

Antonio Gordillo | IMA Marketing

# Controllers



# Welcome



# Agenda

- General overview
- PLC Logic
- Inline
- Axioline
- RFC
- PLCnext Control
- Software PLC
- Software
- PLCnext Technology
- PLCnext Control

Headquarter Phoenix Contact Bloomberg Germany

## General Overview



Business Area Industry Management and Automation

## Current trends



Digitalization



Globalization



Flexibilization



Industrie 4.0

We provide communicative and adaptable automation solutions to ensure long-term market success for both us and our customers.



## Chances and challenges



### Openness

Customized implementation of applications based on an open ecosystem.



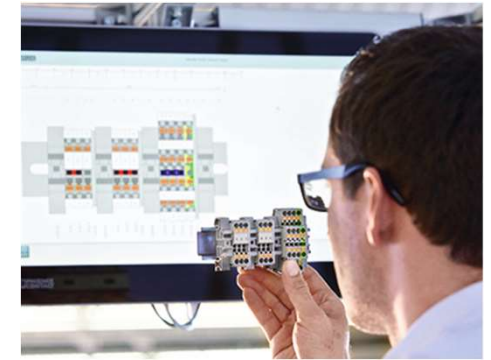
### Cyber security

Protection of industrial systems against cyber attacks and viruses.



### Cloud services and software

Unlimited interconnection and use of virtual services.



### Digital product

Digital product descriptions for smart engineering services.

## Our value proposition

### Quality:

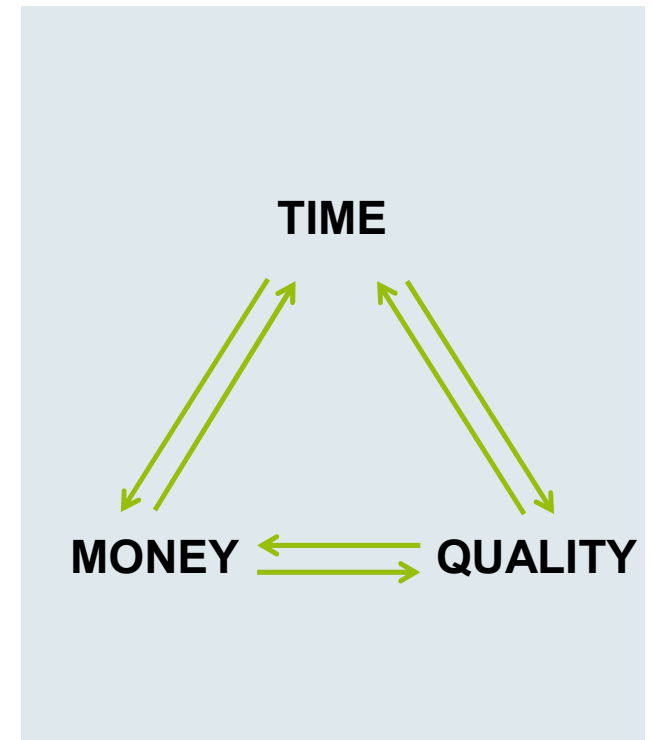
High-quality products and solutions by means of an extensive manufacturing capability and systematic function testing

### Time:

A global network of experts for timely reactions to market demands and quick solutions

