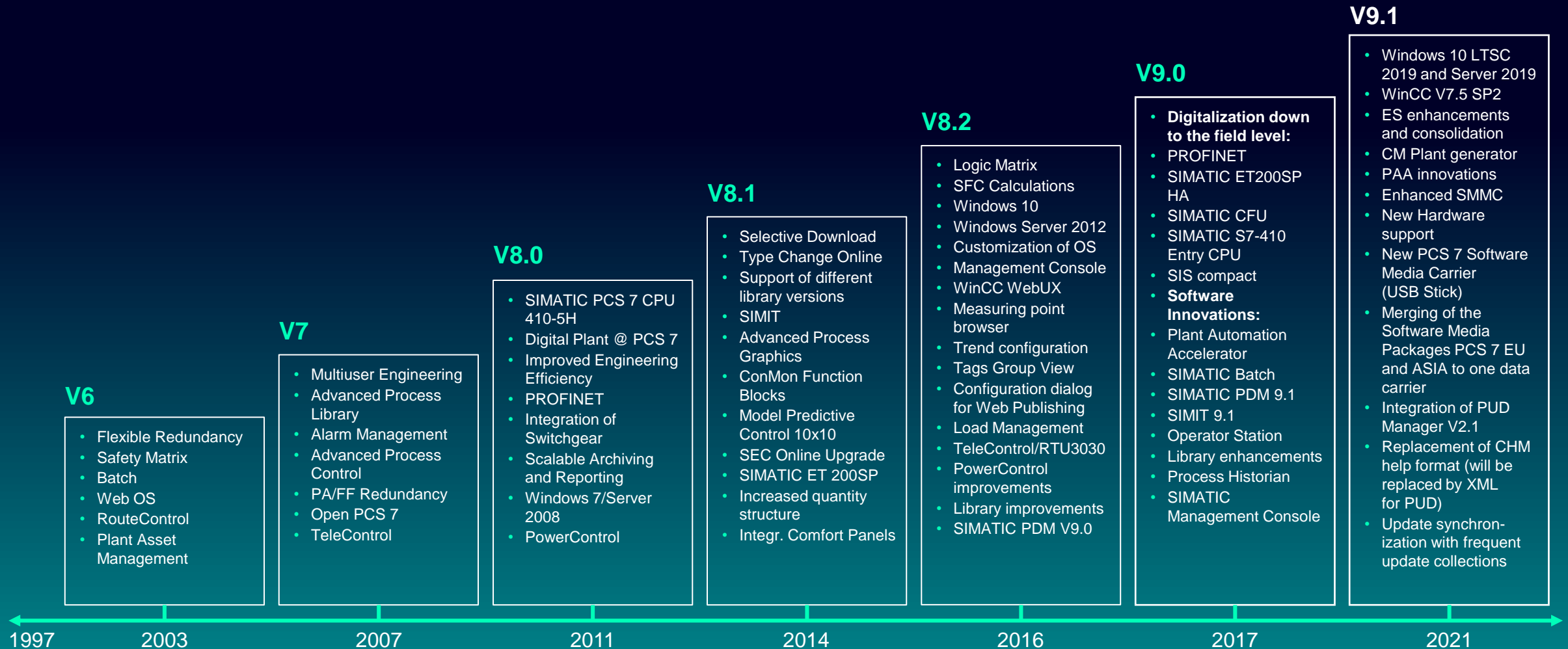


PCS 7 V10 Innovations / Roadmap Update

The cornerstones of the AE Portfolio

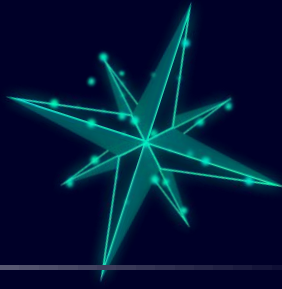
SIMATIC PCS 7

More than 20 years of SIMATIC PCS 7 Innovations



Strategy Highlights of SIMATIC PCS 7

Roadmap of Innovations



SIMATIC PCS 7

Windows 10 LTSC 2019 / Server 2019

Windows 10 IoT LTSC 2021 / Server 2022

Windows 11 IoT LTSC 2024 / Server 2024

Operating Systems

Internet Explorer

Edge in Compatibility Mode

Supported Browsers

Email notification for MS Defender Events

EndPoint Protection

Security

PN-APL supported

PN Certified 3rd Party Field Device availability

CFU PN-APL w/Scalance ; w/ MI

Profinet over APL

MTP Supported

MTP

PH: Engineering Log

Management of Change

User Access Rights

UMAC

PH/IS Migration 2014 → 2020

V9.1 SP1

V9.1 SP2

V10.0

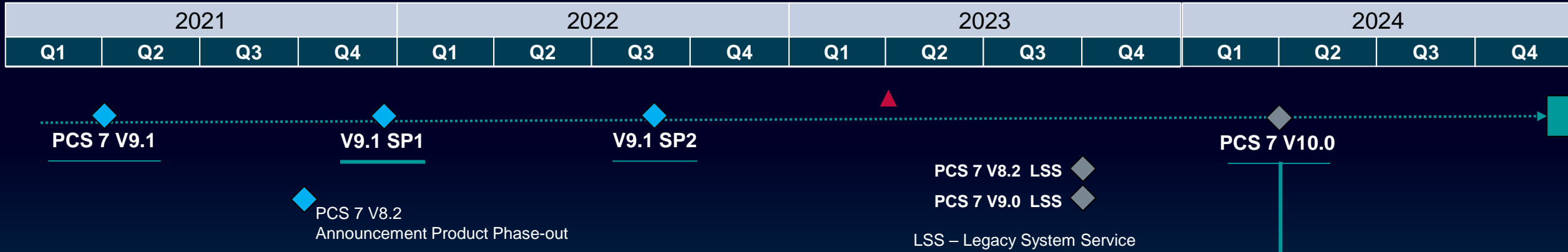
V10.0.1

V10.1



SIMATIC PCS 7 System Roadmap

current planning status



Planned Software topics:

- Windows 10 Enterprise 2019/2021 LTSC and Windows Server 2019/2022
- WinCC V8.0 (Adds: PCS 7 WebClient based on WinCC ViewerRT – no IE11 Dependencies)
- Step 7 V5.7.1 (SNMP default off)
- Management of Change (GMP Regulations - Leverage PH)
- ES User rights Management (User Permissions for engineering tasks)
- SMMC fully automated MS Defender Report
- PH v2023 – MSSQL 2019, 3rd Party Data via OPC UA

Planned Hardware topics :

- Completion of ET 200 SP HA portfolio
- Completion of CFU portfolio
- CN 4100 Integration & Maintenance Station
- Support PA-Profile V4.x field devices
- PROFINET S2/S1 Link
- CPU 410 FW V8.3

Topics to follow:

- RACK IPC: 547J / 647E / 847E (547K)
- BOX IPC: BX-39A / PX-39A (427G/477G)
- OS Client 227G / 277G
- Restore images for Microsoft Hyper-V

Digital Upgrade Twin: Time-Limited Licenses to support Upgrades to PCS 7 V9.1.2 (V10)

Production Plant with PCS 7 V8.0 Project



PCS 7 V8.0 Licenses

Product Manager Review/Approval required to Quote and Order

Production Plant with PCS 7 V9.1 Project

PCS 7 Upgrade Licenses



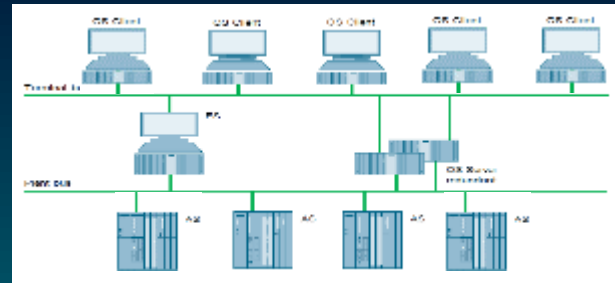
PCS 7 V9.1 Licenses

Upgrade the PCS 7 Project

Test Environment PCS 7 V9.1.2, Test Packages with a fixed end date of September 30, 2023

Upgrade Order

- New Hardware
- PCS 7 Test Packages
- SIMIT Test Packages
- PCS 7 Upgrade Licenses



- PCS 7 Test Package includes:**
- Time Limited PCS 7 V9.1 licenses (fixed end date not related to purchase date or start of usage)
 - x1 package for each PCS 7 Station in the Test Environment.
 - Test Package Basic (without Batch)
 - Test Package Extended (with Batch)
 - **SIMIT V11.0 PoC Package + Dongle w/ SIMIT L and x2 VC valid for x3 months (Evaluation for Single One-Time Use)**

- Exchange of plant hardware from test environment
- PCS 7 V8.0 licenses are upgraded to PCS 7 V9.1 licenses

Test Package Basic – 6ES7658-5LX68-1YA6 \$500.00

DL- 6ES7658-5LX68-1YH6

- Unlimited Count Relevant Licenses
- PCS 7 AS Engineering
- PCS 7 OS Engineering
- Version Cross Manager
- Version Trail
- IEA
- S7-PLCSIM
- F-Systems
- Safety Matrix
- Maintenance Station ES
- Management Console
- OpenPCS 7
- PDM
- Route Control
- PCS 7 Open OS
- OS Client
- SFC Visualization
- Logic Matrix
- OS Single Station
- OS Server
- OS Redundancy
- WebServer
- TeleControl
- PowerControl
- Process Historian
- Information Server
- WinCC User Archives
- Hardnet-IE S7
- Hardnet-IE S7 Redconnect
- Softnet-IE (supports BCE)
- Softnet-IERedconnect VM

Test Package Extended –

6ES7658-5LX68-2YA6 \$1,675.00

6ES7658-5LX68-2YH6

- **Test Package Basic – Plus:**
- Batch Server
- Batch API
- Batch Client
- Batch Recipe System

| SIMIT News

SIMIT System Roadmap



SUS Packages to purchase before June's V11.1 release

6DL8913-0BX00-0AV8	SIMIT SUS ENGINEERING M DL
6DL8913-0CX00-0AV8	SIMIT SUS ENGINEERING L DL
6DL8913-0DX00-0AV8	SIMIT SUS ENGINEERING XL DL
6DL8913-0DA00-2YV8	SIMIT VC FULL SUS 1 Controller DL
6DL8913-0DB00-2YV8	SIMIT VC FULL SUS 5 Controller DL

SIMIT Features

- ✓ Simulate Hardware Faults with the SIMIT VC (channel/wire break)
- ✓ Simulate redundant failures
- ✓ Proof Of Concept Offer
- ✓ Improved integration with PSE/gPROMS (High fidelity Process Simulator)
- ✓ Inclusion of all newly released HW devices
- ✓ Improved re-use of Snapshots and VC imports

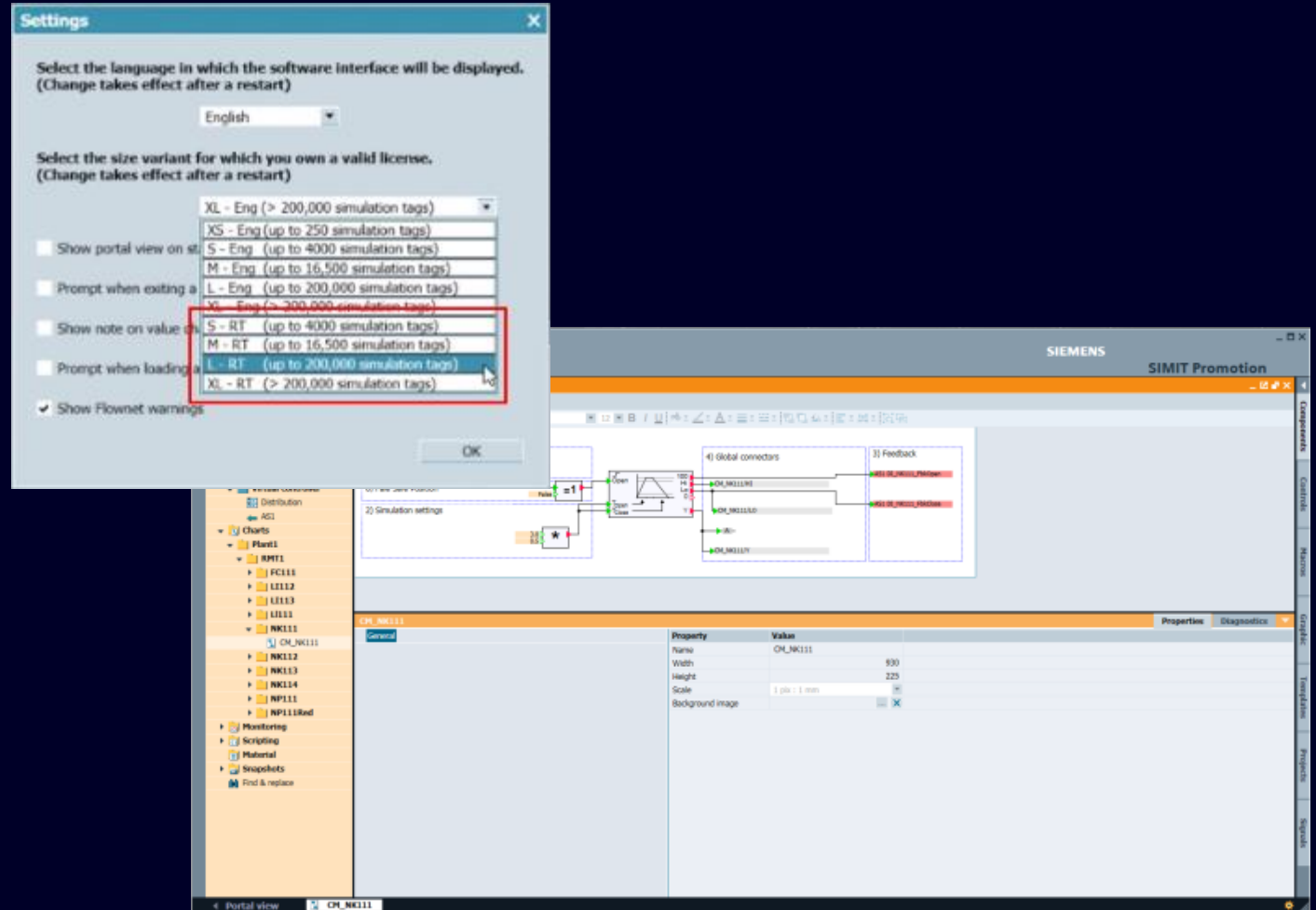
SIMIT V11 Player

SIMIT Player

- Target Use Case:
 - Operator Training Systems
- ~ 40% less than full SIMIT Engineering

