

Migrationer

Bliv klar til at migrere fra HMI og S7-300
til nyere systemer



Dagens værter

Michael Nielsen

Kim Meyer-Jacobsen



SIEMENS

Agenda

Værktøjer, der kan benyttes til migrationen

- ET200 S -> ET200 SP
- S7-300 / S7-400 -> S7-1500
- Software Migration
- Kabel adaptore - helt fra S5 og op til S7-1500

HMI WinCC Comfort

- Værktøjer til konvertering
- Hvor findes de forskellige hjælpeværktøjer?



Product phase-out of S7-300 System



Life Cycle Check



Lifecycle Check

Identification of obsolescence to
maintain plant availability

SIMATIC S7-300 & ET 200M

Product Live Cycle

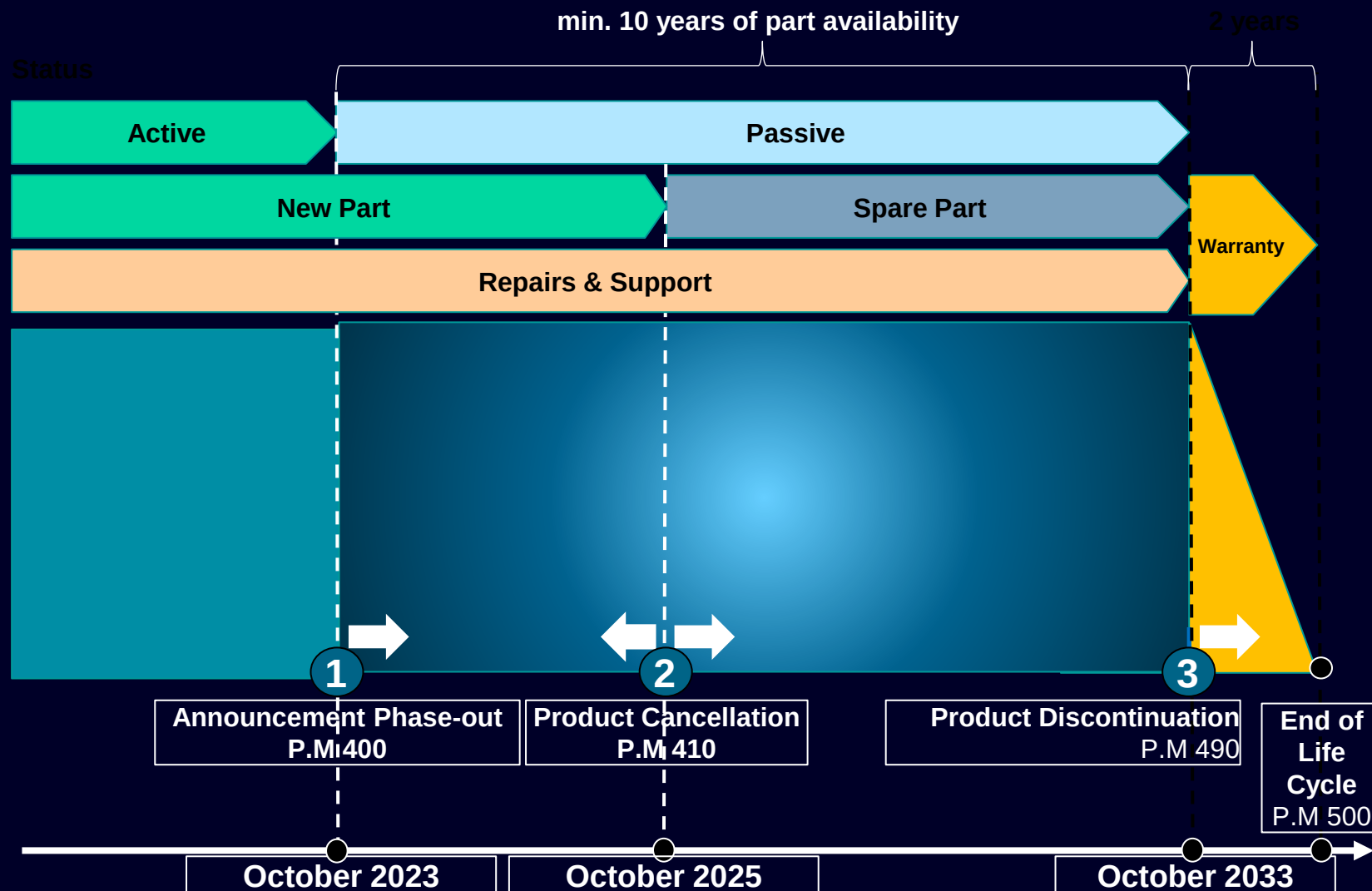
1 Phase-out announcement of S7-300 & ET 200M Systems not before October 2023

2 Available as „New Part“ 1 year min. after Phase-out

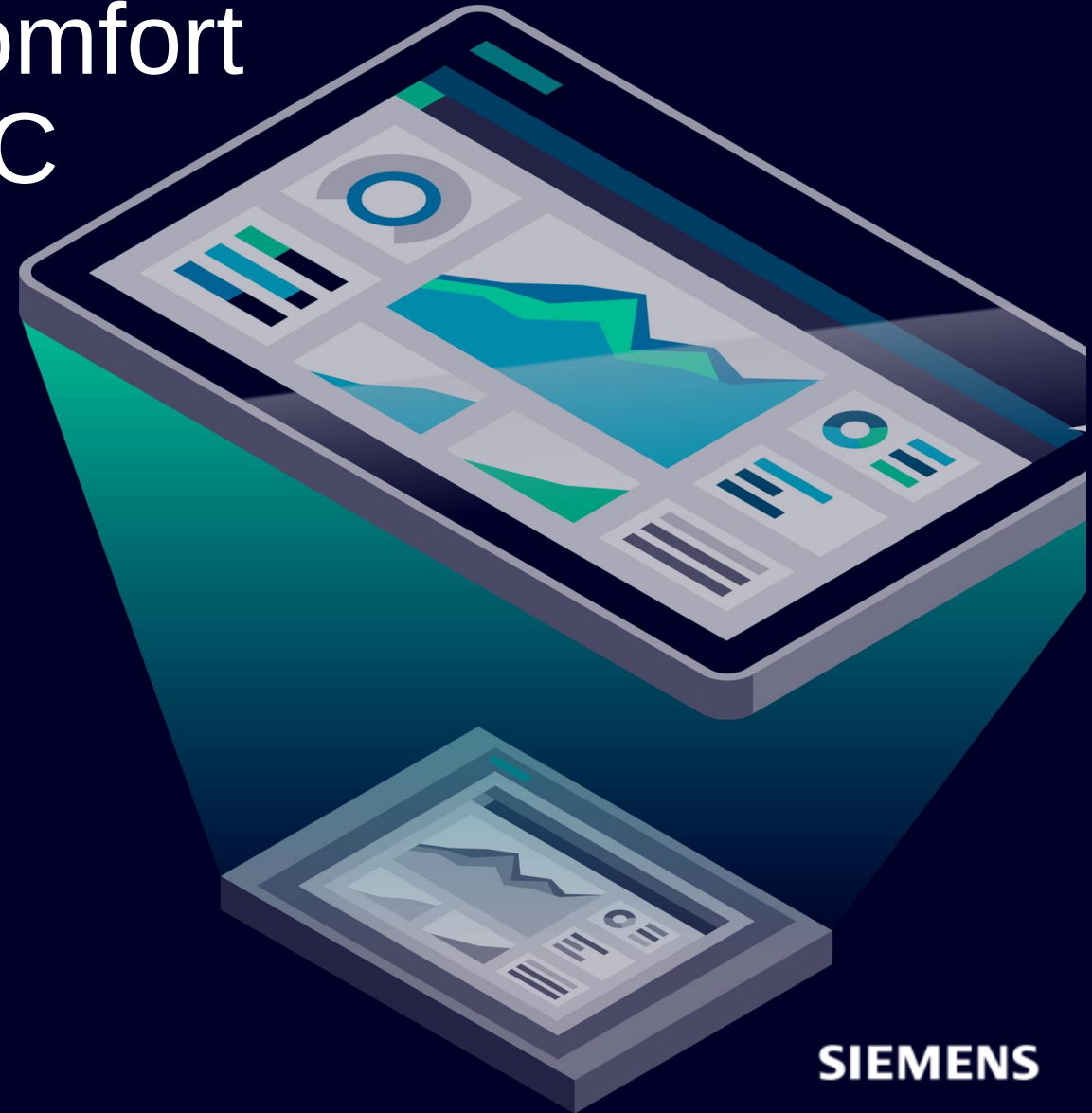
3 10 years spare parts availability until October 2033 min.

