

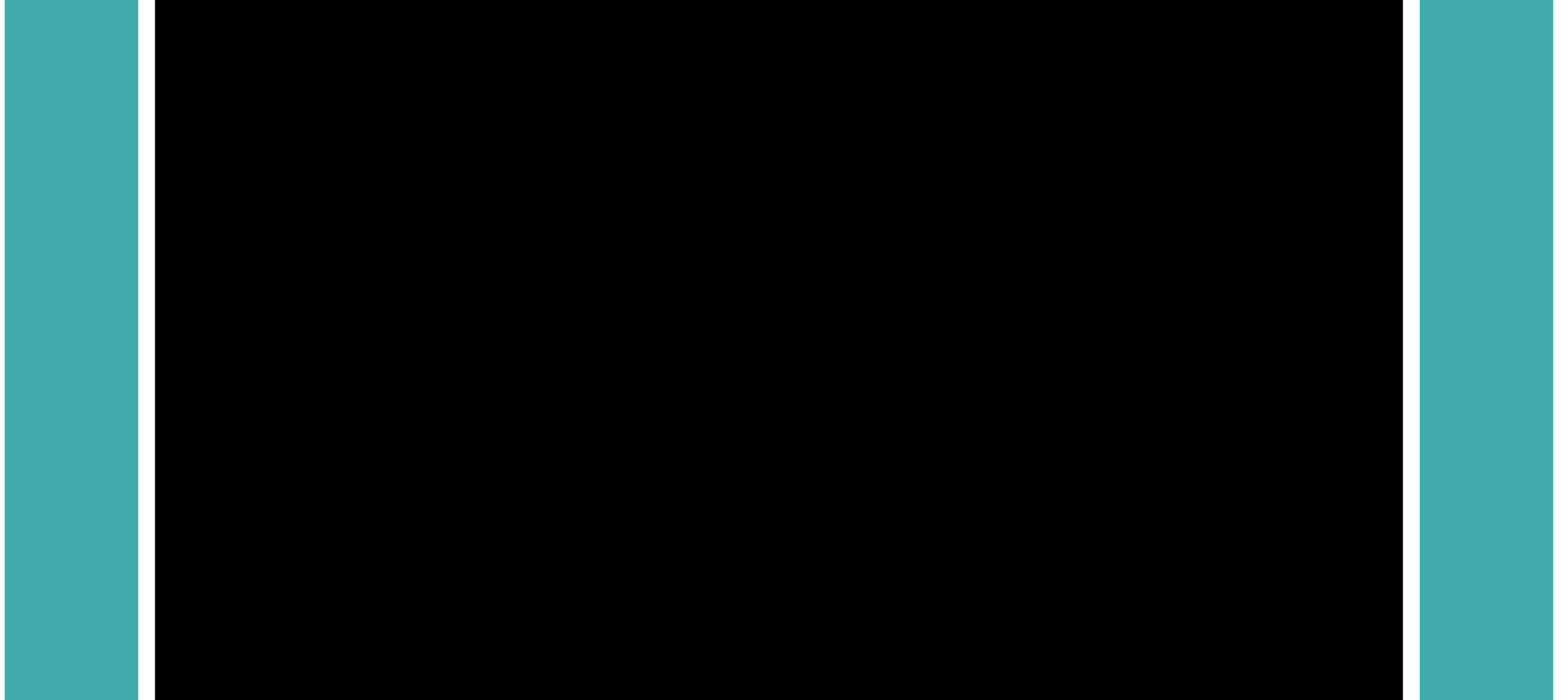


News Siemens Digital Industries

Thinking industry further!