Notables

- No engineering
- Same installation / no additional installation necessary
- VCs still required
- Possible functions:
 - Load, start and stop projects
 - Adapt project to the target system (e.g. IP, PC name, ...)
 - Snapshots



PoC Package (Proof of concept)

- Available for customers running a Proof of concept with SIMIT
- Postal delivery only (assumes you do not have a Dongle)
- Valid for 3 months (starting from 1st usage)
- **Only one package per customer**
- Consists out of the following packages:
 - SIMIT L
 - All libraries
 - Component type editor
 - 2x Virtual Controller
- Can be ordered with one MLFB, no additional dongle and license carrier required
 - Single Package – S79220-C1911-F888 (\$475)

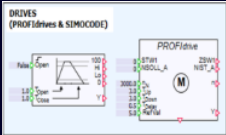


SIMIT product packages and libraries

SIMIT product libraries

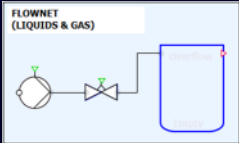
STANDARD, DRIVES

Signals, Logic, Drives, Misc.



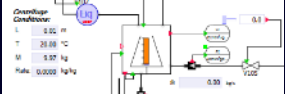
FLOWNET

Water/Steam, Ideal gas Liquid with constant density/heat capacity
Ideal gas



CHEM-BASIC

Mixing/Separation 2 liquids, liquid with solids



SITRANS PI Library

SITRANS Process Instrumentation



SIMIT Solution Device Library

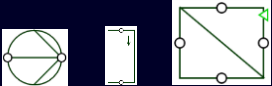
APL based component library for device level creation



MLFB:
6DL5274-0AA20

SIMIT Solution Water Library AddOn

Extends FLOWNET, plant simulation of fresh water production, reverse osmosis processes and pipelines



MLFB:
6DL5274-3AH43

Coming soon

SIMIT solution libraries

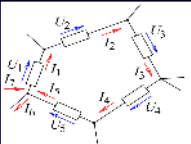
Multi Component FLOWNET Library

Concentration, Liquid and Gas
Material database, thermodynamic modeling



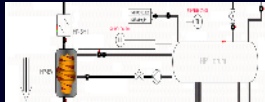
Electrical Network ELN

Electrical generators, consumers, energy optimization, SIPROTEC (PB)



Power Plant Library

Vaporizer, Benson, Steam turbine

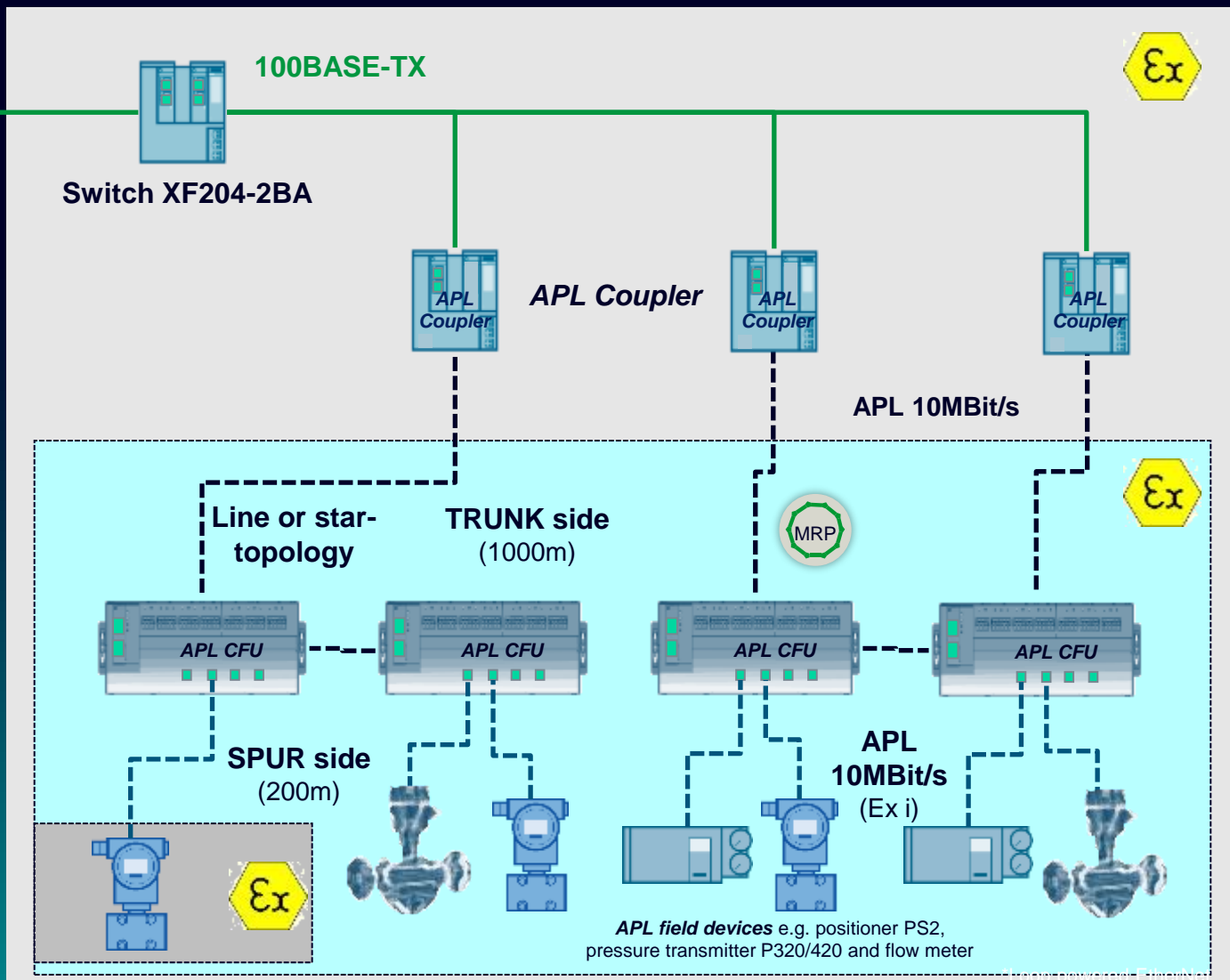
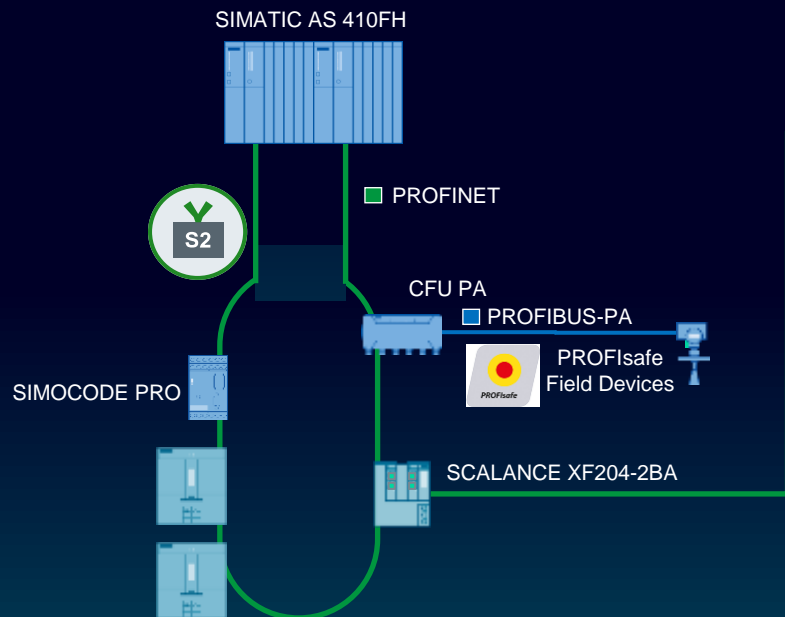


= Add-on

I Advanced Physical Layer

The “other” APL 😊

PROFINET over APL Development Plan – In Planning



- Dedicated PROFINET Network with up to 25 Devices V9.1 SP2
 - PCS 7 V10 will perform testing for larger applications
- Opportunity to start evaluating this new technology in an “offline-test” environment.
- Third Party PROFINET Certified APL Devices supported via GSDML.



SIMATIC CN 4100 Release 2 - SIMATIC PCS 7

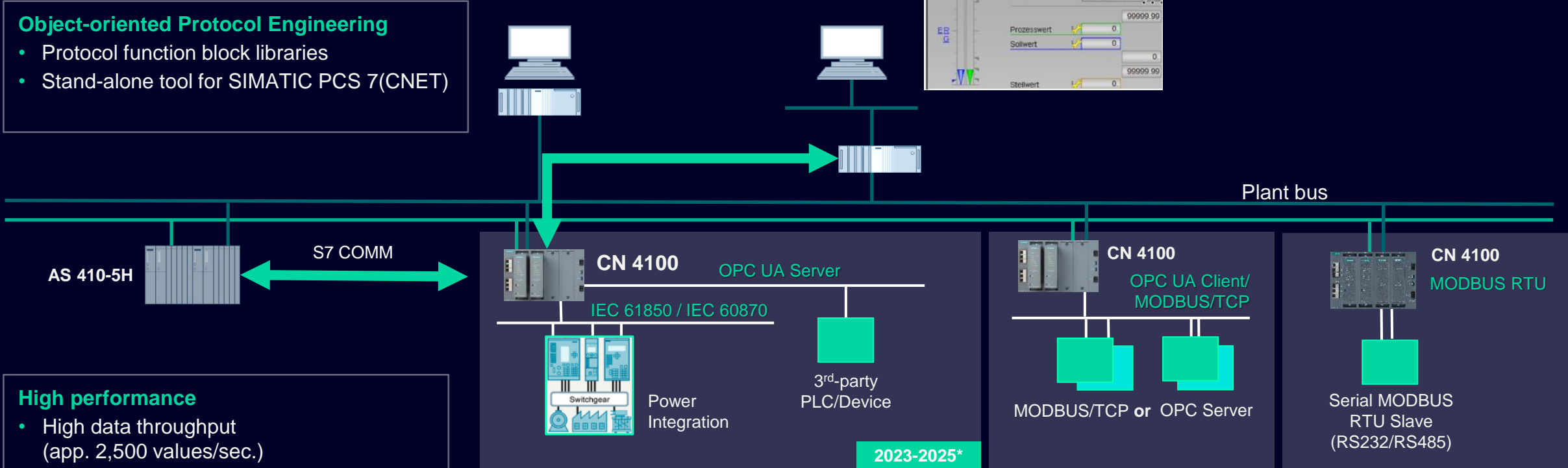
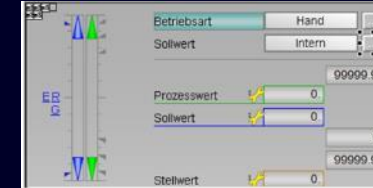


Maximum connectivity

SIMATIC CN 4100

Object-oriented Protocol Engineering

- Protocol function block libraries
- Stand-alone tool for SIMATIC PCS 7(CNET)



High performance

- High data throughput (app. 2,500 values/sec.)
- High availability with redundant SIMATIC CN 4100 module
- Very low load in AS 410-5H
- Security inside (embedded Linux firewall)

High modularity

- Various protocols (OPC UA, MODBUS/TCP, ...)
- 4x Integrated Ethernet Interfaces
- Pluggable Extension Modules

