SIMATIC WinCC Unified V17 Architectures

www.siemens.com/wincc-unified

WinCC Unified Architectures V17
Change Log

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WinCC Unified technical slides cover the overall functionality of the WinCC Unified system.

News of WinCC Unified V17 within a slide are marked as [NEW V17] or [as from V17]

Please note the WinCC Unified Architecture slides that show typical configurations and use cases in detail !

- Changing the order of different use cases
- correction in the Remote Functions slide 21

More slides about the Unified PI Options will follow after release !

SIMATIC WinCC Unified V17

WinCC Unified System – Technical information – Content

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Three steps to a successful project with WinCC Unified

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Verification	Training	Tools

Verification

In order to check if an application can be implemented without technical risk, a questionnaire is available. This helps to check if customer requirements fit the functional scope of WinCC Unified V17.

Download Technical questionnaire

Training

WinCC Unified is a new system, that uses different approaches and technologies in several cases. Make sure, that your customers are aware of all the materials that are available to get started.

- Getting Started Website

- SIOS Topic Page for WinCC Unified

Tools

Free supporting materials to lower the entry barrier for customers

- „Data2Unified"
  SIOS (109770510)

- HMI Template Suite
  SIOS (91174767)

- Demoprojects
  SIOS (109776633)

You can contact the SIMATIC Systems Support of FA S SUP at any time.
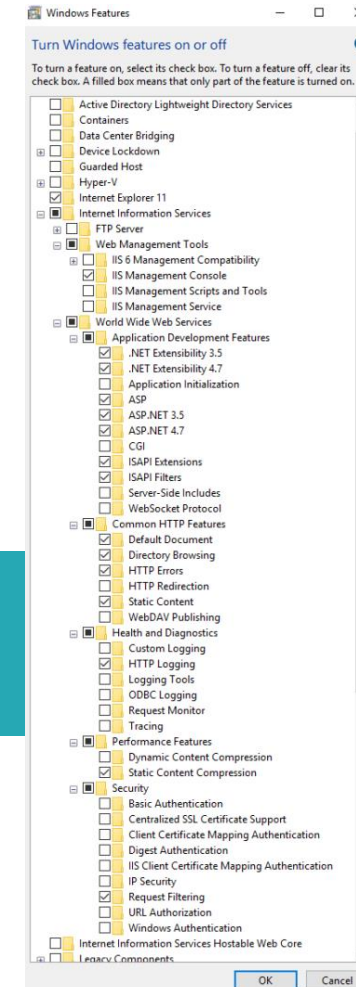Please provide the pre-filled selection sheet with your request!

SIMATIC WinCC Unified V17

Overview of Windows functions that are a precondition to use

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WinCC Unified PC Runtime

Simulation of WinCC Unified Panel or PC systems
(on a WinCC Unified engineering station)

**These windows functions must be activated
before the installation of WinCC Unified !**

https://support.industry.siemens.com/cs/de/en/view/109771777
https://support.industry.siemens.com/cs/de/en/view/109773589

WinCC Unified V17
Preconditions – Operating System

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Operating Systems (64-bit)	Configuration ⊞ Windows 10	Engineering	Runtime
Windows 10 Home	• Windows 10 Home Version 1909 • Windows 10 Home Version 2004 • Windows 10 Home Version 2009/20H2	✔	✘
Windows 10 Pro	• Windows 10 Pro Version 1909 • Windows 10 Pro Version 2004 • Windows 10 Pro Version 2009/20H2	✔	✔
Windows 10 Enterprise	• Windows 10 Enterprise Version 1909 • Windows 10 Enterprise Version 2004 • Windows 10 Enterprise Version 2009 • Windows 10 Enterprise Version 20H2	✔	✔
Windows 10 IoT Enterprise (PC RT: Test for IPC)	• Windows 10 Enterprise 2016 LTSB • Windows 10 Enterprise 2019 LTSC	✔	✔
Windows Server **(for Unified PC RT with more than 5 Clients)**	• Windows Server 2016 Standard (Full Installation) • Windows Server 2019 Standard (Full Installation)	✔	✔

SIMATIC IPC Packages with Windows 10 Enterprise **LTSB/LTSC** (SIOS)
https://support.industry.siemens.com/cs/ww/en/view/109780443

WinCC Unified V17
Preconditions

Operating System (Client)	Recommended Browser		
Microsoft Windows	• Google Chrome (Preferred)	V: 90.0	(at least V:77 or higher)
	• Microsoft Edge (Chromium based)	V: 90	(at least V:88 or higher)
	• Firefox	V: 88.0	(at least V:78 or higher)
	• Firefox ESR	V: 78.10	(at least V:78.6 or higher)
Android	• Google Chrome (Android)	V: 90 is the latest version)	or higher
	• Microsoft Edge	V: 46.03 is the latest version)	or higher
	• Firefox	V: 88.1 is the latest version)	
iOS, Mac	• Safari (MacOS and iOS)		

Reporting (Excel)
Local installation of MS Excel (32- or 64-Bit) as new as possible in accordance to operation system
Online access to Excel (Online Office 365)

SIMATIC WinCC Unified V17

WinCC Unified V17
Preconditions

Virtualization

VMware vSphere Hypervisor (ESXi) 6.7 (or higher)

VMware Workstation 12.5.5 or VMware Workstation 15.5.0 (or higher)

VMware Player 12.5.5 or VMware Player 15.5.0 (or higher)

Microsoft Hyper-V Server 2019

Anti Virus Software

Symantec Endpoint Protection 14.2

McAfee Endpoint Security (ENS) 10.6

Trend Micro "Office Scan" 12.0

Kaspersky Endpoint Security 11.3

Windows Defender (as part of Windows operating systems)

Qihoo 360 "Safe Guard 12.1" + "Virus Scanner"

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified V17
License Compatibility Engineering - New Customers

WinCC Unified (TIA Portal) V17				WinCC (TIA Portal) V17		
Engineering System 🔑 valid for (V16..V17)	Unified Comfort Panels	Unified PC Runtime		Comfort Panels	WinCC RT Advanced	WinCC RT Professional
PC (max.)	✔	✔ (max.)	➡	✔	✔	✔ (max.)
PC (100k)	✔	✔ (100k)	➡	✔	✔	✔ (max.)
PC (10k)	✔	✔ (10k)	➡	✔	✔	✖
Comfort[1]	✔	✖	➡	✔	✖	✖

[1] minimum license for WinCC Unified View of Things

New customers WinCC Unified:

The license of WinCC Unified (TIA Portal) is also valid for engineering using WinCC (TIA Portal).

This applies for versions >= V16.

Note: No parallel installation of WinCC Professional ES and WinCC Unified ES !

WinCC Unified V17 –
Compatibility Engineering and Runtime

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Parallel installation	WinCC Advanced V17 ES	WinCC V7.x RC	WinCC V7.x RT	WinCC RT Professional V x ES	WinCC RT Professional Vx RT
WinCC Unified PC (x) ES	Yes	No	No	No	No
WinCC Unified PC (x) RT	Yes	No	No	No	No

SIMATIC WinCC Unified V17

WinCC Unified System – Technical information – Content

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SIMATIC WinCC Unified V17 –
Ordering Information – Engineering/Trial

All ordering numbers for WinCC Unified V17 can be found in: SIOS 109792165

With V17 available products with article numbers (MLFB, order numbers) are listed in following document.

WinCC Unified product list (26,1 KB)
WinCC Unified V17price list (28,5 KB)

In all architecture slides the Online Software Delivery (OSD) license is indicated and not the DVD version

The OSD version is about 10-12% cheaper than the DVD version

SIMATIC WinCC Unified V17

WinCC Unified System –
Additional materials regarding the WinCC Unified system

- **WinCC Unified Ordering Information**
- WinCC Unified sales slides
- WinCC Unified View of Things

- WinCC Unified / Plant Intelligence Options technical slides
- WinCC Unified architecture slides
- HMI Unified Comfort Panels technical slides

- References
- Videos
- …

Detailed information is available at: **WinCC Unified (MPM)**
As well as at VERTRIEBSTOOLS\PRODUCTS\SIMATIC_WinCC_Unified_System

SIMATIC WinCC Unified V17 – additional Ordering Information

The total number of Logging Tags can be increased (countable) upon demand.
Logging Tags are valid for file-based and databased (Database Option) logging.

The maximum number of concurrent Clients can be increased (countable) upon demand.

Each WinCC Unified PC Runtime includes 2 Clients for local HMI and remote access.
SIMATIC NET must be licensed separately for more than 10 x S7-connections.

Ordering Information ASIA : Hardware DONGLE

Required for SIMATIC WinCC Unified PC Runtime, if:

- An Asian language is configured for the Unified PC Runtime

- Asian language of the operating system

The Dongle can be ordered separately in case of need (6AV6 381-2EA07-2AV0 contact Ch. Haagen)

SIMATIC WinCC Unified V17 – PC Runtime – Activating ASIA licenses

USB Hard lock

The license keys for WinCC Runtime Unified are available on the "License Key USB Hard lock" license storage medium.
The licensed ASIA version is executable in parallel to the European version by switching to Unicode.
The "License Key USB Hard lock" (dongle) checks the following conditions:

- WinCC GUI language
- Runtime language
- Asian characters are used in the WinCC project.
- Operating system settings

Note
It is not allowed to run WinCC in process mode without a valid license. Delete configuration languages If you do not have a license for an ASIA version and delete the Asian configuration languages, the WinCC project continues to run in demo mode. To disable Demo mode, close the WinCC project. When reopened it is recognized that the WinCC project no longer requires licenses for an ASIA version..

Legend

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Base Packages WinCC
Unified PC RT System

Internet

S7-1200

WinCC Unified Client

S7-1500

ES   ES

SIMATIC WinCC Unified Engineering
WinCC Unified Comfort ES V17

S7-300

S7-400

Base Packages
SIMATIC HMI Unified Comfort Panels (7 – 22") (UCP)

SIMATIC WinCC Unified V17

WinCC Unified V17 – Clients
Flexible web-based, remote Monitoring and Operation

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Unified Comfort Panel ✓ | PC ✓

Flexible
remote access
via Browser

WinCC Unified PC Runtime

HMI Unified Comfort Panels
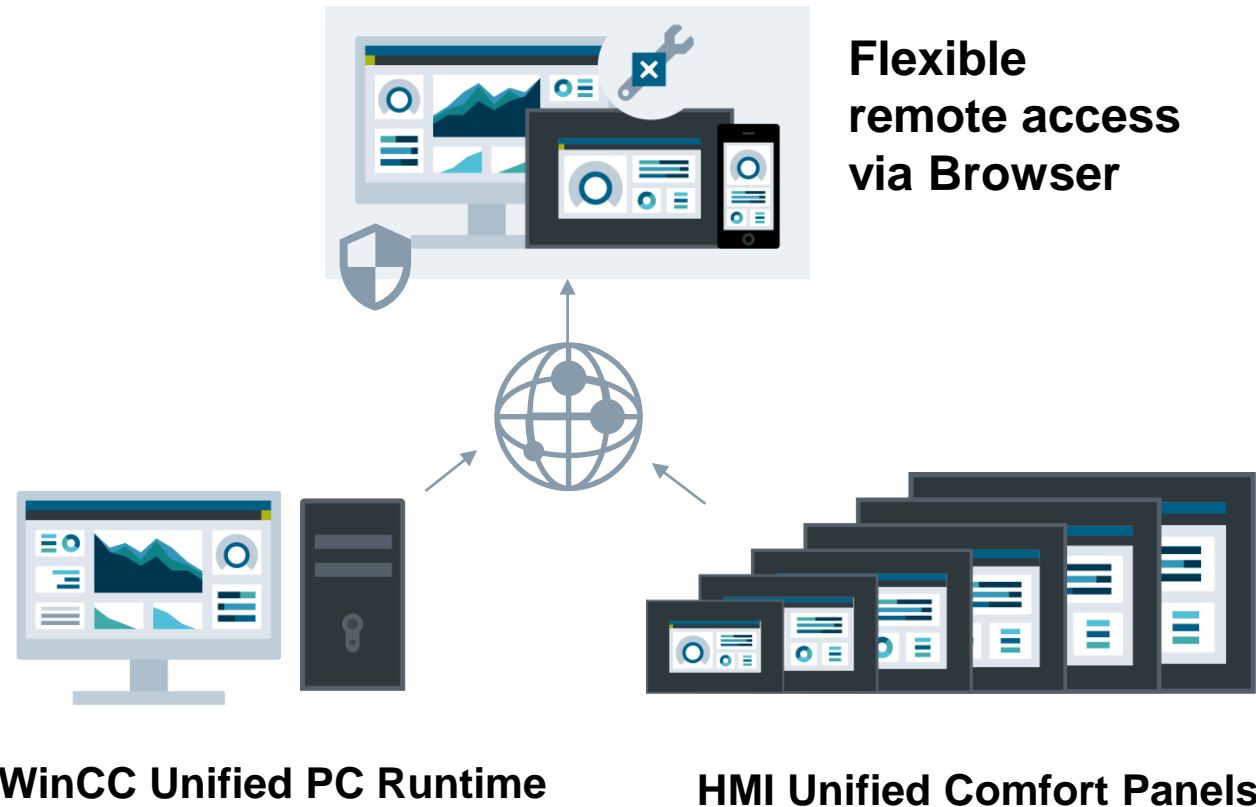
Clients for flexible remote access

- Simultaneous remote access offers parallel operation of many users

- Use **state-of-the-art web** to access the visualization

- **"Zero Installation" Clients**
  via state-of-the-art web browsers –
  no need to install separate apps or plug-ins

- **Configurable access control**
  via user management

- **Secure communication using web standards
  (**https, SSL, certificates,…)

HMI Unified Comfort Panels
Remote Control

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Unified Comfort Panel ✓ NEW

Asynchronous access of up to 3 clients
for independent operation
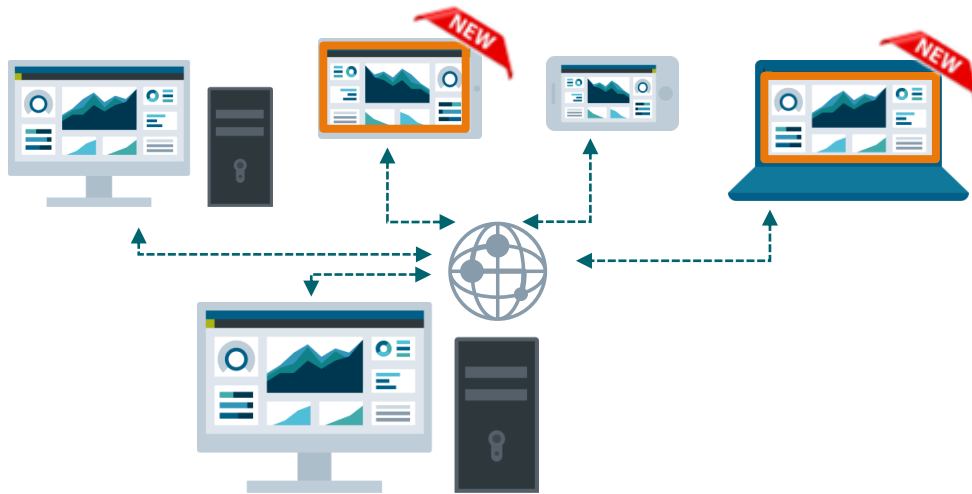(simultaneous access is licensed)

Remote access via Web Browser

- One Client "Operate" included

Synchronous access via app (VNC)

For parallel operation
(all users see the same screen)

SIMATIC WinCC Unified V17

WinCC Unified V17 – Unified PC systems Remote Control

PC ✓

Every WinCC Unified PC Runtime system includes:
- The local visualization Client (installed or via browser)
- **ONE "Operate" Client**
- **ONE "Monitor" Client**

The maximum number of clients can be extended (optional).

Client "Operate"
enables remote operation according to assigned user role
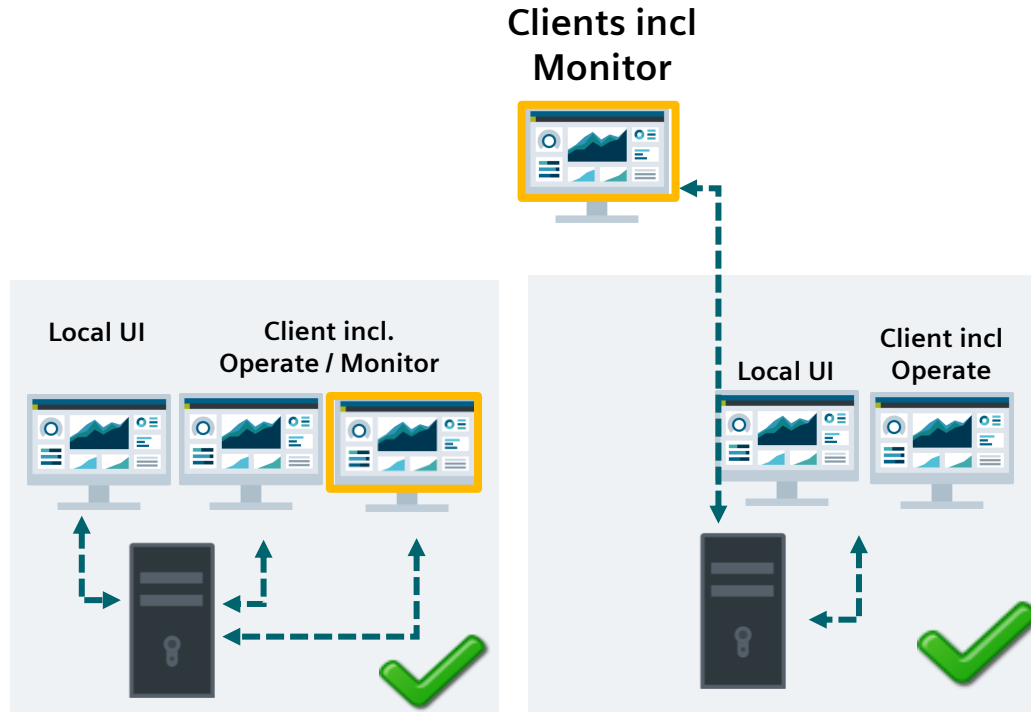
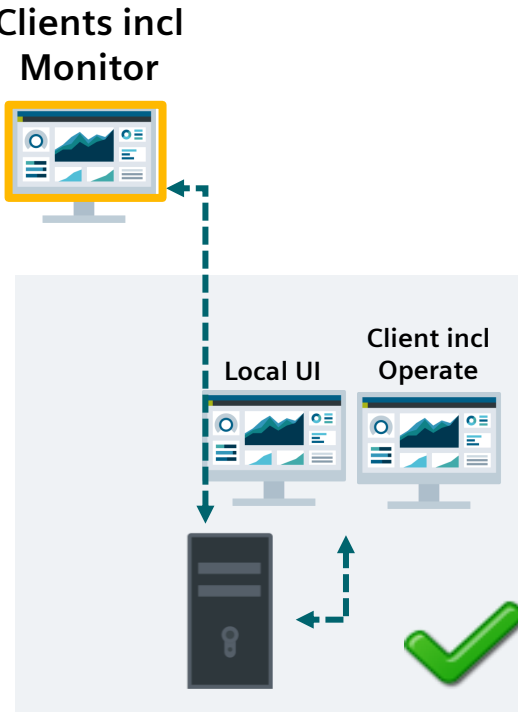**Clients "Monitor"** *NEW*
enables remote operation in view-only mode

Asynchronous access of numerous users (simultaneous access is licensed)
Windows 10 Server is mandatory for more than 5 Clients **!**

SIMATIC WinCC Unified V17

WinCC Unified V17 – PC Systems Remote Monitoring and Operation

Clients incl Monitor

Scalable remote Clients
Monitor / Operate

Scalable Remote Clients
Monitor / Operate

Local UI   Client incl. Operate / Monitor

Local UI   Client incl Operate
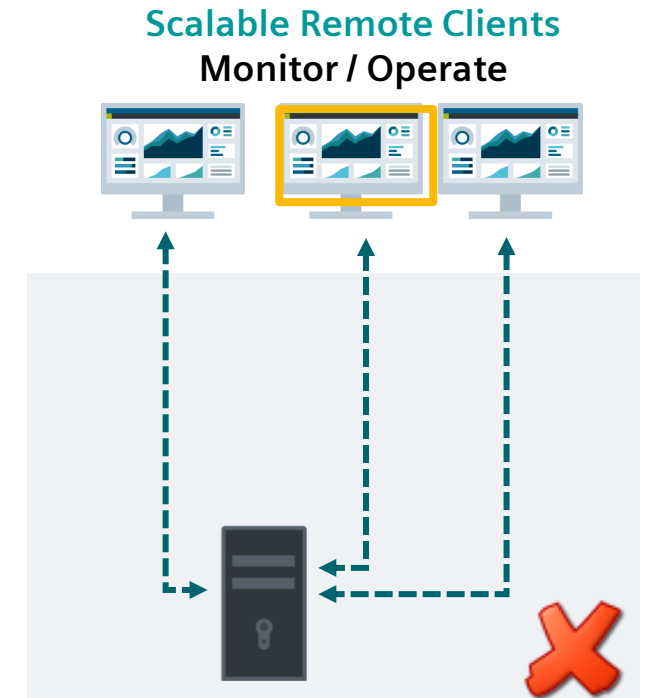
Local UI

WinCC Unified PC RT

WinCC Unified PC RT
Local User Interface plus add. Client
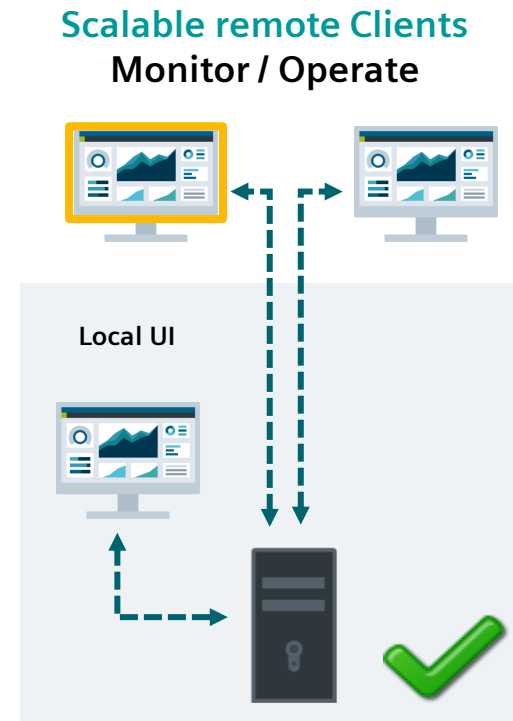
WinCC Unified PC RT
local User Interface

