP/OP 277
SIMATIC Multi Panels	MP 277, MP 377
SIMATIC Comfort Panels	all
PC systems	SIMATIC WinCC Runtime Advanced

Ordering data

Article No.

SIMATIC WinCC Audit for SIMATIC Comfort/Mobile Panels

- Single license, license key only on USB flash drive
- Download⁴⁾
Single license, license key download only
Email address required for delivery

6AV2107-0RP00-0BB0

6AV2107-0RP00-0BH0

SIMATIC WinCC Audit for Runtime Advanced⁵⁾

- Single license, license key only on USB flash drive
- Download⁴⁾
Single license, license key download only
Email address required for delivery

6AV2107-0RA00-0BB0

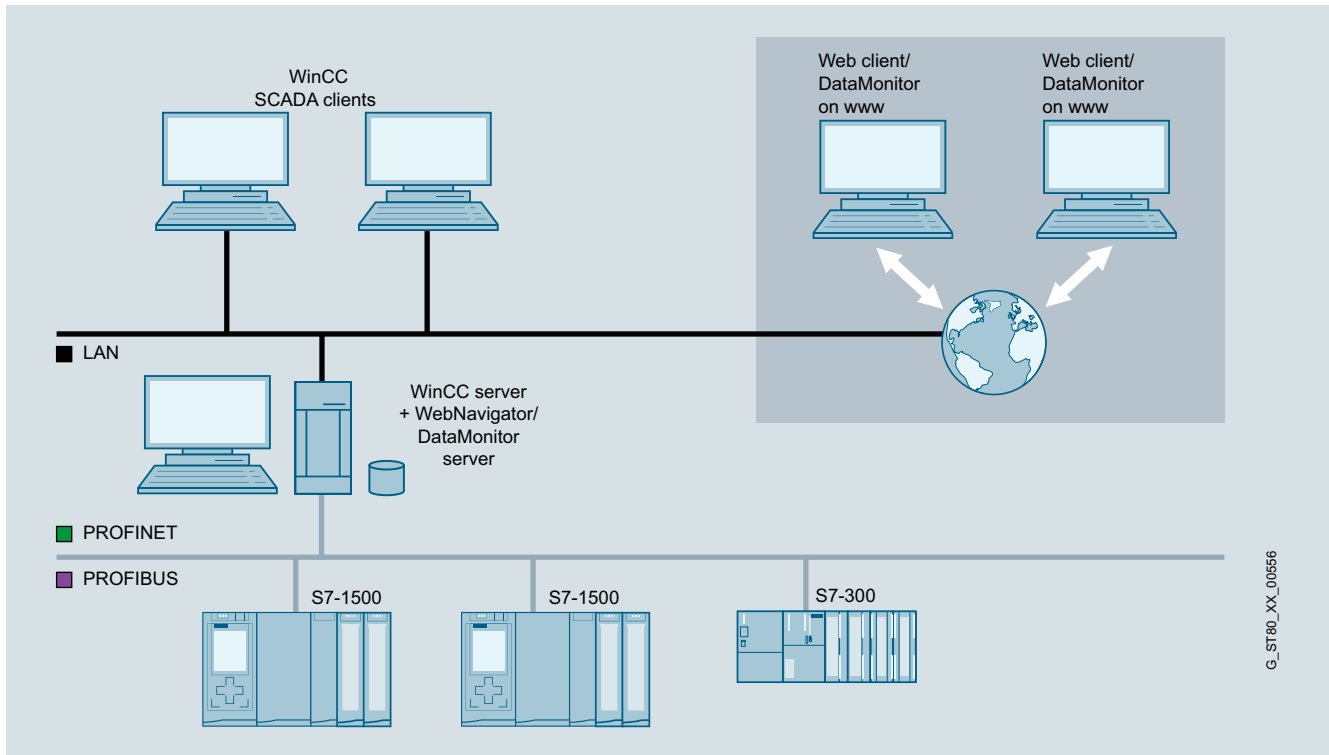
6AV2107-0RA00-0BH0

- Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>
- The following license is also required: SIMATIC WinCC Logging for Runtime Advanced

More information is available at:

<http://www.siemens.com/wincc-audit-tia-portal>

Overview



WinCC DataMonitor

- The WinCC DataMonitor is used for displaying and evaluating current process states and historical data on office PCs using standard tools such as Microsoft Internet Explorer or Microsoft Excel. The DataMonitor Client is supported by a web server with current and historical process data and alarms. All staff ranging from machine operators to corporate managers can use the DataMonitor to obtain information. In combination with WinCC V7 and with the aid of the multiclient architecture, access can be made to several lower-level WinCC stations.
- DataMonitor is a suite of Internet-capable tools:
 - **Process Screens**
Tool exclusively for monitoring and navigating via WinCC or WinCC Runtime Professional screens using the WinCC Web Viewer (WinCCViewer RT) in the "view only" mode
 - **Excel Workbooks**
Logging tool that integrates WinCC or WinCC Runtime Professional Archive and online values into Microsoft Excel and supports online analysis
 - **Published Reports**
Event- or time-driven execution of Excel or PDF reports for the output of process data and analysis results.
 - **WebCenter**
Individual configuration of Internet pages and compilation of information within a portal.
- DataMonitor does not require manual client installation because it loads the required components from the DataMonitor server
- There is no installation required on the client for the WebCenter, Trends and Alarms functions.

Licenses

- A (server-based) license is required for the WinCC DataMonitor. This is a graduated license based on the number of simultaneous web client access operations and can be incremented at any time using additive web client licenses (countable licenses).
- The DataMonitor client software can be installed as many times as required without the need for a license.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here: <http://www.siemens.com/simatic-licenses>

HMI Software

HMI Software in the TIA Portal SIMATIC WinCC (TIA Portal) options

WinCC DataMonitor

Benefits

- Information can be compiled online individually during runtime via the Internet/Intranet.
- Efficiently monitor and analyze production lines.
- Easily collect and distribute information.
- Substantiate decisions with reports.
- View production status anywhere and anytime.