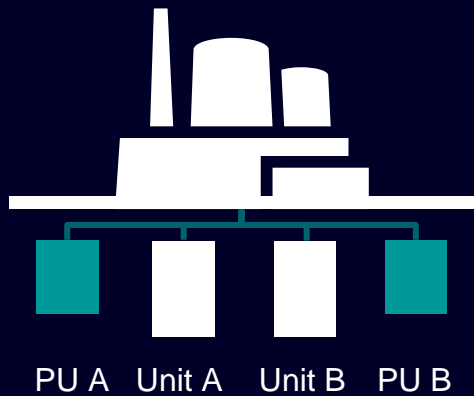
Module Type Package

MTP: Streamlining how you integrate Package Units into the DCS

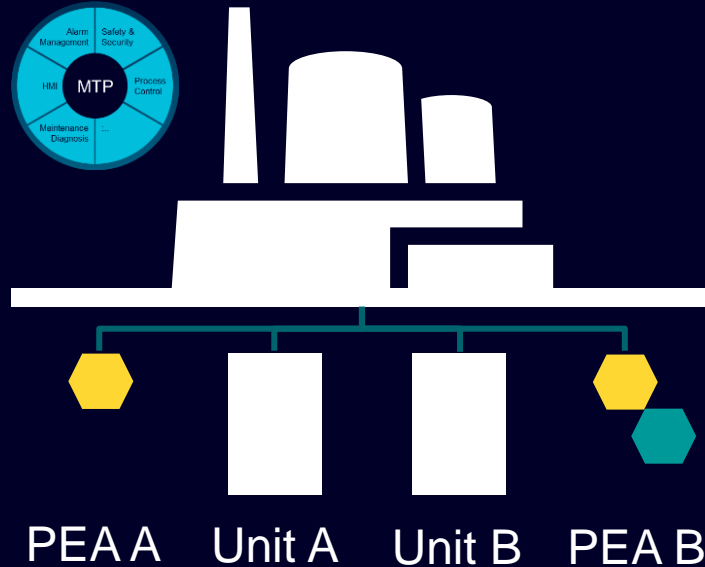
Introduction of MTP – Module Type Package

Modularization and easy module integration

Fixed Plant



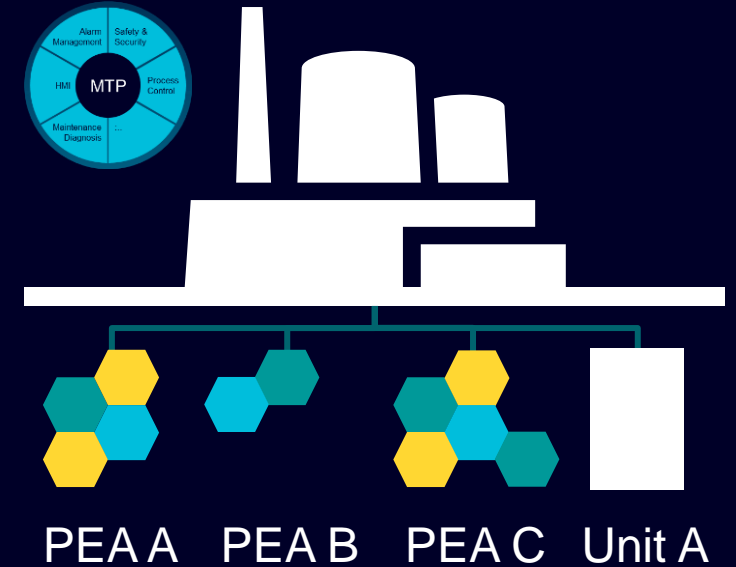
Modular Plant



Main Benefits

- Reduced planning effort
- Reduced coordination
- Easy and fast integration due to pre-tested PU

Flexible Modular Plant



Main Benefits

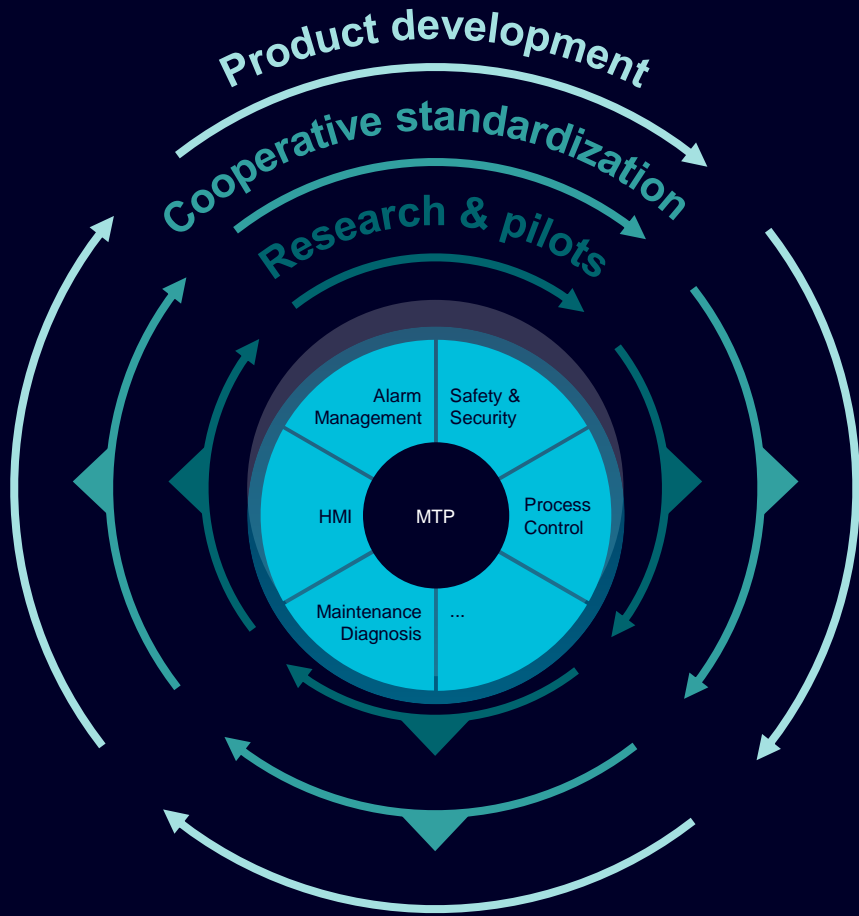
- Increased flexibility
- Higher quality
- Shorter time-to-market
- Engineering reduction
- Test reduction

Those participating in the standard



Status of Agile Standardization (MTP Standard)

VDI/VDE/NAMUR 2658



Status 01-2023

2658-x	Title	WG	CP	ID	PD	IR	PR	Comment
1	Basic Concept							Released
2	HMI – Concept							Released
3	HMI – Interfaces							Released
4	Process Control							Released
5	Runtime – Concept							Work in progress
5.1	Runtime – OPC UA							Work in progress
6	Alarm Mgmt. – Concept							Released for comment
7	Alarm Mgmt. – Modelling							Released for comment
7.1	Alarm Mgmt. – OPC UA							In review
8	Safety – Concept							Concept development
9	Safety – Interfaces							–
10	Diag./Maint. – PEA ¹							Concept development
11	Diag./Maint. – Plant							Concept development
12	Validation/Commissioning							–

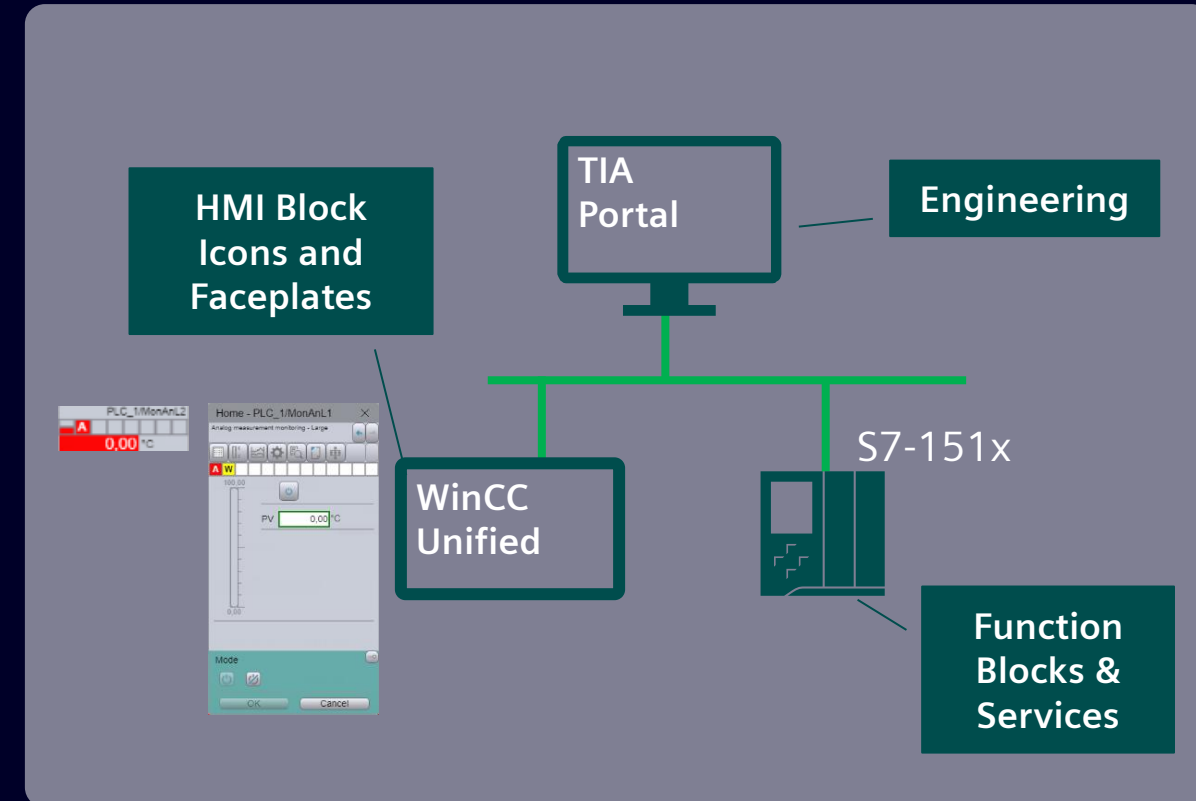
Released with PCS 7

¹ Process Equipment Assembly | WG: Working Group established | CP: Concept Paper | ID: Internal Draft | PD: Public Draft | IR: Internal Release | PR: Public Release

SIMATIC Process Function Library (PFL)

- + Standard Advanced Process Library function blocks and faceplates in TIA Portal.
- + Ready to use with MTP
- + Optimized for TIA Portal with S7-1500 controller & WinCC Unified.
- + Supports virtual commissioning based on PLCSIM Advanced and SIMIT with ready to use SIMIT templates tailored to PFL
- + Standardization & Upgrades to new versions reduces engineering & life cycle costs

[Modular production with "Module Type Package \(MTP\)" - Module design with TIA Portal - ID: 109783062 - Industry Support Siemens.](#)

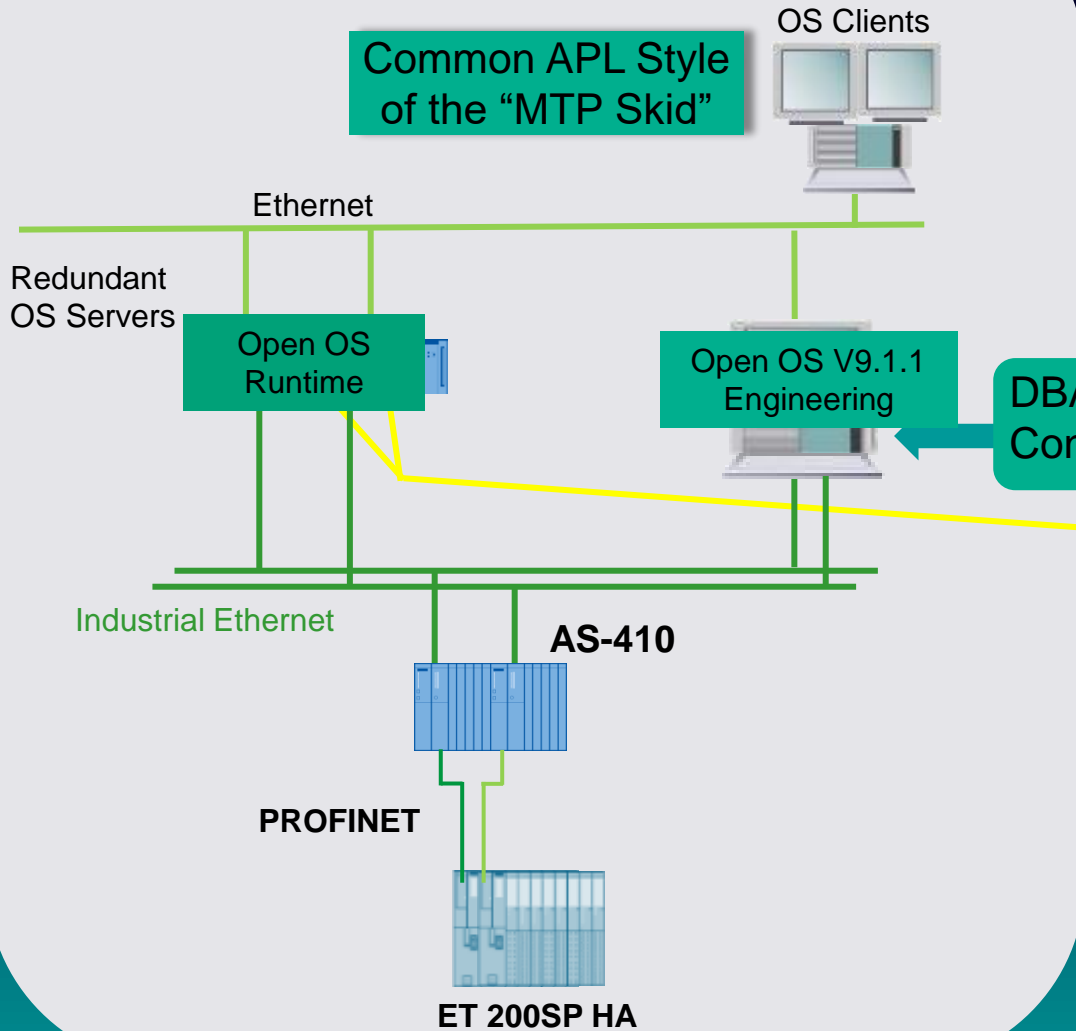


PCS 7 and TIA Portal Integration via MTP



PCS 7 Control System at V9.1.1 and V9.1.2

Common APL Style of the "MTP Skid"



DBA w/MTP Converter



MTP File Creator

OPC UA

MTP Skid

TIA Portal Engineering



Local HMI



Configured using the PFL, which is based on the PCS 7 APL. Includes CFC, Block Icons, and Faceplates.