WinCC Unified PC RT
NO local User Interface

SIMATIC WinCC Unified V17

Remote Functions

Remote PC access to UCP(Sm@rtServer)

- Sm@rt Client-exe (without certificates)

- Synchronized remote operation with the operation on-site => Accessible with third party VNC-applications

Remote access to UCP/UCP:

- via Sm@rtServer (in future) smart client in UCP is not possible Today
- via WebClient
- via Collaboration

Sm@rt Client app in app store supports only Basic 2nd Gen, and Comfort / Advanced Runtime panels. (UCP are not supported)

https://apps.apple.com/de/app/sm-rtclient/id874209707?l=en

Use case : Customer has 2 UCPs and wants to display images of the respective other one

Solution1:   Web Client in Browser Control
Solution2:   Collaboration
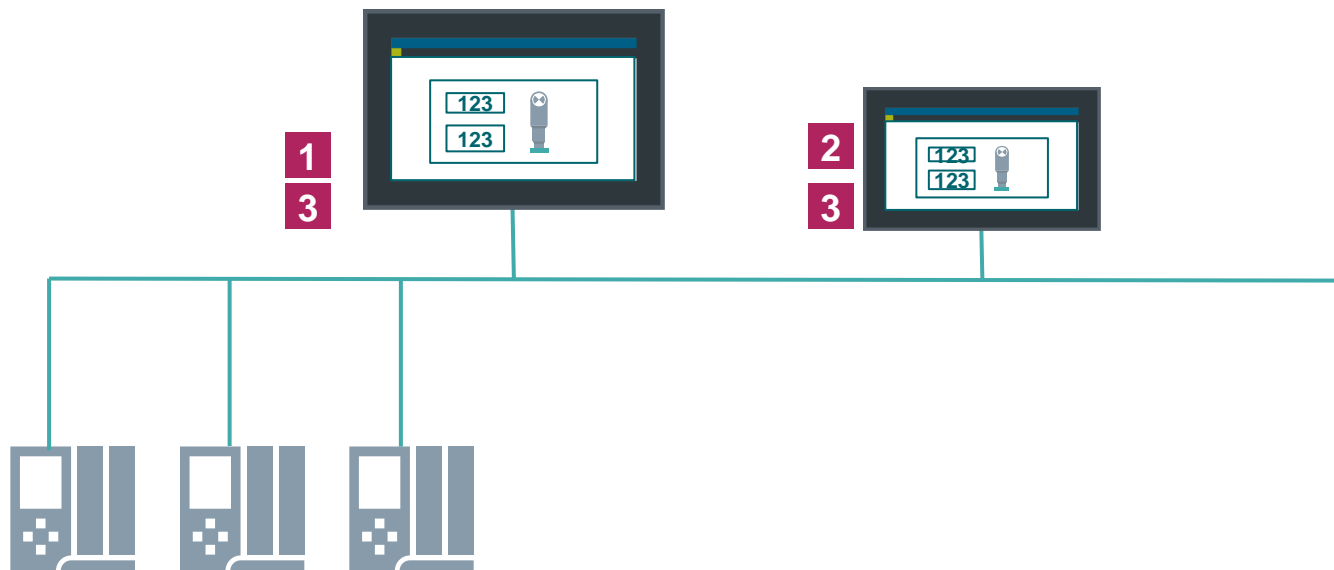
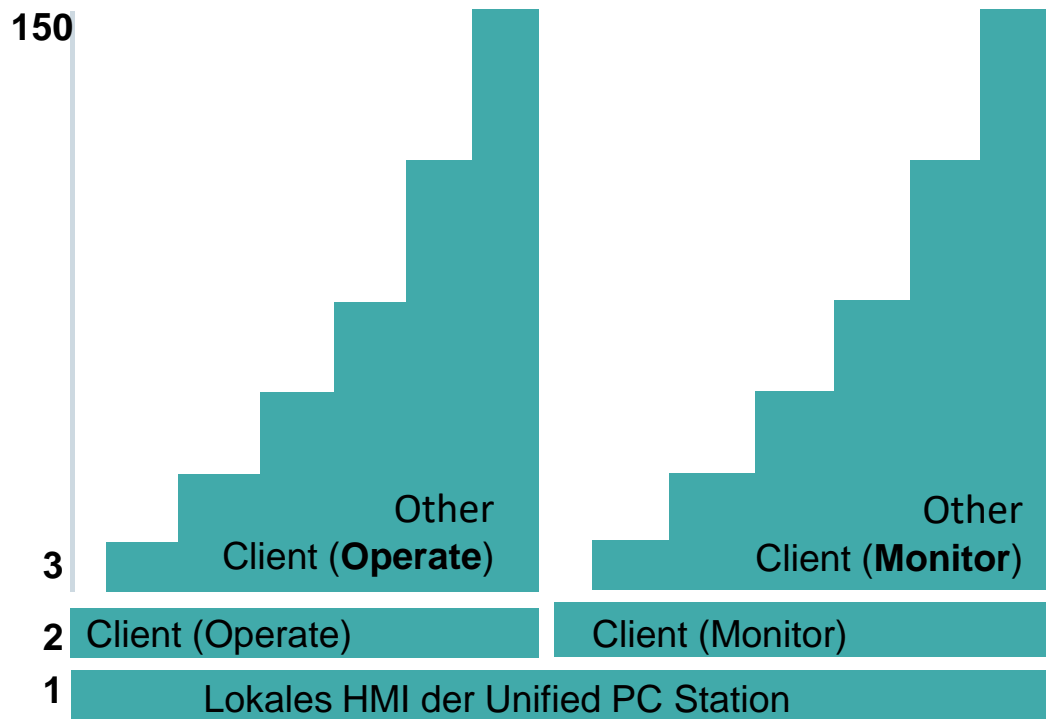Solution2:   Collaboration

1 **MTP1900 Unified Comfort**
MLFB: 6AV2128-3UB06-0AX0

2 **MTP1200 Unified Comfort**
MLFB: 6AV2128-3MB06-0AX0

3 **WinCC Unified Collaboration**
Collaboration
MLFB: 6AV2154-0BR01-7LB0

Flexible configuration
scenarios by sharing **only** screens

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified – PC Systems
License concept – Clients (Operate / Monitor)

PC ✓

150

3

2 Client (Operate)

1 Lokales HMI der Unified PC Station

Other
Client (**Operate**)

Other
Client (**Monitor**)

Client (Monitor)

Client licenses (Operate / Monitor) are pooled at the RT station – and can be extended on demand at any time.

- Flexible remote access for any number of users **(concurrent access)**
- **Grow on demand** increase number of Clients by 1, 3, 10, 30, 100 **(countable)**

- **Each Unified PC RT includes:**
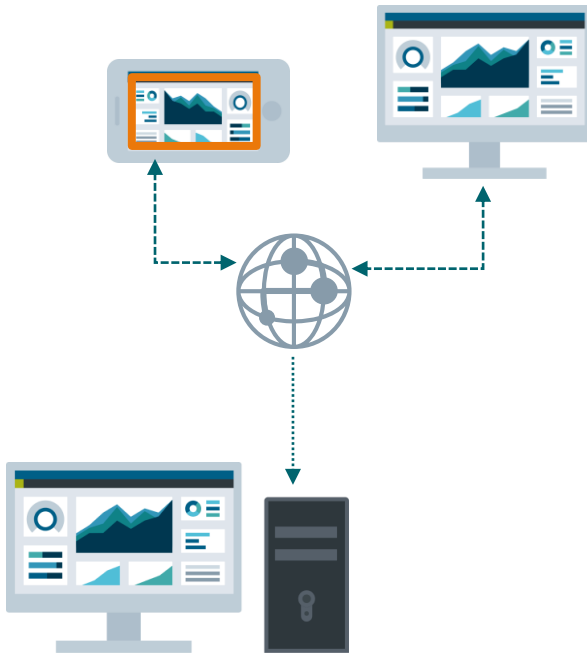 - One Client (local HMI)
  - One Client (Operate)
  - One Client (Monitor) NEW

- **Client (Operate) and Client (Monitor)** are independent of each other
- No up- or downgrade of licenses

SIMATIC WinCC Unified V17

WinCC Unified V17 – PC Systems
WinCC Unified Clients "Operate" & "Monitor"

PC ✓

WinCC Unified PC Runtime
offering Clients for remote Monitoring or Operation

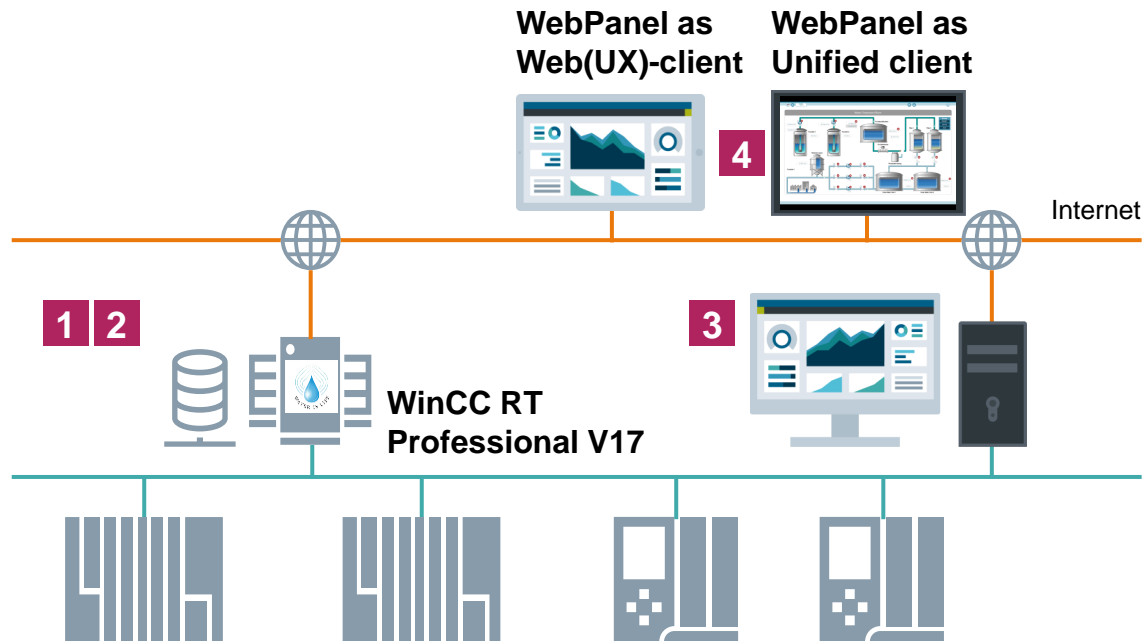- 1 Client for remote Operation inclusive
  (steps: 1,3,10,30,100)
- 1 Client for remote Monitoring inclusive
  (steps: 1,3,10)

The total number of Monitoring or Operation Clients is expandable upon demand.

Secure remote access using Web standards
Manual Certificate Manager SIOS (109779117)

Please note
There are separate licenses for Client Operate and Client Monitor (independent from each other)

use case: Operator control and monitoring of different WinCC systems with SIMATIC WebPanel

WebPanel as Web(UX)-client

WebPanel as Unified client

4

Internet

1 **2**

WinCC RT Professional V17

3

Additional Information

SIOS (109779205)

WebPanel (Linux based software) use HW from ITC but different Software!
Integrated current **Chromium Browser v66**
The IWP software supports different hardware architect (Basic Panels/ITC/IPC)

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1 **SIMATIC WinCC Runtime Professional V17**
WinCC RT Prof 8192 PowerTags
MLFB: 6AV2105-0KA07-0AH0
SIMATIC Net V17

2 **WinCC WebUX**
e.g.: for 1 Clients (Monitor and Operate)
MLFB: 6AV6362-2BB00-0AH0

3 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (2.5k) RT
MLFB: 6AV2154-2MB01-7LA0

4 **WebPanel 15"**
MLFB : 6AV6646-7BA00-0AA0

Attention: Standard ThinClient V3 uses a
Mozilla Firefox browser that is not optimal for WinCC Unified / WebUX

**New update planned for Standard ThinClient V3 in Q1 FY22
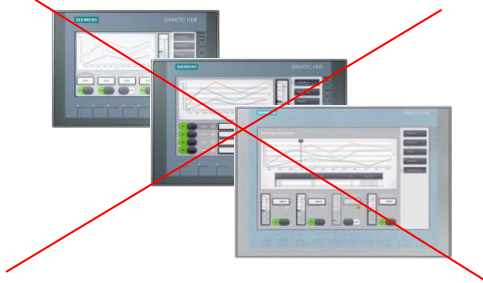with new Browser update to latest Chromium Version**

Background information
WebPanel / SIMATIC Industrial Thin Clients

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- **SIMATIC HMI IWP700 / IWP900 / IWP1200**

- Based on SIMATIC HMI Basic Panels

- =>**Not enough performance** 🙁

- **SIMATIC Industrial Thin Client V3: 15", 19", 22"**
- **SIMATIC Industrial Thin Client V3 PRO: 15", 19", 22"**

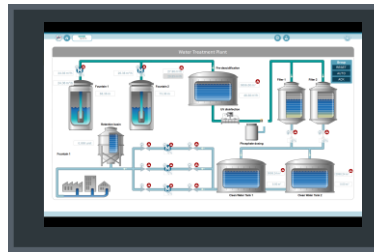- Browser: based on **Firefox Version ESR 52** 🙁
  → **not supported**

WebPanel 15" 😍
(available with 19"/22" special order)
MLFB : 6AV6646-7BA00-0AA0

- Based on SIMATIC HMI
- ITC V3 Panels
- Size: 15"
- Display resolution: 1366x768
- Integrated current
  Chromium Browser v66

SIMATIC Industrial Thin Clients 😍

Situation: Q4 2021

Planned

- More display sizes: 12" and 24"
- Update of SIMATIC Industrial Thin Client PRO: 12", 15", 19", 22", 24"

- Browser update to latest Chromium Version
  → **supported**

SIMATIC WinCC Unified V17

WinCC Unified System – Technical information – Content

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WinCC Unified V17 – Connection to automation systems
SIMATIC WinCC Unified

| Unified Comfort Panel ✓ | PC ✓ |

| Native 3rd Party[1] ✓ | S7-1200/1500 ✓ | *as from V17* | S7-300/400 ✓ | *as from V17* |

| SIMOTION[1] ✓ | S7-1500 Software Controller ✓ | PLCSIM/PLCSIM Advanced ✓ |
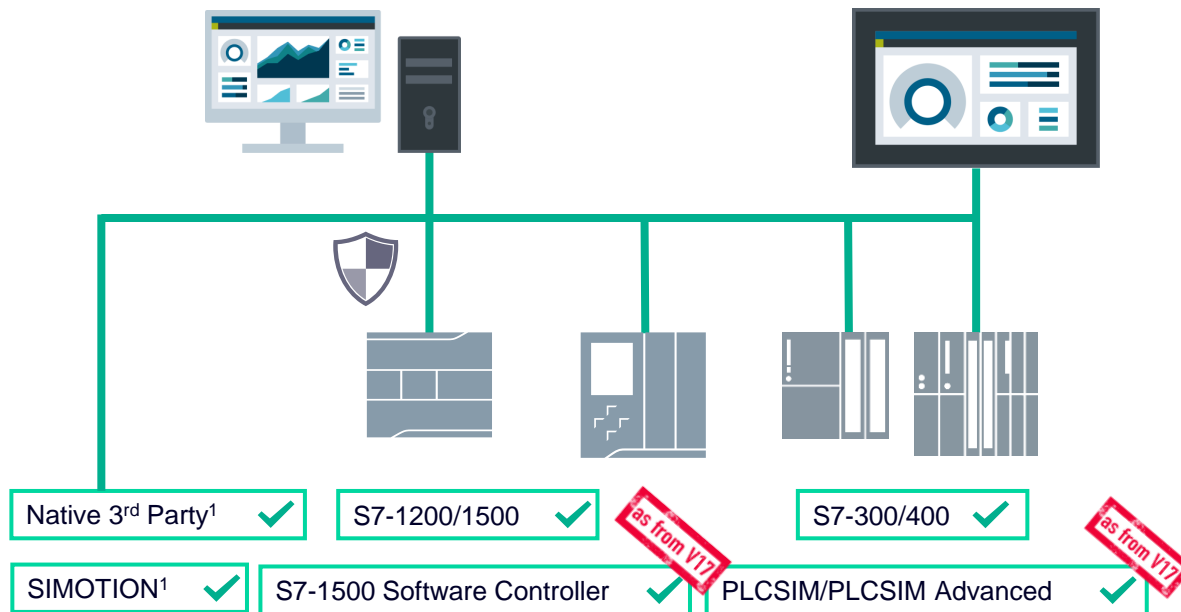
[1] Allen Bradley EtherNet/IP, Mitsubishi iQR/iQF/MC TCP/IP, Omron Ethernet/IP,
Communication driver Standard Modbus TCP/IP, OPC UA are integrated

→ Other Native 3rd Party[1] communication via Channel Support Package (CSP)
   (Entry-ID: 109779920)

- **Perfect integration** of SIMATIC PLCs and Software PLCs (TIA Portal)

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

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

- **Full integration in simulation** with PLCSIM and PLCSIM Advanced

SIMATIC WinCC Unified V17

WinCC Unified V17
Performance data

Connection type	Number of connections	
	Unified Comfort Panel	Unified PC Runtime
S7-300/-400	16	128
S7-1200/-1500	16	128
Allen Bradley Ethernet/IP	8	8
Mitsubishi iQR/iQF/MC TCP/IP	8	8
Omron Ethernet/P	8	8
Standard Modbus TCP/IP	8	8

SIMATIC WinCC Unified V17

WinCC Unified V17 – Connectivity
SIMATIC NET DVD V17

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SIMATIC NET V17 license is required, if more than 10 S7-connections are established.