Highlights:

- With the WebCenter function, archive tags can be accessed without changing the configuration system.
- Dedicated Internet pages can be created for displaying data with the WebCenter.
For this purpose, for example, a bar chart, a pie chart or a trend graph is available.
- The analyses can be made with relative or absolute time specification.
This enables comparisons of identical time periods on different days.
- Reports can be made available on the DataMonitor server or emailed automatically based on time intervals or triggered by events.
- Support of Microsoft Internet Explorer version, including "tabbed browsing".

Function

- All tools are fully Internet-compatible and, therefore, support access via any type of connection (LAN, GSM, radio, modem, Internet, etc.).
- All popular security mechanisms such as login/password, firewalls, encryption, etc. are supported.
- Users can combine the available tools at will.
Licensing only takes into account simultaneous access to one web server.
- For display purposes, screens from the WinCC project can be used or special overview displays configured.
Animations, scripts, navigation and access rights remain valid.
- The WinCC DataMonitor has purely a display function
- Company-wide Excel reports, which contain historical and current process values, can be stored centrally for general access (reports, statistics).
However, local queries to meet individual requirements can also be compiled and executed online.
Plot and trend displays are supported for archive data already swapped out.
- Enhanced user management for the WebCenter in order to assign individual Internet pages and created reports to specific user groups.
- A search function simplifies the management of connections to the WinCC server

Ordering data

SIMATIC WinCC DataMonitor as from Runtime Professional V14 and WinCC as from V7.4 ²⁾

Standard scope of supply

- 1 client license (countable)
- 3 client licenses (countable)
- 10 client licenses (countable)
- 30 client licenses (countable)

As download ¹⁾

- 1 client license (countable)
- 3 client licenses (countable)
- 10 client licenses (countable)
- 30 client licenses (countable)

Article No.

6AV6362-3AB00-0BB0
6AV6362-3AD00-0BB0
6AV6362-3AF00-0BB0
6AV6362-3AJ00-0BB0

6AV6362-3AB00-0AH0
6AV6362-3AD00-0AH0
6AV6362-3AF00-0AH0
6AV6362-3AJ00-0AH0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

²⁾ As from WinCC V14 the licenses are cumulative (countable), i.e. one 10 client license and one 30 client license permit access by 40 clients.

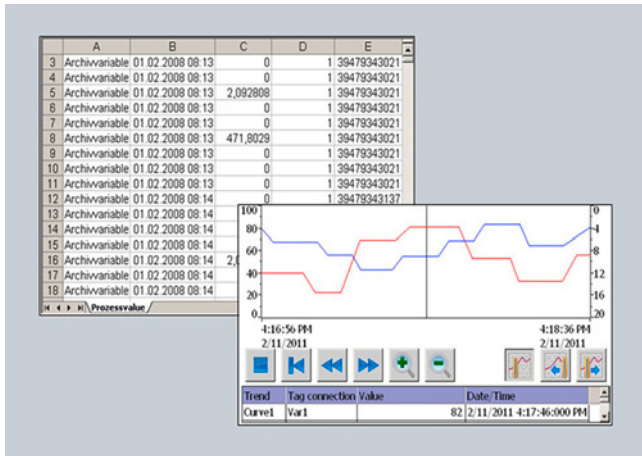
A license is not required for the engineering system for configuring the runtime option.

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-datamonitor>

Overview



- Option for SIMATIC WinCC Runtime Advanced and WinCC Runtime Professional for logging process values and alarms
- Logging of process values and alarms supports the acquisition and processing of process data from an industrial plant or machine. Evaluation of the logged process data provides information about the operating states of the plant or machine
- Licensing:
 - SIMATIC Panels / Multi Panels / Comfort Panels: No license is required.
 - WinCC Runtime Advanced: One license is required per operator station
 - WinCC Runtime Professional: 500 Logging Tags are already included in the basic package. The number of Logging Tags can be increased by means of additional licenses

Benefits

- Alarm and process value logs enable predictive diagnostics, which avoids downtimes
- Early detection of danger and fault conditions
- Increase of the product quality and the productivity thanks to regular analysis of the alarm and process value logs

Application

- Transfer of the logs for evaluation and long-term archiving
- Detection of recurring error states
- Optimization of maintenance cycles
- Ensuring quality standards
- Quality assurance and checking the utilization of production sequences
- Documentation of process sequences

Function

- Time-controlled as well as manual or process-controlled swapping out of process data and alarms for long-term archiving
- During runtime, swapped out data are read in and selectively analyzed using WinCC Runtime Professional
 - Presentation and evaluation of archived process data based on a configurable trend display. Reading of the values is facilitated by a read line.
 - Presentation and evaluation of archived alarms based on a configurable alarm view.
 - User-friendly navigation in the logs
- External evaluation of the logs using MS standard tools
- Various log types are supported: sequence and circular logs
- Logging of process values and alarms on external, Windows-supported storage media
 - SIMATIC Panels and WinCC Runtime Advanced: CSV files, RDB files, Microsoft SQL Server via ODBC
 - WinCC Runtime Professional: Microsoft SQL Server 2005
- Powerful standard functions permit user-friendly and flexible utilization of the logs

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC Logging

Technical specifications

	WinCC Logging for Runtime Advanced
	The values specified are maximum values
Number of logs	100
Archivable data	Process values, alarms
Cyclical trigger for archiving process values (variables)	1 s
Max. number of entries per log (incl. sequence log)	500.000 ¹⁾
Log types	Circular logs, sequence logs (max. 400 per log)
Data storage format	CSV (Comma Separated Variable), RDB (Runtime Data Base), Microsoft SQL database (database not included in scope of delivery)

¹⁾ Dependent on memory medium used

	WinCC Logging for Runtime Professional
	The values specified are maximum values
Number of logs per single-user station/server	100
Archivable data	Process values, alarms
Measured values per second, max.	Server/single-user station: 5 000 per sec.
Log tags per single-user station/server	8.000 ²⁾
Log types	Circular log with and without long-term logging
Data storage format	Microsoft SQL 2008 database

²⁾ Dependent on the Logging PowerPack used for the log tags. 500 log tags are contained in the basis version.