S7-1500

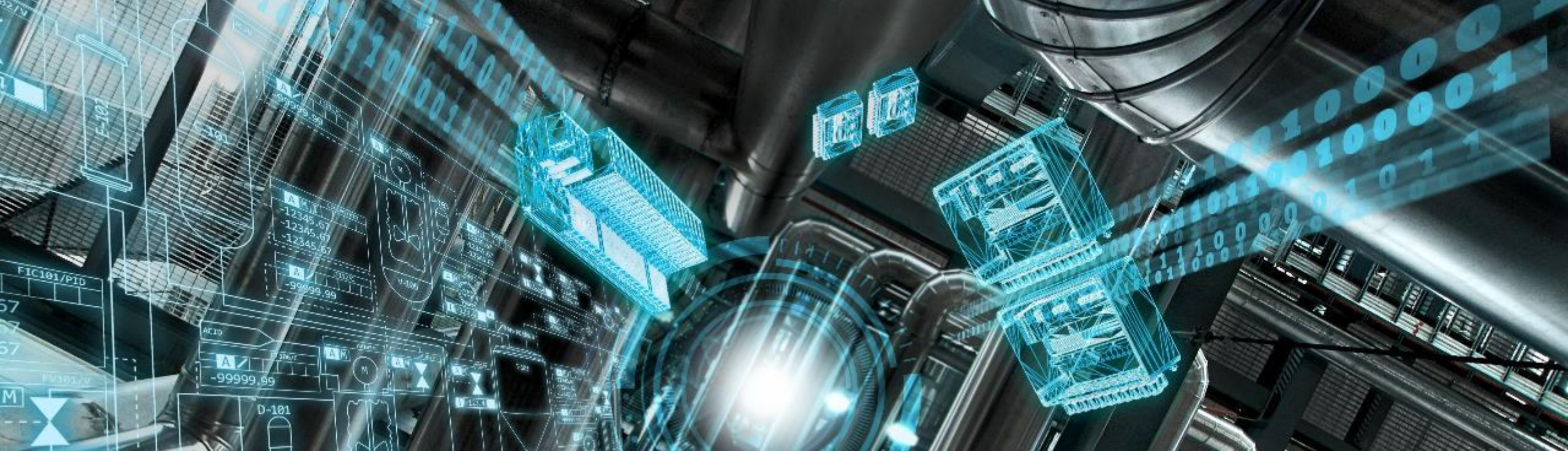
PROFINET



ET 200SP HA

PFL – Process Function Library





Innovations in Hardware Technology

SIMATIC ET 200iSP: goes PROFINET!

PROFINET Interface Module

SIMATIC ET 200iSP PN IM ✓ **6ES7152-1BA00-0AB0**

Released
November
2022

PROFINET (2x ports):

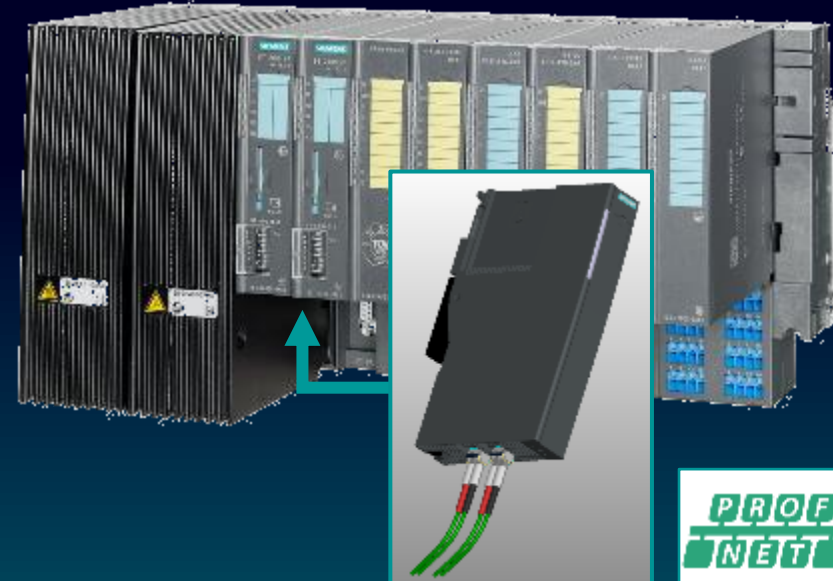
- Redundancy (MRP/S2/R1)
- Configuration in Run (CiR/H-CiR)
- Shared Device (up to 4x Controller)
- 2x pluggable Ex-opt iS fiber optic SFP-Transceiver for up to 1km glass FO cable
- Online addressing via Engineering Station. No DIP switches.
- Support of Failsafe I/O Modules (up to SIL3)

Highest robustness for harsh environment:

- -20°..+70°C
- conformal coating
- NE21 conform
- operation up to 2,000m
- Installation up to Ex zone 1

System precondition:

- PCS 7: V9.1 SP 2 UC1 – R1 w/CiR – H-CiR



Completion of „PROFINET story“:

mix of PROFIBUS DP and PROFINET not longer required

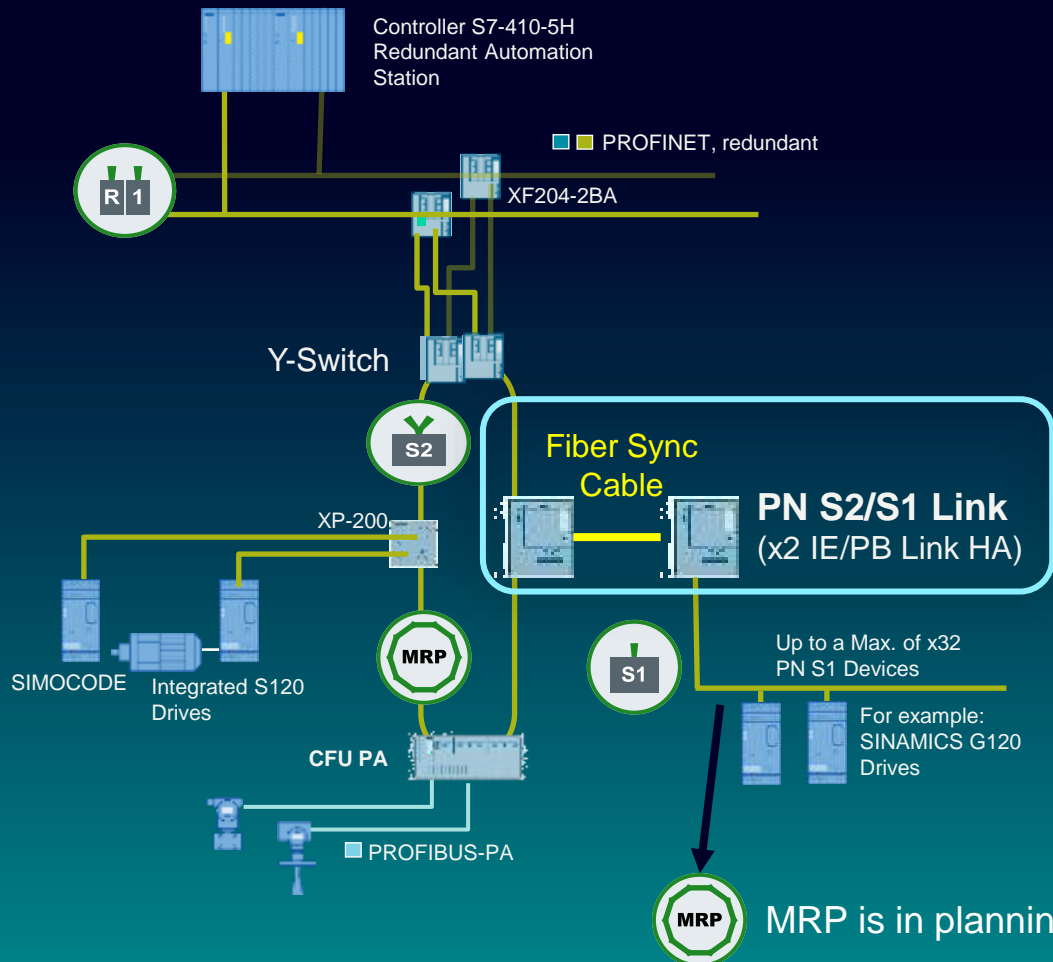
Investment protection: installed base migrated to PROFINET by replacing interface module (no changes of existing Terminal Modules)

“Built-in” media converter: No need of additional converter for intrinsically safe PROFIBUS (RS485iS Coupler) and Fiber Optic (OLM)

IM152-1PN will provide a multimode transceiver (50/125µm and 62.5/125µm) with a LC duplex connector.

Profinet S2/S1 Link (6GK1411-1BB00) Planned with PCS 7 V10.0

Connect single (S1) PROFINET devices to Redundant Controller



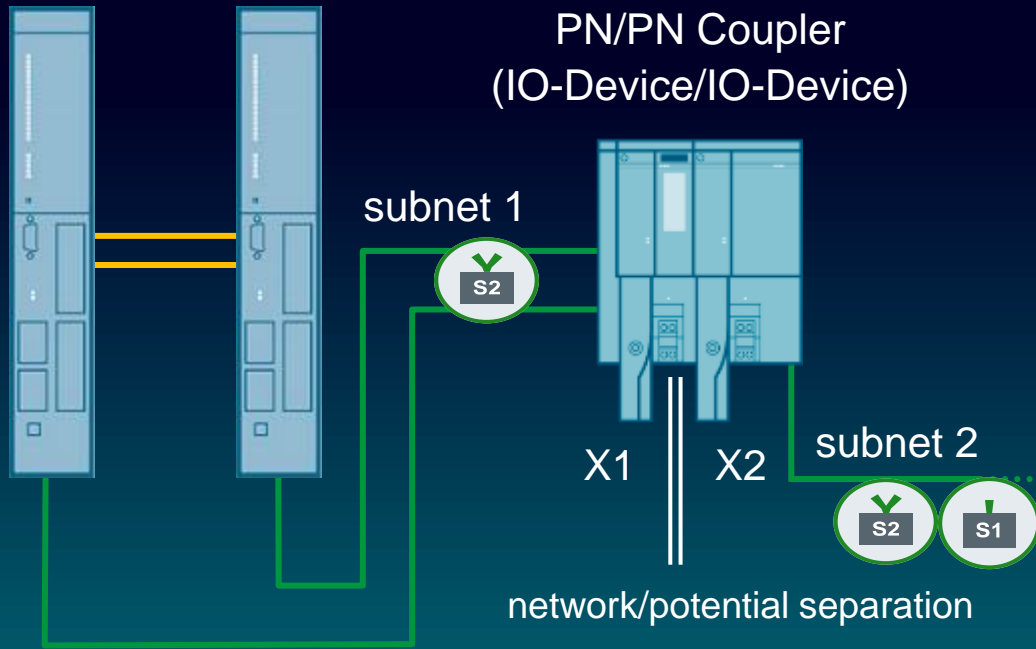
Benefits

- PROFINET S2/S1 Link supports the connection of S1 devices to a Redundant Automation System (S2 or R1 via Y-Switch) with full functionality.
- Based on x2 IE/PB Link HA with Bus Adapter modules and Fiber Sync Cable.

SIMATIC PN/PN Coupler

Installation Into a S2 Network

S7-410-5H (X1)



PN/PN Coupler

X1


Slot 0	
X1	
Slot 1	In 4
Slot 2	Out 2
Slot 3	In 12 Out 4
Slot 4	In 4
Slot 5	Out 8
Slot 6	In 16
Slot 7	In 2
Slot 8	Out 16

X2


Slot 0	
X2	
Slot 1	Out 4
Slot 2	In 2
Slot 3	Out 12 IN 4
Slot 4	Out 4
Slot 5	In 8
Slot 6	Out 16
Slot 7	Out 2
Slot 8	In 16

Options (X2)

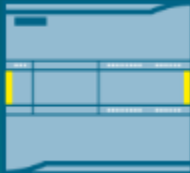
S7-1500



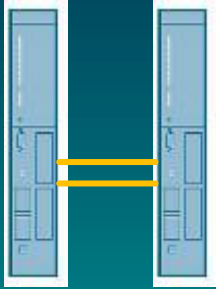
S7-300



S7-1200



S7-410-5H



Example:

Data transfer with PN/PN Coupler & PCS 7

<https://support.industry.siemens.com/cs/ww/en/view/109813246>

Controller for SIMATIC PCS 7

The Flexible, Scalable AS-410 Supports All Automation Tasks

Key Benefits

- Scalable Capacity & Redundancy
 - 410E 200 POs
 - **410E 500 POs New and available**
 - **SEC PO 500: 6ES7653-2CD00-0XB0**
 - 410 100 to >2,600 POs
- Conformally Coated (CPU and Bundle)
- Supports TCiR (Type Change in Run)
- Supports PROFINET S1, S2, R1 w/CiR and PROFIBUS
- 2-Step Firmware Update to reduce downtime of individual CPU
- **Cyber Security Built-in**
 - **Syslog for Security Incident Event Management (SIEM)**
 - **Field Interface Security for Profibus DP and PROFINET**
- Future Proof Design



AS-400 availability until 2035 and beyond AS-410 availability until 2040 and beyond



AS400 and AS410
Flier



SIMATIC S7-400: Harmonized innovation and continuity

SIMATIC S7-400 has always been synonymous with challenging automation tasks in industry. Safety and availability with highest performance and flexibility at the same time are not a contradiction, but the classic application for a SIMATIC S7-400H from Siemens.