S7-1200 and TIA Portal since 2009

10th anniversary





1) Product news Factory Automation

2) Product news Motion Control

3) News Digital Enterprise

SIMATIC HMI Unified Comfort Panels

Seeing what matters- in a brilliant way

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



Feature / Function

NEW

- Durable glass front with capacitive multitouch technology
- Expand the standard functionality with apps (industrial edge)
- Significantly increased hardware performance and system limits
- Protected operating system and encrypted communication technologies (based on linux)
- Visualization powered by SIMATIC WinCC Unified

Benefit

- Maximum usability through enhanced legibility and brilliant colors
- Implement project-specific requirements easily
- Implement applications with a larger quantity structure
- High level of IT security to protect the system against cyber attacks
- Latest technology for today's and tomorrow's requirements to HMI systems

SIMATIC HMI Unified Comfort Panels Multitouch from 7" to 22"

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Ingenuity for life



MTP 700
800 x 480
7.0"



MTP 1000
1,280 x 800
10.1"



MTP 1200
1,280 x 800
12.1"



MTP 1500
1,366 x 768
15.6"



MTP 1900
1,920 x 1,080
18.5"



MTP 2200
1,920 x 1,080
21.5"

MTP = Multi-Touch Panel

SIMATIC HMI Unified Comfort Panel

Increased system performance



	Comfort Panel 7 – 12"/15 – 22"	Unified Comfort Panel 7 – 12"/15 – 22"
PLC-Connections	8	16
Tags	2,048 / 4,096	8,000
Alarms	4,000 / 6,000	9,000
Archives	50	50
Logging Tags	2,048	5,000
Scripts	100 / 200	600
Text-/Graphic list	500	750
Screens	500 / 750	1,200
- Objects per screen	400 / 600	800 / 1,200
- Tags per screen	400	600 / 800

Increased quantity structure
from 7" to 22"

Doubled quantity structure
compared to Comfort Panel

Differentiation only for
tags and objects per screen

SIMATIC WinCC Unified

The unified HMI system in TIA Portal

For all use cases - from machine operation to the integration of IT systems into the automation



Feature / Function	NEW	Benefit
<ul style="list-style-type: none">• Consistency in engineering and runtime• One HMI software for all applications	▶	<ul style="list-style-type: none">• Scalable and fully integrated range of functions from machine level to SCADA• Expandable with several options
<ul style="list-style-type: none">• Native web technology (SVG / JavaScript / HTML5)• New controls for consistent usability	▶	<ul style="list-style-type: none">• Create HMI screens and use them in all resolutions without loss of quality• 24/7 access via web – zero client installation• Access from any device with modern web browser
<ul style="list-style-type: none">• TIA Portal Openness for WinCC Unified in Engineering• WinCC Unified Openness during runtime operation	▶	<ul style="list-style-type: none">• Create a HMI project quickly with reduced engineering effort• Read and write access to process data during production• Integration of own web controls and dynamic SVG files

SIMATIC WinCC Unified System V16

One engineering to cover all use cases

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Platform

Unified Comfort Panels, PC



Common engineering
for all platforms



Software

SIMATIC WinCC Unified
in TIA Portal V16



Innovation Basic Controller SIMATIC S7-1200

New Firmware 4.4 – enhanced connectivity

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Feature / Function

- Secure email with file attachment
- OPC UA Server (Basic License) **NEW**
- TIA Portal V16 – New FW 4.4
- Push-In terminal blocks

Benefit

- ▶ Protected transmission and encryption of sensitive email data
- ▶ Secure M2M communication via data access (browsing, read/write, subscription and companion spec.)
- ▶ Clear configuration through name based addressing, independent of IP addresses
- ▶ Mounting without tool and constant clamping force

SIMATIC S7-1500

Higher availability by new S7-1500R and S7-1500H

S7-1500R: CPU 1513R/1515R



S7-1500H: CPU 1517H



New features with firmware V2.8 for S7-1500R/H CPUs

- IP forwarding for CPUs with more than one interface;
- The "Project trace" function in the TIA Portal is supported allowing for the diagnostics of system states across devices using the trace function;
- Load and change programs in the Run-Redundant system state;
- PROFINET devices without system redundancy can also be used as devices on an S7-1500R/H CPU.
- STEP 7 Graph programming language is supported;
- Programming of user messages and messages via ProDiag is supported;
- Support of technological instructions, such as "PID_Compact", "PID_3Step" and "PID_Temp";
- Extended instructions such as "GETIO / GETIO_PART" for reading the process image and "SETIO / SETIO_PART" for writing the process image are supported;
- Information on the IO system or on the status of the module can be determined via the "GetStationInfo", "DeviceStates" instructions;