Product		Version	MLFB
SOFTNET-IE S7 (OSD)	up to 64 connections floating license	V17	6GK1704-1CW17-0AK0
HARDNET-IE S7 (OSD)	up to 120 connections floating license	V17	6GK1716-1CB17-0AK0

https://support.industry.siemens.com/cs/de/en/view/109775589

Trial version SIMATIC NET DVD V17

Product	Version	MLFB
SIMATIC NET DVD V17	V17	6GK1700-0AA17-0AA0

use case –
WinCC Unified V17 and OpenController

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1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (1k) RT (2 x Clients include)
MLFB: 6AV2154-2EB01-7LA0

2 **WinCC Unified PC Engineering System**
- WinCC Unified PC (10k) ES
- MLFB: 6AV2153-2FB01-7LA5
- :

3 **Open Controller (getestete HW)**
CPU 1515 SP PC 2 mit CPU 1505 SP (Firmware 21.9)

CPU 1515SP PC – hardware spare part	**6ES7677-2DB40-0AA0**
SIMATIC CFast card 30 GB (spare part)	6ES7648-2BF10-0XK1
Server module (spare part)	6ES7193-6PA00-0AA0
CM DP module	6ES7545-5DA00-0AB0
Connector, 24 V DC, 2x2-pin, 10 units (Spare parts)	6ES7193-4JB00-0AA0

Additional Information :
- The recommended WinCC Unified project size with one OpenController corresponds approximately to a comparable WinCC RT Advanced project.
- Operating system Windows 10 LTSC 2019, then a maximum of **5 clients** are possible at the same time .
- Archiving : both archive databases (SQLite and SQL) are possible. Due to limited system resources, the file-based variant with SQLite should be chosen.
- IPC Software packages not provided with OC2

use case – WinCC Unified V17 and Software Controller

ES **3**

Internet

1
4
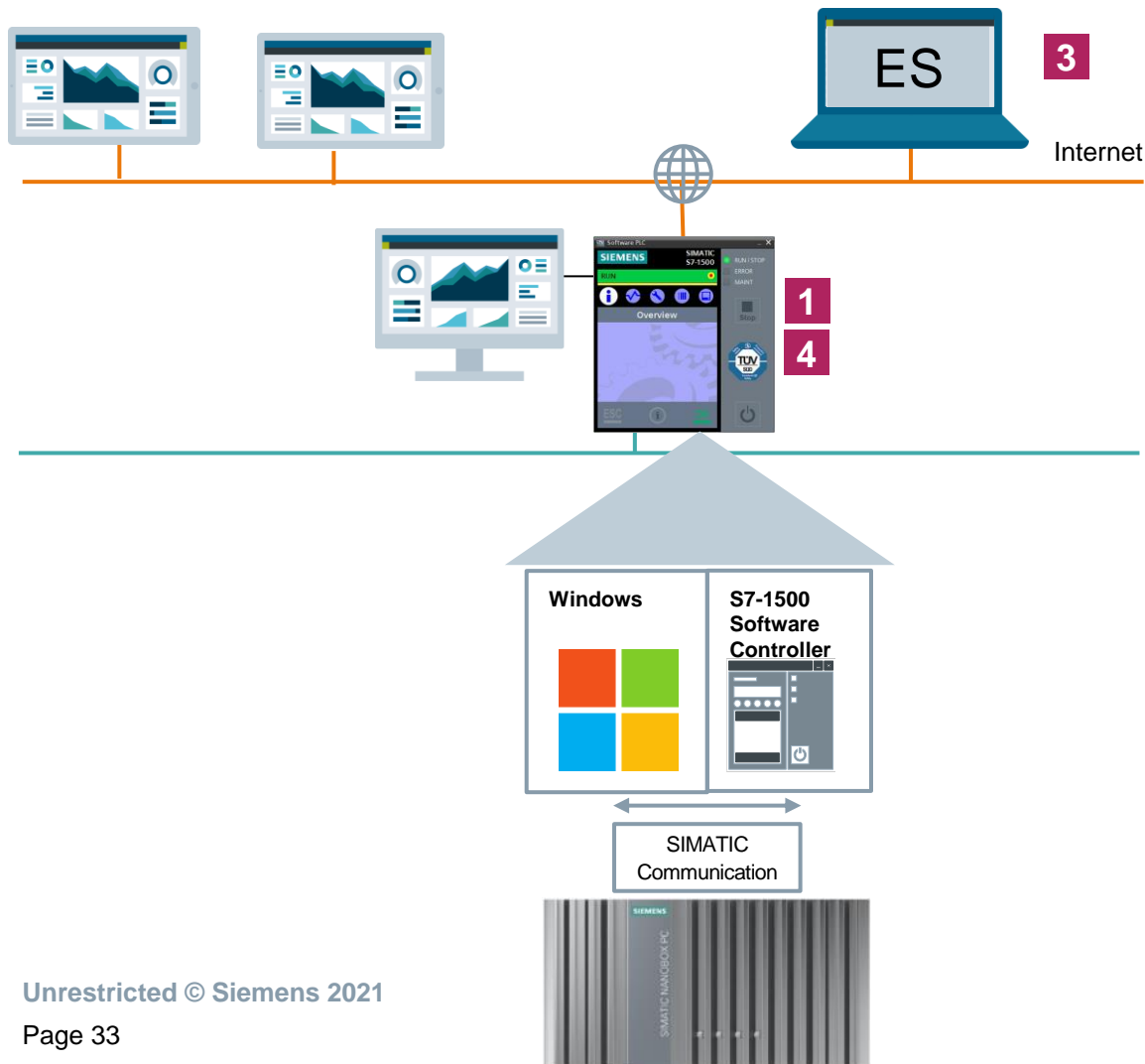
1 Base Packages WinCC Unified PC RT System
WinCC Unified PC (5k) RT (2 x Clients include)
MLFB: 6AV2154-1FB01-7LA0

3 WinCC Unified PC Engineering System
- WinCC Unified PC (10k) ES
- WinCC Unified PC (100k) ES

4 SIMATIC S7-1500 Software Controller – CPU 1507S (F) V2.6

Configuration, programming and diagnostics
via Windows Ethernet
Online access via PROFINET or PROFIBUS interface
possible after first configuration

Support of Windows 10 LTSC 2019
Supported on all current IPC Platforms:
- Nanobox IPC2x7E
- Microbox IPC4x7E
- IPC6x7/8x7E

Windows 10 => max 5 Clients

Use SQLite about Resource's

Windows   **S7-1500 Software Controller**

SIMATIC Communication

Packages with S7-1500 Software Controller CPU 1507 S (update 01/2021)

https://support.industry.siemens.com/cs/ww/de/view/99860269

These packages are only offered with following IPCs:
• IPC277E
• IPC227E

Ordering data

SIMATIC S7-1500 Software Controller CPU1507S (The latest version of the SW controller is always supplied)

Designation	Article number
Package: Software Controller CPU 1507S for IPC2x7E (DVD)	6ES7672-7AC01-6YA0
Package: Software Controller CPU 1507S F for IPC2x7E (DVD)	6ES7672-7FC01-6YA0

These packages planned with following IPCs (Summer 2021):
• IPC227G
• IPC277G

Backup Info SIMATIC S7-1500 Software Controller – Supported SIMATIC IPC Platforms

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Embedded Industrie-PCs
Highly rugged – Highly compact – Maintenance-free

High-end Industrie-PCs
Very rugged – High performance – High functionality

Nanobox (Box and Panel PC)	Microbox (Box and Panel PC)	Box and Panel PC	Rack PC

IPC227E / IPC277E	IPC427E / IPC477E	IPC627E / IPC677E	IPC647E / IPC847E
LTSC 2019	LTSC 2019	LTSC 2019	LTSC 2019
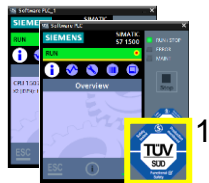
| CPU 1507S (F) | CPU 1507S (F) | CPU 1507S (F) | CPU 1507S |
| | CPU 1508S (F) | CPU 1508S (F) | CPU 1508S |

1 Devices with NVRAM (e.g. buffered SRAM) required for operation of CPU 1507S F and CPU 150ß8S F

SIMATIC WinCC Unified V17

WinCC Unified – Native 3rd Party communication integrated into V17 or via Channel Support Package (CSP)

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The following types of communication peers integrated into V17

Modicon
- Compact series
- Quantum series
- Momentum series
- Premium series
- Micro series
- M340 series

Allen-Bradley
- ControlLogix
- CompactLogix
- MicroLogix
- GuardLogix
- SLC

Mitsubishi
- MELSEC iQR PLCs
- MELSEC iQF PLCs
- MELSEC FX3 series
- MELSEC FX3 series

  with communication module FX3U-ENET
- MELSEC Q series

  with QJ71E71-100 communication module

The Channel Support Package (CSP)

enables you to configure the communication for HMI Unified Comfort Panels and WinCC Unified PC to PLCs that are not contained in the normal WinCC (TIA Portal) installation.

Various channel support packages are planned, which, depending on the completion, will be delivered independently of updates within this Business year.
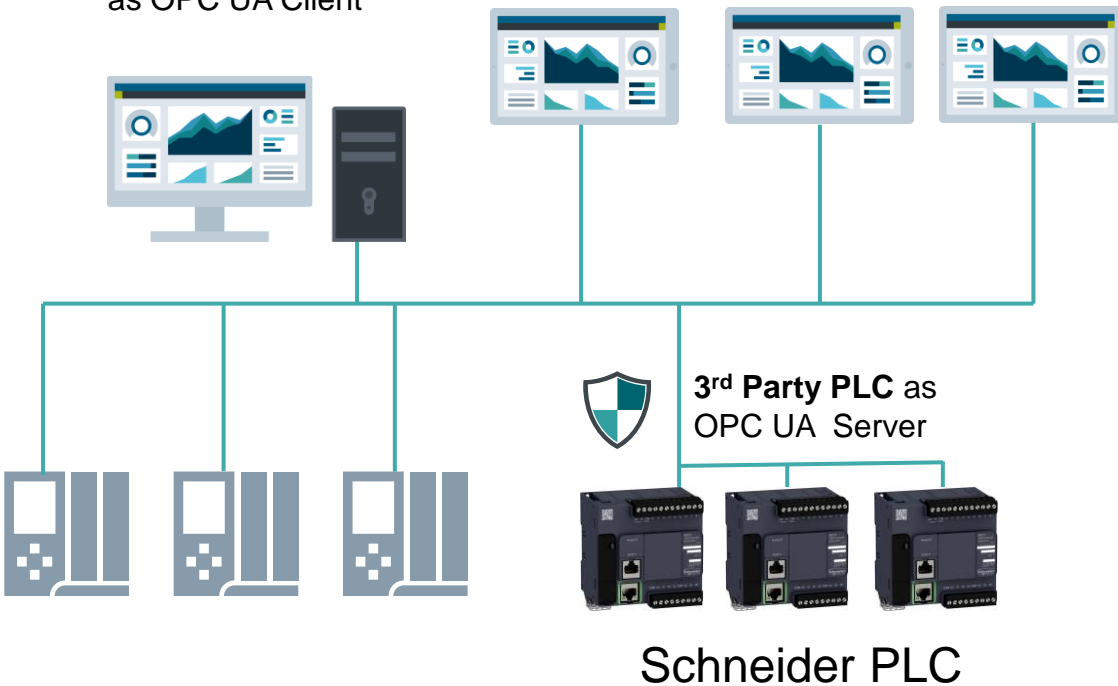
Newest Info's in SIOS:

https://support.industry.siemens.com/cs/us/en/view/109779920

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified
Communication : Using standard interface Ethernet IP

WinCC Unified PC RT
as OPC UA Client[1]

3rd Party PLC as
OPC UA Server

Schneider PLC
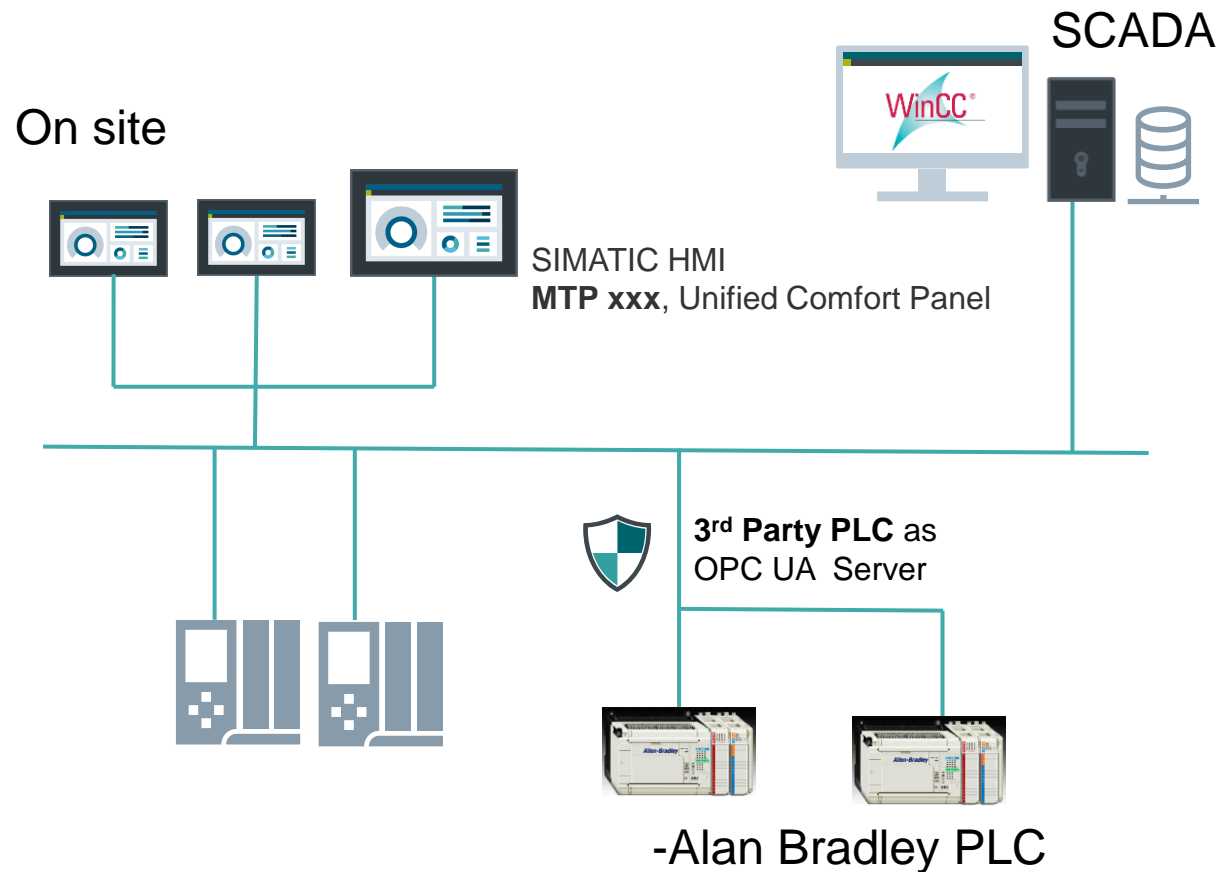
Communication

Over Ethernet IP
-Schneider PLC/
-Alan Bradley PLC

- Project F&B (Thailand)
- Project Infrastructure

[1] **only local OPC UA server** can be connected as OPC UA client

SIMATIC WinCC Unified V17

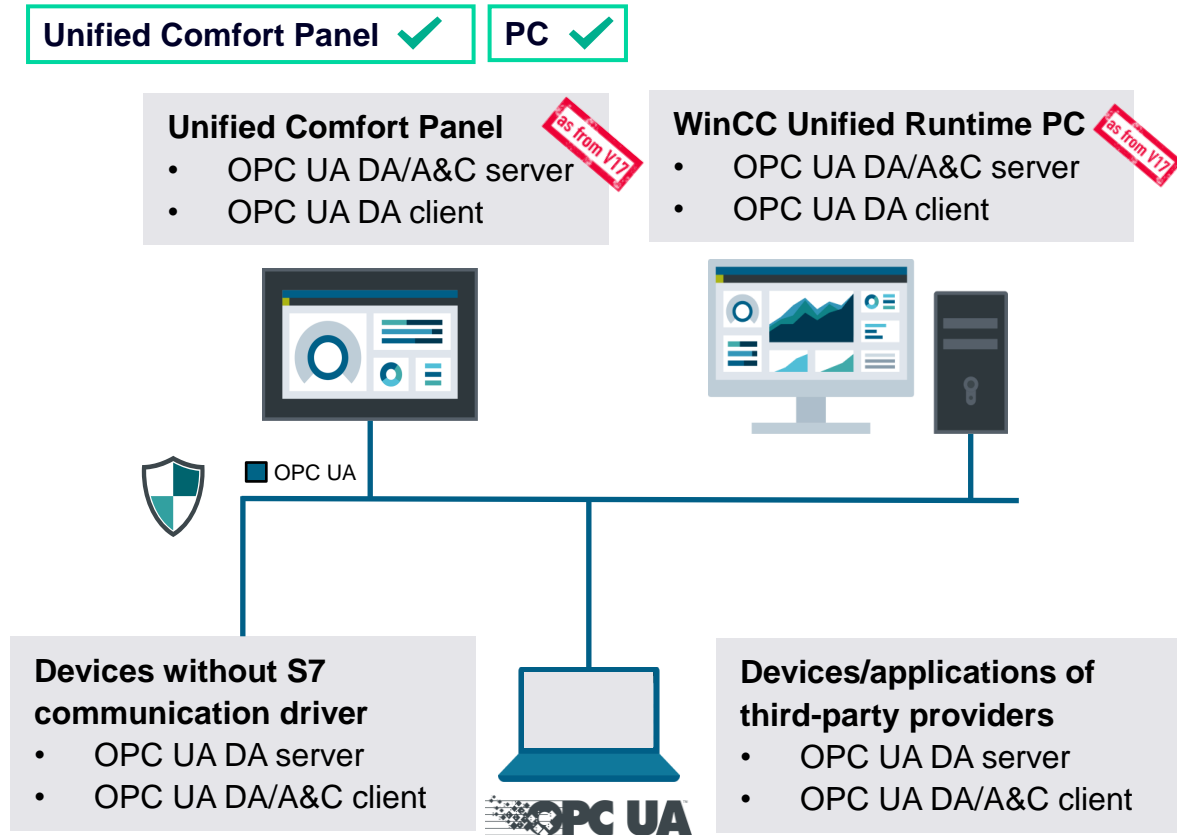# Communication : Using standard interface with OPC UA client

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On site

SCADA

SIMATIC HMI
MTP xxx, Unified Comfort Panel

3rd Party PLC as
OPC UA Server

-Alan Bradley PLC

Communication
OPC UA Client

▶

- Project Water

WinCC Unified V17 – Connectivity
Using standard interface OPC UA

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Ingenuity for life

Unified Comfort Panel ✓	PC ✓

Unified Comfort Panel *(as from V17)*
- OPC UA DA/A&C server
- OPC UA DA client

WinCC Unified Runtime PC *(as from V17)*
- OPC UA DA/A&C server
- OPC UA DA client

■ OPC UA

Devices without S7 communication driver
- OPC UA DA server
- OPC UA DA/A&C client

OPC UA

Devices/applications of third-party providers
- OPC UA DA server
- OPC UA DA/A&C client

OPC UA communication standard for connectivity to OT/IT systems and other automation systems

- **Unified Comfort Panel** and **WinCC Unified Runtime PC** can be configured as **OPC UA server** and as **OPC UA client**.

- The **OPC UA DA server provides** process **values from** the **WinCC data management** for one or more OPC UA DA clients.

- The **OPC UA A&C server provides** the **alarms from** the **WinCC alarm management** for one or more OPC UA A&C clients.

- **Industrial security policies** like **signed and encrypted communication** and **authentication of client** on the server

SIMATIC WinCC Unified V17

Overview
Using standard interface OPC UA : Performance Data

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Connections

	Unified Comfort Panel	WinCC Unified PC Runtime
Count of connected OPA UA clients	3	10

Alarms

	Unified Comfort Panel	WinCC Unified PC Runtime
Count of OPC UA A&C alarms	20,000	20,000

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified
OPC UA client

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Unified Comfort Panel ✓   **PC** ✓

Unified Comfort Panel
- OPC UA DA

WinCC Unified Runtime PC
- OPC UA DA

■ OPC UA

Devices without S7 communication driver
- OPC UA DA server

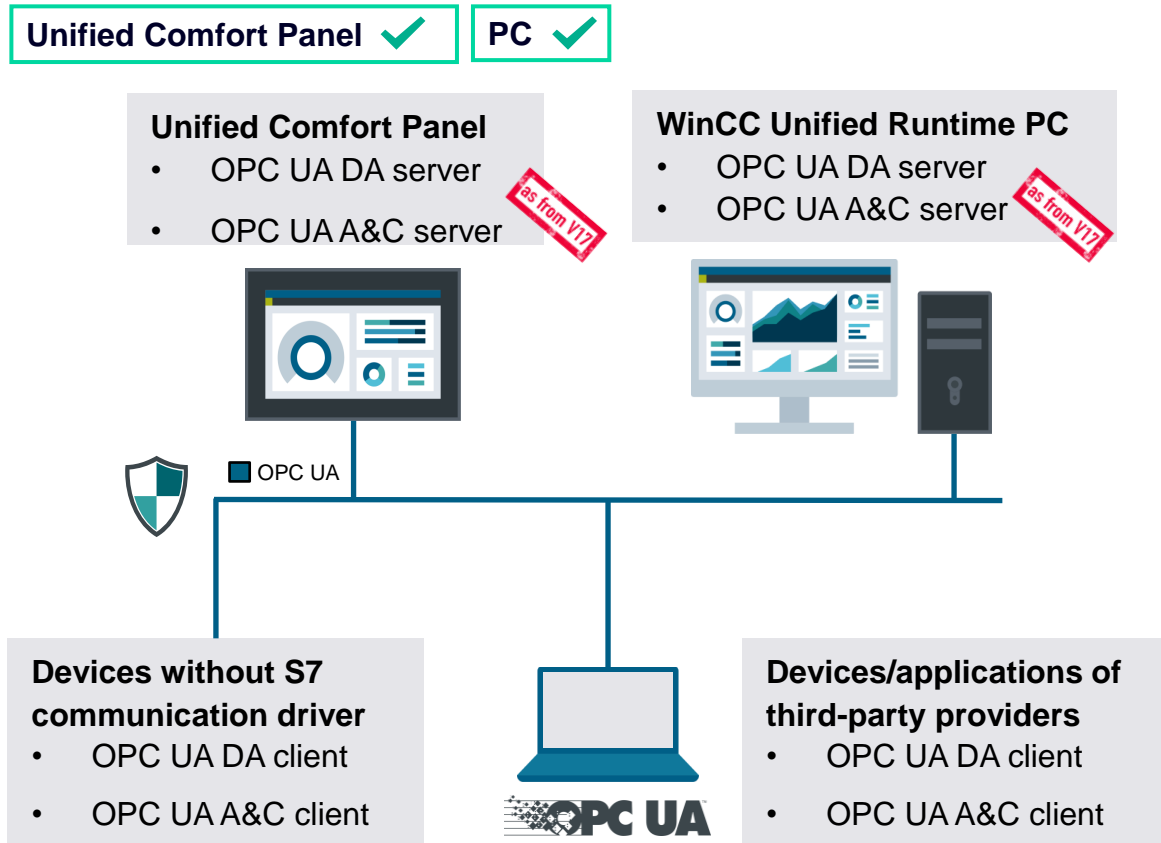**Devices/applications of third-party providers**
- OPC UA DA server
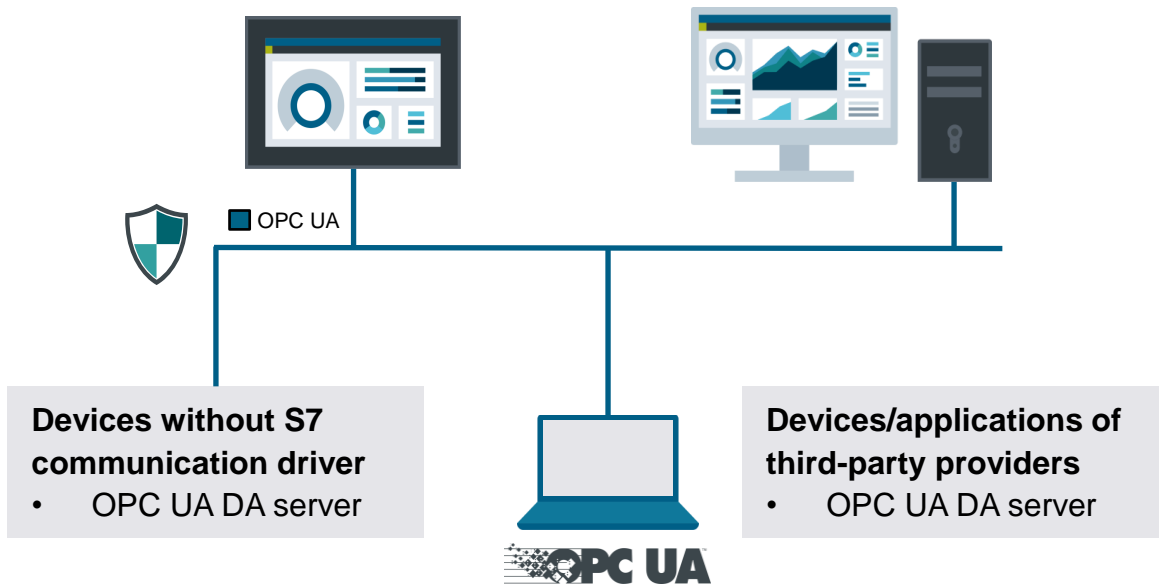
OPC UA DA client to read and write tags from OPC UA servers of other devices/applications.