- Customer Information available as
 - PDF document
 - [Industry Mall](#)
 - [Siemens.com/S7-300](https://www.siemens.com/S7-300)

- Exceptions for individual modules possible in case of:
 - short-term component phase-out
 - tightening of applicable standards

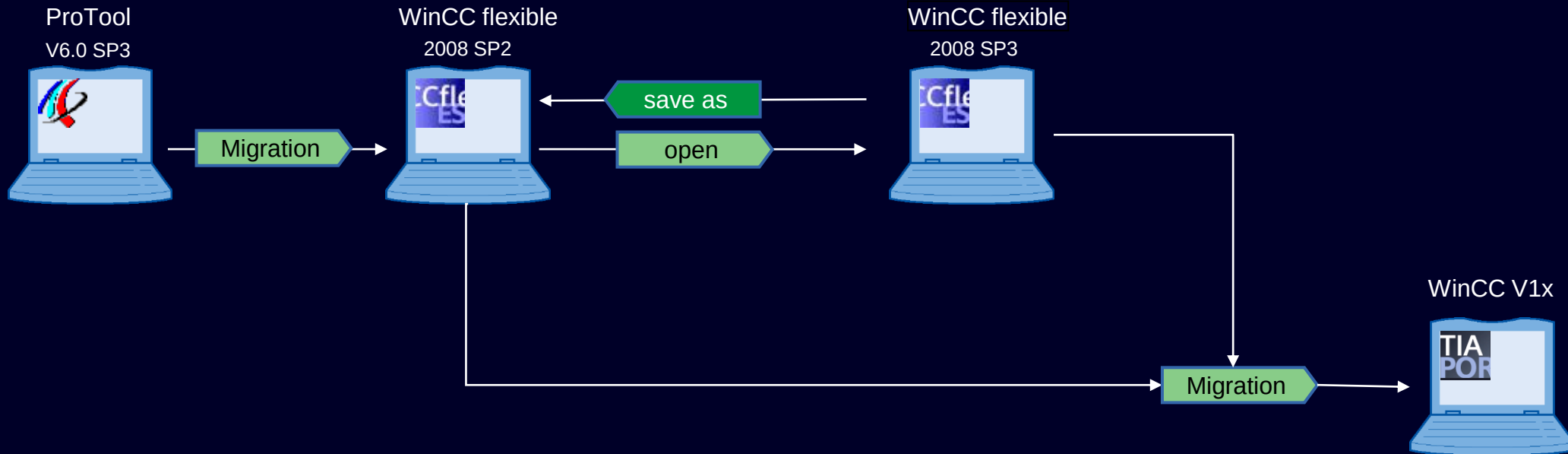


From Comfort to Unified Comfort
also Advanced to Unified PC

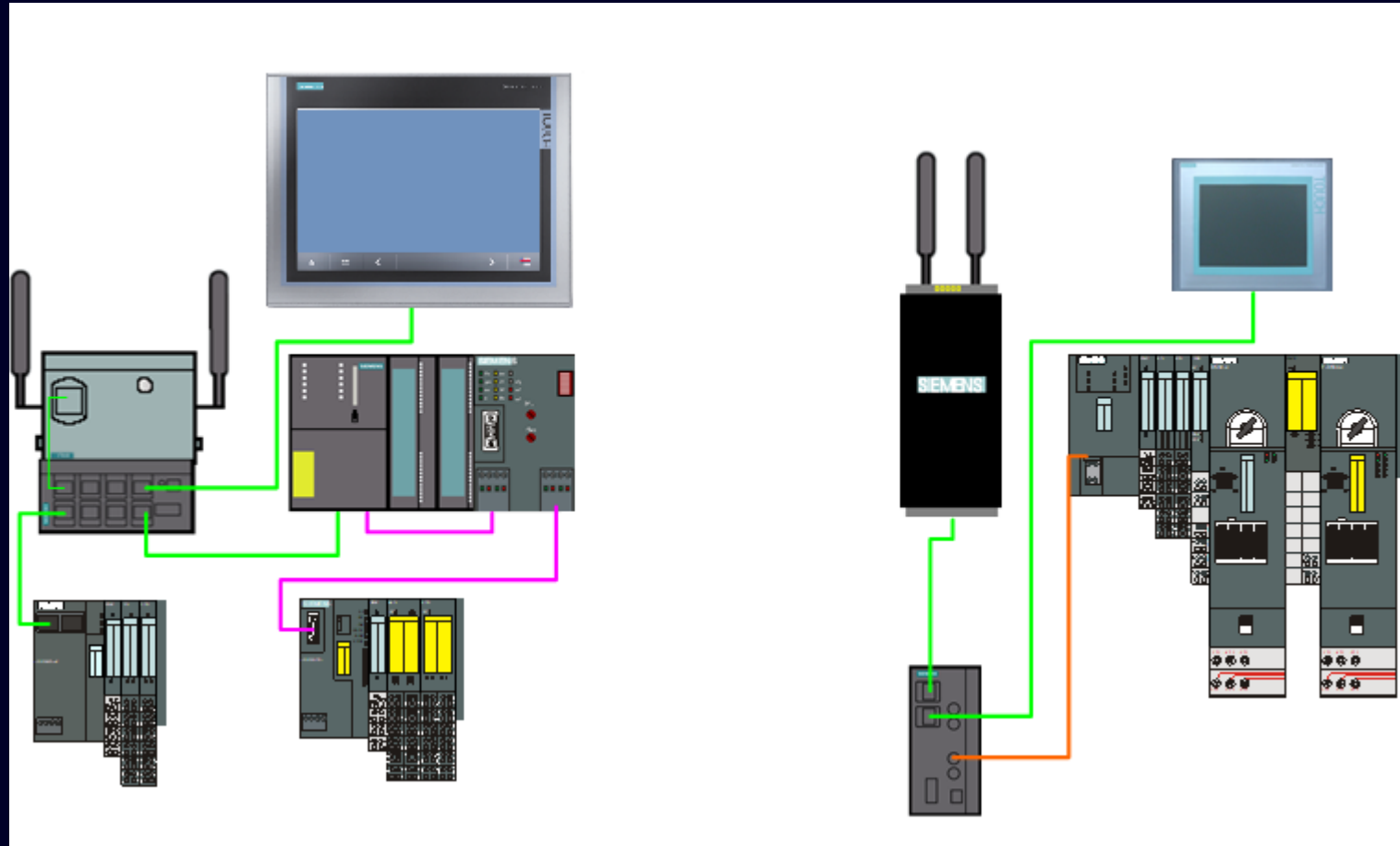


SIEMENS

What are we use to?



Where do we come from?



Har du softwaren, der skal til?

Selection Tool

Welcome

Catalog

Projects

Configure

Order list

Project > Group_1 > STEP7V18 (STEP 7 V18 (TIA Portal))

Search

Special product propertiesConfigure

Selection

STEP 7 V18 (TIA Portal)

SIMATIC STEP 7 V18 (TIA Portal) - the engineering software for programming the S7-1200 and the S7-1500 SIMATIC controller series based on the Totally Integrated Automation Portal (TIA Portal) central engineering framework, which offers users an integrated, efficient and intuitive solution for all automation tasks.

STEP 7 Basic for configuring SIMATIC S7-1200 CPU(s)

STEP 7 Professional for configuring SIMATIC S7-1500 (incl. Software Controller), ET200SP CPU, 300 and 400 CPUs

Select the SIMATIC S7-CPU series you want to configure:

☐ SIMATIC S7-1200

☒ SIMATIC S7-1500 (incl. ET 200SP CPU)

☐ SIMATIC S7-300/WinAC

☐ SIMATIC S7-400

☐ SIMATIC S7-1500 Software Controller

F-CPU: Do you also need the engineering software for configuring F-CPU?

No, I do not want to configure F-CPU(s).

Yes, I am already using STEP 7 software.

Select what you want to configure:

☒ STEP 7 V18

☐ STEP 7 Engineering options

☐ STEP 7 Runtime options

Extend or upgrade existing STEP 7 Engineering Software

Which STEP 7 Engineering software are you using?

- Standard or Professional?

Desired delivery form of the software and license key

How many licenses do you need?