With its high scalability, the SIMATIC S7-400 offers a tailor-made solution for a host of every task, whether in a complex SIMATIC PCS 7 application, or a classic STEP 7 or TIA Portal application. Whenever processes have to be designed with efficiency, high availability and fail-safe requirements in mind, plant operators have relied on the SIMATIC S7-400H for years.

In order to protect the controller even better against external influences, an additional conformal coating layer on the printed circuit board has become standard in automation. For this purpose, the manufacturing plant in Karlsruhe (Germany), the birthplace of the SIMATIC S7-400, has been expanded to include a modern, environmentally friendly UV coating section.

With a planned availability until 2035 and beyond, the SIMATIC S7-400 automation system is particularly suitable for long-term projects in the chemical, energy or infrastructure sectors.

<https://www.siemens.com/press/press-releases>



SIMATIC S7-400 – the first choice for the future when it comes to safety and availability.

SIEMENS



SIMATIC S7-410: First choice in the process industry

With the SIMATIC S7-410 controller, Siemens is bringing PROFIBET to the process industry. With its two Ethernet ports, the flexible I/O and an I1 PROFIBET architecture are easy to implement. In addition, PROFIBET interface ensures the best possible compatibility for each control loop. The operating range has been extended for ambient temperatures up to 70 °C. Due to its extended range of functions, the SIMATIC S7-410 is also suitable for unmanned, high-availability or batch automation solutions.

Thanks to its unique scaling coverage, the SIMATIC S7-410 can be adapted cost-effectively to the respective automation task. The I/O systems used are the SIMATIC ET 20SM, and ET 200SP, as well as the SIMATIC ET 200SP I/O with its outstanding I1 functionalities and, especially in hazardous environments, the SIMATIC ET 200SP.

The SIMATIC S7-410 is particularly at home in the SIMATIC PCS 7 process control system, where innovation and long-term availability complement each other. Another unique advantage of the SIMATIC S7-410 is not only the standard controller in the SIMATIC environment, the same hardware is also the basis for the web-based SIMATIC PCS-free process control system. This provides optimum support for system changeovers, without the need to exchange the controller. If necessary, the SIMATIC S7-410 can also be used in process-oriented STEP 7 applications to form the basis for a modern I1 PROFIBET network architecture.

In terms of security, an automation system based on the SIMATIC S7-410 is also at the forefront, as the OSECERT security certification impressively demonstrates, for example.

With its planned availability until 2040 and beyond, the SIMATIC S7-410 is an investment in the future.

<https://www.siemens.com/press/press-releases>

Subject to change without notice. The information contained in this document is for informational purposes only and does not constitute an offer or a contract. The actual performance characteristics are only binding if specified in the contract.

Availability and technical specifications subject to change without notice. If technical specifications are to be followed or implemented by Siemens AG or its subsidiaries, the user shall be held liable for their own decision regarding the design of the system.



With ongoing updates and continuous support, the SIMATIC S7-410 is your future-proof investment for the new and tomorrow.

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Energy & Infrastructure
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2023

SIEMENS

SIMATIC ET 200SP HA: Additional I/O Modules

Support of ET 200SP CM PtP (MODBUS)

ET 200SP CM PtP ✓ 6ES7137-6AA00-0BA0
6ES7137-6AA01-0BA0
Base Unit Type A0 **6ES7193-6BP00-0DA0**

➔ Functional replacement of ET 200M CP341

Modbus serial (RTU, Server/Client) communication:

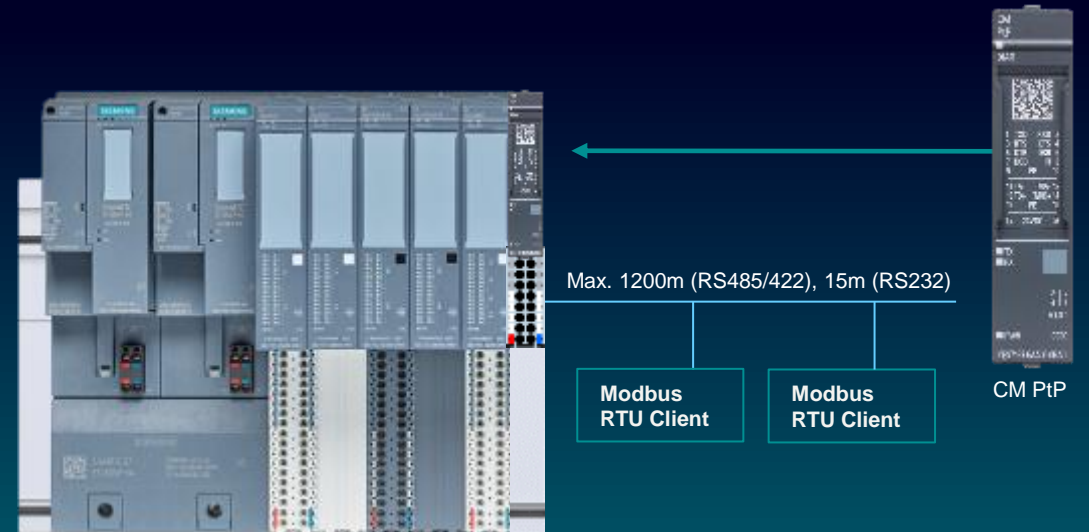
- Up to 8x CM PtP on each PROFINET subnet
- Up to 32 Modbus RTU slaves on each CM PtP
- Baud rate: up to 115,200 bit/s

Operating temperature:

- -30°..+60°C
- SIPLUS variant for extended environmental conditions: -40°..+70°C (6AG2137-6AA00-1BA0)

System precondition:

- PCS 7: V9.1 SP2
(Function blocks Advanced Process Library (APL))



MODBUS serial communication (RTU, Server/Client)

SIMATIC ET 200SP HA Planned New Modules

Q1/2023

Multifunctional

AI 8x U/I/TC/4x RTD 2-/3-/4-wire

6DL1134-6AF00-0PH1

Number of channels:

- 8x analog input voltage / current / Thermocouple / 4x RTD

Input:

- 4..20mA (2/4-wire); and 0..20mA (4-wire), ± 20 mA (4-wire)
- 1..5V, 0...10V, ± 50 mV, ± 80 mV, ± 250 mV, ± 500 mV, ± 1 V, $\pm 2,5$ V, ± 5 V, ± 10 V
- TC Types: B, C, N, E, R, S, J, L, T, K, U, TXK
- RTD Types: Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni200, Ni500, Ni1000, Cu10, LG-Ni1000 | resistor ranges: 150, 300, 600, 3000, 6000Ohm | PTC

Functionalities:

- Resolution 15 bit + signs
- Suitable for analog 2-wire and 4-wire transducers
- Common Mode Voltage: 15V between channels
- Interference frequency suppression: 10Hz / 50Hz / 60Hz / 400Hz

Channel diagnostics:

- Channel-specific diagnosis (short-circuit, wire-break, support of NE43, overflow/underflow, process alarms, common mode)

Properties:

- Isolation tested with 1500 V DC/1 min



AI 16x I 2-wire

6DL1134-6GH00-0PH1

Number of channels:

- 16x analog input current measurement

Input:

- 0 - 10 mA, 0 - 20 mA, 4 - 20 mA (no HART supported)

Functionalities:

- Resolution 15 bit + signs
- 16 sensor supplies, 500 mA, with short circuit protection
- Current measuring range according to NAMUR NE43
- Suitable for analog 2-wire and 4-wire transducers (common ground)
- Update rate 16.6 ms @ 50 Hz filtering, 20 ms @ 60 Hz filtering, 100 ms @ 10 Hz filtering
- 2 A/D Converters
- No IO redundancy supported

Channel diagnostics:

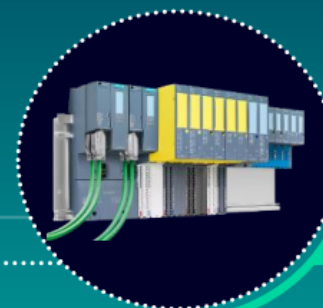
- Channel-specific diagnosis (Wire-break (4-20mA), overflow/underflow, support of NE43)

Properties:

- Isolation tested with 1500 V DC/1 min

Q1/2023

Low cost AI!



- High flexibility due to high functionality

SIMATIC ET 200SP HA Planned New Modules

Q2/2024

DI 16x 24 V DC NPN

6DL1131-6BH60-0PH1

Number of channels:

- 16 digital inputs, 24 V DC

Input:

- Suitable for switches and 2-wire sensors (IEC 61131-2, types 1 and 3)

Functionalities:

- M-reading
- Sensor supply
- No IO redundancy supported

Channel diagnostics:

- Channel-specific diagnosis

Properties:

- Isolation tested with 1500V DC / 1 min



Q3/2024

DQ 8x 24 V DC/2 A

6DL1132-6BH00-0PH1

Number of channels:

- 8 digital outputs, 24 V DC

Output:

- Output current 2 A per channel, at most 8 A per module
- Suitable for solenoid valves, DC relay contactors, and signal lamps

Functionalities:

- de-energize button (sensor supply)
- Short circuit protection, overload protection
- Parameterizable substitute values
- No IO redundancy supported

Channel diagnostics:

- Channel-specific diagnostics (wire-break, short circuit to ground and L+)

Properties:

- Isolation tested with 1500 V DC/1 min



SIMATIC ET 200SP HA

...New D-SUB Terminal Block for fast wiring and simple field connection

TERMINAL BLOCK, TYPE H0, D-SUB

6DL1193-6TC00-0DH0

- D-SUB Terminal Block with 32 x I/O connections

Supported ET 200SP HA Modules

- AI 16xI HART, AI-DI16/DQ16X24VDC HART
- AI 16XTC/8XRTD (no temperature compensation for TC)
- AQ 8xI HART
- DI 16x24VDC, DI 32x24VDC, DI 16XNAMUR
- DQ 16x24VDC/0,5A, DQ 32x24VDC/0,5A
- F-DI 16x 24V DC
- F-DQ 10X24VDC/2A
- F-AI 8xI 2-/4-wire HART

24V DC powering



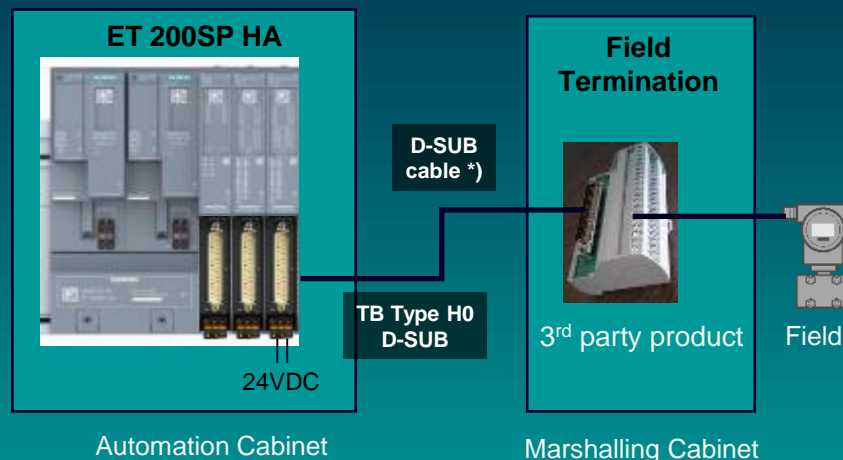
SIMATIC TOP Connect Cable

- Pre-assembled D-SUB to ferruled flying leads cable
- 32x wire with 0,14mm²
- label per wire
- 3m: 6ES7923-3BD00-0HB0
- 5m: 6ES7923-3BF00-0HB0
- 8m: 6ES7923-3BJ00-0HB0



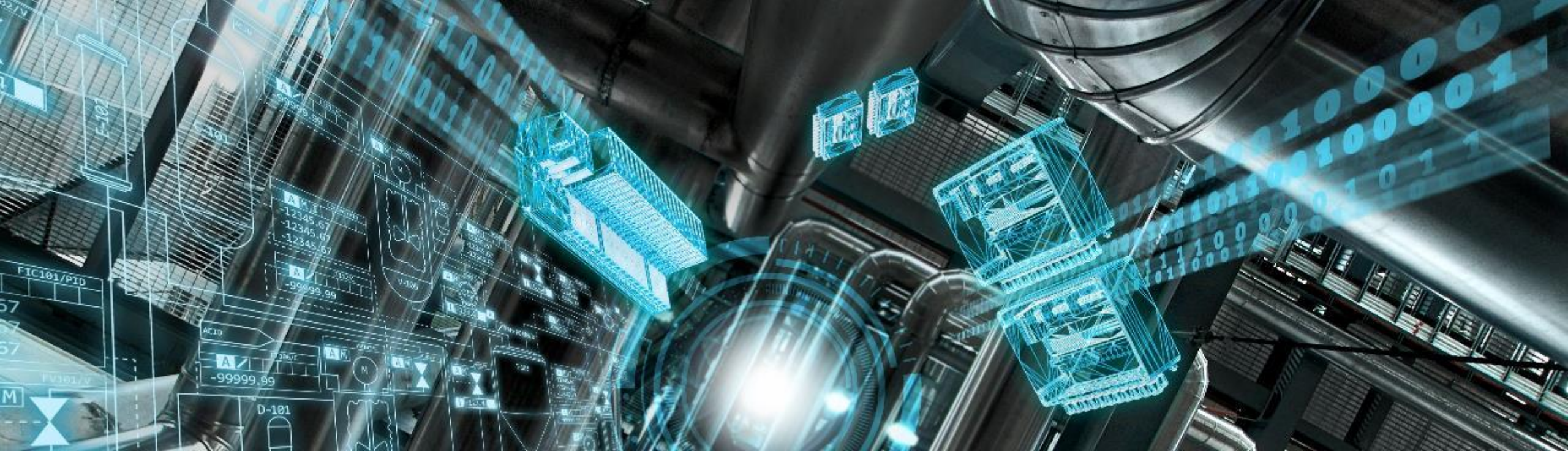
Updated Designs planned for Q1-2023:

- Redundant Terminal Blocks
- Isolated Terminal Blocks



Learn more!