- **OPC UA DA client** for **communication with** an **OPC UA DA server of** devices without S7 communication driver or devices/applications of third-party providers

- **Read** and **write tags** from **OPC UA DA server**

- **No** separate **license needed**

The OPC UA DA client supports the following industrial security policies:
- **Signed** and **encrypted** communication
- **Authentication** with **user & password**

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified
OPC UA server

Unified Comfort Panel ✓   **PC** ✓

Unified Comfort Panel
- OPC UA DA server
- OPC UA A&C server

as from V17

WinCC Unified Runtime PC
- OPC UA DA server
- OPC UA A&C server

as from V17

■ OPC UA

Devices without S7 communication driver
- OPC UA DA client
- OPC UA A&C client

OPC UA

Devices/applications of third-party providers
- OPC UA DA client
- OPC UA A&C client

OPC UA DA/A&C server provides tags/alarms for other devices/applications.

- OPC UA **server** for **communication with devices without S7 communication** driver or **of third-party** providers

- **Read** and **write tags** from **OPC UA DA server** possible

- **Read** and **acknowledge alarms** with **OPC UA client** possible

The OPC UA server supports the following industrial security policies:
- **Signed** and **encrypted** communication
- **Authentication** with **user & password**

OpenController and SoftwareController
the following system are tested

Software Controller

- SIMATIC IPC 427 E with CPU 1508S F V21.9

OpenController

- SIMATIC ET200 SP 1515SP PC 2 with CPU 1505SP F V20.8 (configured with V17)

- SIMATIC ET200 SP 1515 SP PC 2 with CPU 1505 SP V21.9

Additional Information :

the Software Controller /OpenController is regarding performance not suitable for bigger projects !!!
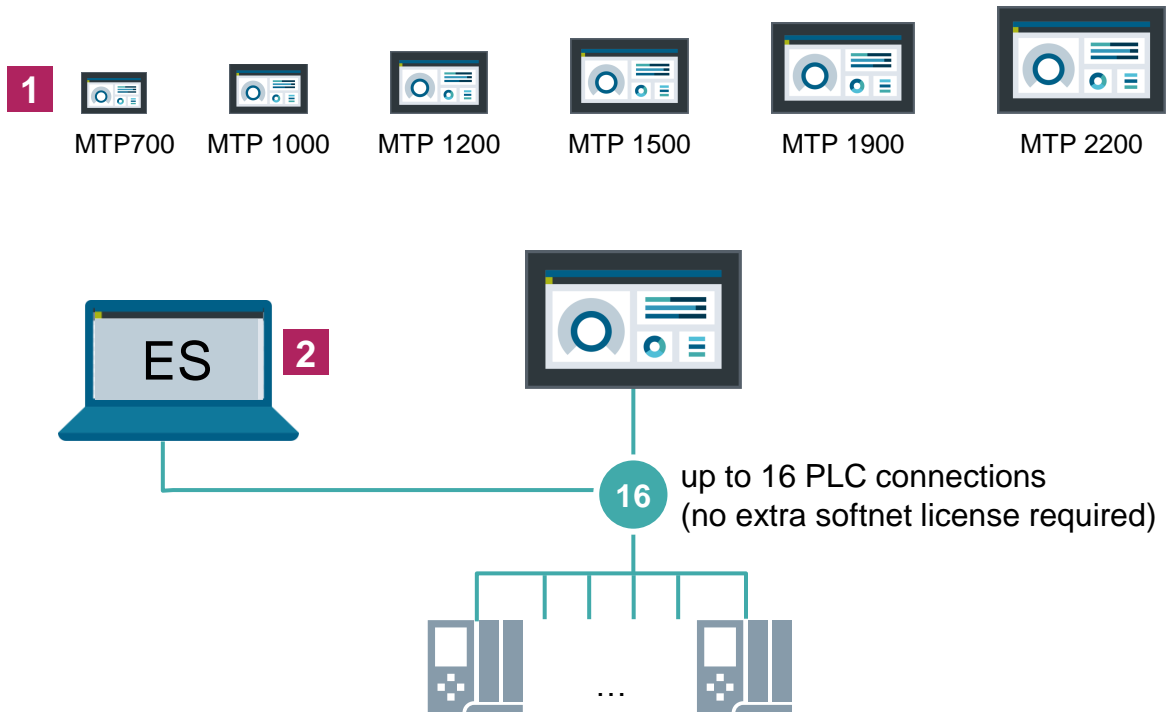
WinCC Unified System – Technical information – Content

1 Preconditions

2 Overview / Ordering Information

3 Connectivity : Configurations/use case

4 HMI Unified Comfort Panels

5 WinCC Unified PC RT V17

6 mixed configurations (Data transfer,Collaboration, Reporting, technological Hierarchy)

7 Use cases with WinCC AddOns

8 Positioning Focus + IPC Packages / Additional Infos

Configuration V17 – Engineering Station – HMI Unified Comfort Panels

1
MTP700   MTP 1000   MTP 1200   MTP 1500   MTP 1900   MTP 2200

ES **2**

16 up to 16 PLC connections
(no extra softnet license required)

...

Minimum for Engineering: Unified Comfort ES V17
→ **Alternative:**
- WinCC Comfort/Advanced License
- WinCC Unified PC (10k/100k/max.) ES

1 **Base Packages**
SIMATIC HMI Unified Comfort Panels (7 – 22")

Device name	MLFB Standard Design
MTP700 Unified Comfort	6AV2128-3GB06-0AX0
MTP1000 Unified Comfort	6AV2128-3KB06-0AX0
MTP1200 Unified Comfort	6AV2128-3MB06-0AX0
MTP1500 Unified Comfort	6AV2128-3QB06-0AX0
MTP1900 Unified Comfort	6AV2128-3UB06-0AX0
MTP2200 Unified Comfort	6AV2128-3XB06-0AX0

2 **SIMATIC WinCC Unified Engineering**
WinCC Unified Comfort ES V17
MLFB: 6AV2151-0XB01-7LA5

Accessories: Catalog-Link

Configuration V17 – PLC Webserver Access– SIMATIC HMI Unified Comfort Panels / VoT

WinCC Unified

View of Things

MTP 700-2200

1

2 ES

S7-1200

Access to the S7-1500 Webserver ?
- **UCP Access to the S7-1500 Webserver with the WinCC Unified Web Browser Control**
- **or Possibility of limited display of values from S7-1500 Web Server via WinCC Unified View of Things**

---

1 **Base Packages**
SIMATIC HMI Unified Comfort Panels (7 – 22")

Device name	MLFB Standard Design
MTP1200 Unified Comfort	6AV2128-3MB06-0AX0

2 **SIMATIC WinCC Unified Engineering**
WinCC Unified Comfort ES V17
MLFB: 6AV2151-0XB01-7LA5

View of Things only requires an Engineering license for WinCC (TIA Portal)

Creating web screens easily for PLC (S7-1500 & ET200SP) with SIMATIC WinCC Unified View of Things.

SIMATIC WinCC Unified V17

Requirements

- Software: STEP 7 Professional V17 installation (includes VoT functions)

- PLCs: All SIMATIC S7-1500 standard systems (incl. ET200SP CPU, failsafe, T-CPU;SW-/Open-Controller still excluded for the time being)

- Firmware: Min. FW 2.9

- Sufficient load memory / transfer buffer on the memory card

Licensing

- WinCC Engineering license is required(minimum WinCC Unified Comfort ES)

- Runtime license: planned for extensions in V18 (10 Pictures / images should remain free of charge, but then be tested hard as a limit)

Performance

Performance and quantity scaffolds depend on the PLC and the resources of the client device.
(PLCs <= S7-1513 have only 1 processor core).

Use case: Using System Diagnostics in SIMATIC WinCC Unified

Unified Comfort Panel ✓	PC ✓

System Diagnostics

System Diagnosis Indicator

Introduction of a system variable @DiagnosticsIndicatorTag indicating the state of the system
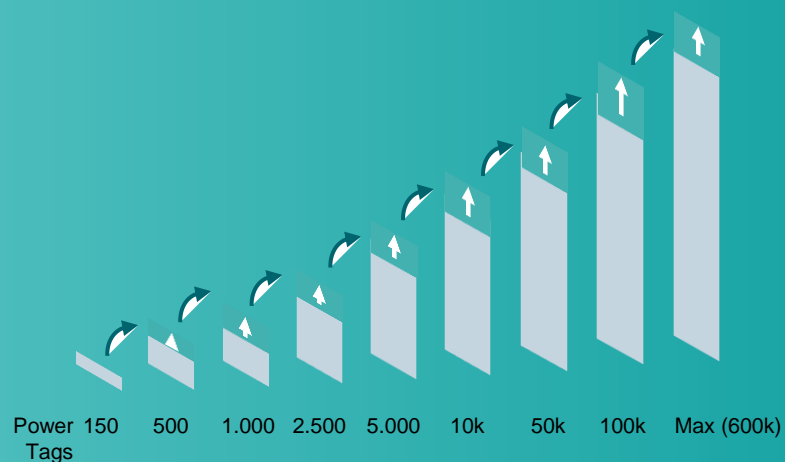
Device Diagnostic Buffer

During maintenance of a machine or in the event of a fault, the diagnostics buffer of a SIMATIC S7 PLC can be scanned on an HMI system without the need for a programming tool.
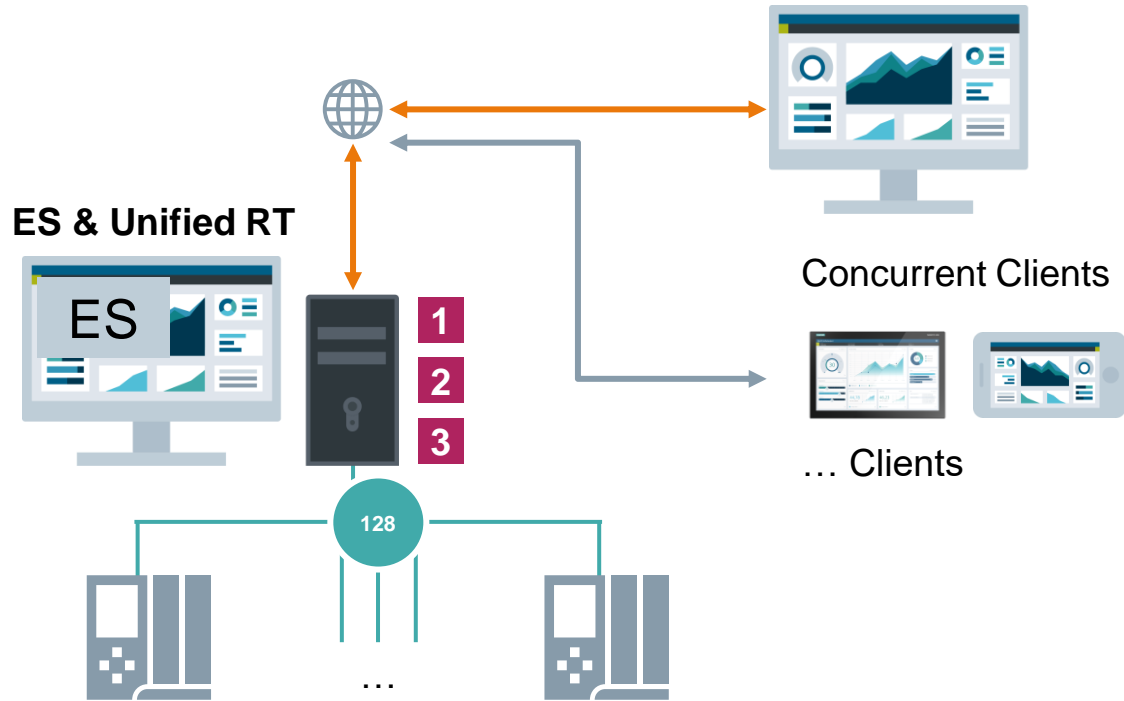
WebControl only with UCP

WinCC Unified System – Technical information – Content

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SIMATIC WinCC Unified V17

WinCC Unified PC RT V17

Power 150   500   1.000   2.500   5.000   10k   50k   100k   Max (600k)
Tags

Configuration V17 – PC Systems – WinCC Unified PC Runtime with 128 connections

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Ingenuity for life

ES & Unified RT

ES

128

Concurrent Clients

… Clients

…

- Each WinCC Unified PC Runtime includes 3 Clients – for locale HMI plus one Operate and one Monitor remote access.
- Simatic NET must be licensed separately for more than 10 x S7-connections S7-connections (up to 128)

1 Base Packages WinCC Unified PC RT System

WinCC Unified PC RT n
- **WinCC Unified PC (150) RT**
- WinCC Unified PC (500) RT
- WinCC Unified PC (1k) RT
- WinCC Unified PC (2.5k) RT
- WinCC Unified PC (5k) RT
- WinCC Unified PC (10k) RT
- WinCC Unified PC (50k) RT
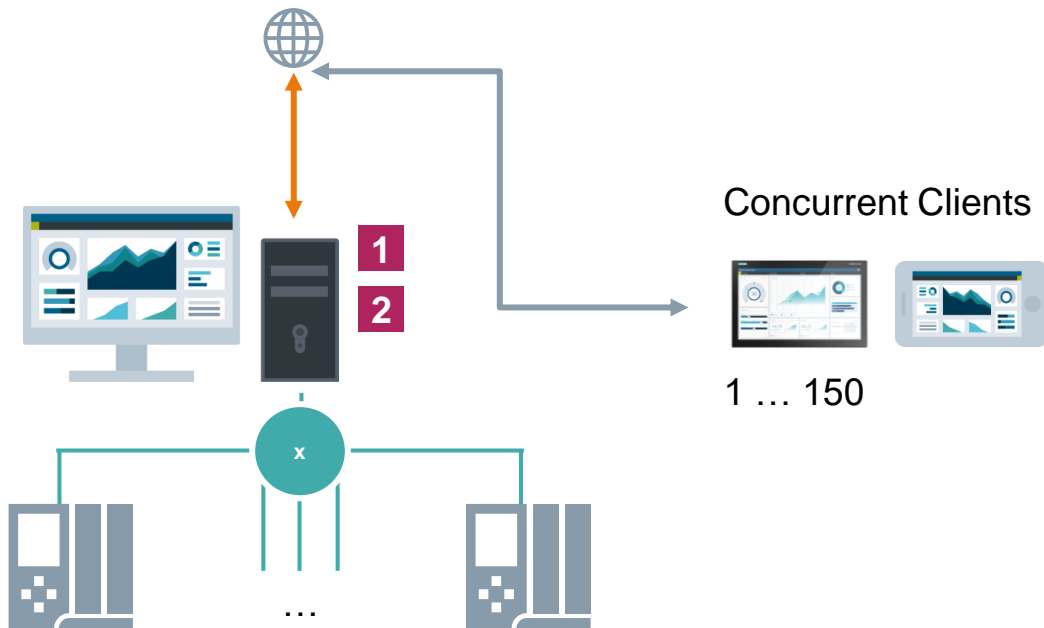- WinCC Unified PC (100k) RT
- WinCC Unified Max RT (max.)

2 WinCC Unified PC Engineering System
- WinCC Unified PC (10k) ES
- WinCC Unified PC (100k) ES
- WinCC Unified PC (Max) ES

3 SIMATIC NET V17
MLFB: 6GK1704-1CW17-0AA0

SIMATIC WinCC Unified V17

Configuration V17 – PC Systems – WinCC Unified PC Runtime – 1 Unified Server and 150 Clients

Concurrent Clients

1 … 150

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC RT n

2 **WinCC Unified Client**

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

- WinCC Unified Client Monitor (1)   MLFB: 6AV2157-1JM00-0LB0
- WinCC Unified Client Monitor (3)   MLFB: 6AV2157-3JM00-0LB0
- WinCC Unified Client Monitor (10)   MLFB: 6AV2157-2CM00-0LB0

- Concurrent Clients (150 system are tested),
  One for local HMI plus one for remote access
- In principle, more clients **are possible** (depending on the
  total system load) but cannot be guaranteed
- Windows operating system with **actual** HTML 5 Browser
- "Zero Installation" Clients via state-of-the-art web browsers –
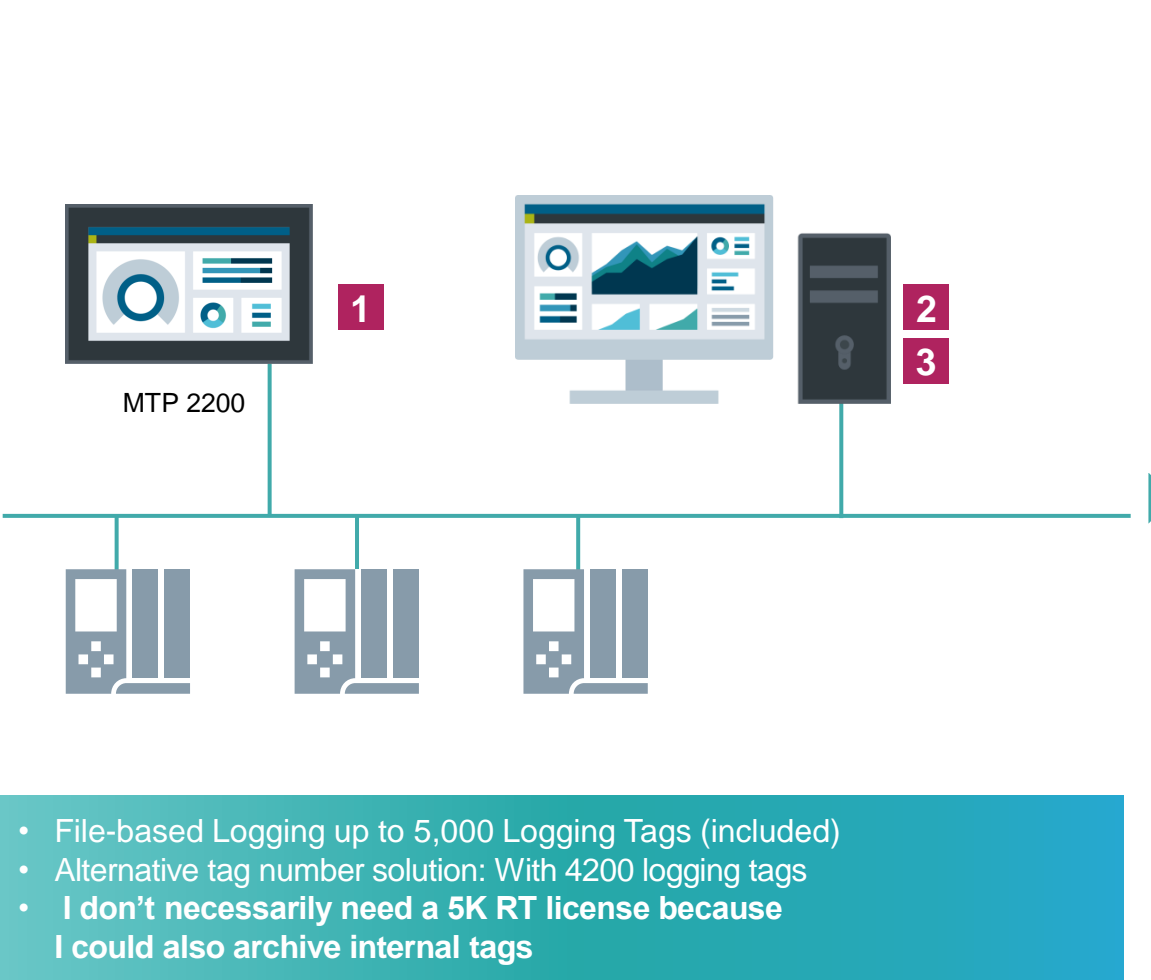 (no need to install separate apps or plug-ins)