Associated Software Update Service

Desired delivery form of the associated Software Update Service (SUS).

Result

Description	Article number	Quantity
SIMATIC STEP 7 PowerPack & Upgrade V5.7 -> V18/2021 SR1 Combo (Download)	6ES7822-1AE08-0XC5	1

Check the compatibility of your software with the [Kompa tool](#).

Har du softwaren, der skal til?

Selection Tool

Welcome

Catalog

Projects

Configure

Order list

Project > Group_1 > WinCCUnifiedV18 (WinCC Unified V18 (TIA Portal) with Unified Comfort ES, Unified PC)

Search

Special product properties

Configure

Selection

WinCC Unified V18 (TIA Portal) with Unified Comfort ES, Unified PC

SIMATIC WinCC Unified V18 (TIA Portal) is the new visualization system that enables you to successfully master the challenges of digitalization in machine and plant engineering. SIMATIC WinCC Unified V18 (TIA Portal) combines know-how from more than 30 years of experience in the human machine interface field with the latest hardware and software technologies. Note: you can also configure Basic Panels, Comfort Panels and WinCC Runtime Advanced with WinCC Unified ES.

Select the SIMATIC HMI series you want to configure

☐ SIMATIC Unified Comfort Panel

☒ SIMATIC WinCC Unified PC with 10k PowerTags

☐ SIMATIC WinCC Unified PC with 100k PowerTags

☐ SIMATIC WinCC Unified PC with max. PowerTags

Select what you want to order

☒ Engineering

☐ Runtime

☐ Runtime Options

Are you already using WinCC Software?

Yes, I am already using WinCC software

WinCC Engineering System

Which WinCC Engineering software are you using?

WinCC flexible

Which edition are you using?

WinCC flexible 2008 Standard

Desired delivery form of the software and license key

Download

How many licenses do you need?

1

Associated Software Update Service

Desired delivery form of the associated Software Update Service (SUS)

Result

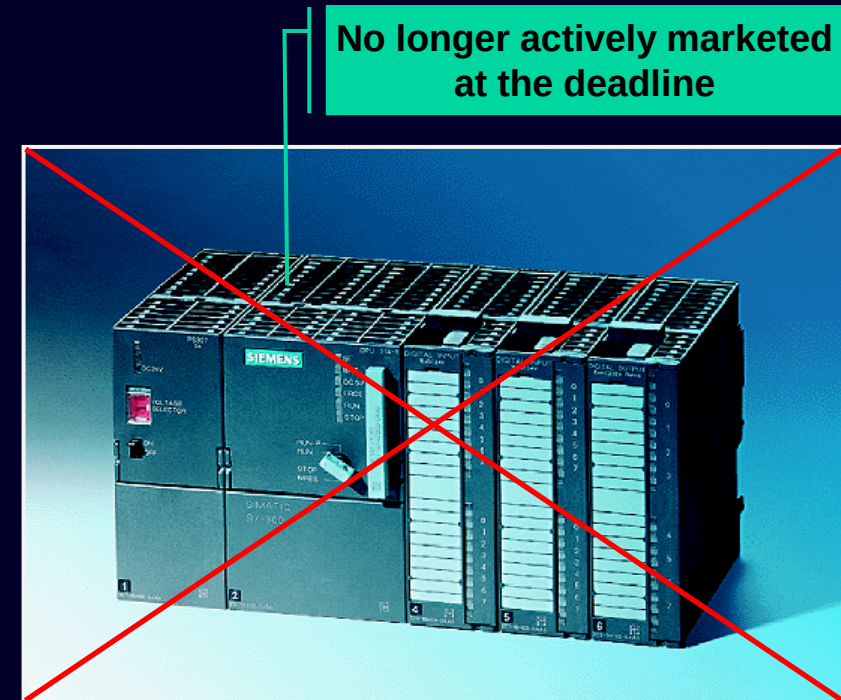
Check the compatibility of your software with the [Kompa tool](#).

Description	Article number	Quantity
WinCC Comfort V18 Upgrade DL	6AV2101-4BB08-0AK5	1
WinCC Advanced Powerpack V18 DL	6AV2102-2AA00-0BJ5	1

Hardwareconfiguration & Migration

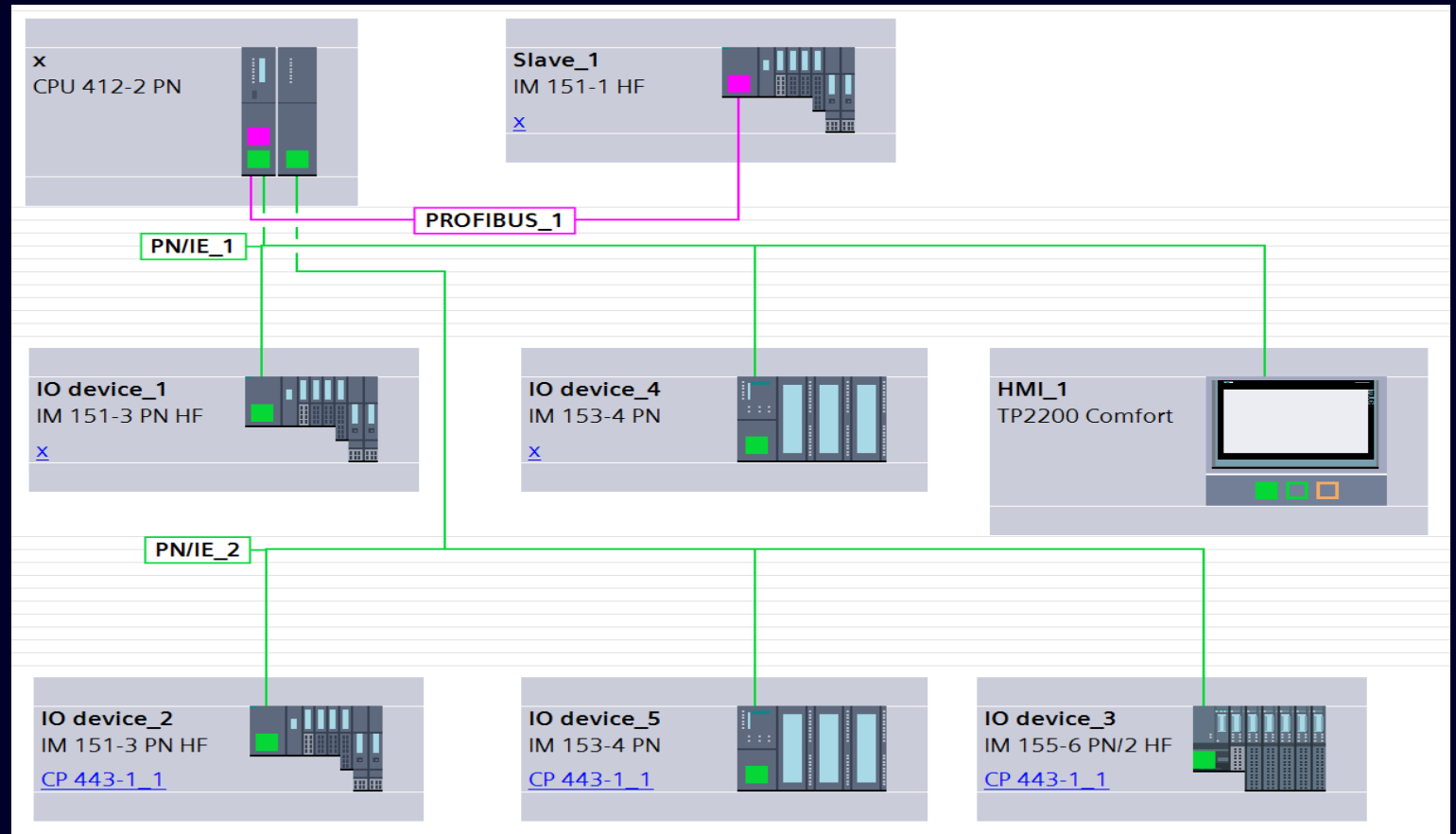
Witch modules, can be migrated:

- All modules of the project must be in the hardware catalog
- Important: Most of the modules which are actively marketed at the 01.10.2007 are included in the hardware catalog



