O novo sistema de visualização
SIMATIC WinCC Unified
WinCC Unified V16
Officially announced...

Big Picture
We meet these requirements with the new WinCC Unified system!

- **Technology**
  - Native Web Technology
  - HTML5, SVG, Java Script
  - Device independent
  - Object-oriented – HMI

- **Scalability**
  - One Engineering
  - Unified Comfort Panels
  - WinCC Unified PC
  - Collaboration

- **Everywhere**
  - On-Premise
  - Unified @Cloud
  - Unified @Edge
  - MindSphere Apps

- **Integration**
  - Basis for Digitalization
  - Plant Intelligence
  - Integration Platform for everything north of the PLC
  - Openness

- **WinCC Unified in TIA Portal**
  - One Engineering
  - Unified Comfort Panels
  - WinCC Unified PC
  - Collaboration
WinCC Unified is fit for today’s HMI and SCADA applications, but also ready for future scenarios in the digitalization context (e.g. Augmented Reality or Edge technologies).
Feature Highlights
<table>
<thead>
<tr>
<th>SIMATIC WinCC Unified Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scalability from panel to control center</strong></td>
</tr>
<tr>
<td>One common software platform for all devices</td>
</tr>
<tr>
<td><strong>Modern User Interface based on web technologies</strong></td>
</tr>
<tr>
<td>Flexible access with any modern web browser</td>
</tr>
<tr>
<td><strong>Advanced scripting based on JavaScript</strong></td>
</tr>
<tr>
<td>Powerful and platform independent scripting language</td>
</tr>
<tr>
<td><strong>Automate engineering tasks with TIA Portal Openness</strong></td>
</tr>
<tr>
<td>Create, validate and reuse WinCC Unified components automatically</td>
</tr>
</tbody>
</table>

| **Technological hierarchy for object oriented engineering** |
| Define plant assets once and reuse them by instances |
| **Calendar and Performance Insight Option** |
| Manage working times and get production insights based on individual KPI calculation |
| **Easy collaboration of WinCC Unified systems** |
| Setup of distributed configurations. Predefined as well as on the fly access |
| **Use WinCC Unified as Integration Platform** |
| Integrate IT-Tools into one user interface and exchange data via interfaces |
WinCC Unified
Modern User Interface

A great experience. No matter where you are!

Based on Web Technologies
Like HTML5, SVG and JavaScript. Lightweight user interface with all the possibilities you’re used to.

Access from Everywhere
With any modern web browser. No need for installing extra plugins – Also on mobile devices.

Customize and Animate
Use Dynamic SVGs or Custom Web Controls to make your HMI stand out.
The graphical user interface of WinCC Unified is based on modern web technology (SVG and HTML5). All controls have been fundamentally redesigned to fully exploit the potential of these technologies.

Use graphics in all resolutions without loss of quality

Consistent usability for all devices

Work from mobile with the zero installation client

Get access from any device with any modern web browser
SIMATIC WinCC Unified
One common HMI platform

**Faceplates**
Use the same faceplates for Panel- and PC Systems.

**Screen structure**
Consistent structuring of screens with picture windows.

**Controls**
Common UI Controls for Panels and PC to ensure the best Usability.
Modern User Interface

Use Cases

WinCC Unified Server with many Remote Clients (Zero Installation)

WinCC Unified Server with many different devices - working as Remote Client
Highlight
Openness and Scripting

WinCC Unified openness provides access to engineering data as well as to the runtime system.
Modern scripting language with integrated Debugging functionality.

```javascript
function Button_1_OnTapped(item, x, y, modifiers, trigger) {
    let myDate = new Date(); // create a Date object
    let strTime, strDate, tagVal, strToWrite;
    strDate = myDate.toLocaleDateString(); // get local date to script internal tag
    strTime = myDate.toLocaleTimeString(); // get local time to script internal tag
    let tagVal = Tag('AnimationTag');
    let tagValue = tagVal.Read(); // read the value of tag AnimationTag
    // Build the string to be written into file
    strToWrite = strDate + " " + strTime + " : TagValue = " + tagValue + "\n";
    // Write the entry to the file
    // In case the folder does not exist, an error will occur,
    // if the file does not exist, it will be created
    HMIRuntime.FileSystem.AppendFile('D:\MyFiles\textfile.txt', strToWrite, 'utf8').then(
        function() {
            HMIRuntime.Trace('Write file finished successfully');
        },
        catch(function({
            HMIRuntime.Trace('Error writing file');
        })
    );
}
```