WinCC Logging –
File-based Logging (4200 Logging Tags)

MTP 2200

- File-based Logging up to 5,000 Logging Tags (included)
- Alternative tag number solution: With 4200 logging tags
- **I don't necessarily need a 5K RT license because I could also archive internal tags**

1 Base Packages
SIMATIC HMI Unified Comfort Panels (7 – 22")

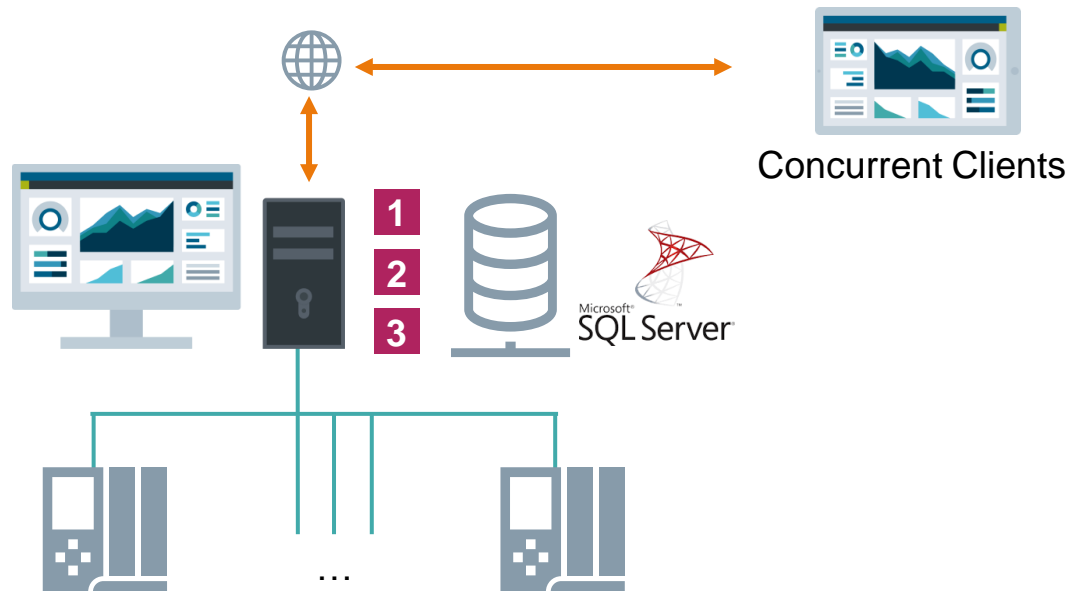| Device name	MLFB Standard Design
MTP2200 Unified Comfort	6AV2128-3XB06-0AX0

2 Base Packages WinCC
Unified PC RT System
WinCC Unified PC RT n
- WinCC Unified PC (2.5k) RT…
- WinCC Unified PC (5k) RT

3 WinCC Unified Logging Tags (4200)

- WinCC Unified Logging Tags
- WinCC Unified Logging Tags (100)   MLFB:6AV2157-2DA00-0LB0
- WinCC Unified Logging Tags (500)   MLFB:6AV2157-1EA00-0LB0
- WinCC Unified Logging Tags (1000)   MLFB:6AV2157-2EA00-0LB0
- WinCC Unified Logging Tags **(5000)**   MLFB:6AV2157-1FA00-0LB0

Configuration V17 – PC Systems – Logging – Unified PC Runtime Databased Logging (11 000 Logging Tags)

Concurrent Clients

Microsoft® SQL Server™

- The number of Logging Tags is scalable (countable) to grow upon demand up to 30.000 Logging Tags.
- The licenses for Logging Tags are valid both logging types: file-based and databased- Logging
- For logging less 5,000 Tags use File-based Logging
- Alternative tag number solution: With 11 000 logging tags I don't necessarily need a 50K RT license because I could also archive internal tags

1 Base Packages WinCC Unified PC RT System

WinCC Unified PC RT n
- WinCC Unified PC (150) RT
- WinCC Unified PC (500) RT
- WinCC Unified PC (1k) RT
- WinCC Unified PC (2.5k) RT
- WinCC Unified PC (5k) RT
- WinCC Unified PC (10k) RT
- **WinCC Unified PC (50k) RT**
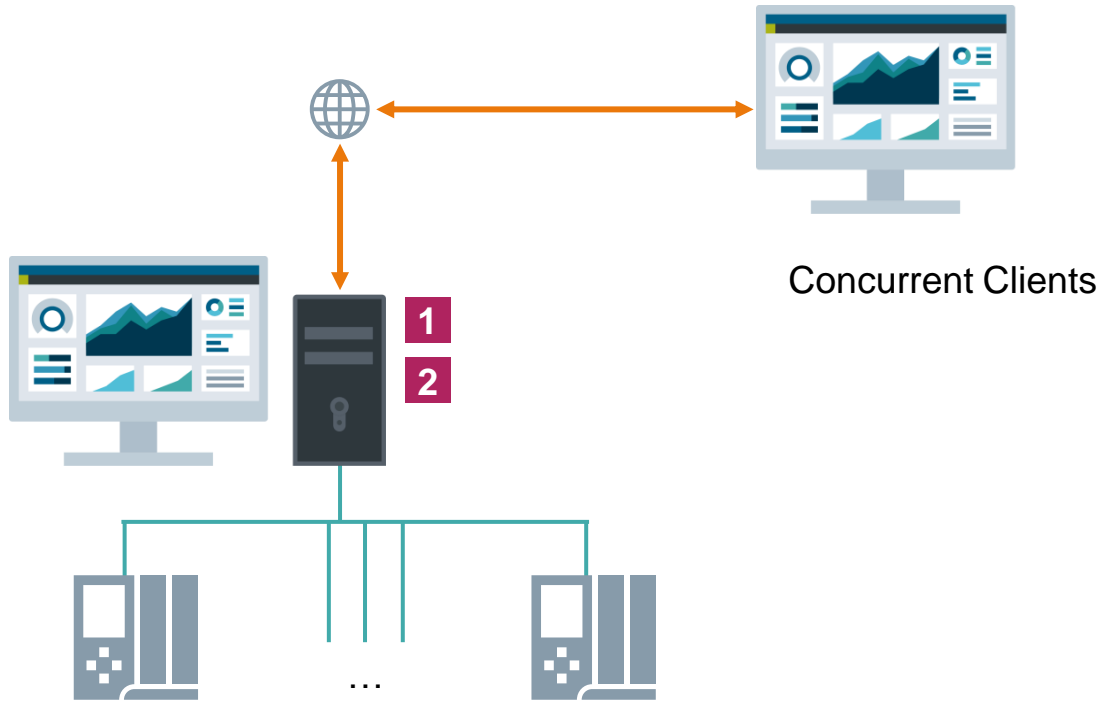- WinCC Unified PC (100k) RT
- WinCC Unified Max RT (max.)

2 Database Storage
MLFB: 6AV2154-0BS01-7LA0

3 WinCC Unified Logging Tags (11 00)
(1x WinCC Unified Logging Tags (10 000 +1000))

- WinCC Unified Logging Tags (100)   MLFB:6AV2157-2DA00-0LB0
- WinCC Unified Logging Tags (500)   MLFB:6AV2157-1EA00-0LB0
- WinCC Unified Logging Tags **(1000)**   MLFB:6AV2157-2EA00-0LB0
- WinCC Unified Logging Tags (5000)   MLFB:6AV2157-1FA00-0LB0
- WinCC Unified Logging Tags **(10000)**   MLFB:6AV2157-2FA00-0LB0
- WinCC Unified Logging Tags (30000)   MLFB:6AV2157-6FA00-0LB0

Configuration V17 – PC Systems – Recipes – Unified PC Runtime with Parameter Control

Concurrent Clients

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC RT n:
- WinCC Unified PC (150) RT
- WinCC Unified PC (500) RT
- WinCC Unified PC (1k) RT
- WinCC Unified PC (2.5k) RT
- WinCC Unified PC (5k) RT
- WinCC Unified PC (10k) RT
- WinCC Unified PC (50k) RT
- WinCC Unified PC (100k) RT
- WinCC Unified Max RT (max.)

2 **WinCC Unified Parameter Control (PC)**
MLFB: 6AV2154-0BP01-7LB0

...

Recipe station – Additional clients can be added upon demand

WinCC Unified System – Technical information – Content

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mixed configurations

- Data transfer

- Collaboration V17

- Reporting

- Technological Hierarchy

Configuration V17 –
use case : Data transfer
Use Unified RT Configurations in other station/Devices

Plant A Parameter Control

Plant B Parameter Control

Concerns
- Parameter Control
- Calendar data
- Reports (& Report Configurations)

- Rest RT Data

SIMATIC WinCC Unified V17

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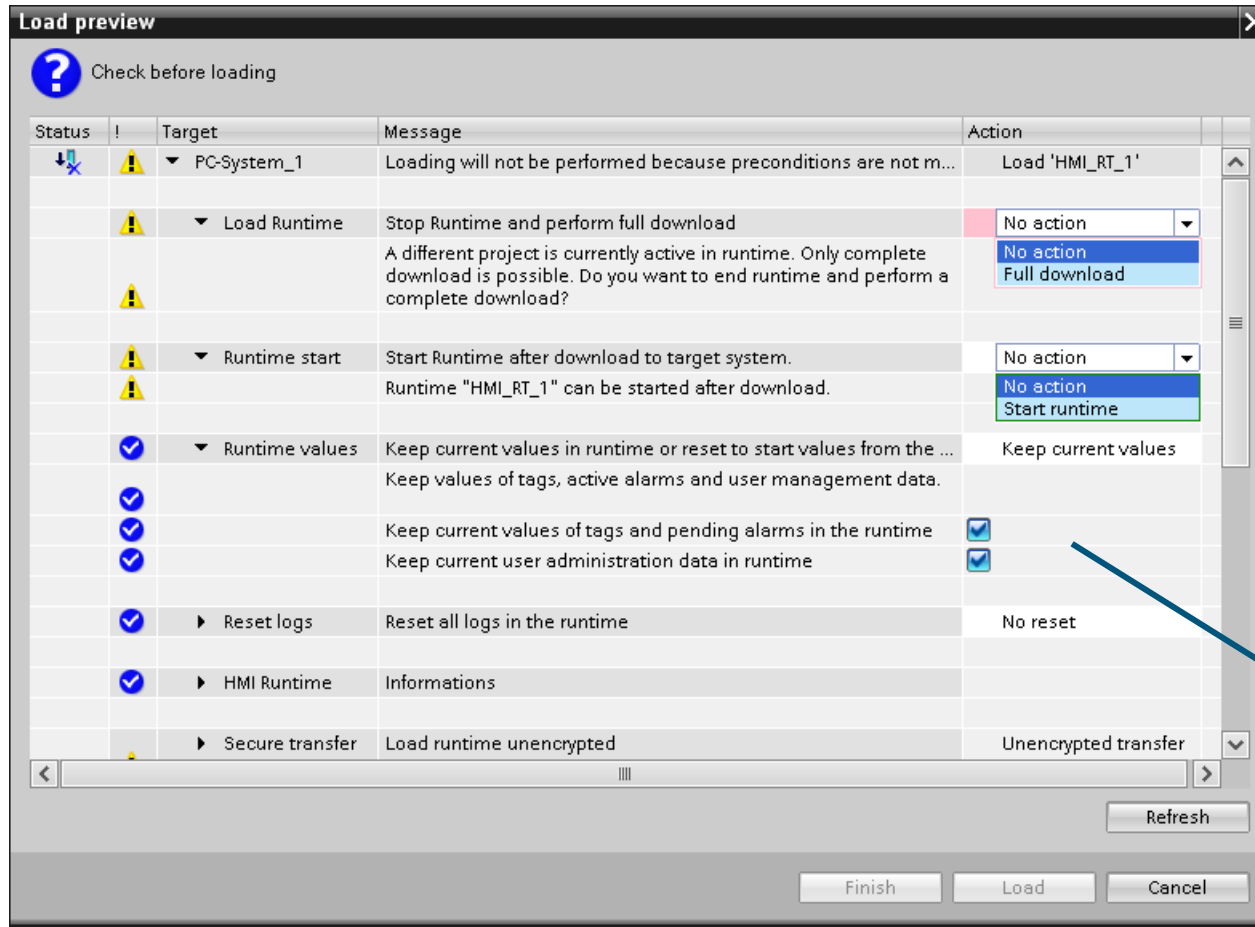
Goal:

Resetting / deleting the current data

a. Is selectable via TIA Portal download (except incl. PI options)

b. Is possible via RT Manager via options for tags/alarms

c. Plant Intelligence Options

        PFI : Not possible in V17 (Tom)

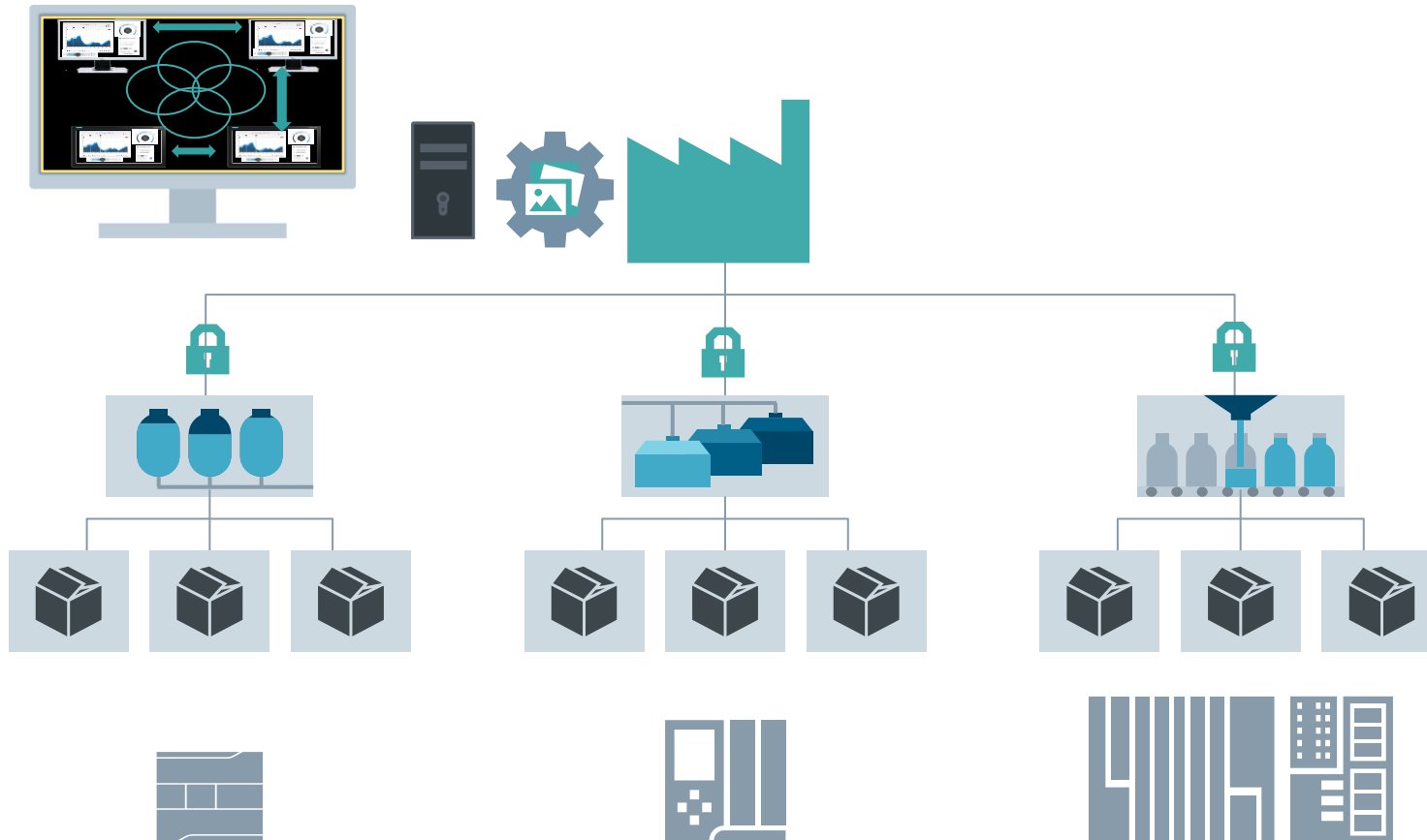   SES / LCS / CAL : "Clear all" possible at runtime (in RT)

SIMATIC WinCC Unified V17

Device handling – Downloading project data
SIMATIC WinCC Unified V17

Select to keep or overwrite RT values.

Use case – Central operation/monitoring of various systems with WinCC Unified Collaboration ⚙🖼

You can use **Unified Collaboration to exchange** certain Run-time objects between several SIMATIC Unified Runtimes.
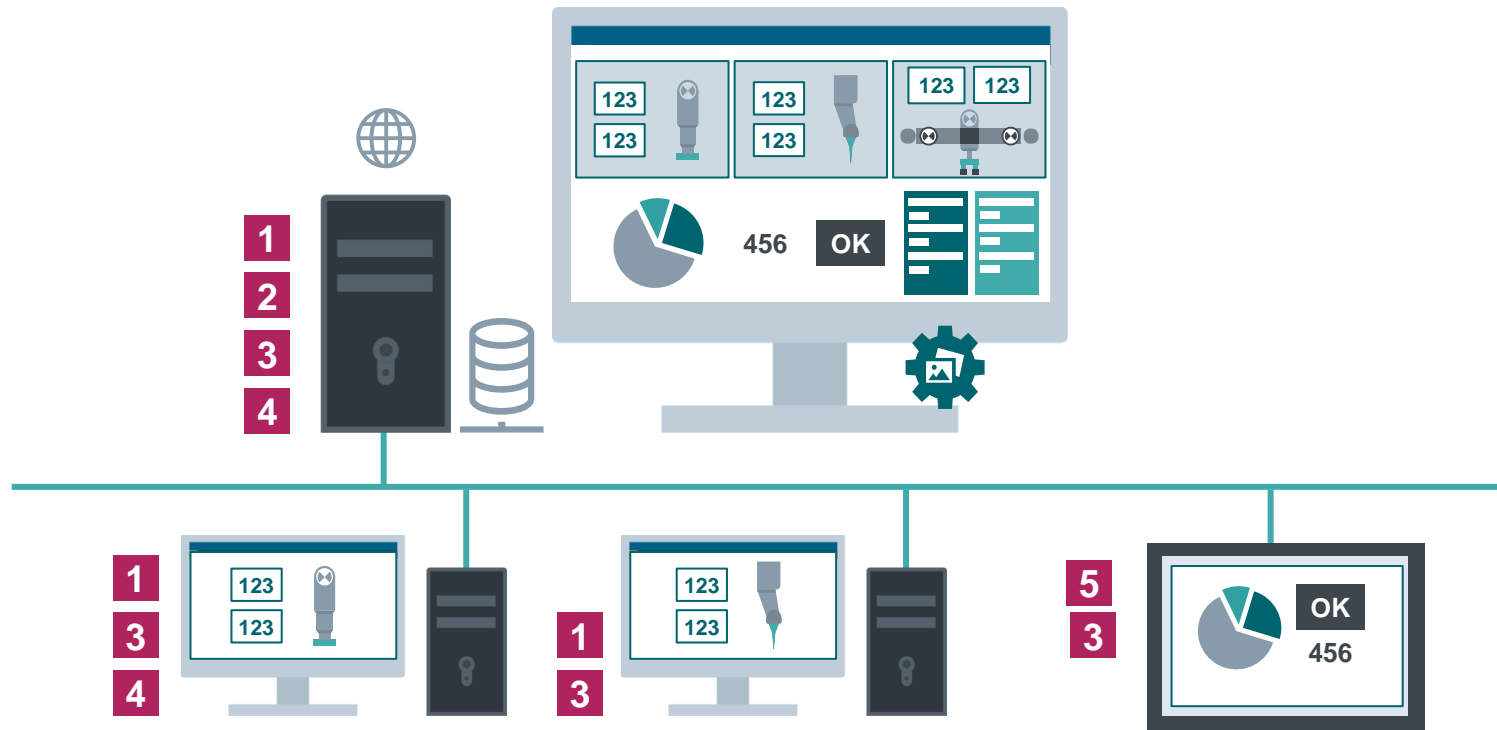You can display and operate a split screen of another device in a screen window.