No longer actively marketed
at the deadline

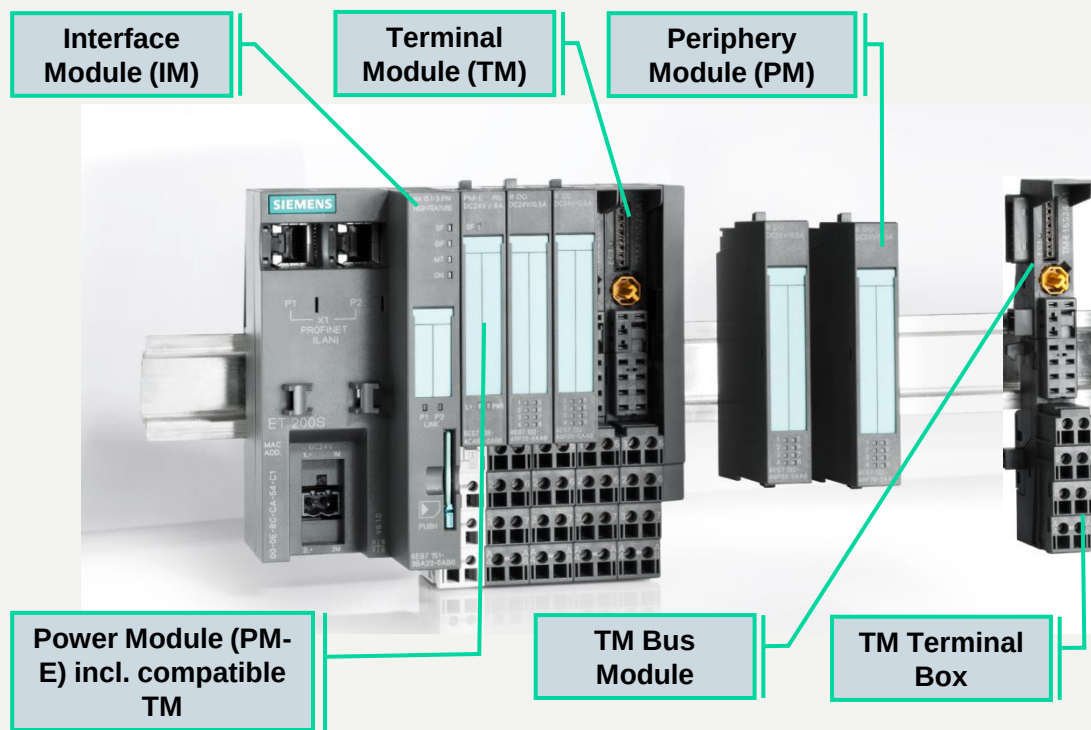
SIEMENS



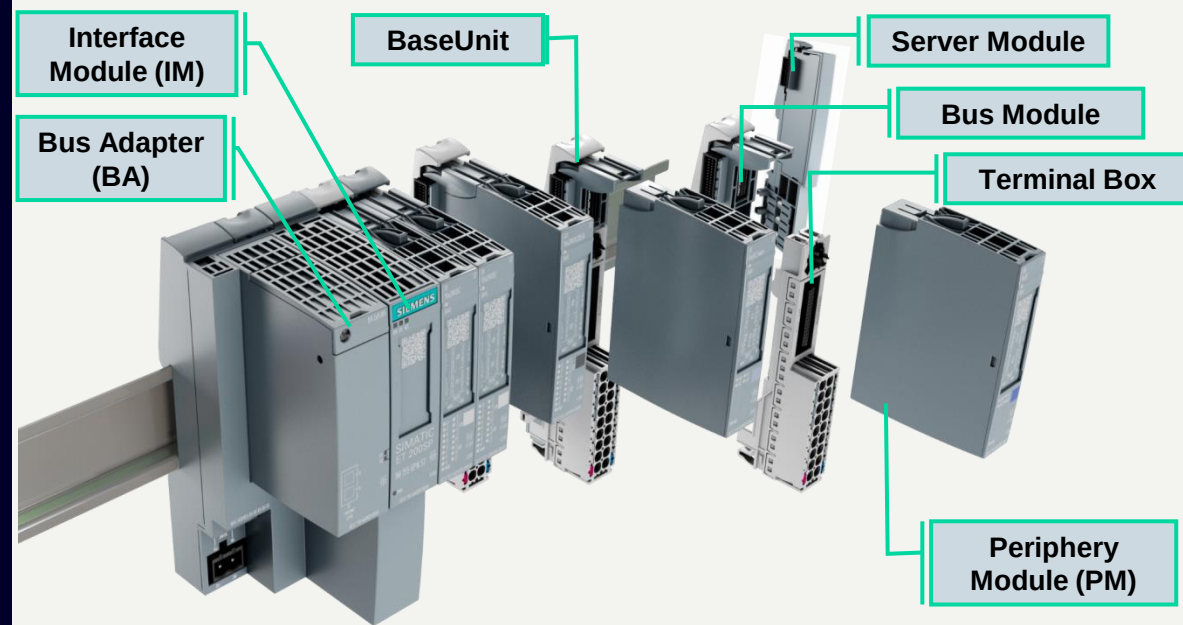
SIMATIC ET 200S/SP

Module overview

ET 200S station



ET 200SP station



SIMATIC ET 200S/SP

Module lettering PM

ET 200S

Module type and functional class

Terminal wiring diagram

Status-LED
■ Channel active

Hardware version (functional status)

Article number



ET 200SP

Module type and functional class

DIAG-LED (green/red)
■ Startup / Parameterization
■ Operating status RUN
■ Group error

Terminal wiring diagram for quick wiring without the need for a manual

Status-LED
■ Channel active

Channel error-LED (as of HF)
■ Channel error detected

PWR-LED
■ Supply via L1/M OK

2D-Matrix code for automatic target/actual comparisons + generation of the end-use database. Comprises article number and serial number, as well as Mac address for IMs

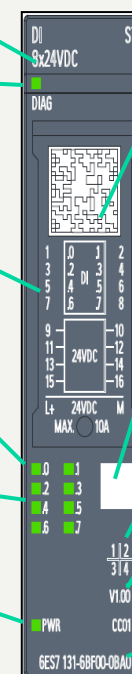
Module color coding
■ Digital inputs ■ Communication
■ Digital outputs ■ Technology
■ Analog inputs ■ Special module
■ Analog outputs

Hardware version (functional status)

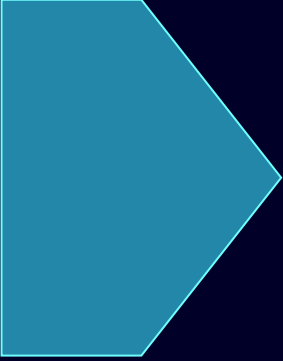
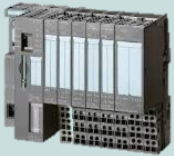
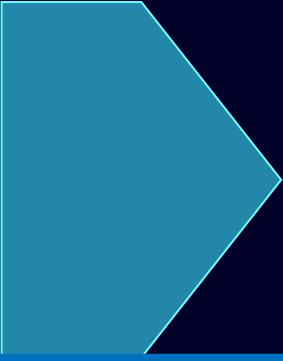
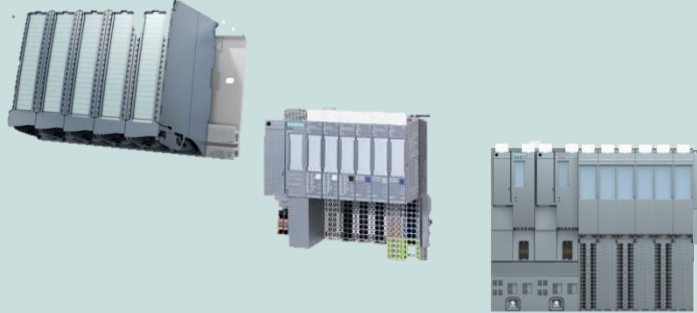
Firmware status (delivery status)

Color code of the matching label

Article number



From Classic to the New World

„Classic“ Products		Innovation Products	
	S7-300 PLC + S7-300 IO		S7-1500 PLC S7-1500 IO
	S7-400 PLC + S7-400 IO		
	ET 200S		ET 200SP
	ET 200M / S7-300 IO IM 365; IM360/361		ET 200MP / S7-1500 IO ET 200SP ET 200SP HA
			

Phase-out

Entry type: **Product note** Entry ID: **109809890**, Entry date: **05/24/2022**

★★★★☆ (8)

> Rate

Information about the product phase-out of S7-300 / ET 200M components

Entry	Associated product(s)
-------	-----------------------

For the SIMATIC S7-300 system and the ET 200M I/O system, the PM400 milestone (product phase-out announcement) is set for October 1, 2023. Discontinuation (PM410) is effective as of October 1, 2025.