SIMATIC S7-1500R/H

Use cases

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airport-logistik



Tunnel



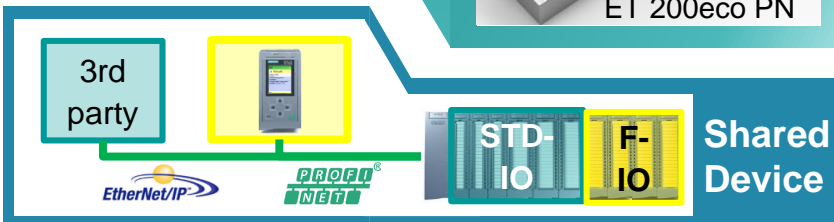
HVAC



Water & Waste-Water

SIMATIC ET 200 MultiFieldbus Interfaces for ET 200MP, ET 200SP, ET 200eco PN, Coupler

Protocols



Feature / Function

Products

- ET 200MP IM: IM155-5MF ST
- ET 200SP IM: IM156-6MF HF
- ET 200eco PN “Next generation”*
- **PN/MF Coupler**

Functions

- Support for PROFINET, EtherNET/IP and Modbus TCP
- Simultaneous communication with all protocols to modules of a station via the same cable (e.g. Standard I/O via EIP, F-I/O via PROFIsafe, Energy Metering via MTCP)
- Engineering via MFCT (MultiFieldbus Configuration Tool)
- Support of **Shared Device in MultiFieldbus configurations** (Allocation of a station to several controllers)

Benefit

- **Savings in costs and planning effort when designing machines/plants**, since the same IO configuration can be used independently of the overarching controller
- **High flexibility** due to the possibility of access to the ET 200 station / modules from several controllers via shared device

PN/MF Coupler:

- Easy to configure deterministic data exchange, even across network boundaries, between SIMATIC and 3rd party controllers
- Simple integration of SIMATIC controls into existing machines / plants

Smartly for error-free device selection and configuration in every automation project

TIA Selection Tool



Feature / Function

Interface to TIA Portal V16 and EPLAN – AML 1.0

- Data exchange of project data with TIA Portal or EPLAN

S7-1500 CPU: Failsafe- and motion requirements

Drive dimensioning with the integrated SIZER in the TIA Selection Tool

Application Wizard and EPLAN generation

NEW

Benefit

- ▶ Time and cost savings through correct configuration of the entire automation portfolio
- ▶ Quality improvement by avoiding redundant planning steps and errors through automatic data transfer
- ▶ Selection of the S7-1500 CPU according to Motion & Failsafe requirements
- ▶ The automation configuration merges with the drive world in one tool
- ▶ Extended by functions and portfolio around conveyor technology
- ▶ Function oriented approach to plan the application
- ▶ Time saving through generated circuit diagrams in EPLAN format

TIA Portal V16 Grace Period Offer

Exclusive SUS offer for TIA Portal products **valid until 2020/02/29**



TIA Portal Engineering	TIA Portal Eng. Options
STEP 7 Professional	STEP 7 Safety Advanced
STEP 7 Professional COMBO	STEP 7 Safety Basic
STEP 7 Basic	TIA Portal Multiuser Engineering
WinCC Basic	S7-PLCSIM Advanced
WinCC Comfort	SIMATIC Manager Suite
WinCC Advanced	TIA Portal Teamcenter Gateway
WinCC Professional	SIMATIC visualization Architect
SINAMICS Startdrive Advanced	SINAMICS DCC Combo

Less 25%

TIA Portal Runtime

SIMATIC WinCC RT Professional	SIMATIC WinCC Client for RT Prof.
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Precondition:
A valid license for version 15/15.1 of the SUS capable TIA Portal base product

Delivery of the SUS download product

... earliest (after verification):

- ✓ a new **first delivery** of the Certificate of Contract (CoC) via email
- and within 1-3 business days (after TIA Portal V16 delivery release):
- ✓ the **SUS delivery** (download link) with TIA Portal V16 upgrade via email

Automation Newsletters

TIA Portal, PLC, HMI, and so on...