[SIMATIC ET 200SP HA - Assembling the IO Rail - YouTube](#)

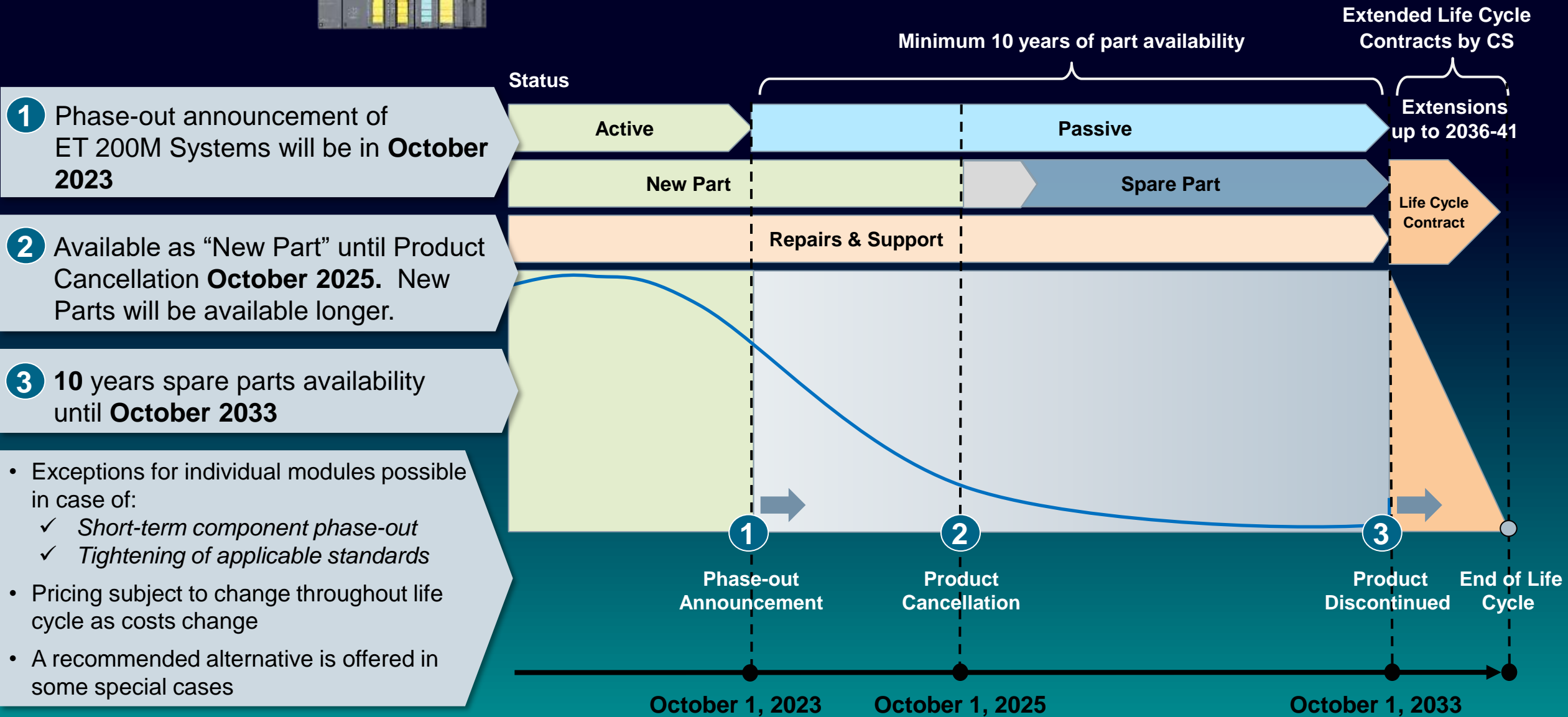


| ET 200M Support Roadmap

SIMATIC ET 200M Product Life Cycle Stages & Duration



PA FAQ <https://support.industry.siemens.com/cs/us/en/view/109809934>
 FA & PA FAQ <https://support.industry.siemens.com/cs/ww/en/view/109809890>



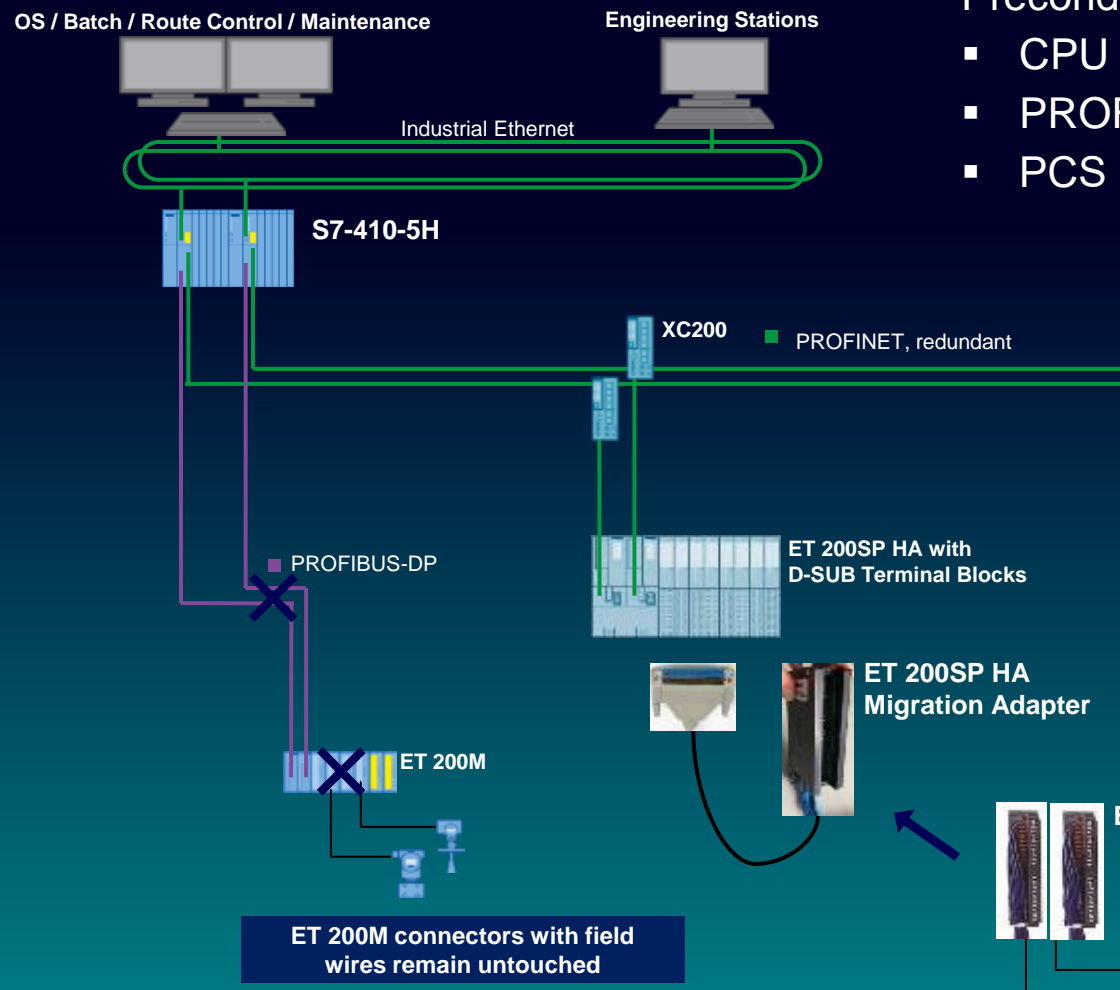
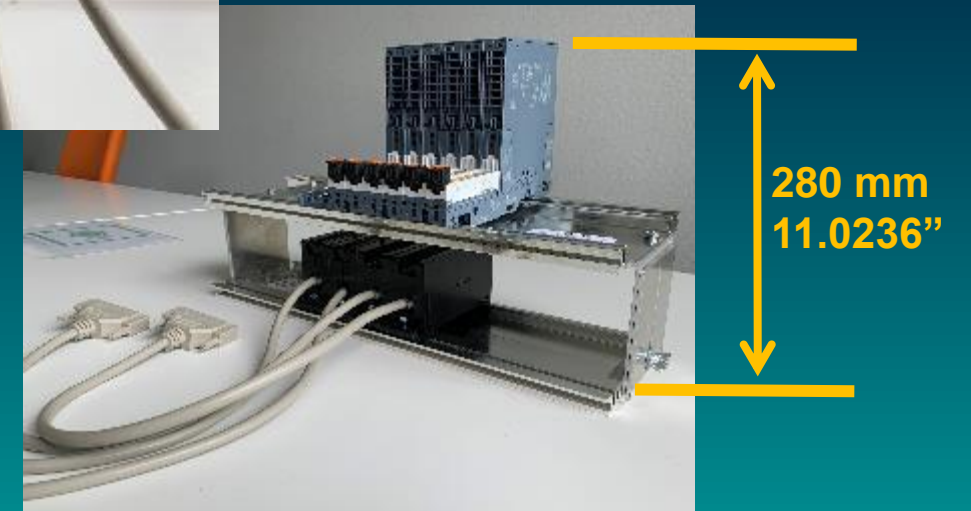
SIMATIC ET 200SP HA: Migration