Costumer information

6ES7315-2EH14-0AB0 (EAN: 4025515077770 / UPC: 040892550313)

CPU315-2 PN/DP, 384 KB

- Product details
- Technical data
- CAX data
- Release Notes

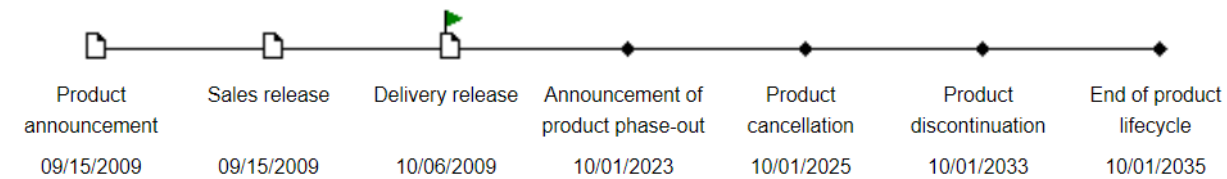


SIMATIC S7-300 CPU 315-2 PN/DP, Central processing unit with 384 KB work memory, 12 Mbit/s, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required

Versions

E version / Functional State (FS):
12
Firmware version:
V3.2.19
Software version:
-

Product life

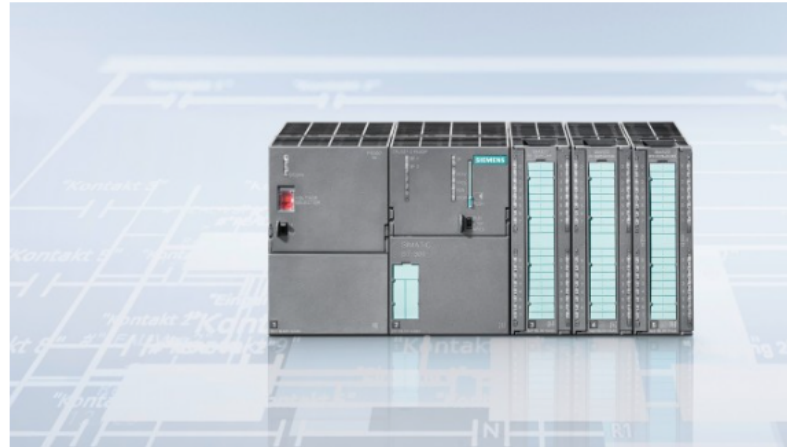


S7-300 Web page

<https://siemens.com/S7-300>

<https://siemens.com/S7-300>

SIMATIC S7-300 - Proven and available until 2033



The legendary universal PLC

The SIMATIC S7-300 is used in many applications worldwide and has been proven successful millions of times. The SIMATIC S7-300 universal Controllers saves on installation space and features a modular design. A wide range of modules can be used to expand the system centrally or to create decentralized structures according to the task at hand, and facilitates a cost-effective stock of spare parts. SIMATIC is known for continuity and quality. You want your application to be future-proof? Then you should look at the advantages and new possibilities of the SIMATIC S7-1500 and the engineering with TIA Portal

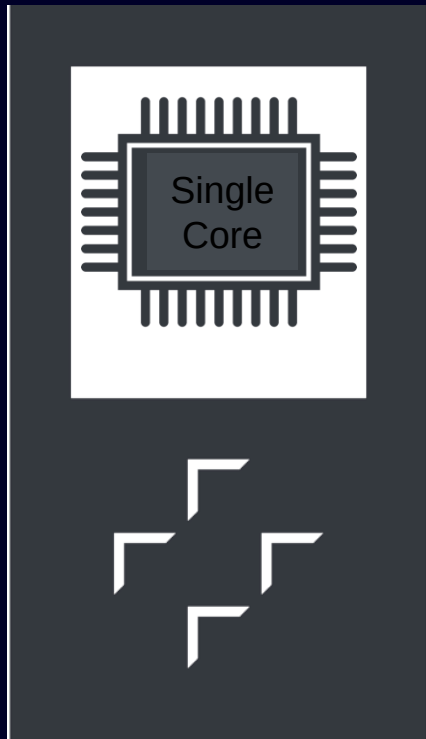
> SIMATIC S7-1500 Controller

Information on product lifecycle

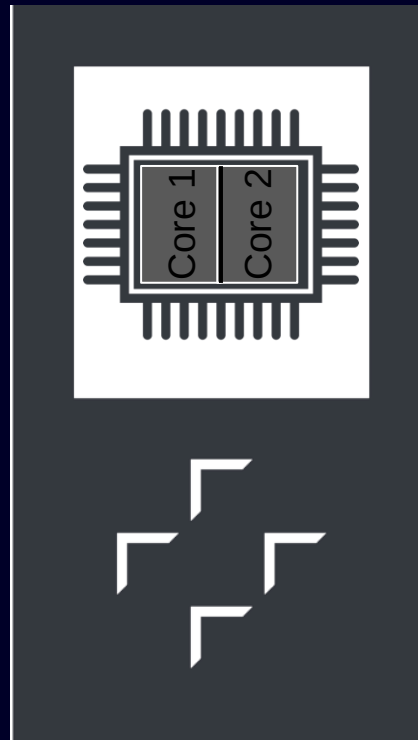
The SIMATIC S7-300/ET 200M system families are part of our established product range and will definitely be available until 2023. Upon publication of a product phase-out announcement, the respective product will be available as a spare part for a period of ten more years until 2033.

SIMATIC Hardware

New Hardware for CPUs ≤ 1516 starts with FW V3.0 & TIA Portal V18



6ES751x-xyyx0/1/2-0AB0
FW $\leq$ V2.9



6ES751x-xyyx03-0AB0
FW = V3.0

New Hardware with 2 Core Processors

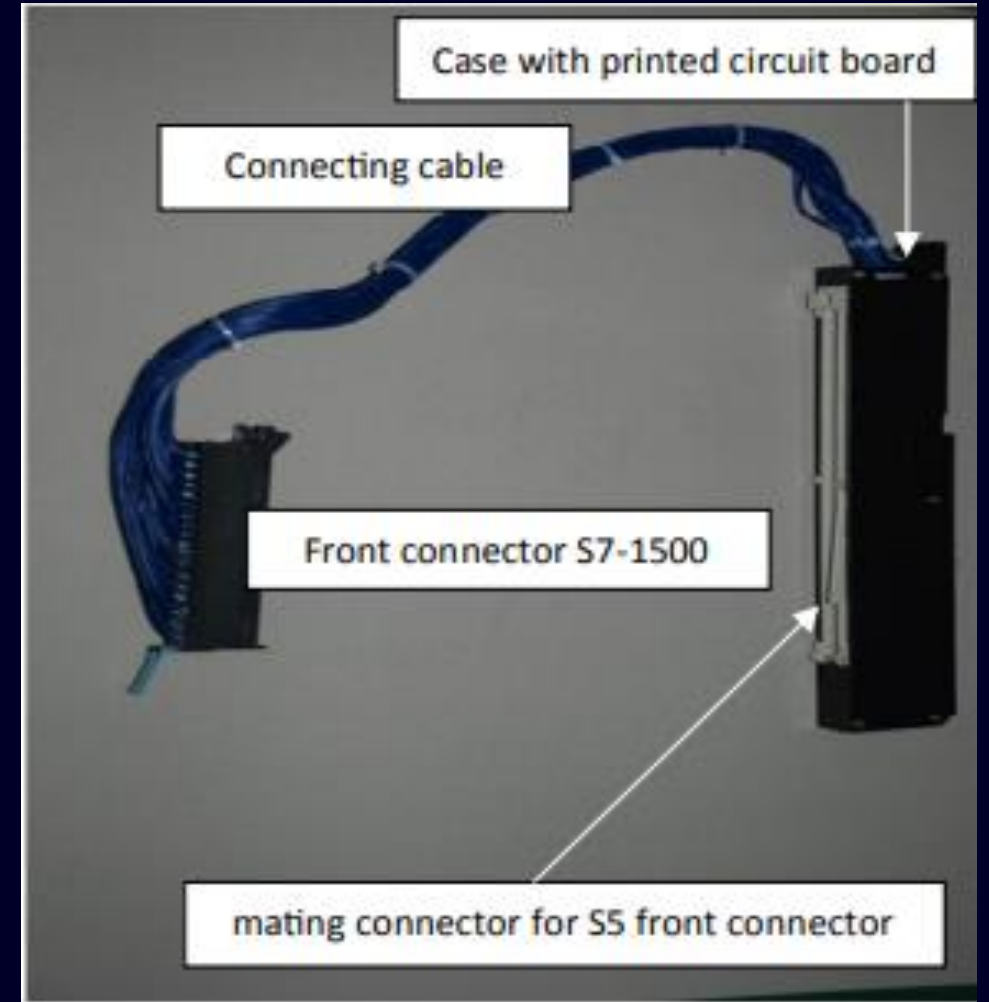
- Core 1
 - User program
 - Diagnoses
- Core 2
 - Communication