Totally Integrated Automation Portal

HMI Design
Master LOGO small is beautiful

Become the HMI UX expert. Learn why and how to benefit – compute charge.

Visualize future
SIMATIC WinCC Unified System – limitless visualization for every application

Be one of the first to learn about it!

[Register now](#)

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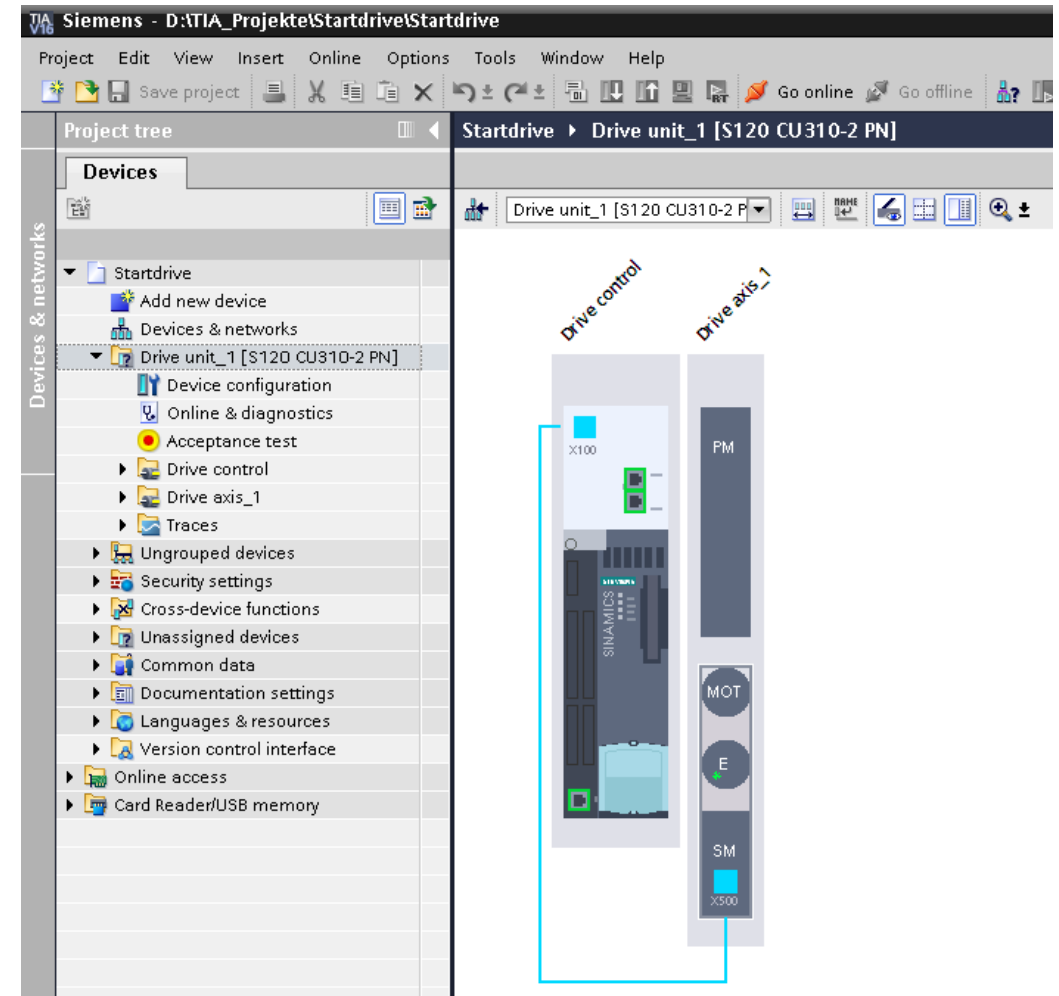
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Startdrive V16 - Innovations