### Money:

Smart products and solutions for a consistent, cost-optimized value added chain

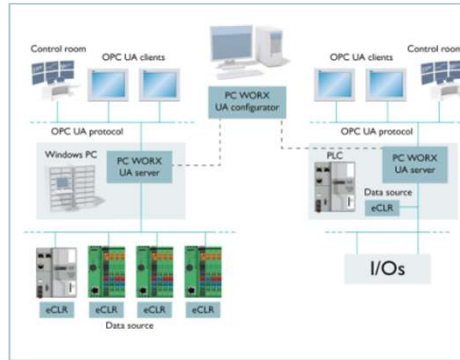


Business Area Industry Management and Automation

## Comprehensive automation



Solutions



Systems



Business intelligence

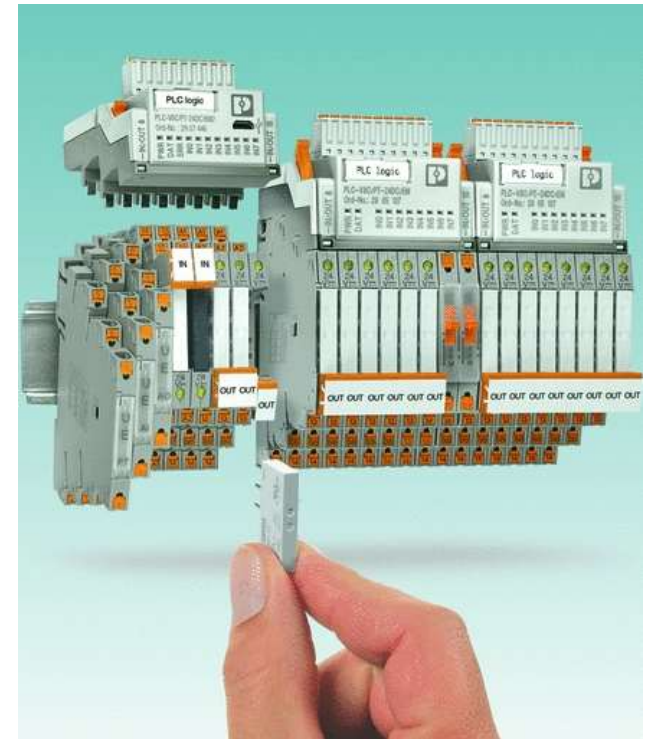


Products

Components + automation concept + software + industrial know-how

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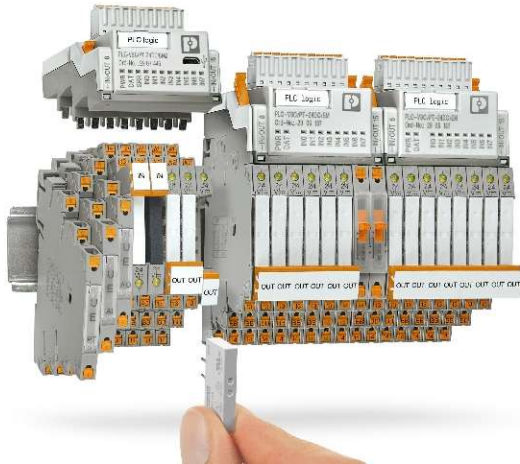