Flexible configuration scenarios by **sharing screens.**
The HMI devices can be used as follows:

- All HMI devices in the **same project**

- HMI devices in **diff. projects**

Use case – Line Visualization with WinCC Unified Collaboration

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (**50k**) RT
MLFB: 6AV2154-1GB01-7LA0
SIMATIC NET must be licensed separately for more than 10 S7-connections

2 **Database Storage**
MLFB: 6AV2154-0BS01-7LA0

3 **WinCC Unified Collaboration** [1]
Collaboration for PC
MLFB: 6AV2154-0BR01-7LB0

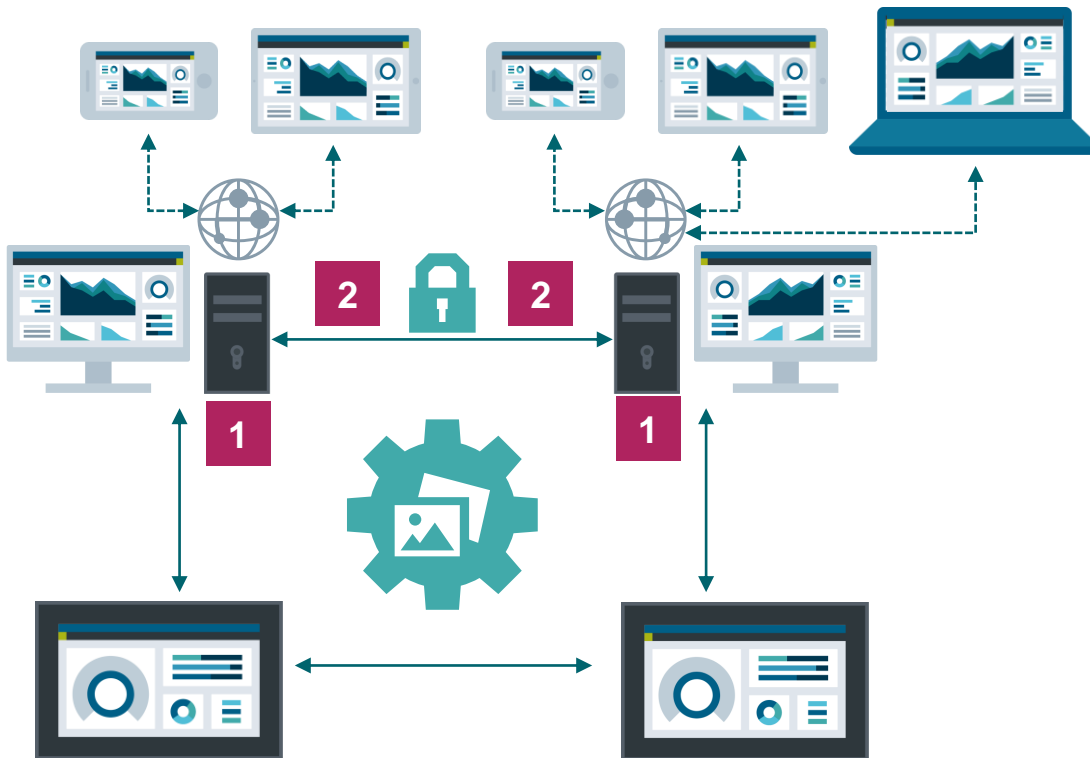**4** **WinCC Unified Logging Tags (1000)**
MLFB:6AV2157-2EA00-0LB0

5 **MTP1900 Unified Comfort**
MLFB: 6AV2128-3UB06-0AX0

Flexible configuration scenarios by sharing screens

Note: Logging on the respective station is only possible. Central Logging for different stations isn't available in V17.

[1]Collaboration for Unified Comfort Panels is available as of Unified Comfort Panel Images V16 Update 5.

WinCC Unified – Use case –
Exchange data between different stations with collaboration

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Unified Comfort Panel ✓   PC ✓

1 Base Packages WinCC Unified PC RT System
WinCC Unified PC (5k) RT
MLFB: 6AV2154-1FB01-7LA0

2 WinCC Unified Collaboration
Collaboration for PC
MLFB: 6AV2154-0BR01-7LB0

▶ **Note:** Enable for distributed system architectures for WinCC Unified systems. Modular and decentralized production units work together by exchanging information between unified stations:
Direct access to images of different units
e.g. for line monitoring

Note:
Consider SSL certificate handling!
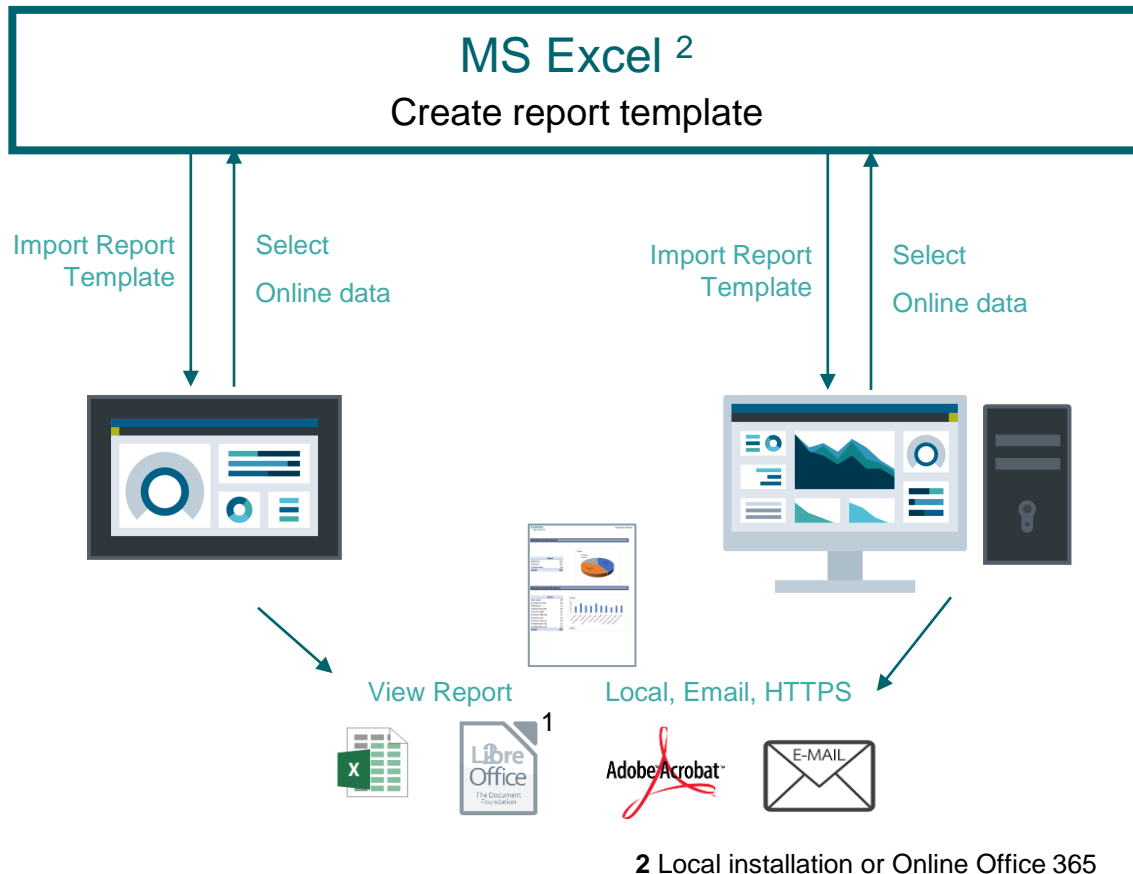Application example for certificate handling
https://support.industry.siemens.com/cs/ww/en/view/109777591

[1]Collaboration for HMI Unified Comfort Panels is available as of Unified Comfort Panel Images V16 Update 5.

SIMATIC WinCC Unified V17

WinCC Unified – Reporting – Installation and usage

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| Unified Comfort Panel ✓ | PC ✓ |

1 UCP: Libre Office is used to generate pdf

MS Excel [2]
Create report template

Import Report Template | Select Online data | Import Report Template | Select Online data

View Report | Local, Email, HTTPS

Libre Office — The Document Foundation [1]

Adobe Acrobat | E-MAIL

2 Local installation or Online Office 365

WinCC Unified ES
- Engineer WinCC Unified Screen with Report Control
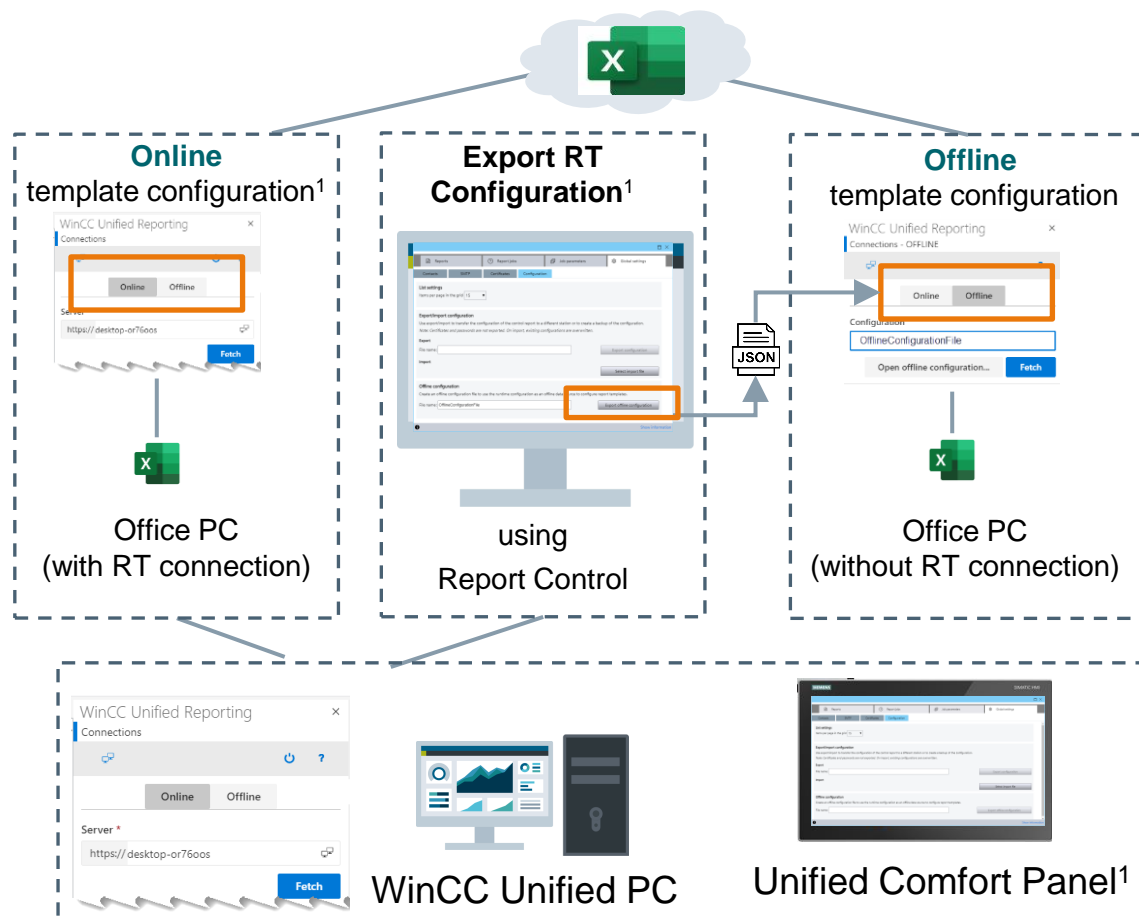- Download Project to WinCC Unified PC Station or HMI Unified Comfort Panel

MS Excel (WinCC Unified Report Excel Addin)
- Create Report Excel Template

- Select data (tags, …) from WinCC Unified PC RT or HMI Unified Comfort Panels
  (one data source per report)

- View Report using manual trigger function in Excel

SIMATIC WinCC Unified V17

WinCC Unified V17 – Reporting
Configure Report Template – Online / Offline

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Unified Comfort Panel ✓   **PC** ✓

Online
template configuration[1]
Office PC
(with RT connection)

Export RT Configuration[1]
using
Report Control

Offline
template configuration
Office PC
(without RT connection)

WinCC Unified PC   Unified Comfort Panel[1]

Create templates online (RT connection) [1]
Use online connection of Excel Report Add-in

Export [1] „RT configuration" (Report Control)
- Export RT configurations as data source for offline templates
- Load offline configuration via Excel report Add-in

Create templates offline (no RT connection)
- Load configuration of "offline configuration file" as data source of Excel Report Add-in

[1]**Unified Comfort Panel:** online/offline configuration only via WinCC Unified Client!

WinCC Unified V17 – Report Control – Global settings
Export & Import of RT configuration to setup a new station

Unified Comfort Panel ✓   **PC** ✓

Reuse „Report control" configurations

- Configure Reporting at runtime via "report control"
- Export "report control" configuration to a zip-file
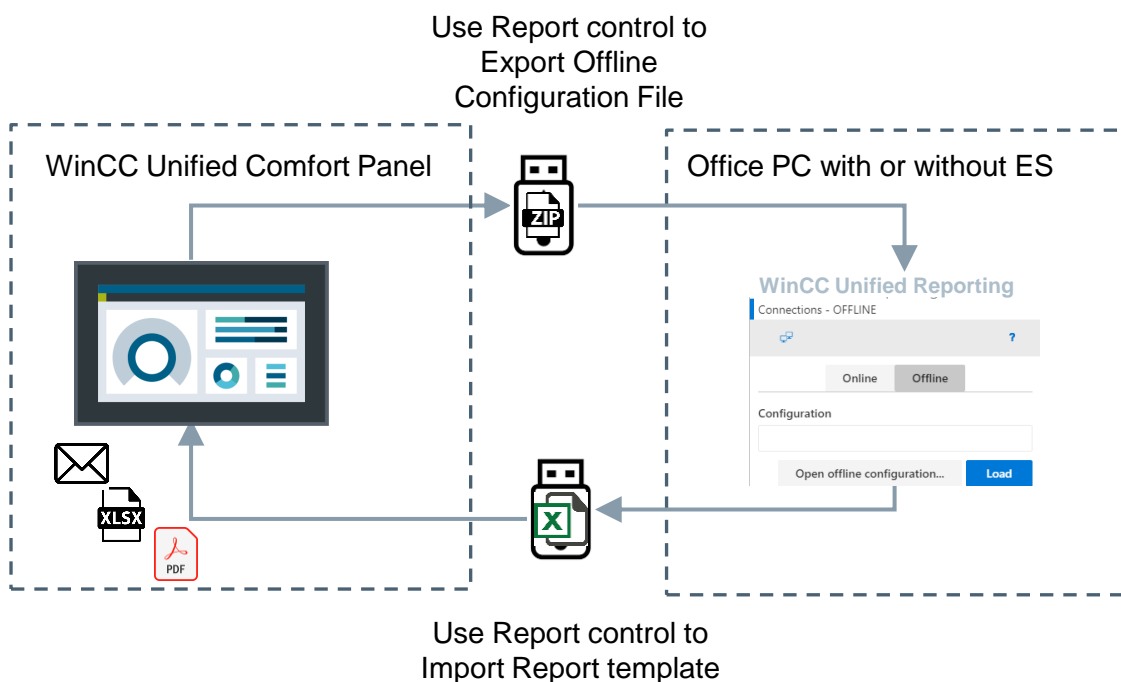
The Configuration file includes all:

- Configurated Report jobs, Job Parameters, Templates, Triggers, Targets,..
- Global Settings: e.g. Contacts, SMTP configurations, Certificates for email Server,…

Import Report settings to a new station

- Includes all global settings as well as configured report jobs and their parameters

WinCC Unified V17– Reporting – Unified Comfort Panel Configure Report Template – Offline

Unified Comfort Panel ✔

Use Report control to Export Offline Configuration File

WinCC Unified Comfort Panel

Office PC with or without ES

WinCC Unified Reporting

Connections - OFFLINE

Online | Offline

Configuration

Open offline configuration... | **Load**

Use Report control to Import Report template

Preparation

- Report is contained in the Unified Panel Image
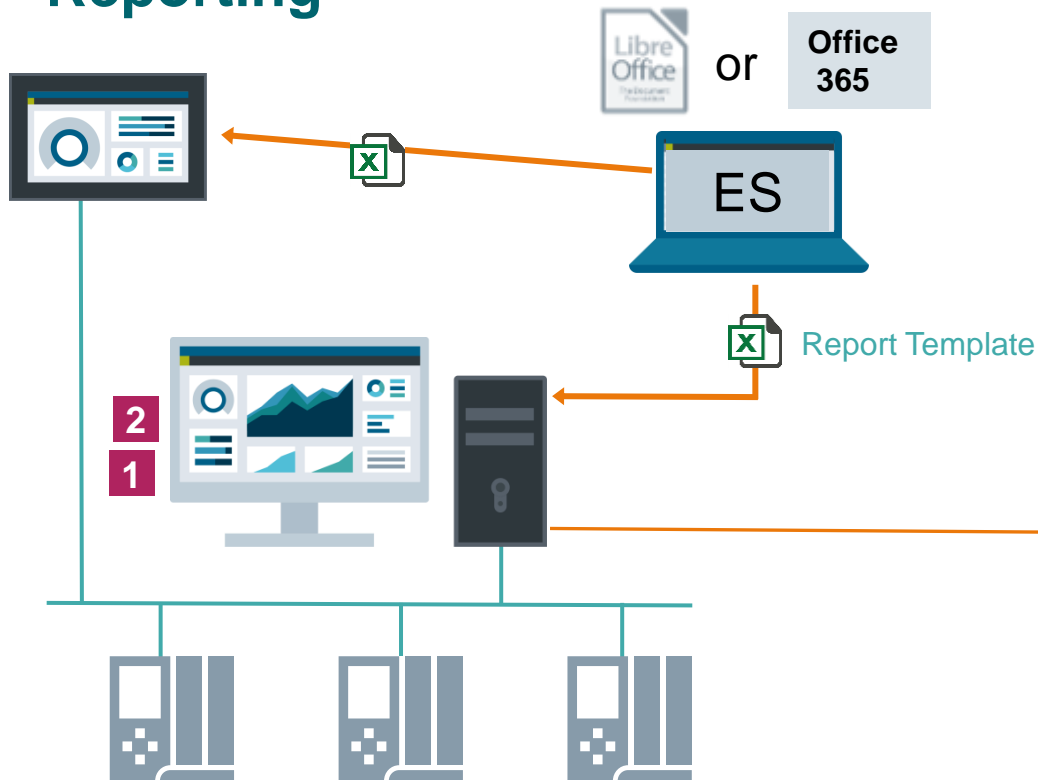- Configure Screen containing Report control to manage Reports

Offline File

- Use external storage media to transfer offline configuration file

Create Report offline using WinCC Unified Comfort Panel

- Export offline configuration file to industrial download
- Transfer to Office PC
- Select offline and load Configuration file into Excel Add-in
- Create Report template
- Transfer report template to Panel and Import into WinCC Unified RT

USB1 , USB 2 or SSD Card if supported by Panel

SIMATIC WinCC Unified V17

WinCC Unified – Reporting

Libre Office **or** Office 365

ES

Report Template

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (10k) RT
MLFB: 6AV2154-2FB01-7LA0

2 **WinCC Unified Report Execution**
MLFB: 6AV2157-0BQ01-7LB0
Software : MS Excel 2016/2019
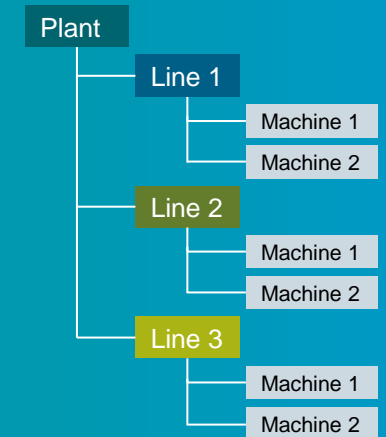
View Report

Local, Email, HTTPS

Automatic execution of reports: Licenses necessary
for WinCC Unified – Report Execution