Ordering data

Article No.

SIMATIC WinCC Logging for Runtime Advanced ¹⁾

- Single license, license key only on USB flash drive
- As download ²⁾
Single license, license key download only
Email address required for delivery

6AV2107-0GA00-0BB0

6AV2107-0GA00-0BH0

SIMATIC WinCC Recipes + Logging for Runtime Advanced ¹⁾

- Single license per option, license key only on USB flash drive
- As download ²⁾
Single license, license key download only
Email address required for delivery

6AV2107-0HA00-0BB0

6AV2107-0HA00-0BH0

SIMATIC WinCC Logging for Runtime Professional 1500 logging tags

- Single license, license key only on USB flash drive
- As download ²⁾
Single license, license key download only
Email address required for delivery

6AV2107-0GB00-0BB0

6AV2107-0GB00-0BH0

SIMATIC WinCC Logging for Runtime Professional 5 000 logging tags

- Single license, license key only on USB flash drive
- As download ²⁾
Single license, license key download only
Email address required for delivery

6AV2107-0GD00-0BB0

6AV2107-0GD00-0BH0

WinCC Logging for Runtime Professional Powerpack 1 500 -> 5 000 logging tags

- Single license, license key only on USB flash drive
- As download ²⁾
Single license, license key download only
Email address required for delivery

6AV2107-2GD00-0BD0

6AV2107-2GD00-0BJ0

WinCC Logging Upgrade for SIMATIC WinCC Archives V7.0 (10 licenses)

Single license per option, license key only on USB flash drive

6AV2107-4GX00-0BF0

¹⁾ One license is required for each operator console. A license is not required for the engineering system for configuring the runtime option.

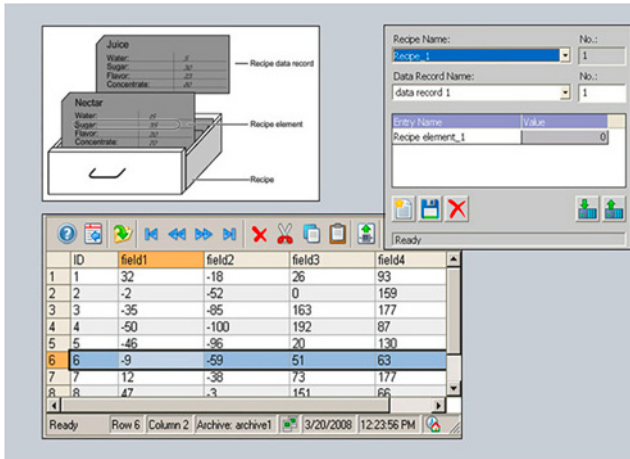
²⁾ Current information and availability regarding the new delivery form can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-logging-tia-portal>

Overview



- Option for SIMATIC WinCC Runtime Advanced and WinCC Runtime Professional for managing data records in recipes that contain related machine or production data
- The data in a data set can be transferred, for example, from the control unit to the PLC to switch production to a different product variant
- Licensing:
 - SIMATIC Panels / Multi Panels / Comfort Panels: No license is required.
 - WinCC Runtime Advanced: One license is required per operator station
 - WinCC Runtime Professional: A license is only required on the server (or single-user system).

Benefits

- Generation and management of machine parameters and production data on the basis of data records, and exchange with the automation device, e.g. with the machine.
- Clear tabular representation of the data elements with the aid of a configurable screen object, or depiction in technological relationships across several process screens.
- Simple operator guidance through standard functions.
- Export/import of data records for further processing with other tools (e.g. MS Excel)

Function

- Input of data records (e.g. operating parameters of a machine, production data for a plastics machine) on the HMI device as well as their storage and transfer to the control
- Display or entry of data records via a configurable screen object or via several process screens distributed within the project
- The data record elements are coupled with the process via a direct tag connection
- Transmission of data records from or to the controller
- Powerful interfaces enable a synchronized data exchange with the controller.
- Storage of data records on local data carriers or on remote data servers via networks
- Logging of data records, e.g. as batch report/shift report
- User-friendly and flexible management of data records by powerful standard functions

The recipes and the associated data records are created using a separate, user-friendly WinCC Engineering editor and data is pre-assigned to them. A configurable table object is used for displaying the data at runtime. Furthermore, the individual data record elements can also be displayed directly based on standard input/output fields across several process screens. In this way, the data in technological views can be presented clearly to the operator.

Import and export functions support the importing and exporting of data via external applications (e.g. MS Excel).

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC Recipes

Technical specifications

	WinCC Recipes for Runtime Advanced
	The values specified are maximum values
Number of recipes	1 000
Number of elements per recipe ¹⁾	2 000
User data length in KB per data record	256
Number of data records per recipe	5 000

	WinCC Recipes for Runtime Professional
	The values specified are maximum values
Number of recipes	1 000 ²⁾
Number of elements per recipe ¹⁾	500 ³⁾
User data length in KB per data record	3 000 ³⁾
Number of data records per recipe	3 000 ²⁾

¹⁾ When using arrays, each array element represents a recipe element

²⁾ Limited by system resources.

³⁾ The product of the number of recipe elements and the number of data records must not exceed a value of 320 000.

Ordering data

SIMATIC WinCC Recipes for Runtime Advanced ⁴⁾

- Single license, license key only on USB flash drive
- As download ⁵⁾
Single license, license key download only
Email address required for delivery

6AV2107-0JA00-0BB0

6AV2107-0JA00-0BH0

SIMATIC WinCC Recipes + Logging for Runtime Advanced ⁴⁾

- Single license, license key only on USB flash drive
- As download ⁵⁾
Single license, license key download only
Email address required for delivery

6AV2107-0HA00-0BB0

6AV2107-0HA00-0BH0

SIMATIC WinCC Recipes for Runtime Professional ⁴⁾

- Single license, license key only on USB flash drive
- As download ⁵⁾
Single license, license key download only
Email address required for delivery

6AV2107-0JB00-0BB0

6AV2107-0JB00-0BH0

⁴⁾ One license is required for each operator console. A license is not required for the engineering system for configuring the runtime option.