<https://support.industry.siemens.com/cs/us/en/view/109809934>

Migration adapters for fast and error-free hardware exchange

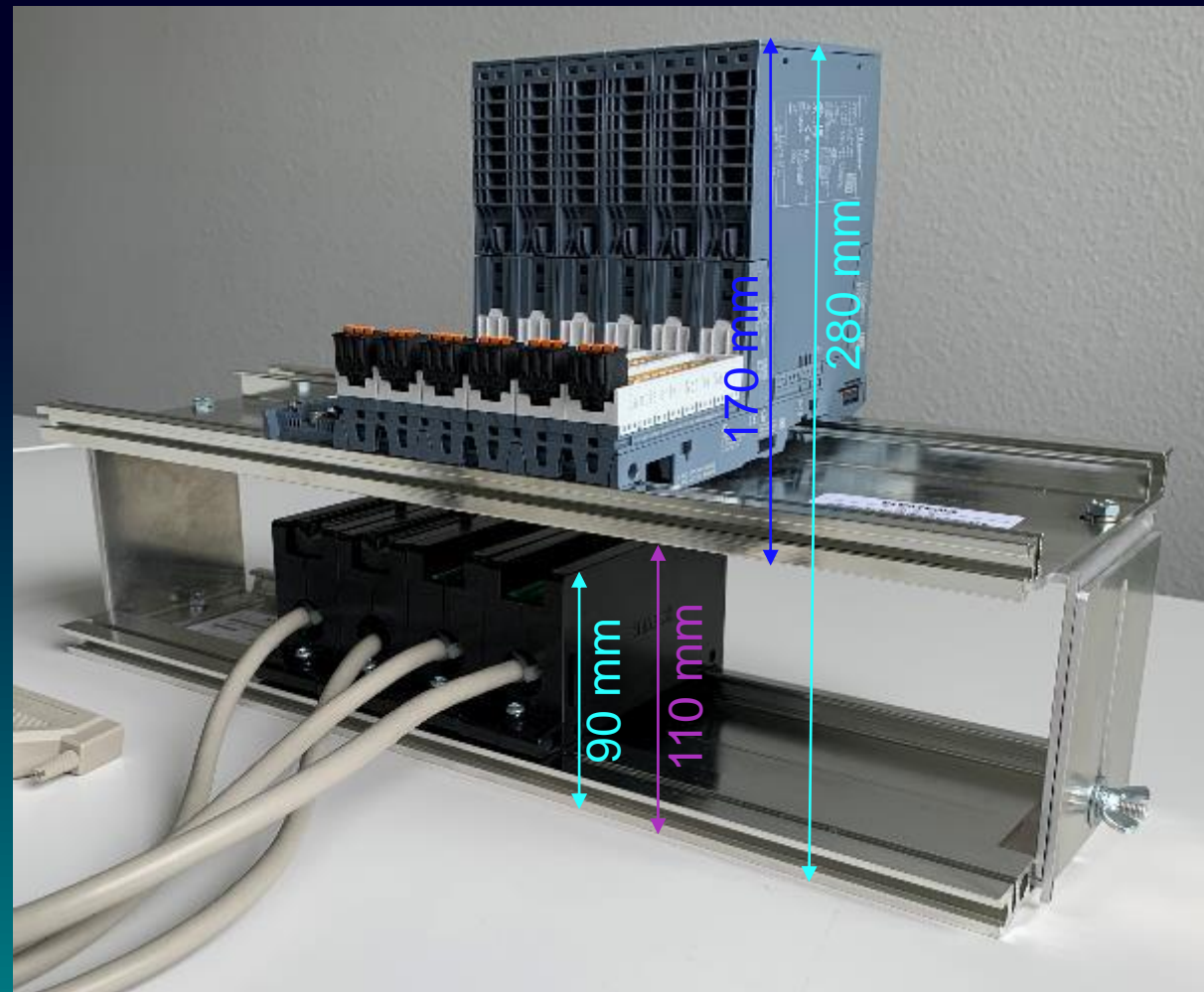
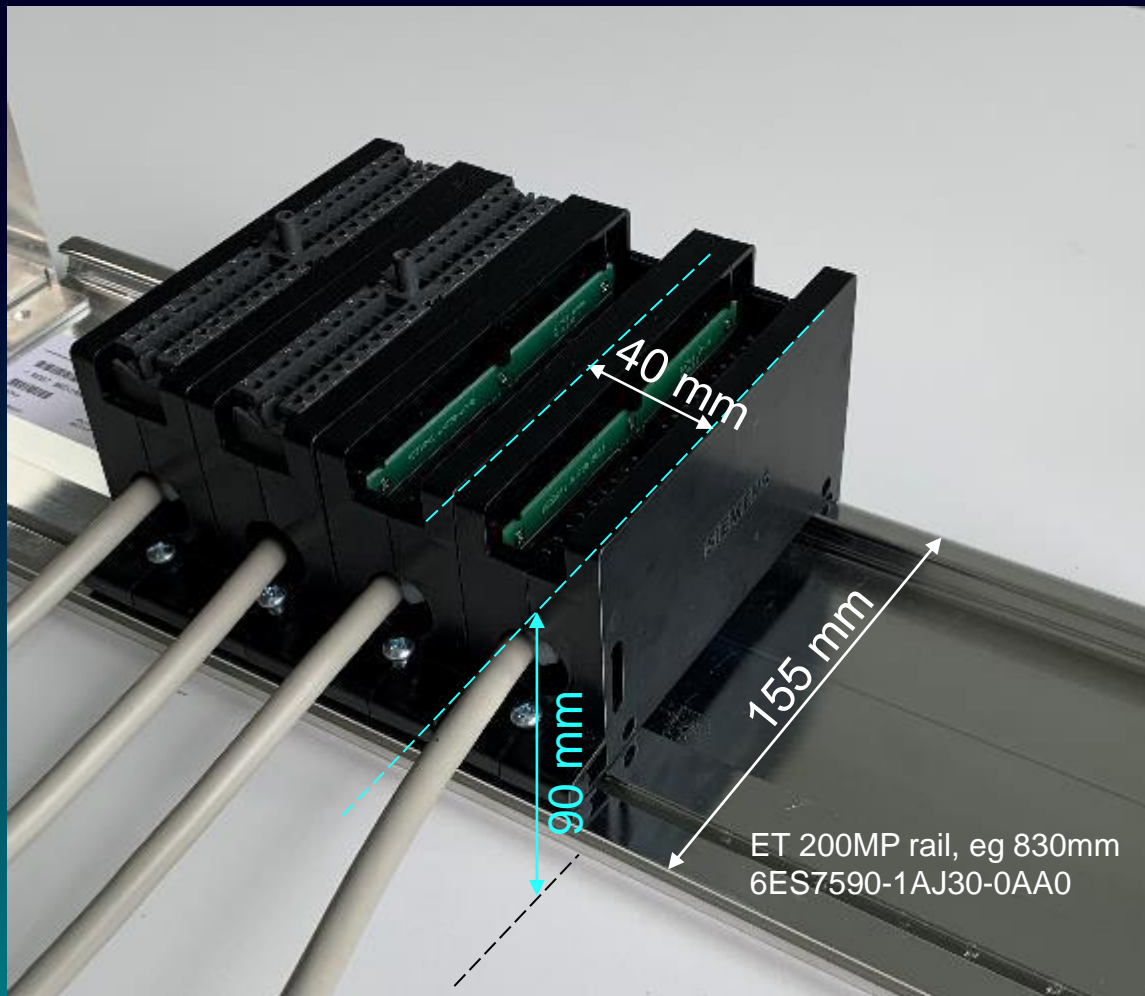
Preconditions for migration:

- CPU S7-410-5H
- PROFINET cabling and SCALANCE
- PCS 7 ≥ V9.0

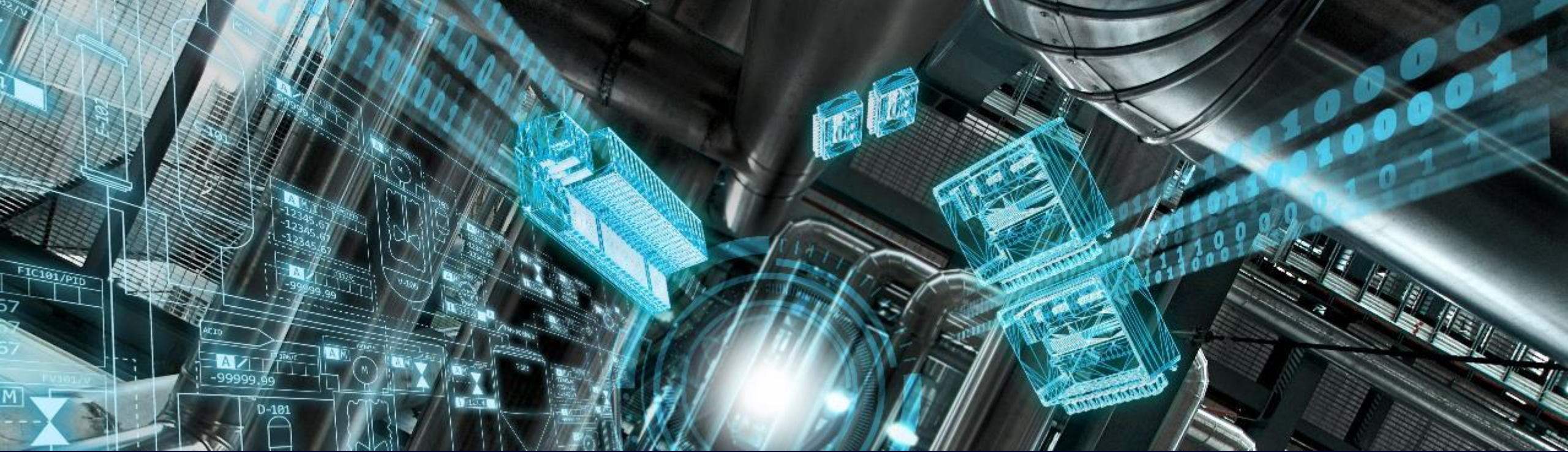


Adapter Planned Availability: Q2-2023

ET 200SP HA Migration Adapters Dimensions



Installation metal supports (2 pcs)
6EZ2041-8HR35-0BG0

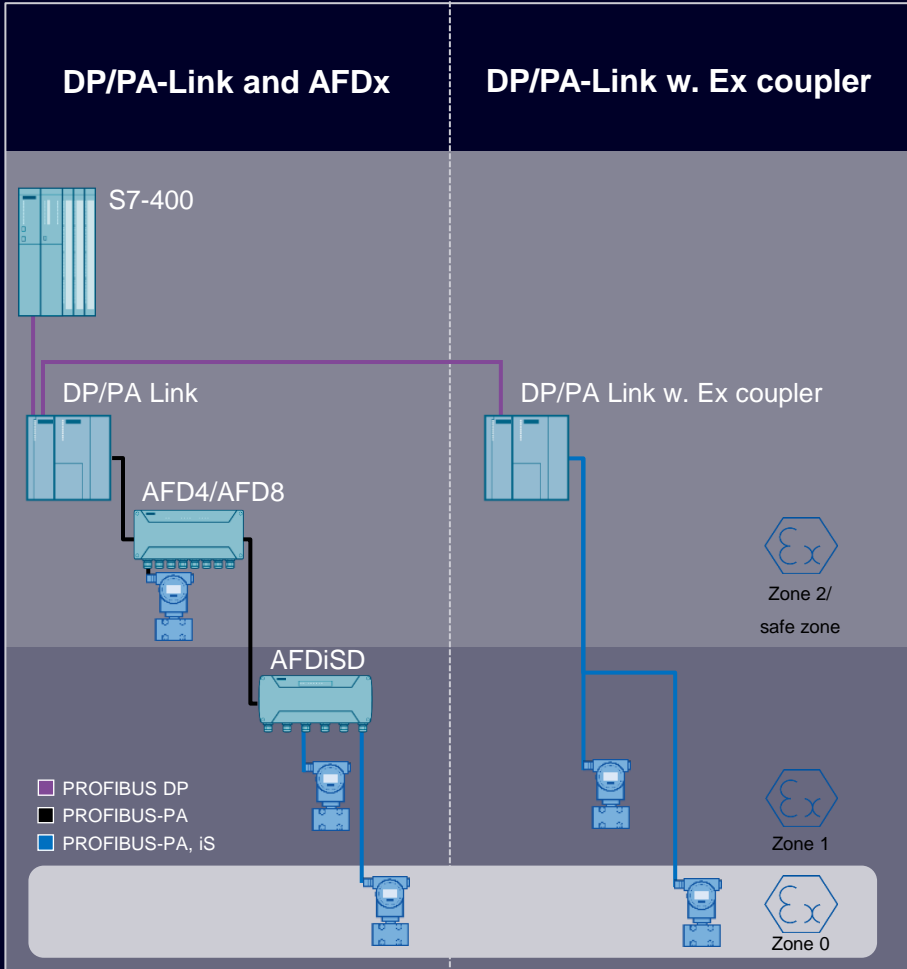


PROFIBUS PA and the Compact Field Unit (CFU)

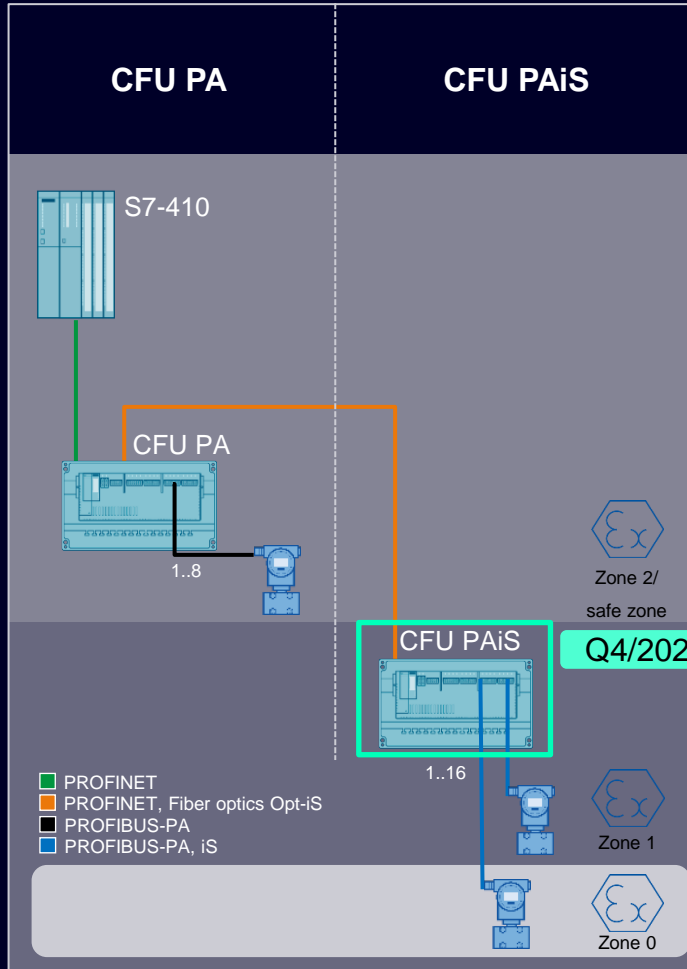
SIMATIC CFU: CFU with PROFIBUS PA goes Intrinsically Safe!

... Portfolio completion CFU for PROFIBUS PA

Traditional fieldbus installation



State-of-the-art installation



CFU exclusive

More flexibility through consistent decentralization

Up to 70% less terminations required and cabling reduction of 30% and more!