PLC logic

# Programmable logic relay system



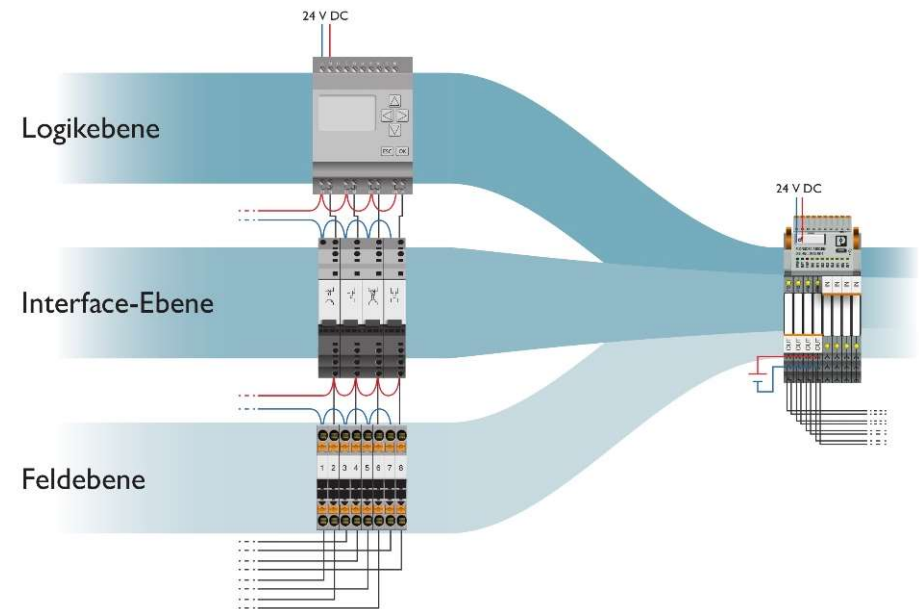
Short description

Features and benefits

Product overview

Comparison of solutions

Technology

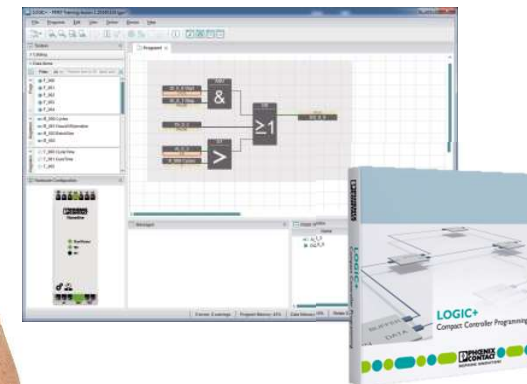
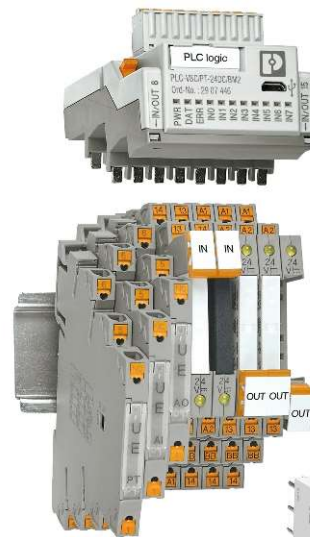


# PLC logic – Short description

## Programmable logic relay system

On the logic module market, the PLC logic relay system is the first to combine logic, interface, and field connection levels in a single solution. This means that you can switch and control I/O signals using a single compact system.

You can combine the new PLC logic module with the corresponding relay and analog modules as required.



# PLC logic – Features and benefits

## Programmable logic relay system

- ✓ Benefit from high availability thanks to plug-in relays and special function modules. The relays can be replaced quickly during maintenance work. This helps to ensure high machine and system availability.
- ✓ Wear-free switching with solid state relays to reach a high system availability.
- ✓ Filter series protect for net or signal interference.

Easy  
service -  
pluggable  
relays

Wear-free  
switching  
with **solid-  
state**



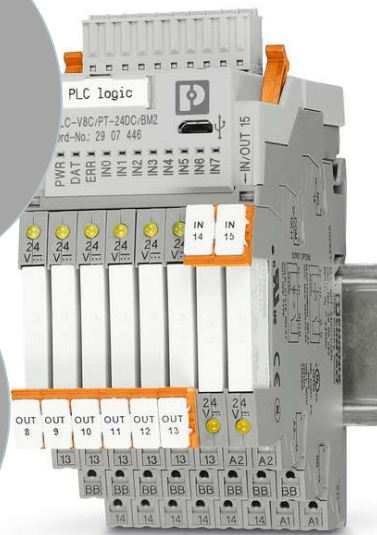
# PLC logic – Features and benefits

## Programmable logic relay system

- ✓ **Easy wiring**  
Thanks to push-in connection technology. This enables quick, tool-free wiring.
- ✓ **Easy modification per IO channel.**
- ✓ **Easy project implementation**  
LOGIC+ is intuitive software that allows you to implement your projects quickly.