⁵⁾ Current information and availability regarding the new delivery form can be found at: <http://www.siemens.com/tia-online-software-delivery>

More information

Additional information is available on the Internet at:

<http://www.siemens.com/wincc-recipes-tia-portal>

Overview

Option for SIMATIC WinCC (TIA Portal), supporting the parallel operation of two interfaced WinCC single-user systems or process data servers for mutual monitoring

If one of the two server PCs or one of the two WinCC stations fails, the second one will take over control of the entire system. Once the failed server or station is restored to operation, the contents of all the message and process value archives are copied to it.

One WinCC Redundancy package is required for each redundant pair of servers.

Benefits

- Increased system availability with gap-free data integrity
- Automatic switchover of the client when a server fails or the communication to the server fails
- Continuous operation and visualization through automatic switchover of the clients to the intact server
- Automatic synchronization of all archives in the background after a fault is cleared

Function

Normally, two WinCC stations or process data servers run in parallel. Each station has its own process connection and its own data archives. WinCC Redundancy ensures automatic matching of system and user archive data.

If one of the two server computers or WinCC stations fails, the second will take over the archiving of messages and process data, thereby ensuring seamless data integrity. In client/server mode, the clients are automatically switched from the failed server to the redundant partner. This ensures continuous plant visualization and operation on every operator station.

When the failed partner resumes operation, all process values, messages and data archived during the fail period are automatically matched with the partner. This process runs in the background and does not affect plant continuity. Once this is complete, two equivalent servers/stations will be available again.

Communication with the SIMATIC S7 PLC can also be configured with redundancy (an H Series SIMATIC S7 is required) by plugging in two communication modules and configuring two communication paths (S7-REDCONNECT software package). The use of failsafe H Series SIMATIC S7 PLCs can, if required, further increase availability at control level.

Ordering data

SIMATIC WinCC Redundancy for Runtime Professional

- Single license for 2 installations, license key on USB flash drive, software and documentation on DVD
- As download¹⁾
Single license for 2 installations, license key download only
Email address required for delivery

Article No.

6AV2107-0FB00-0BB0

6AV2107-0FB00-0BH0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

A license is not required for the engineering system for configuring the runtime option.

More information

Additional information is available on the Internet at:

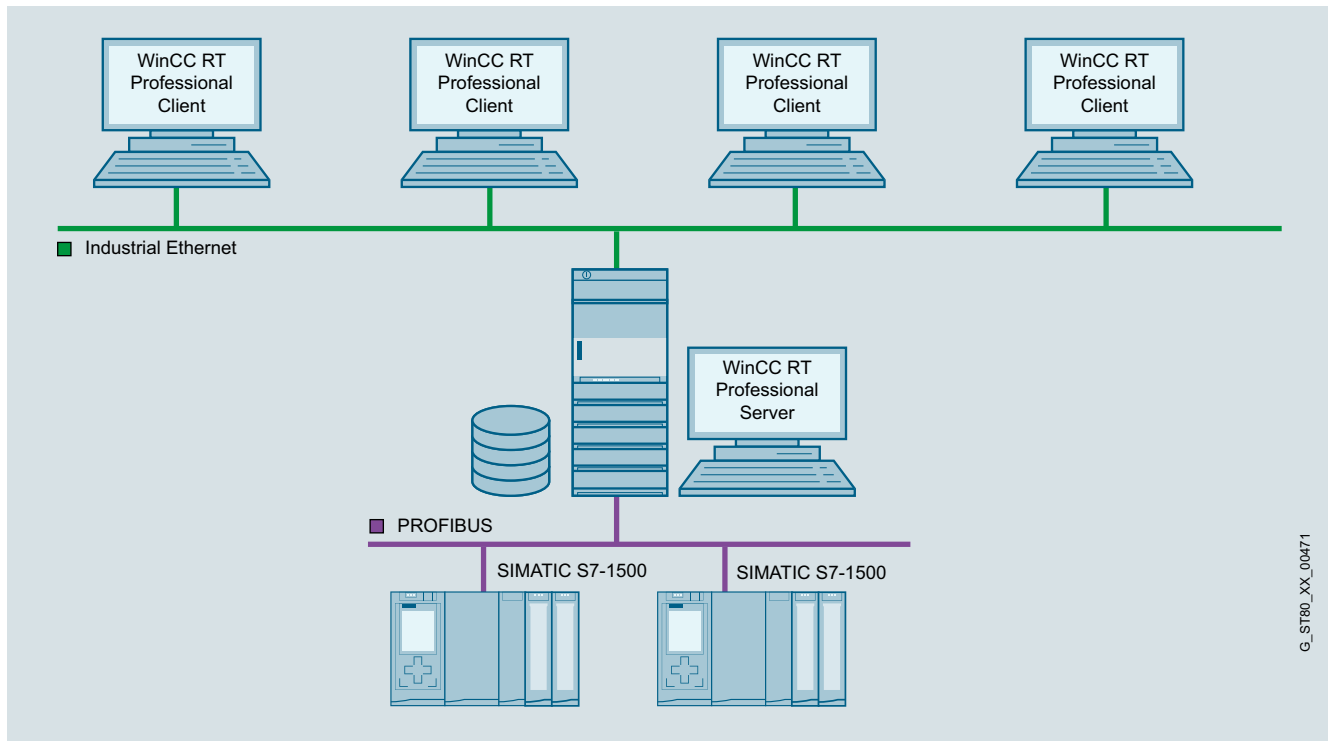
<http://www.siemens.com/wincc-redundancy-tia-portal>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC Server / WinCC Client

Overview



G_ST80_XX_00471

- Option for SIMATIC WinCC Runtime Professional, which permits the configuration of a powerful client/server system
- One of the following operating systems must be available to install the option on the server:
Windows Server 2012 R2 64-bit StdE,
Windows Server 2016 64-bit Standard,
Windows Server 2019 64-bit Standard.
When using Windows 10, a maximum of 3 clients can be connected.
- A number of coordinated HMI stations can be operated in a single group with networked automation systems.
- Client/server solution: One server supplies up to 32 connected clients with process and archive data, alarms, screens and reports.
 - Requirement: Network connection (TCP/IP) between the server PC and the connected clients.
- Licensing:
 - A WinCC Runtime Professional license on the server with the appropriate number of PowerTags and the "WinCC Server for RT Professional" license.
 - The "WinCC Client for RT Professional" license on the clients.