- Support of **CU310-2 PN with PM240-2**
- Support of **CU Adapters CUA31/32**
- Support of SINAMICS **Integrated** for **SIMATIC Drive Controller**
- Support of SINAMICS **Know-How and Write protection** (SINAMICS S)

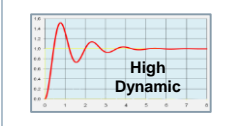

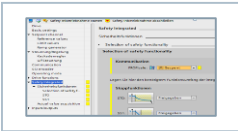




SIMATIC MICRO-DRIVE

Features and benefits



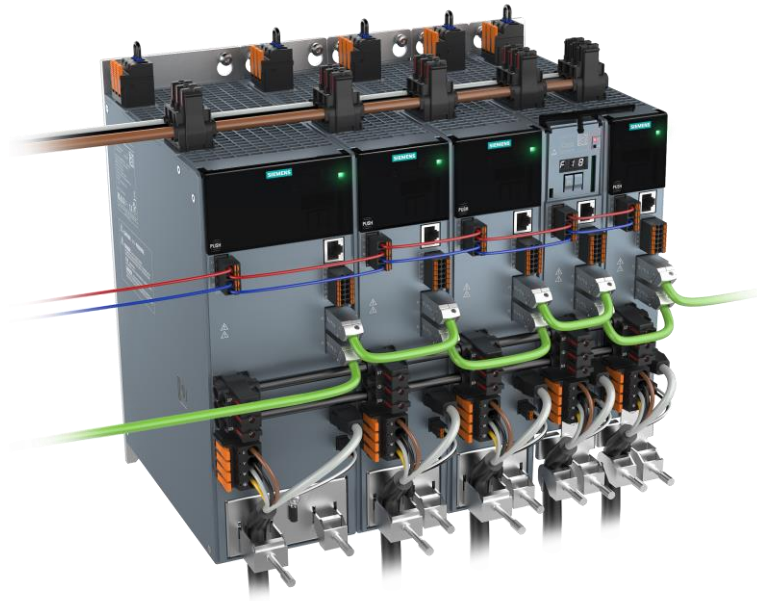
Feature/Function
<ul style="list-style-type: none"> Flexibility and combinability of system components¹ PROFINET IRT (1ms)
<p>Safety Integrated: STO, SS1, SLT, SLS, SBC, SSM via PROFIsafe</p>
<ul style="list-style-type: none"> TIA Portal integration “One Button Tuning”
<ul style="list-style-type: none"> One cable to motor² Integrated C1 EMC-Filter
<ul style="list-style-type: none"> 24 – 48 V: 0.05 – 1.00kW Battery supply incl. energy recovery UL and Marine certification

Benefits
<ul style="list-style-type: none"> Universally applicable Increased performance 
<p>Fulfills high demands for safety</p> 
<p>Easy engineering</p> 
<p>Saves time on installation</p> 
<p>Ready for various markets</p> 

¹ Product partner: Dunkermotoren & ebm-papst (motors)/HARTING & KnorrTec (connecting cables) | ² Dunkermotoren up to 200W & ebm-papst up to 400W

SINAMICS S210 servo drive system

Features and benefits



Feature/Function

- Dedicated S-1FK2 motors (Compact or high dynamic)
- PROFINET IRT (250 μ s)

Basic and **Extended** Safety integrated functions via PROFIsafe

- Integrated Webserver
- »One Button Tuning«
- **TIA Portal (V15.1)**

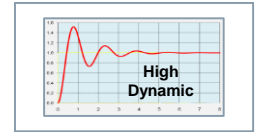
- One-Cable-Connection (OCC)
- Integrated EMC (C2) Filter

- 1AC 230V (200 – 240V) 0,05 – 0,75kW
- **3AC 400V (200 – 480V) 0,40 – 7,00kW¹**
- UL Certification

NEW!