Fasten commissioning by automated Engineering using Engineering Openness

Add custom features to your solution with Openness in Runtime

Implement custom solutions with one unified scripting language
Openness Use Cases

Engineering

Automated Engineering
Simplified and automated handling due to customer-specific user interface with reduced complexity

Integration Platform
Seamless integration of customized components as well as third party applications

1 Application Programming Interface
SIMATIC WinCC Unified Connectivity

Perfect integration of SIMATIC PLCs (TIA Portal)

High number of connections for PC systems, up to 128 PLCs (>10 with extra Softnet-IE license)

Increased number of connections for Panel systems, up to 16 PLCs

Native 3rd Party\(^1\) communication via Channel Support Package e.g. Modbus TCP, Allen-Bradley EtherNet/IP, ...

1 In preparation  \(^2\) only tag communication via OPC UA DA

Unrestricted © Siemens 2020
Page 14  March 2020
WinCC Unified

Core Options
- Performance
- Insight
- Logging (Database)
- Calendar
- Sequence Execution
- Configuration
- Server Communication
- Device Management
- User Interface
- Monitoring
- Ticker
- Trending
- Analysis
- Archiving
- Archiving (Documentary)
- Archiving (Historical)
- Auditing
- Auditing (Y-T-Q)
- Diagnostic
- Parameter
- Control
- Audit
- Archiving (Y-T-Q)
- Archiving (Documentary)
- Archiving (Historical)
- Auditing
- Auditing (Y-T-Q)
- Diagnostic
- Parameter
- Control

Basic Options
- Client
- Logging (Fieldbased)
- Collaboration
- Reporting
- Administration
- User
- Connectivity
- Technological Hierarchy
- Openness
- Scripting

SCADA & PI Options
- Redundancy
- Availability
- System (AVY)
- Version (AVY)
- Fault Management
- Service Level Agreement
- Support Level Agreement
- Central Logging
- Log Coordination
- Configuration
- Server Communication
- Device Management
- User Interface
- Monitoring
- Ticker
- Trending
- Analysis
- Archiving
- Archiving (Documentary)
- Archiving (Historical)
- Auditing
- Auditing (Y-T-Q)
- Diagnostic
- Parameter
- Control
- Audit
- Archiving (Y-T-Q)
- Archiving (Documentary)
- Archiving (Historical)
- Auditing
- Auditing (Y-T-Q)
- Diagnostic
- Parameter
- Control

WinCC Unified
HMI Unified
SIMATIC HMI
Unified Comfort Panels

Unrestricted © Siemens 2020

siemens.com/wincc-unified-system
<table>
<thead>
<tr>
<th>Highlights</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great usability in a brilliant way</td>
<td>Capacitive Multitouch technology combined with bright colors and excellent readability</td>
</tr>
<tr>
<td>Size doesn’t matter</td>
<td>Same interfaces and functionality for all devices from 7” to 22”</td>
</tr>
<tr>
<td>Need more? Add Apps!</td>
<td>Use Siemens Industrial Edge to extend standard functionality by edge apps</td>
</tr>
<tr>
<td>The power to do more</td>
<td>Realize larger applications thanks to increased system limits</td>
</tr>
<tr>
<td>Security Integrated</td>
<td>From access control and encrypted communication to security patches. Everything is inside</td>
</tr>
<tr>
<td>Everything under control</td>
<td>Full commissioning within TIA Portal. No IT-management necessary</td>
</tr>
<tr>
<td>Ready for the future as of today</td>
<td>Take full advantage of WinCC Unified with a Modern UI, openness and full scalability</td>
</tr>
<tr>
<td>Comfort DNA remains</td>
<td>Well known Comfort Panel features like automatic system backup remain</td>
</tr>
</tbody>
</table>
SIMATIC HMI Unified Comfort Panels
Seeing what matters - in a brilliant way