Benefits

- Integrated scalability from the single-user system to the client/server solution
- Considerably expanded quantity structure, relieves the load on the individual servers, and thus better performance through the distribution of the overall application or of the tasks among several servers

Application

In a complex plant, WinCC Runtime Professional can be configured as a distributed system depending on the requirements:

- Functional distribution (e.g. alarm server, log server, etc.), or
- Distribution corresponding to the physical plant structure (e.g. body-in-white, paint shop, etc.).

Function

All process data of a WinCC project is stored in different Runtime databases, e.g. alarms, trend values, etc. These Runtime databases are located on a central computer, the WinCC Server, instead on each HMI device. The operator stations, i.e. the WinCC Clients, then access the WinCC Server.

WinCC Clients and WinCC Server are independent systems. You can also connect WinCC Clients subsequently. Alternatively, you can activate and deactivate a project from a WinCC Client.

Ordering data

Article No.

SIMATIC WinCC Server for Runtime Professional

- Single license, license key only on USB flash drive

6AV2107-0EB00-0BB0

As download¹⁾

- Single license, license key download only, email address required for delivery

6AV2107-0EB00-0BH0

SIMATIC WinCC Client for Runtime Professional

V16

- Single license, license key on USB flash drive, software and documentation on DVD
- Single license, software and license key download. Email address required for delivery

6AV2107-0DB06-0AA0

6AV2107-0DB06-0AH0

SIMATIC WinCC Client for Runtime Professional ASIA V16

Single license, license key on USB flash drive, software and documentation on DVD

6AV2107-0DB16-0AA0

V15

- Single license, license key on USB flash drive, software and documentation on DVD

6AV2107-0DB05-0AA0

As download¹⁾

- Single license, software and license key download. Email address required for delivery

6AV2107-0DB05-0AH0

SIMATIC WinCC Client for Runtime Professional ASIA V15

Single license, license key on USB flash drive, software and documentation on DVD

6AV2107-0DB15-0AA0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

A license is not required for the engineering system for configuring the runtime option.

More information is available at:

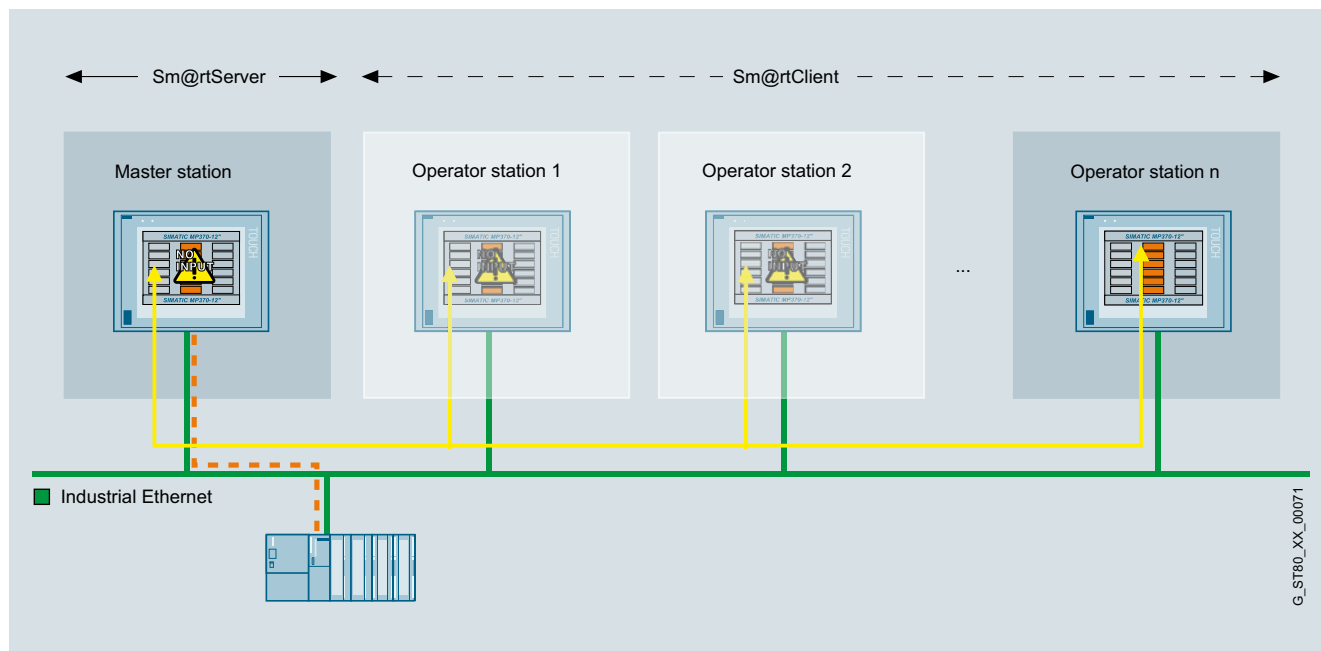
<http://www.siemens.com/wincc-server-tia-portal>

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC Sm@rtServer

Overview



- Option for SIMATIC WinCC Runtime Advanced plus SIMATIC Panels for communication between various SIMATIC HMI systems.
- Available for the following SIMATIC HMI systems:
 - Basic Panels 2nd Generation (with Ethernet interface)
 - Comfort Panels
 - Mobile Panel 2nd Generation, Mobile Panel 277, Mobile Panel 177 PN
 - TP 177B PN/DP, OP 177B PN/DP
 - TP 277, OP 277
 - MP 177, MP 277, MP 377
 - WinCC Runtime Advanced
- A SIMATIC HMI system can be used to control or monitor another system remotely; entry level for client/server configurations for distributed operator stations or for solutions with head end or control room
- Local operation, visualization and data processing are as possible as plant-wide access to information. Integrated information flows ensure an overview of the status of all processes.