Benefits

Increase performance



Fulfill high demands for safety



Easy engineering



Saves time on installation



Ready for world wide markets



¹ FSA (FY19 Q2); FSB (FY19 Q3); FSC (FY19 Q4)

SINAMICS G120X

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Ingenuity for life

Water & Wastewater



Heating, Ventilation, Air-conditioning



SINAMICS G120X Features



- Seamless power range **up to 630 kW/ 700 HP**
- Long cable lengths **up-to 450m**
- Harsh environment **3C3 coating**
- Firmware functions: **Deragging mode, pipe-filling mode, multi-pump control**
- **PN, Profibus, Modbus RTU, EtherNet/IP**

SINAMICS G120X Features



- Time saving, easy to setup: **“Out of the box”**
- High EMC requirements – **C1 class (filter B)**
- High protection degree **IP55¹**
- Firmware functions: **ESM (Fire Mode), automatic restart, skip frequency bands**
- **BACnet MS/TP, Modbus RTU, USS**

¹ In preparation

SIMATIC Drive Controller S7-1500 Technology-CPU

The scalable SIMATIC Motion Controller Portfolio

SIMATIC CPU 1504D TF & CPU 1507D TF / Handling V2.0 / Cross PLC synchronous operation



Feature / Function	Benefit
<ul style="list-style-type: none"> • Compact & Close-to-Drive SIMATIC controller Portfolio extension optimized for production machines: CPU 1504D TF and CPU 1507D TF 	<ul style="list-style-type: none"> ▶ Motion Control PLC, drive control and technology I/Os in one device for compact & high performance multiaxis machines
<ul style="list-style-type: none"> • Extensive connection options for communication, HMI and peripherals 	<ul style="list-style-type: none"> ▶ Complete machine control close to the drive incl. reduced assembly and programming efforts
<ul style="list-style-type: none"> • Control of kinematics with up to 4 interpolating axes incl. synchronization to moved belts 	<ul style="list-style-type: none"> ▶ Simple programming of pick & place, assembly or handling tasks based on PLCopen
<ul style="list-style-type: none"> • Cross PLC synchronous operation 	<ul style="list-style-type: none"> • Synchronized movements over several CPUs allow modular automation concepts
<ul style="list-style-type: none"> • Universal functionality & programming from S7-1500 to S7-1500 T-CPU 	<ul style="list-style-type: none"> ▶ Seamless extension of the motion control functionality of a standard CPU in TIA Portal
<ul style="list-style-type: none"> • Fail-safe CPU with extended motion control functions incl. safe monitoring of movements 	<ul style="list-style-type: none"> ▶ Automation, Motion Control and Safety Solutions with one CPU



1) Product news Factory Automation

2) Product news Motion Control

3) News Digital Enterprise

SIMATIC IOT2050 NEW

The successor of the IOT2040



The intelligent gateway and data collector for industrial IoT applications



Feature / Function

- Multiplied computing power
- TI ARM SoC, 64 Bit Processor
- SIMATIC Industrial OS preinstalled (Full managed Debian-based Linux, 64Bit)
- Graphic Interface
- 2 full USB interfaces
- Arduino shield compatibility
- Internal memory eMMC, with SD card expandable
- Remote Edge functionality preinstalled