New Display implementation

Benefits

- Deterministic program processing (smaller jitter)
- Higher communication performance
- No separate Display FW needed

Use adapters

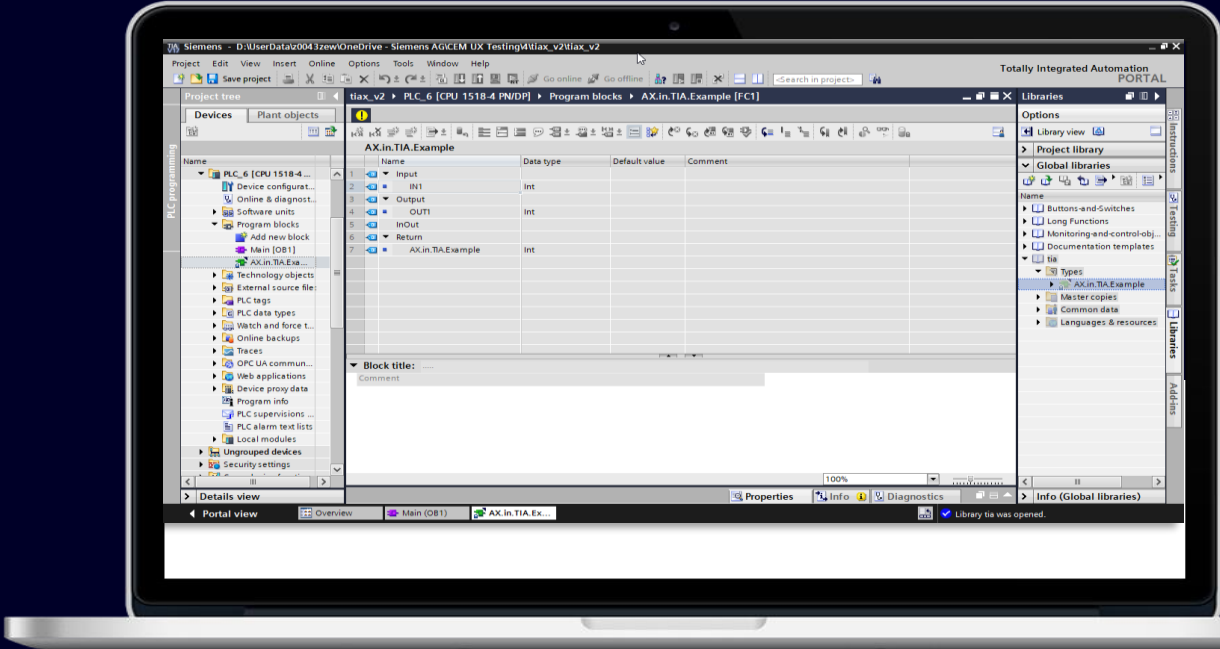
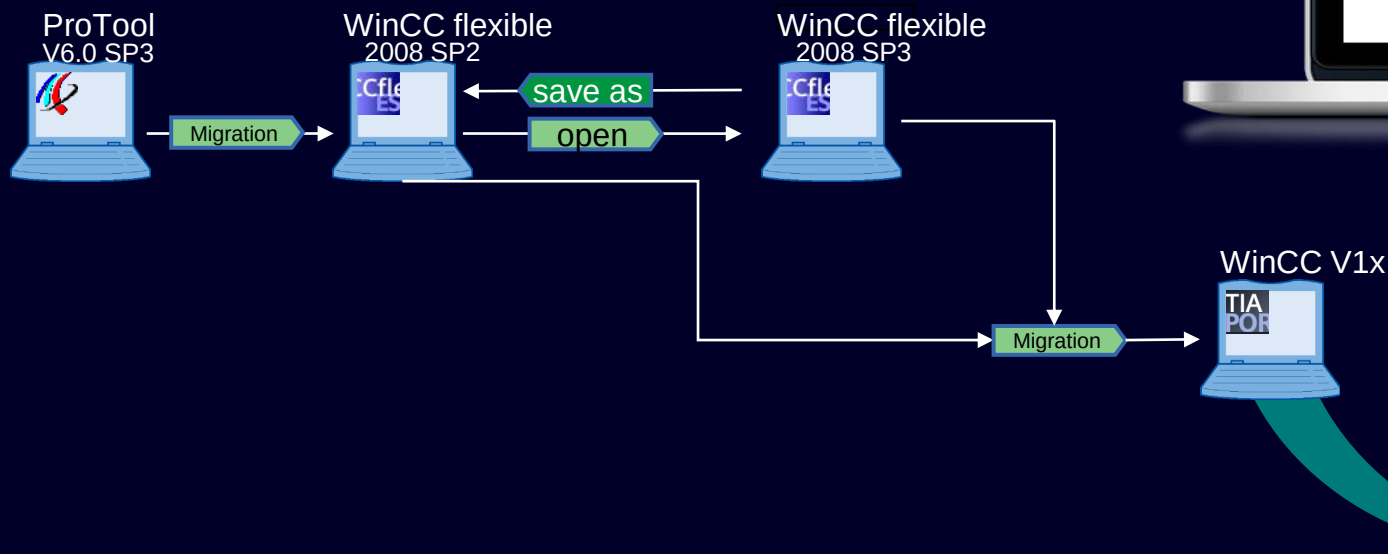


Premounted cables



SIEMENS

What now?



Modernization

Why call it Modernization?

What is the difference?

Comfort:

Bitmap

Fixed screen technology

WinCE 6.0 / Windows Embedded 2013

VB script

Scalable to Panel at a PC (no SCADA)

Unified:

SVG:

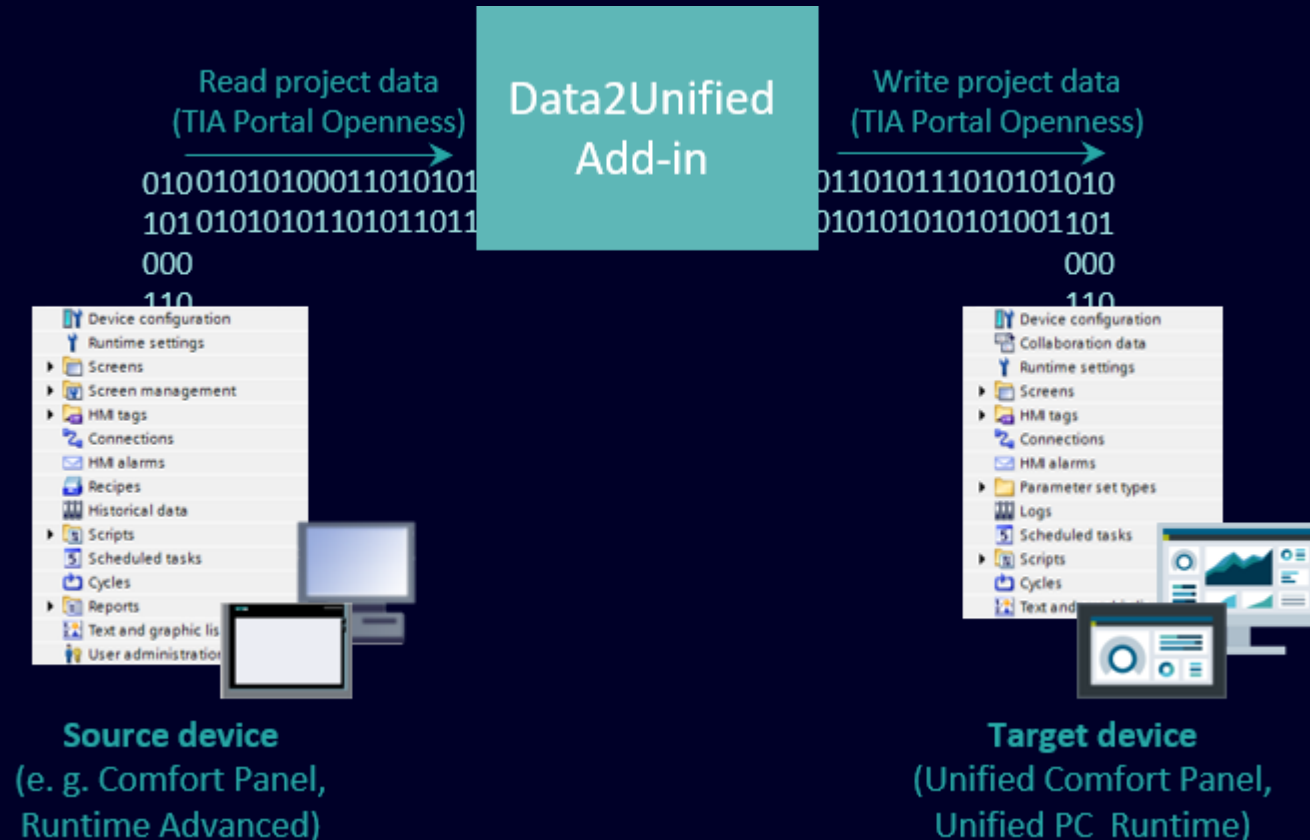
HTML5

Linux

Java Script

Scalable to PC system SCADA

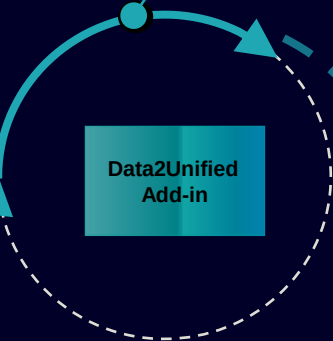
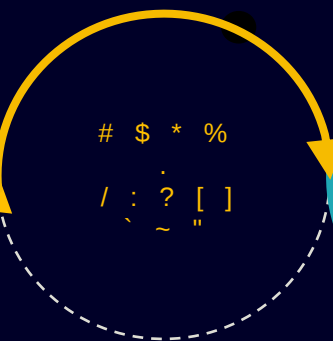
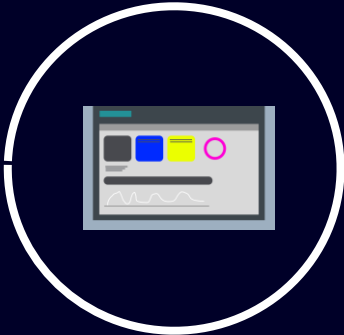
Data2Unified



But is it Just to Convert?