Easy  
wiring

Easy  
channel  
modification



Push-in Technology<sup>®</sup>  
Designed by PHOENIX CONTACT

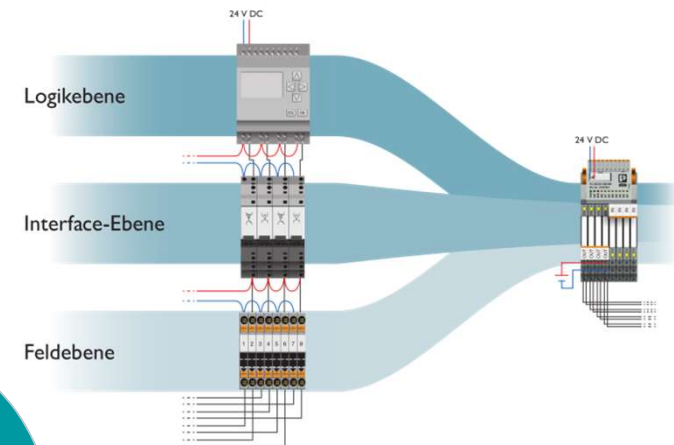
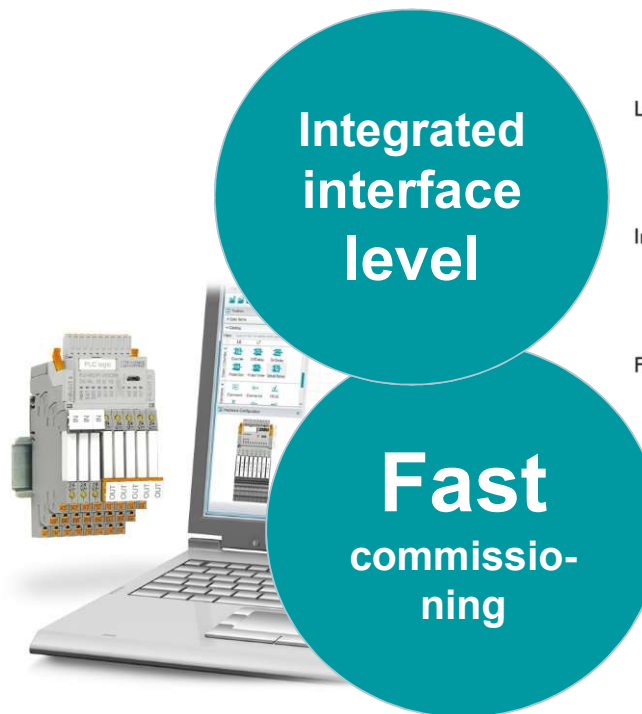




# PLC logic – Features and benefits

## Programmable logic relay system

- ✓ **Integrated interface level**  
The PLC logic relay system is the first to combine logic, interface, and field connection levels in a single solution.
- ✓ **Fast commissioning**  
The easy handling helps when it comes to configuration and startup of the products. The programs created can be simulated offline on the PC and tested online during operation.

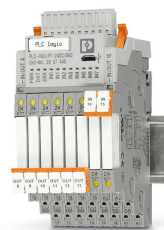


## PLC logic – Features and benefits

# Programmable logic relay system



- ✓ **50mm design width**  
PLC logic processes 16 I/O signals with just one basic module, with an overall width of just 50 mm.