New generation High-End Operator Panels from 7 to 22 Inch

<table>
<thead>
<tr>
<th>Feature / Function</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable glass front with capacitive multitouch technology</td>
<td>Maximum usability through enhanced legibility and brilliant colors</td>
</tr>
<tr>
<td>Expand the standard functionality with apps (industrial edge)</td>
<td>Implement project-specific requirements easily</td>
</tr>
<tr>
<td>Significantly increased hardware performance and system limits</td>
<td>Implement applications with a larger quantity structure</td>
</tr>
<tr>
<td>Protected operating system and encrypted communication technologies (based on Linux)</td>
<td>High level of IT security to protect the system against cyber attacks</td>
</tr>
<tr>
<td>Visualization powered by SIMATIC WinCC Unified</td>
<td>Latest technology for today’s and tomorrow’s requirements to HMI systems</td>
</tr>
</tbody>
</table>
SIMATIC HMI Unified Comfort Panels Portfolio

Comfort Panels
12 devices (Key and touch)

Unified Comfort Panels
6 devices (Multitouch)
SIMATIC HMI Unified Comfort Panels
Multitouch from 7” to 22”

<table>
<thead>
<tr>
<th>Model</th>
<th>Display Size</th>
<th>Resolution 1</th>
<th>Resolution 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP 700</td>
<td>7.0”</td>
<td>800 x 480</td>
<td></td>
</tr>
<tr>
<td>MTP 1000</td>
<td>10.1”</td>
<td>1,280 x 800</td>
<td></td>
</tr>
<tr>
<td>MTP 1200</td>
<td>12.1”</td>
<td>1,280 x 800</td>
<td>1,366 x 768</td>
</tr>
<tr>
<td>MTP 1500</td>
<td>15.6”</td>
<td>1,920 x 1,080</td>
<td></td>
</tr>
<tr>
<td>MTP 1900</td>
<td>18.5”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTP 2200</td>
<td>21.5”</td>
<td>1,920 x 1,080</td>
<td></td>
</tr>
</tbody>
</table>

*MTP = Multi-Touch Panel*
SIMATIC HMI Unified Comfort Panels
Standard and Neutral Design

Uniform functionality from 7 to 22 inches
- All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.
- Modern design with new robust hardened glass front

Design
Every Unified Comfort Panel is available in two design versions:
- **Standard design**: With Siemens and SIMATIC HMI branding, and a silver-colored aluminum frame
- **Neutral design**: No branding, and a black-colored aluminum frame
SIMATIC HMI Unified Comfort Panels
Connectivity

2 Port PROFINET Switch
1 IP address 100 MBit

1 Port Ethernet
1 IP address 100 Mbit /1 GBit

Serial
(422, 485) to support 3rd party PLCs

4x USB 3.0
Support of USB Hardware e.g. printer

2x SD-Card
Data card for files and logs and customer data
System card for automatic backup

Reset Button
Set device to maintenance mode

1 Available after product release
SIMATIC HMI Unified Comfort Panel
Temporary not all services on all interfaces!

Integrated Switch
2 Ports
• S7/S7+ Communication
• MRP / HSYNC
• PN Basic Services
  (assign name, IP,..)
• Project download

Gigabit Interface
1 Port
• Project download and firmware via Ethernet
• Sm@rtServer
• Web Browser
• Network Access
• Edge Management and apps
• 3rd Party PLC

• If both communication services are required, two Ethernet wires must be used temporarily
• Will be changed with Update for WinCC Unified V16
## SIMATIC HMI Unified Comfort Panel