- Licensing:
The "SIMATIC WinCC Sm@rtServer for Panel" or "SIMATIC WinCC Sm@rtServer for Basic Panel" or "SIMATIC WinCC Sm@rtServer for Runtime Advanced" license must be installed on the server HMI device. A separate license is no longer required for Comfort / Mobile Panels Version V14 or higher and for Runtime Advanced Version V14 SP1 or higher. A license is not required for the engineering system for configuring the runtime option.

Note:

When accessing the operator stations via the Sm@rtServer option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system. Additional information on the topic of industrial security is available on the Internet at:

<http://www.siemens.com/industrialsecurity>

Benefits

- Flexible solution for remote access to HMI systems
- Quick elimination of malfunctions or downtimes – thus increasing the productivity – through global access to machines/plants by the service and maintenance personnel.
- Avoidance of on-site service calls.

Application

- Operator control and monitoring of machines covering large areas with several operator stations by one operator.
- Operator control and monitoring of machine-level HMI systems from one central station (e.g. head-end station of a production line or from a control room)
- Remote maintenance and servicing of machines/plants over the Internet/Intranet

Function

Coordinated operation of several operator stations:

- The HMI application and communication with the controller takes place via the master station. "Sm@rtClients" can be activated from here in the case of machines/plants with larger dimensions which require a larger number of operator panels. The Sm@rtClients are then provided with access to the master station and thus to the process. Access procedures guarantee that only one operator system can actively access the process at any given time.
- Embedded in process screens, a configurable screen object (Sm@rtClient display) represents the screen of the relevant HMI system (Sm@rtServer)
- Powerful standard functions permit user-friendly and flexible operation of the display

Remote control of an operating station:

- The HMI application and communication with the controller takes place via the HMI system. Using the Sm@rtServer, the HMI systems in the machines/systems can be serviced remotely. An access process ensures that only one operator (either locally at the machine or remotely via Internet Explorer) can actively access the process at one time.
- Microsoft Internet Explorer V6.0 SP1 or higher is sufficient for accessing an HMI system.

Technical specifications

WinCC Sm@rtServer	
	The values specified are maximum values
Execution platform	
SIMATIC Basic Panels 2 nd Generation	All devices with Ethernet interfaces
SIMATIC Comfort Panels	all
SIMATIC Panels	Mobile Panel 177 PN, Mobile Panel 277, TP/OP 177B PN/DP, TP/OP 277
SIMATIC Multi Panels	MP 177, MP 277, MP 377
PC systems	SIMATIC WinCC Runtime Advanced
Number of Sm@rtClients that can simultaneously connect to a Sm@rtServer	
SIMATIC Basic Panels 2 nd Generation	1 client
Comfort Panel, Mobile Panel 2 nd Generation as Sm@rtServer	2 clients for 4" devices 3 clients for 7", 9", 12" and 15" devices 2 clients for 19" devices 1 client for 22" devices
Mobile Panel 177 PN, TP/OP 177B PN/DP, MP 177 as Sm@rtServer	2 clients
Mobile Panel 277, TP/OP 277, MP 277 as Sm@rtServer	3 clients for 6" devices 2 clients for 8" and 10" devices
MP 377 as Sm@rtServer	3 clients for 12" devices 2 clients for 15" devices 1 client for 19" devices
WinCC Runtime Advanced as Sm@rtServer	5 clients

Ordering data

Article No.

WinCC Sm@rtServer for SIMATIC Basic Panels ¹⁾ <ul style="list-style-type: none"> • Single license License key only on USB flash drive • As download²⁾ Single license, license key download only Email address required for delivery 	6AV2107-0CR00-0BB0 6AV2107-0CR00-0BH0
WinCC Sm@rtServer for SIMATIC Panels ^{1) 3)} <ul style="list-style-type: none"> • Single license License key only on USB flash drive • As download²⁾ Single license, license key download only Email address required for delivery 	6AV2107-0CP00-0BB0 6AV2107-0CP00-0BH0
WinCC Sm@rtServer for Runtime Advanced ^{1) 4)} <ul style="list-style-type: none"> • Single license License key only on USB flash drive • As download²⁾ Single license, license key download only Email address required for delivery 	6AV2107-0CA00-0BB0 6AV2107-0CA00-0BH0

¹⁾ The license must be installed on the Sm@rtServer HMI device. A license is not required for the engineering system for configuring the runtime option.

²⁾ Current information and availability regarding the new delivery form can be found at: <http://www.siemens.com/tia-online-software-delivery>

³⁾ The license is no longer required for version V14 or higher

⁴⁾ The license is no longer required for version V14 SP1 or higher

More information is available at:

<http://www.siemens.com/wincc-smartserver-tia-portal>

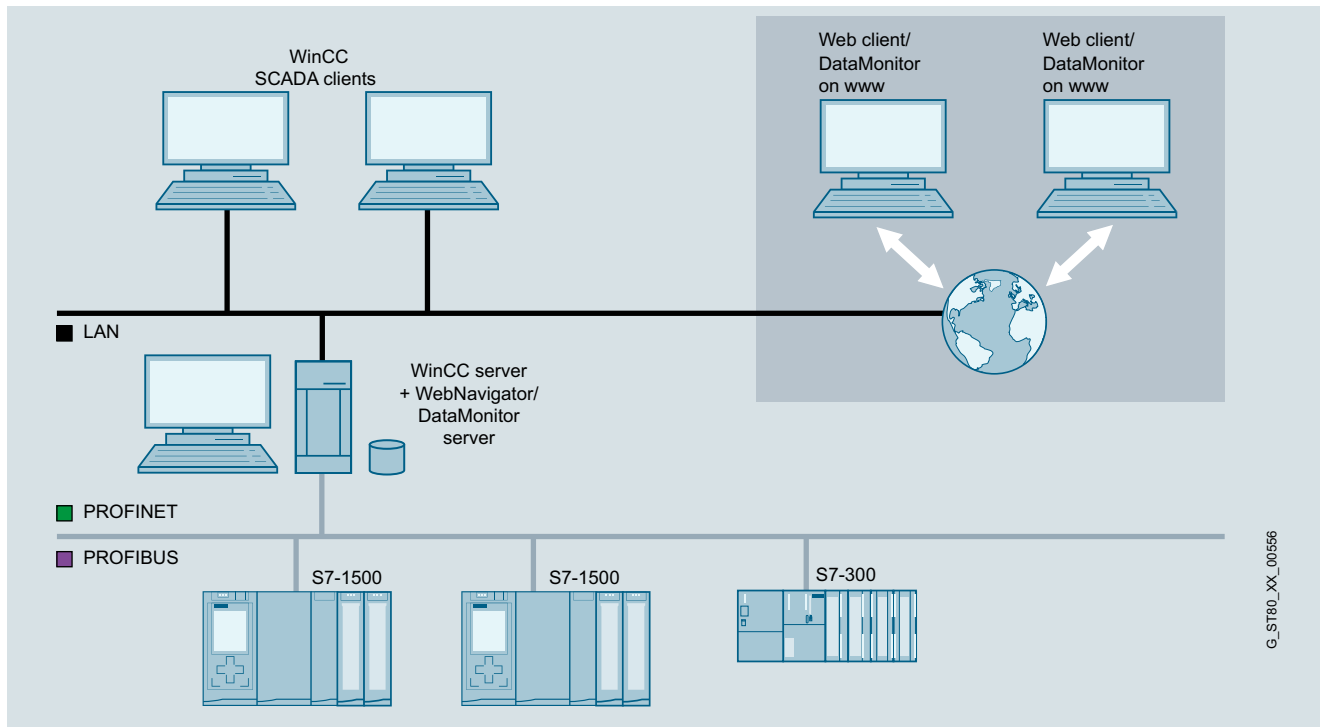
HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

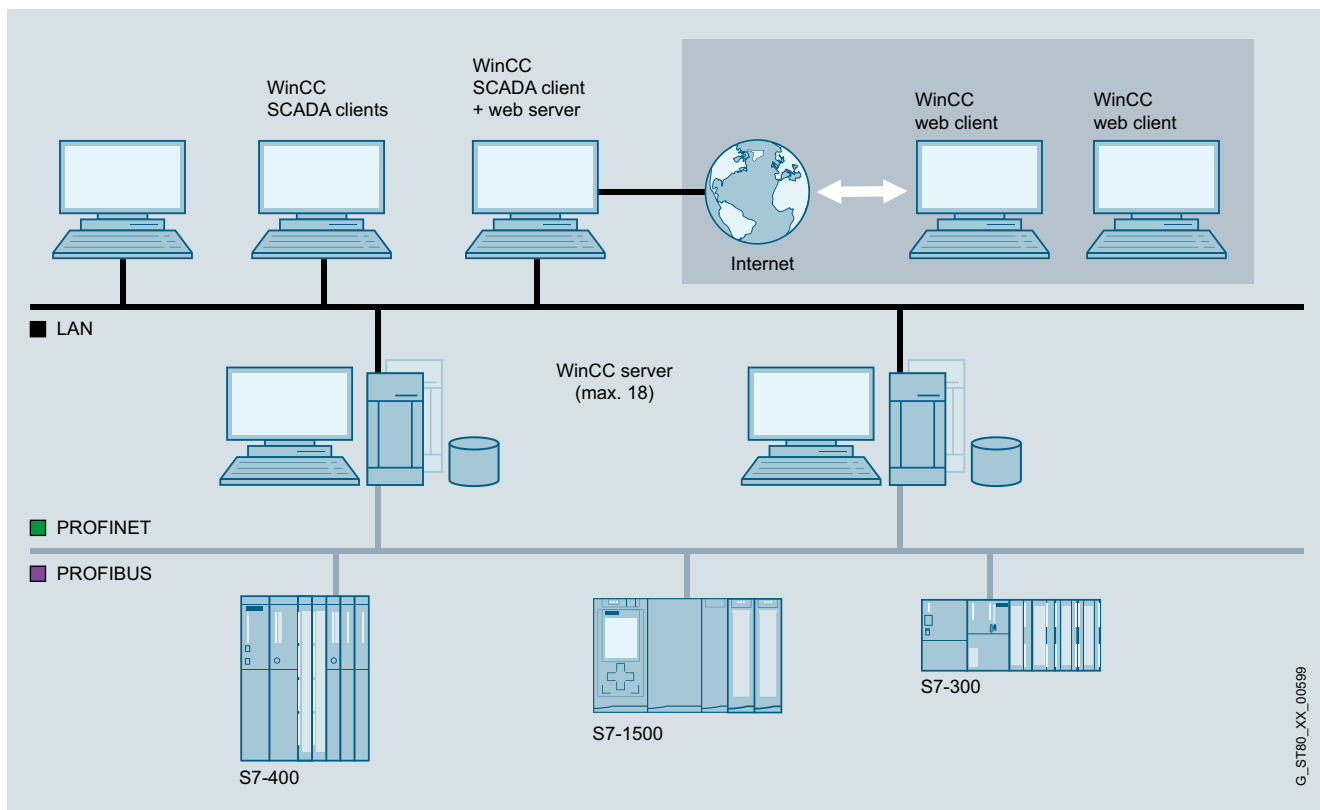
WinCC WebNavigator

Overview

WinCC WebNavigator



WinCC Server as web server



WinCC MultiClient as web server

3

G_ST80_XX_00566

G_ST80_XX_00599

Overview (continued)