PROFIBUS PA easier as ever before

Time for device integration reduced from 30 minutes and more to less than 1 minute! That's Plug-and-Produce!

Simple as PROFINET over APL!

SIMATIC CFU: CFU with PROFIBUS PA goes Intrinsically Safe!

... CFU PAiS in detail

SIMATIC CFU PAiS

V10

PROFINET (2x ports):

- Redundancy (MRP/S2)
- Configuration in Run (CiR/H-CiR)
- 2x pluggable Ex-opt iS fibre optic SFP-Transceiver for up to 3km glass FO cable

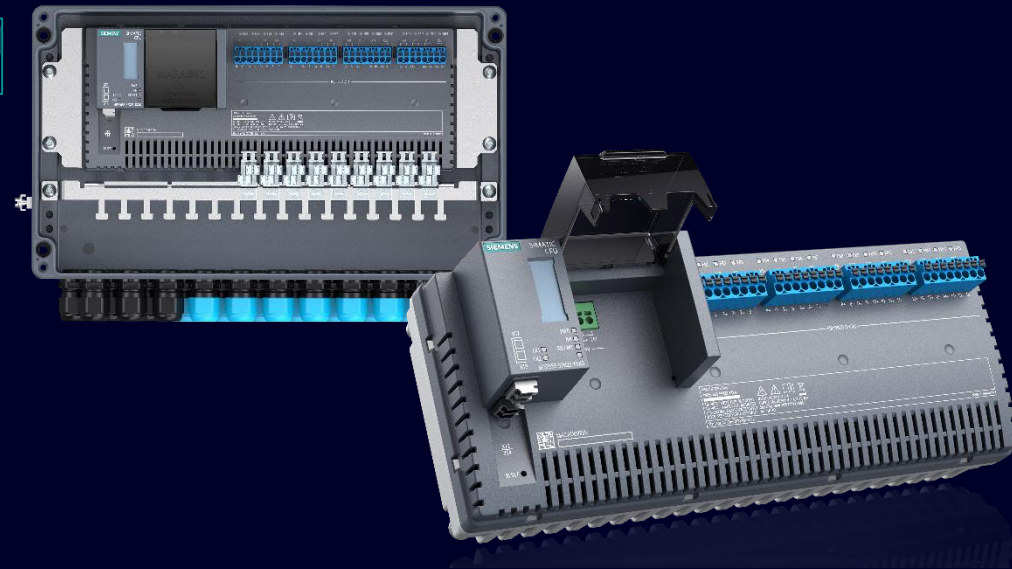
Redundant 24V DC (IP30 covered)

PROFIBUS PA (16x channels):

- Intrinsically safe: Ex-ia, bus powered (13,5V / up to 40mA)
- Cable-length up to 120m
- 4x pluggable connector, each for 4-channels with Push-In
- Support of PROFIBUS PA Profile 4.0
- Support of PROFIsafe

Highest robustness for harsh environment:

- -40°..+70°C
- conformal coating
- NE21 conform
- Installation up to Ex zone 1

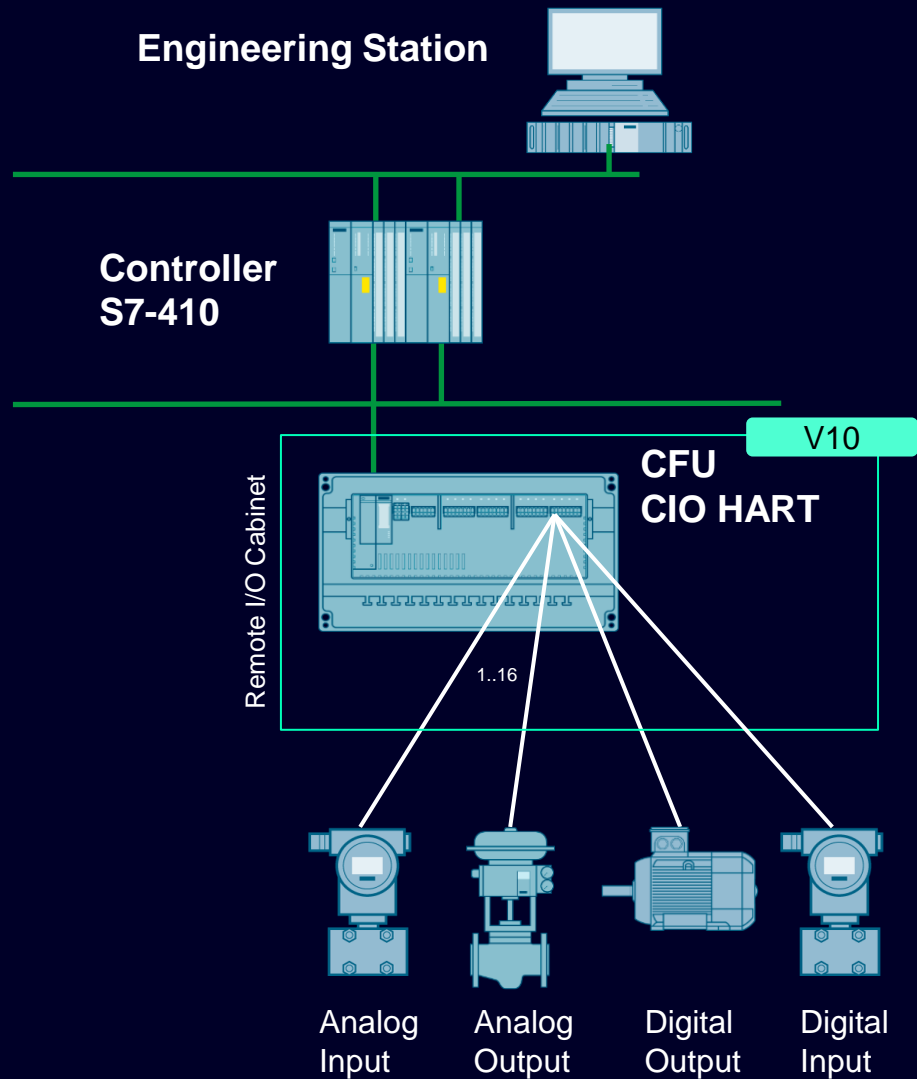


Plug-and-Produce:

automatic device detection, addressing and 1-to-1 replacement

SIMATIC Compact Field Unit (CFU) – Configurable I/O

... Standardization & Late Binding with configurable I/O's



- Application Engineering **independent** from Hardware Engineering
- Early **standardized cabinet design** with maximum flexibility since
 - **all channels** can be configured at a later stage as **AI, AQ, DI, DQ**
- **Very less spare parts** since only
 - 1 I/O card type is needed for
 - all 4 signal types

SIMATIC CFU: CFU with HART and free configurable I/O!

... CFU CIO HART in detail

SIMATIC CFU CIO HART

V10

PROFINET (2x ports):

- Redundancy (MRP/S2)
- Configuration in Run (CiR/H-CiR)
- BusAdapter (RJ45/FC/LC/Media Converter)

Redundant 24V DC

Free configurable I/O (16-channels):

- 2-wire / free wiring of the sensorics shall be possible (left+, right-)

AI/AQ:

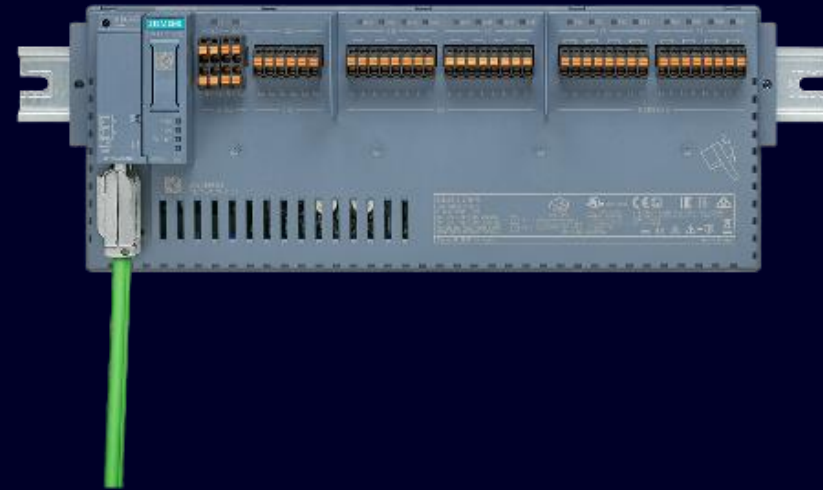
- 0-20 mA, 4-20mA, 4-20mA with HART

DI/DQ:

- Several modes available: Standard-DI, DI-Namur, DI Open-Collector
- Counter up to 5kHz
- 24VDC, 0.5A per channel; DQ: 2A (1 channel per each 4-channel-group)

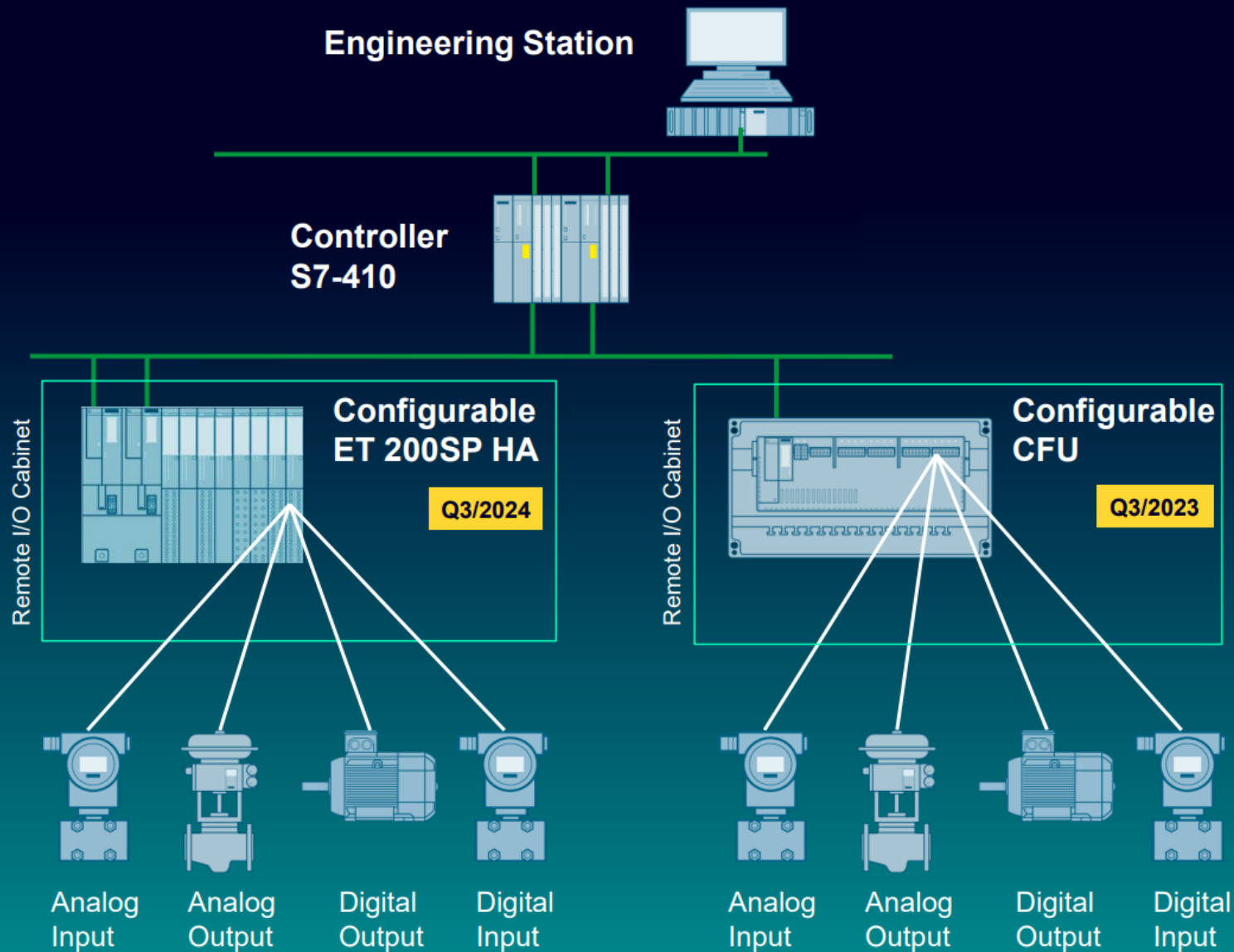
Highest robustness for harsh environment:

- -40°..+70°C / conformal coating / NE21 conform
- Installation up to Ex zone 2



HW binding at latest stage:
channel-wise free configurable I/O

SIMATIC CFU: CFU with HART and Freely Configurable I/O



- Application Engineering **independent** from Hardware Engineering
- Early **standardized cabinet design** with maximum flexibility since
 - **all channels** can be configured at a later stage as **AI, AQ, DI, DQ**
- **Very less spare parts** since only
 - 1 I/O card type is needed for
 - all 4 signal types
- **I/O redundancy** supported for ET 200SP HA

| Contact

Published by Siemens DI PA

Doug Ortiz

Manager

Process Industries and Drives

2060 Detwiler Road

Suite 111

Harleysville, PA 19438

USA

Mobile 215 264-6734

E-mail douglas.ortiz@siemens.com

For more information:

usa.siemens.com/pcs7



<https://www.linkedin.com/in/doug-ortiz/>