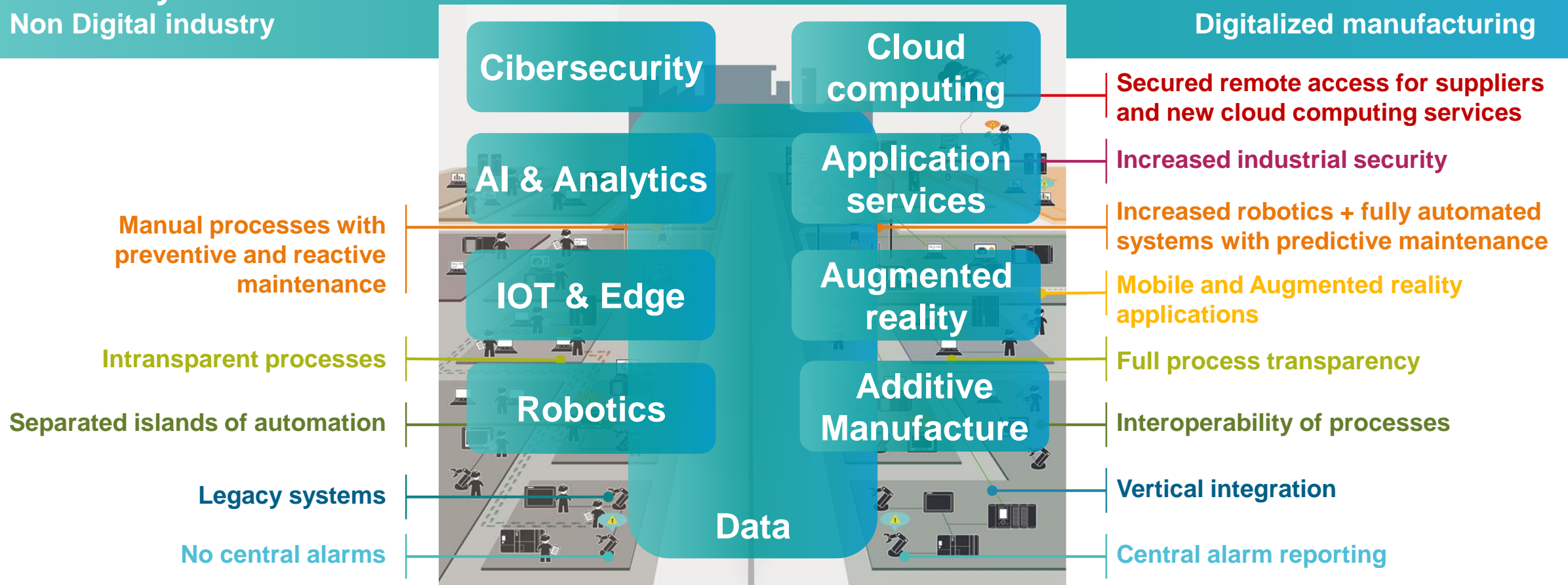
Benefit

- High-performance data compression, implementation of different communication protocols
- Use of existing advantages such as freely available packages, simple update concept, etc.
- Reduced development and maintenance costs
- Professional and "usual" SIMATIC Support
- Visualization of the data streams
- Easy and multiple connection options
- Direct connection to actuators and sensors - no changes to the existing system
- Faster system startup
- Easy integration into Edge solutions
- Programming of data preprocessing in high-level programming languages such as Java

Yesterday vs. Tomorrow

Yesterday
Non Digital industry

Tomorrow
Digitalized manufacturing



Digital Era opens new potential and market opportunities but also new challenges only addressable with operation intelligence

Digital Age Business

From Business Intelligence

- Analysis of historical data over defined periods of time
- implementation of reactive optimization measures

...to Operation Intelligence

- Continuous analysis of process data
- Continuously optimized and predictive operations with cost effective maintenance services

Cloud computing & Analytics

Globally available data lake for aggregated data of all sorts to be evaluated with Analytics and AI tools towards continuous process transparency and optimization