SIMATIC WinCC Unified V17

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Plant visualization –
Use case – Technological Hierarchy
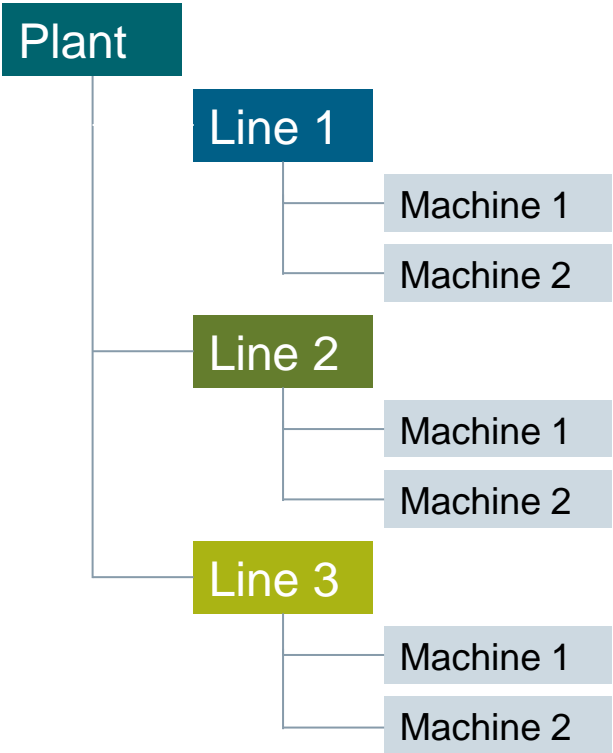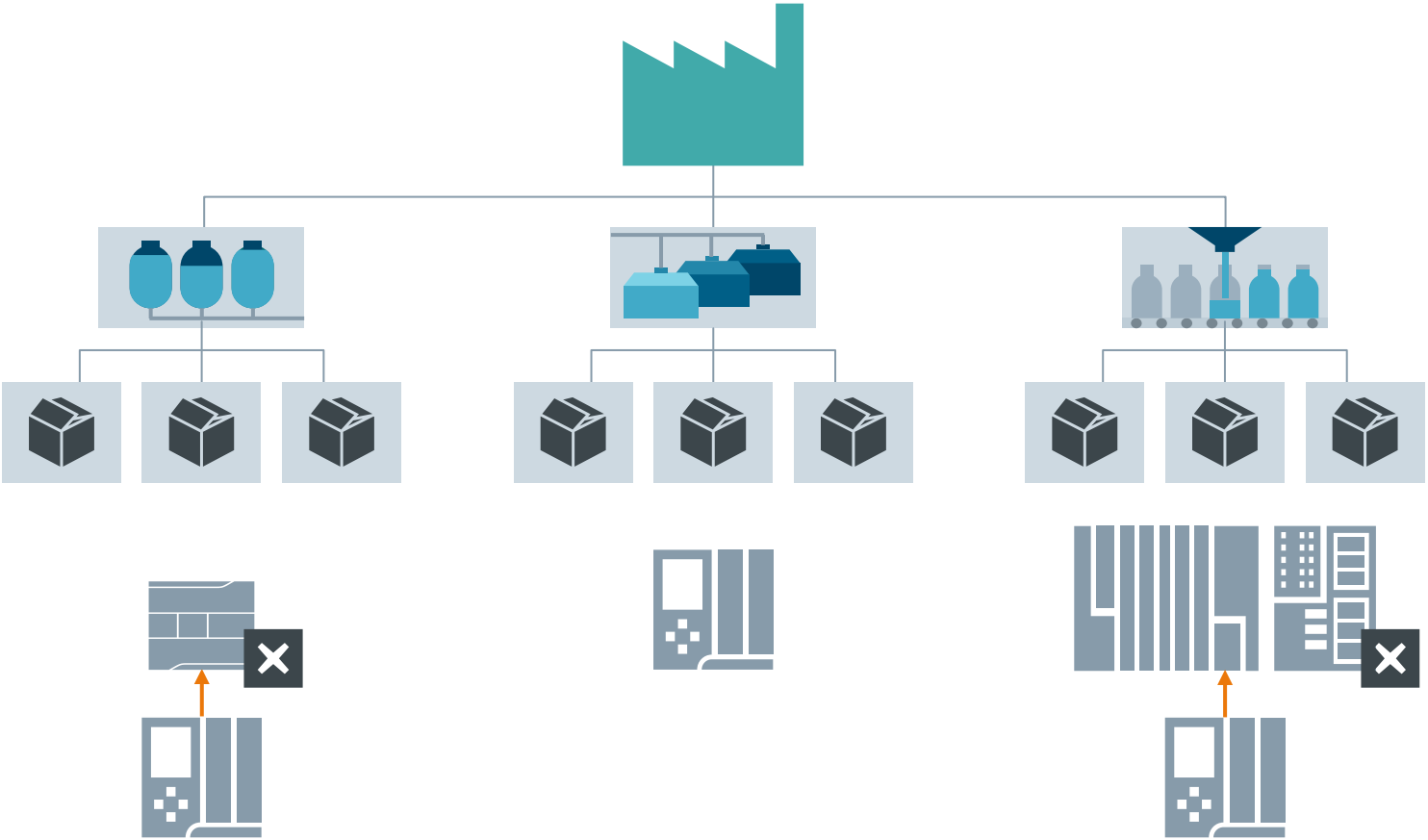
Technological hierarchy (only S7-1500 / not Soft PLC)

SIMATIC WinCC Unified V17

WinCC Unified –
Use Case – Technological Hierarchy

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Unified Comfort Panel ✗ PC ✓

Plant
- Line 1
  - Machine 1
  - Machine 2
- Line 2
  - Machine 1
  - Machine 2
- Line 3
  - Machine 1
  - Machine 2

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC **(50k)** RT
MLFB: 6AV2154-1GB01-7LA0

2 **Database Storage**
MLFB: 6AV2154-0BS01-7LA0

3 **WinCC Unified Collaboration**
Collaboration for PC
MLFB: 6AV2157-0BR01-7LB0

4 **WinCC Unified Logging Tags (1000)**
MLFB:6AV2157-2EA00-0LB0
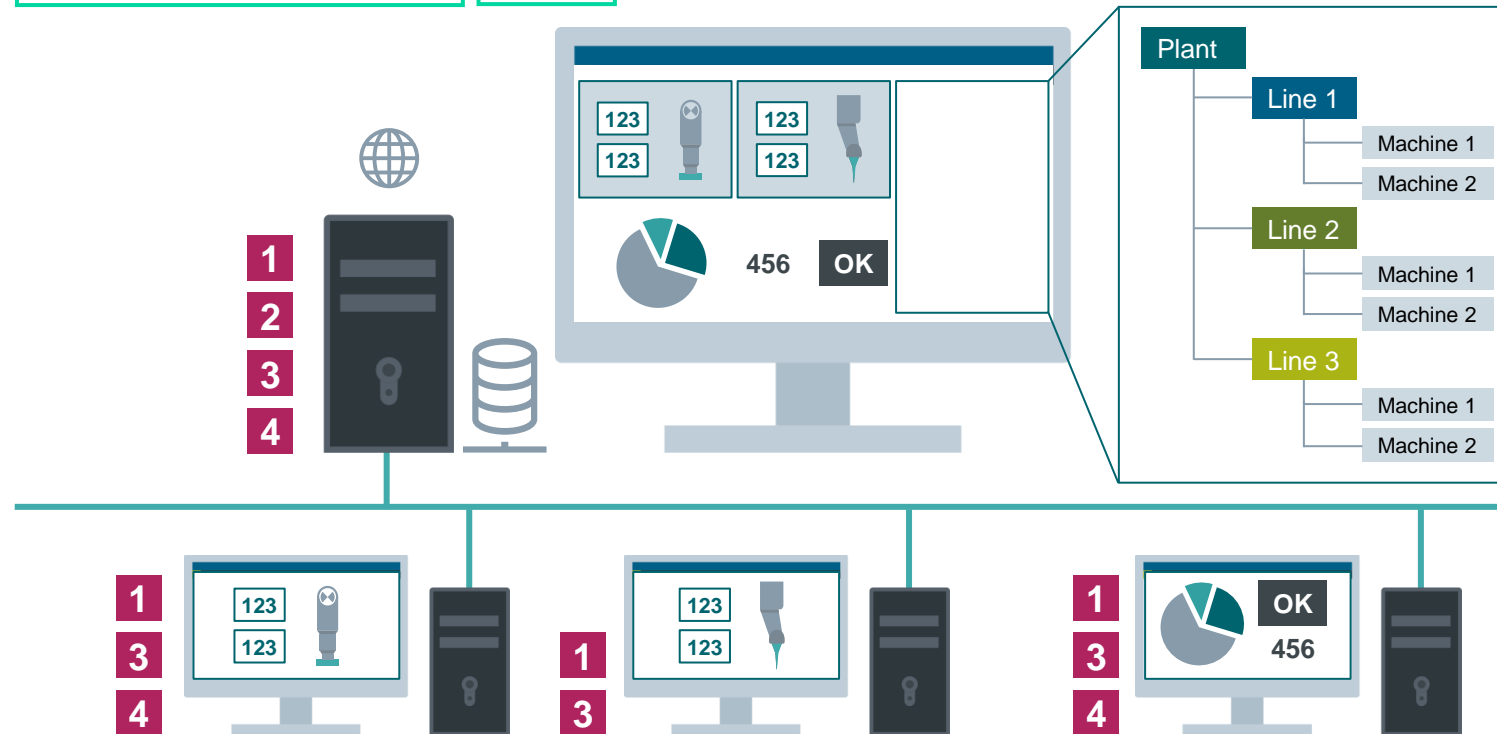
Technological hierarchy (only S7-1500). Not with Soft PLC in V17

SIMATIC WinCC Unified V17

Use case: Central user management (UMC)
Overview of new functions (from UMC V2.9 SP3)

Info from: Richard Witte

Product Portfolio Manager

User Management & Access Control   TIA Portal OPENNESS

SIMATIC Logon support

- The UMC server supports the SIMATIC Logon protocol
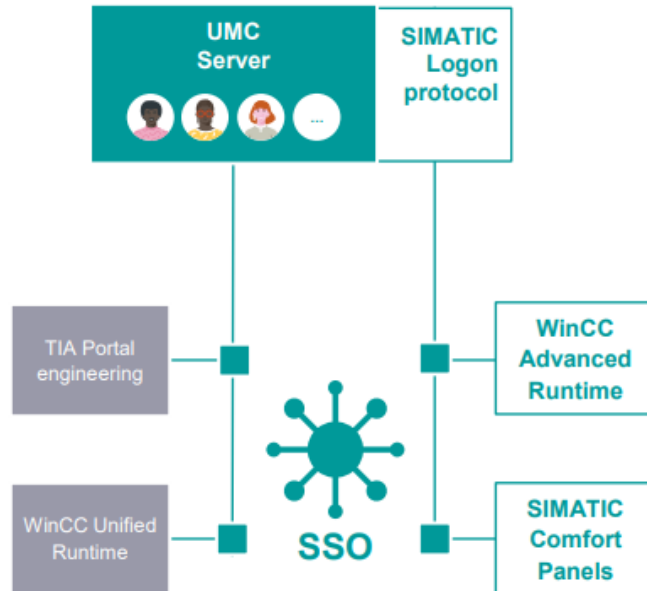
- This enables central user management for WinCC Runtime Advanced and Comfort Panels via UMC

Benefits

Integration of the SIMATIC Logon protocol enables use of an existing HMI Runtime system within a UMC domain.

Single sign-on (SSO)

- TIA Portal and HMI Runtimes support the connection to single sign-on

Benefits

Single sign-on enables seamless authentication

between a protected TIA Portal project and an HMI Runtime on the same operator station. Once authenticated, the application can take over the existing single sign-on user session.

SIMATIC WinCC Unified V17

Central user management (UMC) Licensing
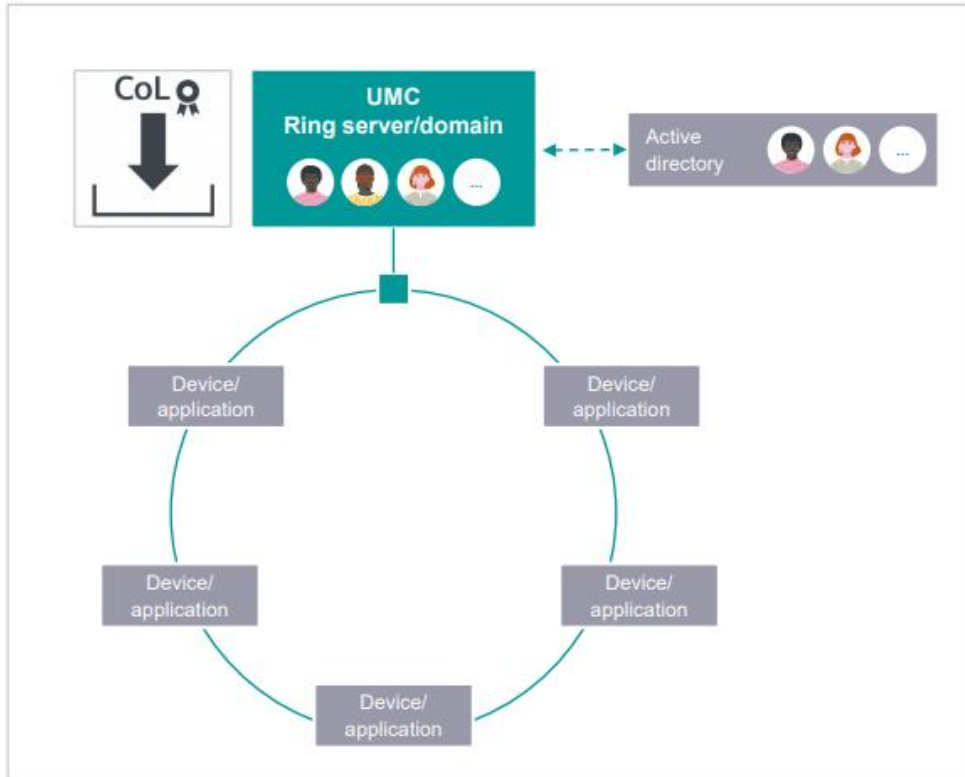
License model

- The User Management Component (UMC) is included in the products' scope of supply

- The license model depends on the number of user accounts per UMC domain

- Up to ten user accounts can be created without a license

- Additional 100 user accounts as 365-day license

- MLFB: 6ES7823-1UE30-0YA0

- Additional 4000 user accounts as 365-day license

- MLFB: 6ES7823-1UE10-0YA0

- The licenses can be accumulated

Benefits

- First steps possible without license costs • Appropriate license for low number of user accounts

- Flexible expandability with accumulative licenses

- Flexible adjustment thanks to limited license period

SIMATIC WinCC Unified V17

WinCC Unified V17 – User Administration
Login via central user management (UMC)
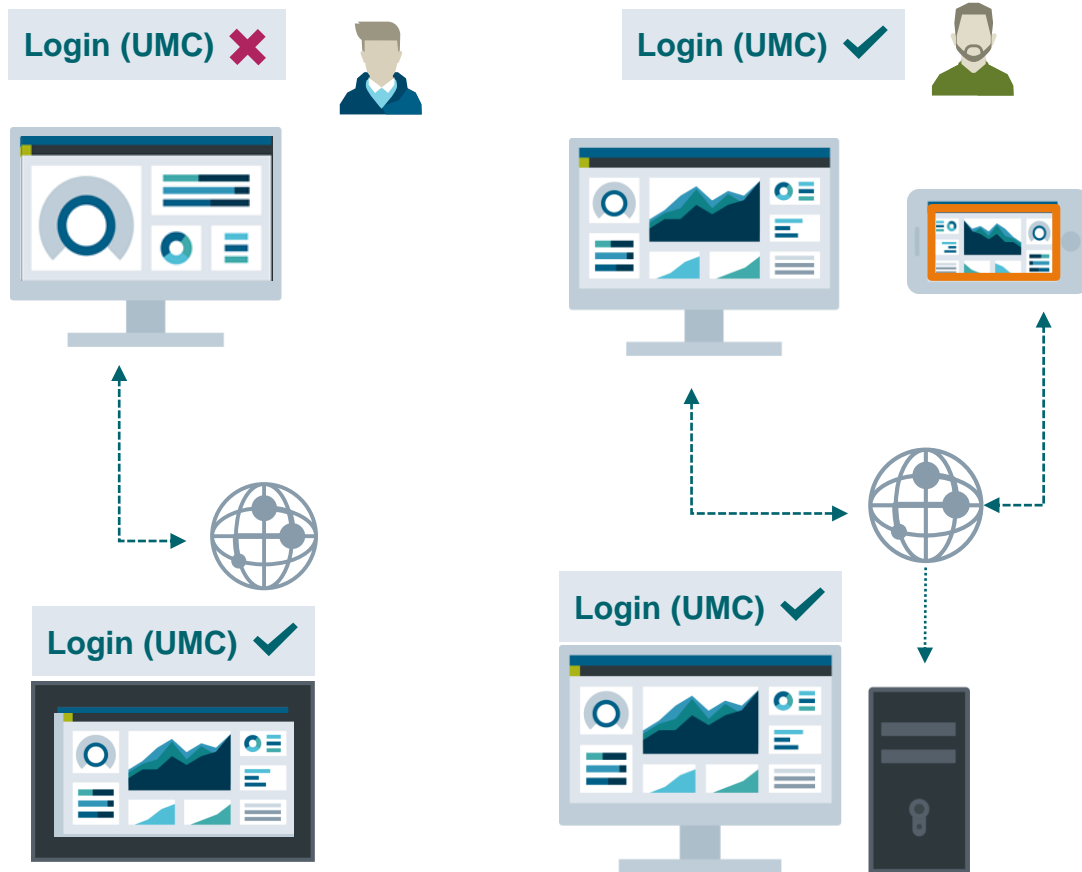
UMC for HMI Unified Comfort Panel –
Login for local operation
(not available vie remote Client)

UMC for WinCC Unified PC
Login for local operation
as well as via remote Clients (Monitor/ Operate)

Central User Management
please check WinCC Unified architecture slides
for typical configurations

SIMATIC WinCC Unified V17

WinCC Unified V17 – User Administration
Integrated user management and access control

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Unified Comfort Panel ✔   **PC** ✔

Local user management and access control (UMAC) using functional rights and definition of users and password policies during engineering

Protection against unauthorized access of single objects or entire production units

Define user roles and rights to your demand for privacy and integrity in terms of authentication and authorization

Add, remove users, assign roles and change passwords during runtime

SIMATIC WinCC Unified V17

Decentralized position dependent visualization via smartphone, QR code and WinCC Unified

Configuration V17 –
Decentralized position dependent visualization via
smartphone, QR code and WinCC Unified
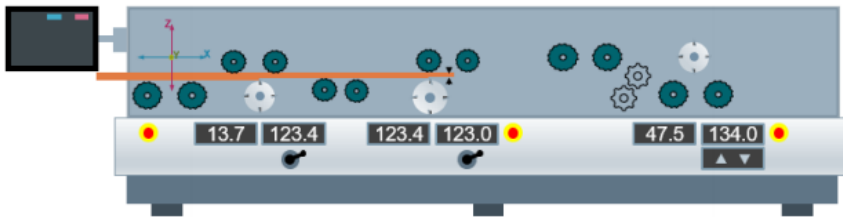
Figure 1   Conventional design of a planer and moulder

The set value of the new formats is currently carried out via handwheel, cordless screwdriver or position specification via mini panel and electrical format adjustment axis directly on the unit. The actual position values are currently shown via simple 7-segment displays.
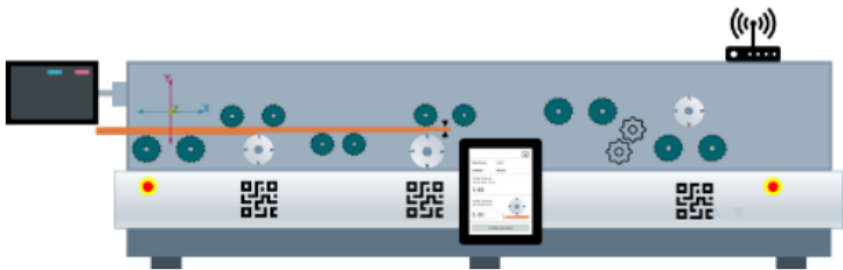
Figure 2 Schematic structure of a planer and moulder

The following application example shows an example of an innovative option using WinCC Unified and a smartphone to adjust the format of an axis "Plane

Link to this entry page of this application example

https://support.industry.siemens.com/cs/ww/en/view/109792602

SIMATIC WinCC Unified V17

WinCC Unified System – Technical information – Content

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Use cases with WinCC AddOns
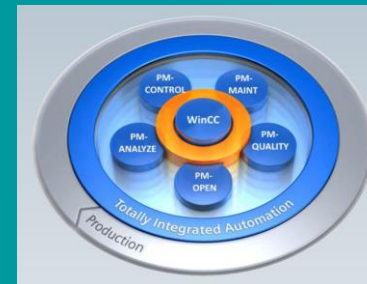
WinCC Unified V17
WinCC AddOns   compatibility   SIOS (109778862)

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WinCC Add-ons	Description	Unified Comfort Panels	Unified PC Runtime[1]
PM-QUALITY	Archiving system for the job- or batch-related acquisition of process and production data	🛠	✔
PM-CONTROL	Recipe system: comfortable authoring and management of recipes (product-specific set points)	🛠	✔
PM-MAINT	Maintenance planning tool designed for the use in preventive maintenance	🛠	✔
PM-ANALYZE	Archive Localization of error sources or weak points, reduction of downtimes and maintenance times, or the timely recognition of wear effects	🛠	✔
PM-OPEN HOST/S	Flexible communications solutions between the automation level and SAP ERP	🛠	✔
PM-OPEN MINDCONNECT	View analytical and quality reports via MindSphere	🛠	✔
PM-LOGON	User login via RFID	🛠	🛠

Please note the separate release info of PM-AddOns provided by CoC Mannheim in SIOS.

✔ Available   ✔ Available (limited)   🛠 In work   ✖ Not available

[1]Release of the PM-Agent to connect the PM-AddOns to WinCC Unified PC Runtime.Controls are not integrated in RT bur run as separate program (either in parallel or using a separate PC station).