### Increased system performance

<table>
<thead>
<tr>
<th></th>
<th>Comfort Panel 7 – 12&quot;/15 – 22&quot;</th>
<th>Unified Comfort Panel 7 – 12&quot;/15 – 22&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC-Connections</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Tags</td>
<td>2,048 / 4,096</td>
<td>8,000</td>
</tr>
<tr>
<td>Alarms</td>
<td>4,000 / 6,000</td>
<td>9,000</td>
</tr>
<tr>
<td>Archives</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Logging Tags</td>
<td>2,048</td>
<td>5,000</td>
</tr>
<tr>
<td>Scripts</td>
<td>100 / 200</td>
<td>600</td>
</tr>
<tr>
<td>Text-/Graphic list</td>
<td>500</td>
<td>750</td>
</tr>
<tr>
<td>Screens</td>
<td>500 / 750</td>
<td>1,200</td>
</tr>
<tr>
<td>- Objects per screen</td>
<td>400 / 600</td>
<td>800 / 1,200</td>
</tr>
<tr>
<td>- Tags per screen</td>
<td>400</td>
<td>600 / 800</td>
</tr>
</tbody>
</table>

- **Increased quantity structure from 7" to 22"**
- **Doubled quantity structure compared to Comfort Panel**
- **Differentiation only for tags and objects per screen**
SIMATIC HMI Unified Comfort Panel
Completely new designed control panel

- New look for the Control Panel - optimized for touch devices
- User has only access to control panel UI – not to operating system UI
Intuitive operation for industrial applications

- Usability is similar to smartphones
- Modern design with new robust hardened glass front
- Detection of fault operations e.g. heel of hand
- Glove operation
- Anti-reflective and brilliant glass for better readability
- High electromagnetic compatibility (EMC)

Gestures and Multitouch

- **Gesture detection control** to define actions  
  e.g. swipe gesture for screen change
- **Zooming and panning** for more details  
  in trend control, web control and document viewers
- **Scroll** in lists e.g. alarm control, text lists, documents
Device-managed Edge Unified Comfort Panel
WinCC Unified + Edge
Industrial Edge
What that means? Here’s an example...

A smartphone is an Edge Device...

…which has Apps running in the OS

With Industrial Edge we have the same approach as an Industrial level with what we called Edge Apps
Industrial Edge – Device-managed Edge – Unified Comfort Panel

Technical Specification

- App creator: Publisher
- Deployment: Local
- App memory: 4 GB
- Working memory: 800 MB
- Load: 50% of Panel CPU
- Installed Apps: 6
- Apps in RUN: 4

Runtime performance is secured by process isolation (reserved hardware resources).
Live Demo
Overview

The future of visualization starts now!

SIMATIC WinCC Unified is a totally new visualization system you can use to overcome the challenges of digitalization in mechanical engineering and plant construction. All thanks to the latest hardware and software technologies, both now and in the future. It offers proven engineering in the TIA Portal, the latest web technology, high power reserves for the coming years, so you can implement your ideas the way you imagine them.
TIA Portal Promotion Package 2020

In this challenging times with all the restrictions (travel, home office, no access to physical engineering environments like class rooms in universities) and challenges it is necessary to be flexible and location-independent. To cover also the new scenario of developing applications outside of the company, e.g. during home office, the new TIA Portal developer licenses can be used. They can be used for STEP 7 Prof., WinCC Adv., WinCC Unified and Safety Adv. and are valid until Dec 31st 2020.

How does it work?
TIA Portal Cloud as TRIAL

TIA Portal Engineering in the Cloud

In this challenging times with all the restrictions (travel, home office, no access to physical engineering environments like class rooms in universities) and challenges it is necessary to be flexible and location-independent. For an easy introduction into TIA Portal Engineering there is new cloud-based platform available. The cloud platform enables users to get to know the TIA Portal and all corresponding TIA Portal options like PLCSIM Advanced as well as SIMIT for the simulation of physical behavior without the need for installation.

How does it work?
Free time limited access via 21 days voucher. Based on Industry Premium Portal the user is able to use each available TIA Portal version for a limited time.
Thank you for your attention

Francisco Correia
francisco.correia@siemens.com
+351 917 000 494
www.linkedin.com/in/francisco-correia

Filipe Simões
filipe.simoes@siemens.com
+351 913 537 788
www.siemens.com/