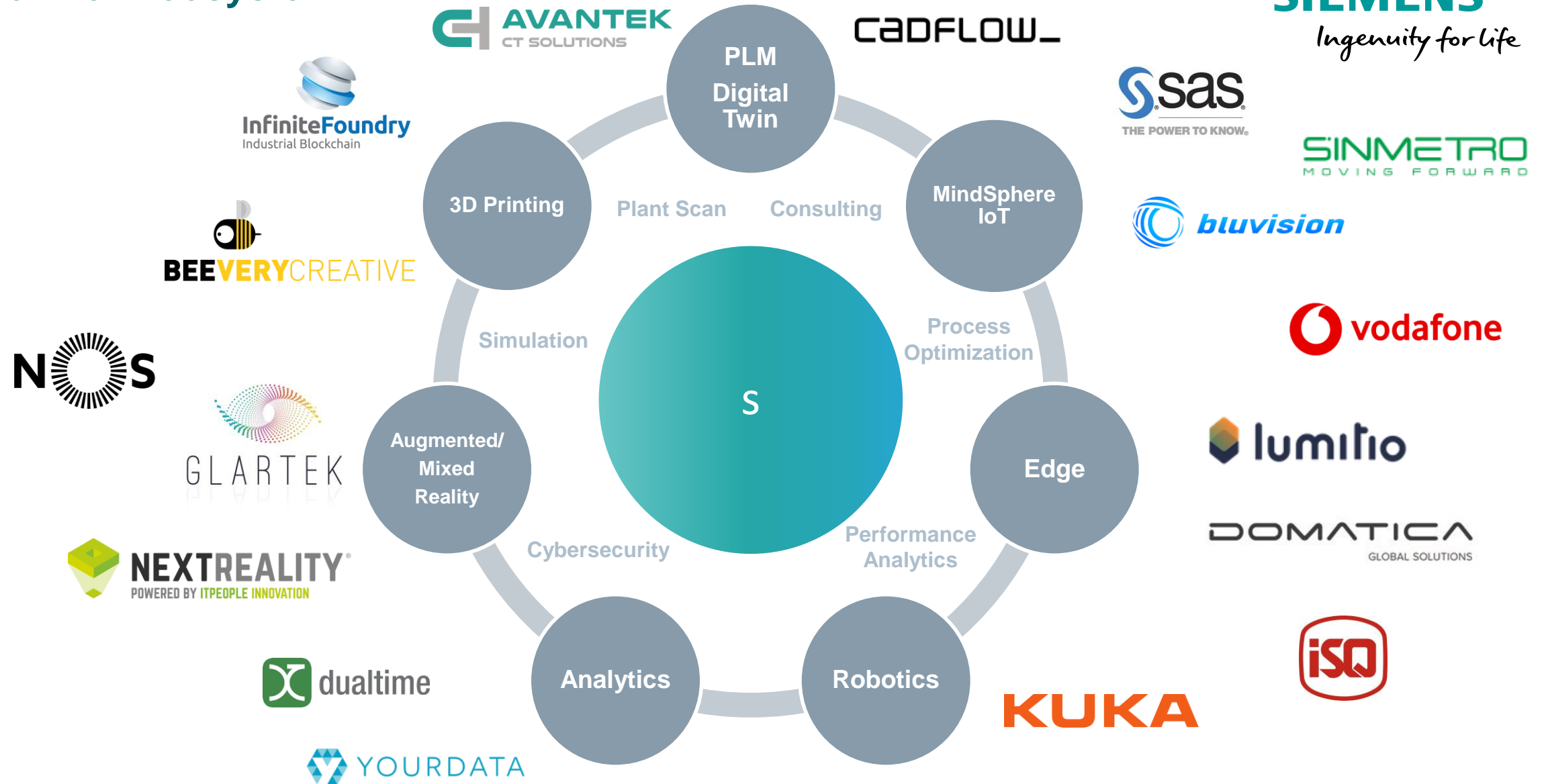
Digital Twins & Simulation

Digital Data models to evaluate, simulate and optimize with process data

IoT & Edge

Continuous connectivity to operation data flows, from sensor to system to edge operations

Partner Ecosystem



i-Experience Center
Industry 4.0

#unlockthepotential

#unlockthepotential

INDUSTRY IN THE DIGITAL ERA

Digital Innovation Hub

Digital Industries

Let's Start...