WinCC WebNavigator

- Option for SIMATIC WinCC or WinCC Runtime Professional for operating and monitoring plants over the Internet, company Intranet or LAN.
- Configuration from:
 - A web server with SIMATIC WinCC as single-user or server version and a web client that permits operator control and monitoring of a current WinCC project using the Internet Explorer. In combination with WinCC V7, the WebNavigator Server can be operated on a MultiClient

Licenses

- A (server-based) license is required for the WebNavigator. This is a graduated license based on the number of simultaneous web client access operations and can be incremented at any time using additive web client licenses (countable licenses).
- The WebNavigator client software can be installed as many times as required without the need for a license.
- A (client-based) license is required for the WebNavigator diagnostics. This provides access to all web servers with a WebNavigator Server or WebNavigator Diagnostic Server license.
- The WinCC/WebUX and WinCC/WebNavigator licenses can be combined, if necessary.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here: <http://www.siemens.com/simatic-licenses>

Note:

When accessing the operator stations via the WinCC WebNavigator option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system.

You will find more information on the topic of Industrial Security on the Internet at:

<http://www.siemens.com/industrialsecurity>

Benefits

- Operator control and monitoring across long distances and on different platforms (PC, local panel, mobile PDA)
- Large configurations with up to 150 operator stations (depending on the plant complexity and communication load)
- Optimally tailored clients for operating and monitoring, analysis, service and diagnostics
- Acceptance of configuration data for the web, generally without changes
- Minimum maintenance costs due to central software administration
- With the WinCC Web Viewer (WinCC Viewer RT), the process screens can be displayed on the web client independently of the Internet Explorer. Settings for the client are made on the client itself. The WinCC Web Viewer can also be used in conjunction with the MS Terminal Service.
- The SIMATIC WinCC WebNavigator can also be operated in "view only" mode and is thus used as tool for monitoring and navigating using Internet Explorer or WinCC Web Viewer (WinCC Viewer RT).
- Security is increased by adjustable automatic logout. If an automatic logout is to take place, an absolute or inactive time period can be set.

Application

In addition to the standard WebNavigator licensing, there is the "Diagnostics Client" with identical functionality but different licensing. It is especially suitable for the following applications:

- Remote diagnostics/operation of several unmanned WinCC server stations
- Central control rooms that monitor several web servers via one user interface
- Maintenance personnel who require guaranteed access to the server at any time, regardless of the number of users already logged on to the server. On the server side, only one WebNavigator Diagnostics Server license or, alternatively, one Standard WebNavigator license is required.

Design

Thin Client solutions

The WebNavigator can also run under Windows Server 2008 R2 SP1 or Windows Server 2012 R2 terminal services. The Windows Server 2008 R2 SP1 or Windows Server 2012 R2 operating system is required.

This makes it possible, for example, to connect SIMATIC Thin Clients to the WinCC server as visualization stations.

For this purpose, the Windows terminal services must be installed on the PC on which the web client is installed. The Windows Server 2008 R2 SP1 or Windows Server 2012 R2 operating system is required.

Up to 25 Thin Clients can be connected to one terminal server.

Applications:

- Mobile devices
- Handhelds
- Rugged on-site visualizations

Function

The WinCC basic system makes setting up and configuring a WebNavigator Server very easy. WinCC process screens to be visualized via the Internet are created as usual using the graphic editor.

To display WinCC process screens on the web client, the Microsoft Internet Explorer or the supplied browser-independent WinCC Web Viewer (WinCC Viewer RT) is used.

The operator on the web client is integrated in the central WinCC user administration and can operate and monitor the system according to the configured access rights.

The WebNavigator supports all standard security mechanisms that can be used for applications on the Internet, e.g. routers, firewalls and proxy servers.

HMI Software

HMI Software in the TIA Portal
SIMATIC WinCC (TIA Portal) options

WinCC WebNavigator

Ordering data

SIMATIC WinCC WebNavigator as from Runtime Professional V14 and WinCC as from V7.4 ²⁾

Single license, license key on USB flash drive

- 1 client license (countable)
- 3 client licenses (countable)
- 10 client licenses (countable)
- 30 client licenses (countable)
- 100 client licenses (countable)

As download ¹⁾

Single license, license key download.

Email address mandatory

- 1 client license (countable)
- 3 client licenses (countable)
- 10 client licenses (countable)
- 30 client licenses (countable)
- 100 client licenses (countable)

Article No.

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6AV6362-1AD00-0BB0
6AV6362-1AF00-0BB0
6AV6362-1AJ00-0BB0
6AV6362-1AM00-0BB0

6AV6362-1AB00-0AH0
6AV6362-1AD00-0AH0
6AV6362-1AF00-0AH0
6AV6362-1AJ00-0AH0
6AV6362-1AM00-0AH0

Article No.

SIMATIC WinCC WebNavigator Diagnostics Client

For WinCC V14 Runtime Professional and WinCC as from V7.4

- Standard scope of supply
- As download

6AV6362-1BA00-0BB0
6AV6362-1BA00-0AH0

WinCC WebNavigator Load Balancing

For WinCC V7.4 only

- Load Balancing
- Load Balancing Step Up

6AV6362-1FA00-0BB0
6AV6362-1GA00-0BB0

As download

RT-SW, single license, license key download.

Email address mandatory

- Load Balancing
- Load Balancing Step Up

6AV6362-1FA00-0AH0
6AV6362-1GA00-0AH0

¹⁾ Current information and availability regarding the new type of delivery can be found at: <http://www.siemens.com/tia-online-software-delivery>

²⁾ As from WinCC V14 the licenses are cumulative (countable), i.e. one 10 client license and one 30 client license permit access by 40 clients.

A license is not required for the engineering system for configuring the runtime option.

You can find more information at:

<http://www.siemens.com/wincc-webnavigator>