SIMATIC WinCC Unified V17

PM AddOns – PM-Agent Unified

Property/Function	PM-AGENT	PM-AGENT Unified
Compatible with WinCC V7.2; V7.3; Win CC RT Prof. V13	✔	
Compatible with WinCC 7.4; V7.4SP1; WinCC RT Prof. V14; V14 SP; V15	✔	✔
Compatible with WinCC V7≥V7.5[1]; WinCC RT Prof. ≥ V15.1[2]		✔
Compatible with WinCC RT Unified V16		✔
Compatible with WinCC RT Unified V17		🛠
Program start/Runtime Environment	Interactive (startup list) as a Service (PM ServiceConfig) ✔	Operating system serv. and Control Center Application
Automatic data buffering on connection failure	Limited	(Default 30 days)
Transmission protocol PM-SERVER ↔ PM-AGENT	Proprietary	https

[1] **WinCC 7.5 ≥ Upd.1;**   [2] **WinCC RT Prof 15.1 ≥ Upd.3;**

use case –
WinCC Unified V17 and PM Control V12 (available Q4/2021)
Show recipes on UCP / Unified PC
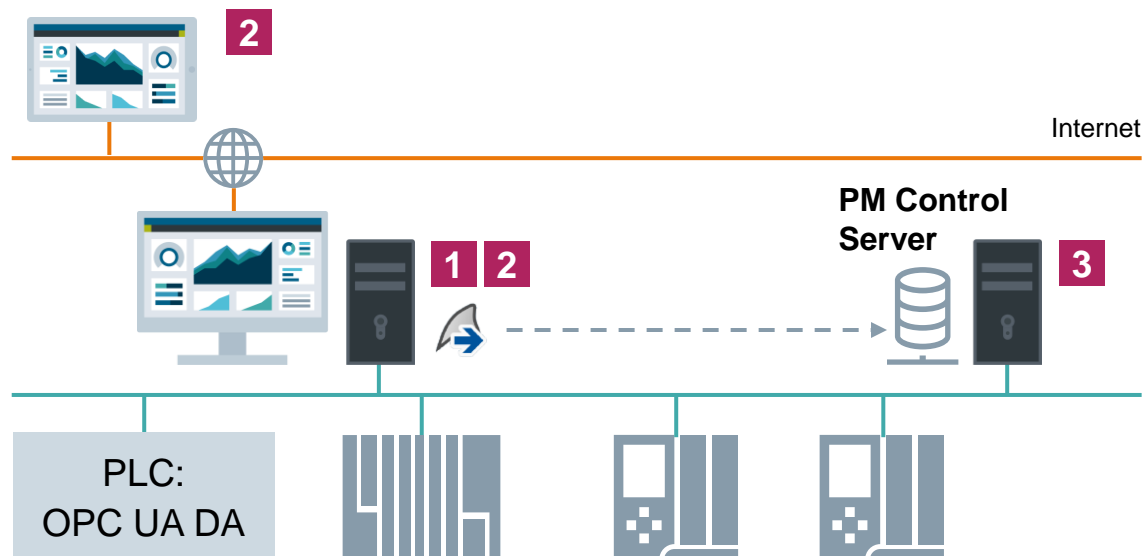
Internet

PM Control Server

PLC:
OPC UA DA

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (5k) RT
MLFB: 6AV2154-1FB01-7LA0

2 **Unified Client Operate (3)**
MLFB: 6AV2157-3JW00-0LB0

3 **PM Control V12**
MLFB:
with PM Unified Agent

Additional Information
PM Control V12 Controls can be integrated in WinCC Unified V17 picture !

Note: Please complete the purchase order for the copy protection delivery: -Z U02 = Dongle for an USB port, -Z S03 = License file

use case – WinCC Unified V17 and PM ANALYZE V12 (available Q4/2021)
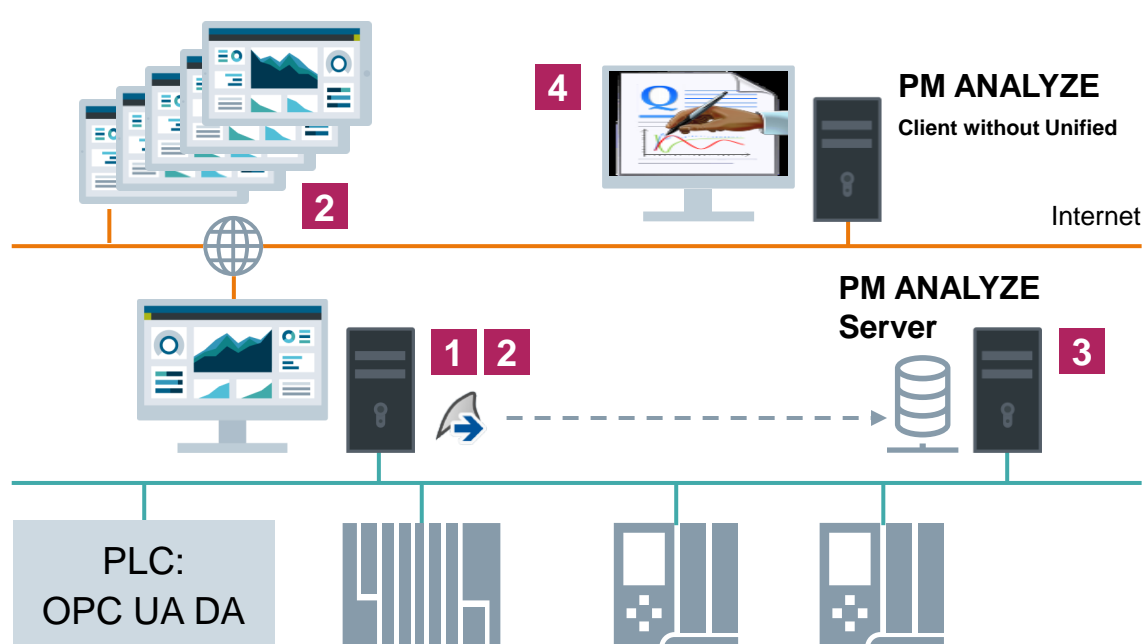
PM ANALYZE
Client without Unified

4

2

Internet

PM ANALYZE
Server

1 **2**

3

PLC:
OPC UA DA

Additional Information
- PM Add Controls can't be integrated into WinCC Unified picture (only in V16)
- **PM Control >=V12** Controls can be integrated in WinCC Unified V17 picture (available Q4/2021

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1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (5k) RT
MLFB: 6AV2154-1FB01-7LA0

2 **Unified Client Operate (3)**
MLFB: 6AV2157-3JW00-0LB0

3 **PM ANALYZE Server**
MLFB: 9AE7 112-1SS01-1AA0-Z
with PM Unified Agent

4 **PM ANALYZE (Client)**
MLFB:9AE7 112-4SC01-1AA0-Z

Note: Please complete the purchase order for the copy protection delivery: -Z U02 = Dongle for an USB port, -Z S03 = License file

WinCC Unified –
Use Case – Alarming/SIMATIC-Notifier

Smart Watch

Concurrent Clients

Concurrent Clients

Internet

3 **4**

1

PLC:
OPC UA DA
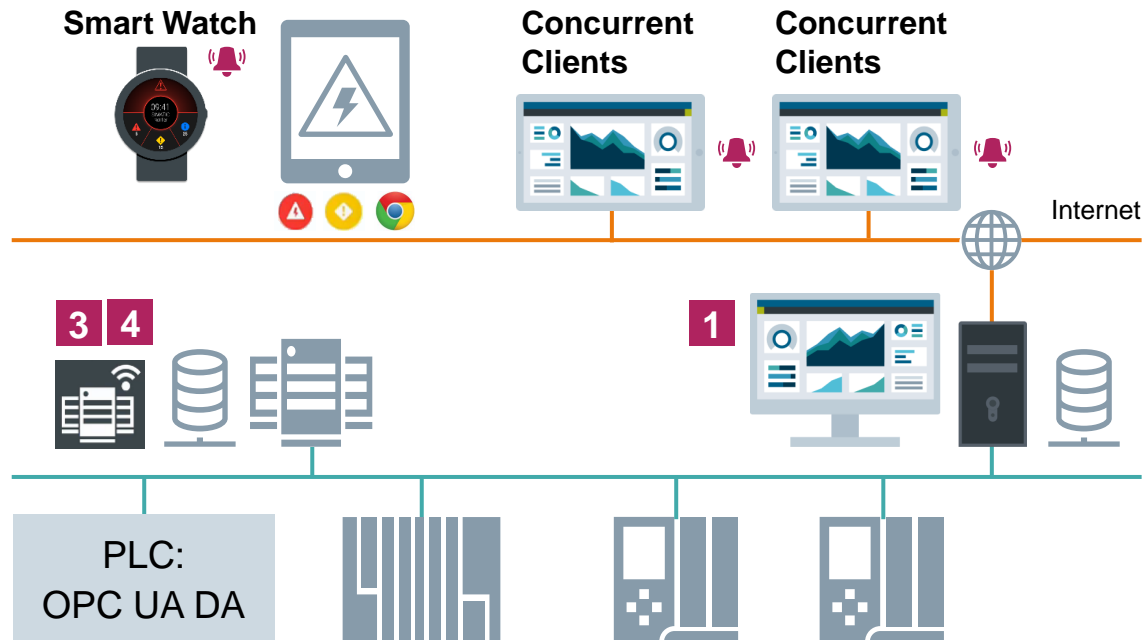
Additional Information
SIMATIC-Notifier Server already includes one Client License, which allows to connect 1x smart device to the Notifier Server. If you need more than 1x device connected, this license enables you to add several additional clients to the SIMATIC-Notifier system
SIMATIC-Notifier can not run at the WinCC Unified IPC!

1 **Base Packages WinCC Unified PC RT System**
WinCC Unified PC (5k) RT
MLFB: 6AV2154-1FB01-7LA0

3 **SIMATIC-Notifier**
SIMATIC-Notifier Server 1.0
MLFB: 6AV2170-0AA10-0AA0

4 **SIMATIC-Notifier**
SIMATIC-Notifier Client License
MLFB: 6AV2170-0AA20-0AA0

SIMA Notif SIEMENS

HMI & SCADA Portfolio – incl. WinCC Unified System

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Panel Systeme	Key Panels Basic Panels	Mobile Panels Comfort Panels	HMI Unified Comfort Panels		
PC Systeme	WinCC Advanced	WinCC Professional	WinCC Unified	WinCC V7	WinCC OA
	WinCC (TIA Portal)		WinCC Unified (TIA Portal)		
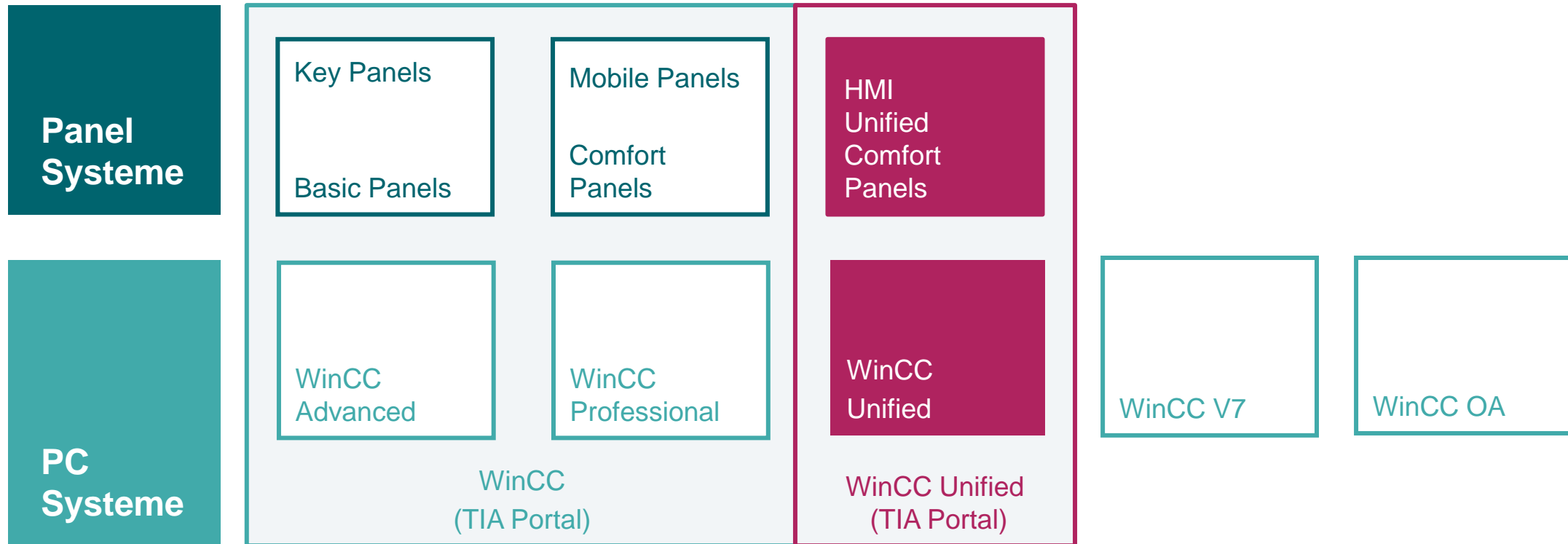
WinCC Unified will expand over the next years in parallel.
In the long-term, the HMI & SCADA Portfolio in TIA Portal will continuously be based on WinCC Unified.

SIMATIC WinCC Unified V17

PC-based WinCC systems comparison SIMATIC HMI incl. SCADA

By end of 06/2021 a comparison slide set with

- WinCC RT Adv. V17

- Unified PC RT V17

- WinCC Unified V17

- WinCC V7.5 SP2

- WinCC OA 3.18

will be available in MPM as a successor to the link below.

https://mpm.siemens.cloud/MPM/en/mpm_10032170-ppt

- WinCC RT Adv. V16

- Unified PC RT V16

- WinCC Unified V16

- WinCC V7.5 SP1

- WinCC OA 3.17

SIMATIC WinCC Unified V17

WinCC Unified System – Technical information – Content

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1   Preconditions

2   Overview / Ordering Information

3   Connectivity : Configurations/use case

4   HMI Unified Comfort Panels

5   WinCC Unified PC RT V17

6   mixed configurations (Data transfer,Collaboration, Reporting, technological Hierarchy)

7   Use cases with WinCC AddOns

8   Positioning Focus + IPC Packages / Additional Infos

SIMATIC WinCC Unified V17

SIMATIC HMI Unified Comfort Panels –
Starter Kits and accessories

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Starter-Kit

- Device
- WinCC Unified V17 Comfort
- 1,5 m Profinet cable
- Memory Card (32 GB)
- Protective film
- Device-Managed Edge license

[Overview of Starter kits in Industry Mall](#)

Accessories

- Mounting frames for Comfort Panel compatibility
- Input tools (e.g. touch pen, mouse and keyboard)
- Storage media (e.g. USB-Stick, SD-Card)
- Protective films

Special offer for all UCP Starter-Kits (until end of the calendar year 2021)

- As of 2022, the L1-prices for the starter kits will also be adjusted (Price group remains).

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified –
Ordering Information – IPC Packages

SIMATIC IPC

Available for almost all SIMATIC IPCs
that meet the technical requirements
of SIMATIC WinCC Unified PC.

+

SIMATIC WinCC Unified PC

WinCC Unified PC Runtime License
+ Parameter Control
+ Logging Tags
  (number depends on the RT license)

→ Price discount only with concurrent order of IPC and WinCC Unified software

→ Please note the technical requirements of WinCC Unified when selecting the configuration

→ Further information regarding the packages can be found in SIOS (99860269)
  https://support.industry.siemens.com/cs/de/en/view/99860269

Note : no kiosk mode possible (due to missing Windows functions in Windows 10 LTSB/ LTSC)

SIMATIC WinCC Unified
Ordering Information - IPC Packages

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Package	Options included	Order Number
WinCC Unified V17 PC RT 150 Package	WinCC Unified Logging Tags **(100)** Parameter Control	6AV2155-3DB01-7AA0
WinCC Unified V17 PC RT 500 Package	WinCC Unified Logging Tags **(200)** Parameter Control	6AV2155-1EB01-7AA0
WinCC Unified V17 PC RT 1k Package	WinCC Unified Logging Tags **(500)** Parameter Control	6AV2155-2EB01-7AA0
WinCC Unified V17 PC RT 2.5k Package	WinCC Unified Logging Tags **(500)** Parameter Control	6AV2155-2MB01-7AA0
WinCC Unified V17 PC RT 5k Package	WinCC Unified Logging Tags **(1000)** Parameter Control	6AV2155-1FB01-7AA0
WinCC Unified V17 PC RT 10k Package	WinCC Unified Logging Tags **(1000)** Parameter Control	6AV2155-2FB01-7AA0
WinCC Unified V17 PC RT 50k Package[1]	WinCC Unified Logging Tags **(1000)** Parameter Control	6AV2155-1GB01-7AA0

[1] **Cannot** be ordered with IPC127E, IPC227E, IPC277E, IPC327E and IPC377E

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified –
IPC Promotion Packages incl. Clients

SIEMENS
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Available with V17

WinCC Unified PC RT + 1 Client

- WinCC Unified **PC RT 150**
- Parameter Control
- Logging Tags **(100)**
- Client Operate **(1)**

6AV2155-3DV01-7AA0

- WinCC Unified PC **RT 500**
- Parameter Control
- Logging Tags **(200)**
- Client Operate **(1)**

6AV2155-1EV01-7AA0

WinCC Unified PC RT + 2 Clients

- WinCC Unified **PC RT 150**
- Parameter Control
- Logging Tags **(100)**
- Client Operate **(2)**

6AV2155-3DW01-7AA0

- WinCC Unified PC **RT 500**
- Parameter Control
- Logging Tags **(200)**
- Client Operate **(2)**

6AV2155-1EW01-7AA0

Only with concurrent order of a **+** **SIMATIC IPC see SIOS (99860269)**

~ 30% discount

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified
Promotion Packages (IPC Package)

SIEMENS
Ingenuity for life

Available with V17

Package	Options included	Order Number
WinCC Unified V17 PC RT 150 + 1 Client Package	Parameter Control LoggingTags **(100)** Client Operate **(1)**	6AV2155-3DV01-7AA0
WinCC Unified V17 PC RT 150 + 2 Clients Package	Parameter Control LoggingTags **(100)** Client Operate **(2)**	6AV2155-3DW01-7AA0
WinCC Unified V17 PC RT 500 + 1 Client Package	Parameter Control LoggingTags **(200)** Client Operate **(1)**	6AV2155-1EV01-7AA0
WinCC Unified V17 PC RT 500 + 2 Client Package	Parameter Control LoggingTags **(200)** Client Operate **(2)**	6AV2155-1EW01-7AA0

Cannot be ordered with IPC127E, IPC227E, IPC277E, IPC327E and IPC377E !

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified
Ordering Information - Promotion Packages

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Available with V17

WinCC Unified PC (1k) RT

- WinCC Unified PC (1k) RT

- Parameter Control (PC)
- Logging Tags (100)
- Report Execution

6AV2155-2ES01-7AL0

WinCC Unified PC (10k) RT

- WinCC Unified PC (10k) RT

- Parameter Control (PC)
- Logging Tags (1000)
- Report Execution

6AV2155-2FS01-7AL0

WinCC Unified PC (50k) RT

- WinCC Unified PC (50k) RT

- Parameter Control (PC)
- Logging Tags (1000)
- Report Execution
- Database Option
- Client Operate (1)

6AV2155-1GS01-7AL0

Packages only available via Online Software Delivery (OSD)

~ 30% discount

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified –
Promotion Packages – Collaboration / Clients

SIEMENS
Ingenuity for life

Available with V17

WinCC Unified
Collaboration (3x1)

- 3x WinCC Unified Collaboration

  can be distributed to any HMI Unified
  Comfort Panel
  or
  WinCC Unified PC Runtime System

6AV2155-3JR01-7LB0

WinCC Unified
Client (5x1)

- 5x WinCC Unified Client Operate (1)

  can be distributed to any HMI Unified
  Comfort Panel
  or
  WinCC Unified PC Runtime System

6AV2155-1CW01-7LB0

~ 20% discount

Packages only available via Online Software Delivery (OSD)

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified –
Promotion Package Plant Intelligence Options

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WinCC Unified Plant Intelligence Optionen

- Calendar Option (Base)
- Performance Insight Option (Base)

6AV2155-1CP31-7LA0

Package only available via Online Software Delivery (OSD)

~ 30% discount

Additional Information

SIMATIC WinCC Unified V17

Get started smoothly with the WinCC Unified System – Supporting Materials

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Tutorial Center

Video series for an easy start with the WinCC Unified System. Learn all the things you need to get started smoothly.

Template Suite

Ready to use screen templates for PC Systems and the HMI Unified Comfort Panels in a free TIA Portal library incl. Wizard.

Switching Guideline

Everything you need know when you want to switch from an existing visualization to the WinCC Unified System

Find all the supporting materials for the WinCC Unified System at a glance
https://support.industry.siemens.com/cs/ww/en/view/109777887

Important Links : SIMATIC WinCC Unified V17

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delivery release for HMI Unified Comfort Panels (SIOS): V17

https://support.industry.siemens.com/cs/ww/en/view/109779106

sales release for HMI Unified Comfort Panels (SIOS)

https://support.industry.siemens.com/cs/ww/en/view/109778963

SIMATIC WinCC Unified V17

SIMATIC WinCC Unified V17 Architectures

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siemens.com/wincc-unified-system

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