Procedure

WinCC
Comfort
Project



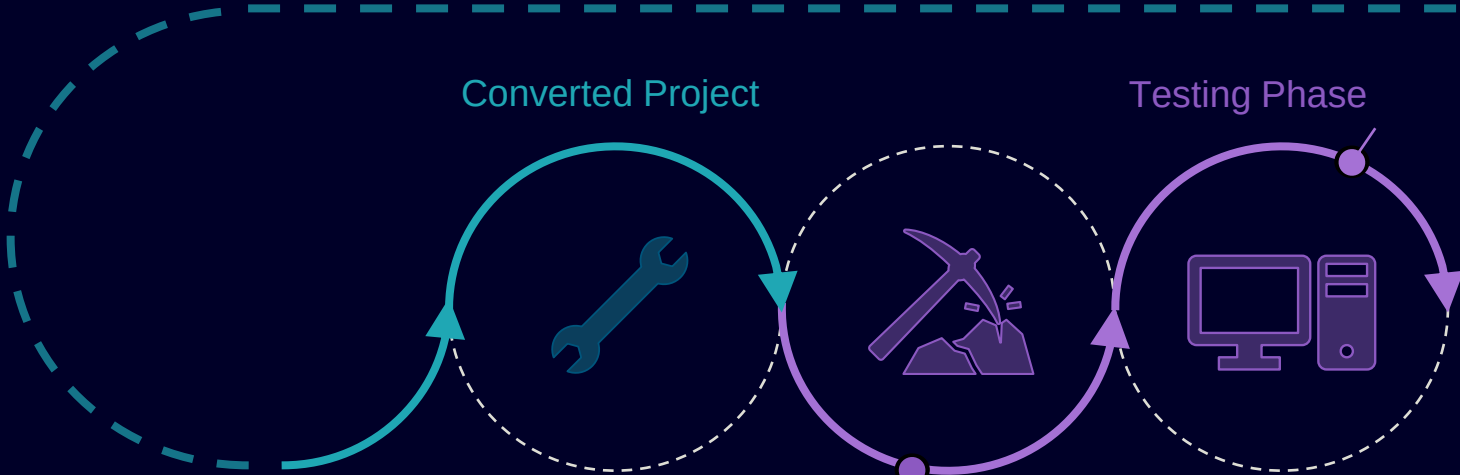
Data2Unified

Preparation

Converted Project

Testing Phase

WinCC Unified
Project



Manual
Adaption

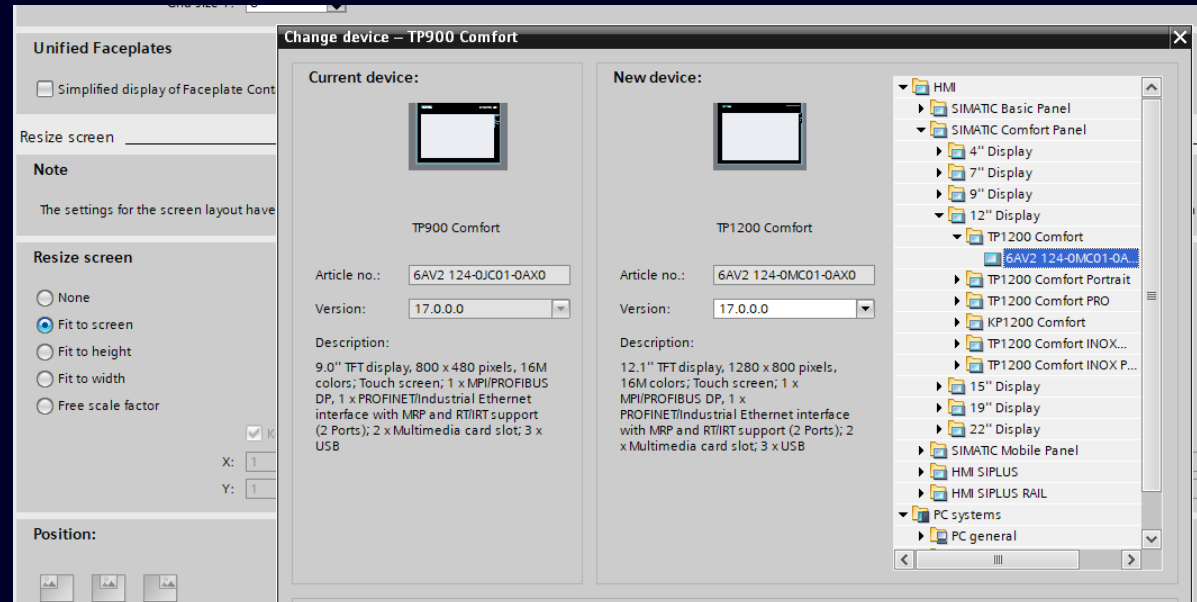


Preparation

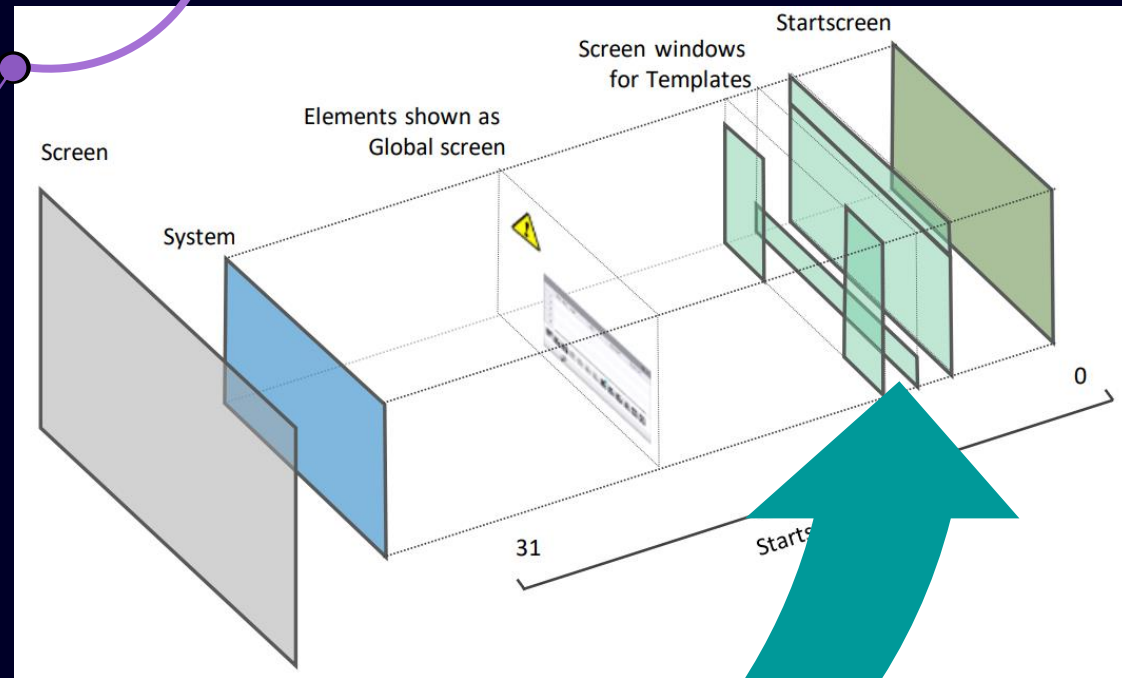
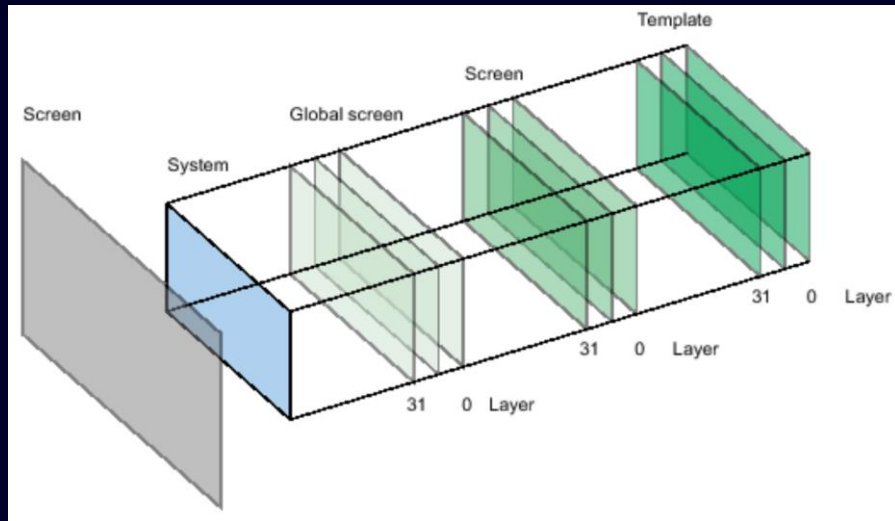


\$ * % .
/ : ? [] ' ~
"

Tag Naming
I/O Field



Manual adjustments



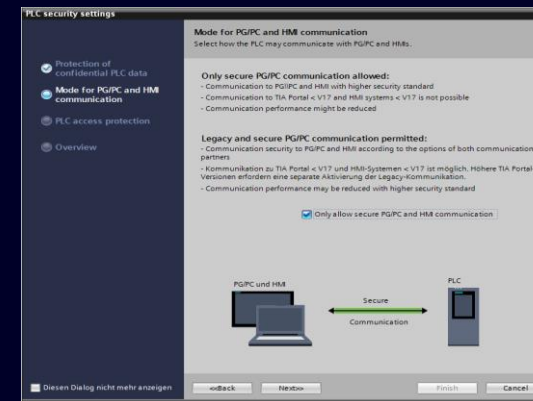
Security Wizard for new PLC Security Mechanisms

- Security-by-Default
- From
- S7-1500 FW v2.9
- S7-1200 FW v4.5

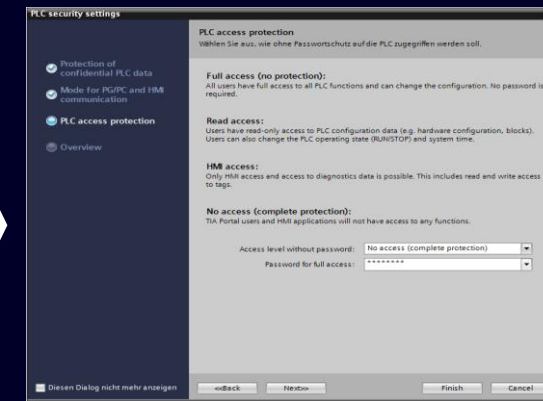
Step 1



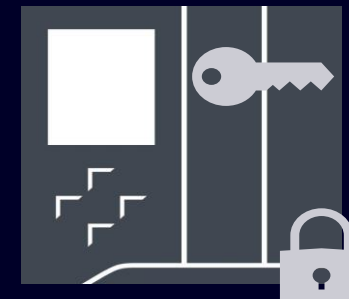
Step 2



Step 3



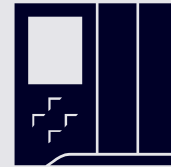
- Protection of confidential PLC configuration data
- Mode for secure PG/PC and HMI Communication
- PLC Access Protection



PLC with Security-Settings

SIMATIC Robot Library

One language for all robot manufacturers



TIA Portal & SIMATIC S7



SIMATIC Robot Library



Standard Robot Command Interface

Manufacturer A



Manufacturer B



Manufacturer C



Manufacturer D



Manufacturer E



Manufacturer F



Manufacturer G



Manufacturer H



Migration made easy -- Marketing Activities

Overview Tools

TIA Migration Marketing Site

Your step into the future - Migration made easy
Higher productivity, efficiency and availability
through modernization

Topics:

- Engineering
- Controller and I/O Systems

**First
point of
entry**

Migration Overview Page (SIOS)

Here you find a wealth of migration collateral for plants with SIMATIC (TIA Portal).

TIA Portal Tutorial Center

The TIA Portal Tutorial Center is a media system with various videos which gives you an overview of the general functions and tools of the TIA Portal. Migration is an integral part:

- Introduction to migration and modernization
- Migration and modernization for end customers and plant operators
- Migration and modernization for machine builders (OEM)

Migration Guide S5

SIMATIC S5 to S7-1500

Migration Guide S7-300/400

SIMATIC S7-300/400 to S7-1500

Migration Guide PC-based

SIMATIC WinAC RTX to S7-1500 software controller

Migration Guide T-CPU

SIMATIC S7-31xT to S7-1500 (T)

Programming Guideline for S7-1500

- S7-1500 innovations
- Recommendations on general programming
- Recommendations on hardware-independent programming
- Recommendations on STEP 7 Safety in TIA Portal
- Overview of the most important recommendations

Programming Styleguide

Programming Styleguide for S7-1200 / S7-1500

Modernization HMI

SIMATIC HMI Unified Modernization

Switching Comfort Panels to Unified

SIMATIC HMI Unified Comfort Panels & PC

Migration Guide SCADA

SIMATIC WinCC V4 to WinCC V7.x

TIA Selection Tool

Import/Create HW config of S7-300 and use integrated migration function incl. recommendation/alternatives

Comparison list SIMATIC S7

SIMATIC S7-1200 / S7-1500 Comparison list for programming languages

Kontakt

Michael Nielsen

michael.nielsen@siemens.com

Kim Meyer-Jacobsen

kim.meyer-jacobsen@siemens.com



Find os på
LinkedIn

SIEMENS

SIEMENS



WEBINARER MED INSPIRATION, VIDEN OG VÆRDI

Industry Information Live

Tilmeld dig, se og gense på
www.siemens.dk/di-webinarer



Tilmeld dig på
www.siemens.dk/di-tilmeld-nyheder

Du finder også vores nyheder på
www.siemens.dk/di-nyheder

NYHEDSBREVE TIL INDUSTRIEN
UDKOMMER 8-10 GANGE OM ÅRET

Industry Information News

TIPS OG TRICKS PÅ YOUTUBE

Industry Information Demo

Find hurtigt playlisten og abonner via
www.siemens.dk/di-demo