**16 I/O  
signals**

**50 mm  
design  
width**

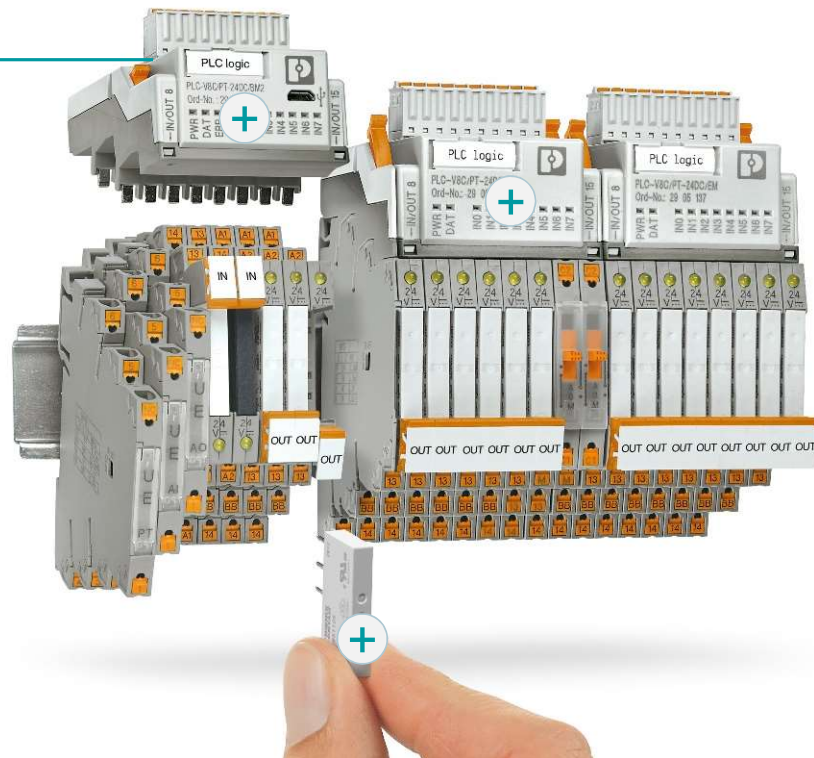


# PLC logic – Product overview

## Programmable logic relay system



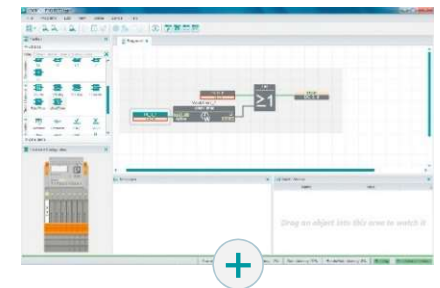
PLC logic App



Touch panel




LOGIC+





# PLC logic – Product overview

## Programmable logic relay system



**Memory module**  
Save programs or easily copy them to other devices with the memory module.






# PLC logic – Product overview

## Programmable logic relay system






The image shows a single PLC logic module and a rack containing several of these modules. The module is a compact, grey, rectangular unit with a label that reads 'PLC logic' and '16 I/O signals'. It has a DIN rail connector on the left and a terminal block on the right. The rack is a vertical stack of these modules, showing how they fit together in a system.

### Basic module

PLC logic processes 16 I/O signals with just one basic module, with an overall width of just 50 mm.



A small square button with a blue 'X' icon, used to close the information window.



# PLC logic – Product overview

## Programmable logic relay system

System Availability	Easy handling
	Time saving
Space	saving

### Intuitive LOGIC+ software

LOGIC+ is the intuitive software which allows you to rapidly impleme



# PLC logic – Product overview

## Programmable logic relay system



### PLC logic app

Easy and quick parameter adjustments and monitoring via app for iOS.

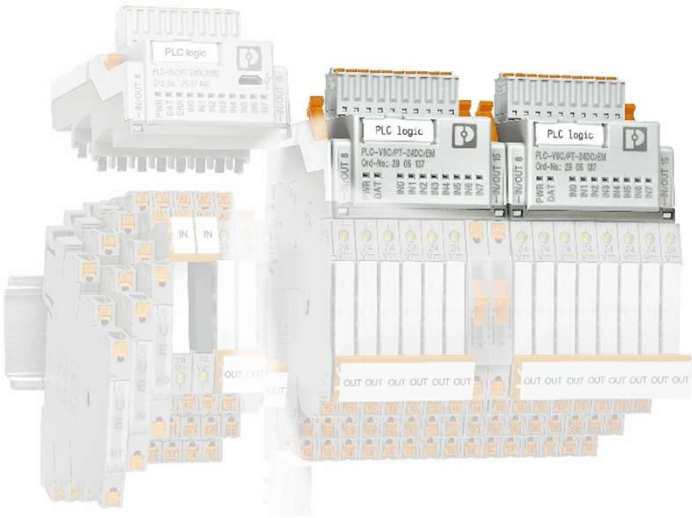
Thanks to the app and the corresponding Bluetooth adapter, you can access the process data quickly and wirelessly.



# PLC logic – Product overview

## Programmable logic relay system

System Availability	Easy handling
	Time saving
Space saving	



**Extension modules**

The basic module and the extension module are connected via integrated connectors - no tools required.

Up to 48 I/O signals can be acquired and switched with one basic module and two extension modules.

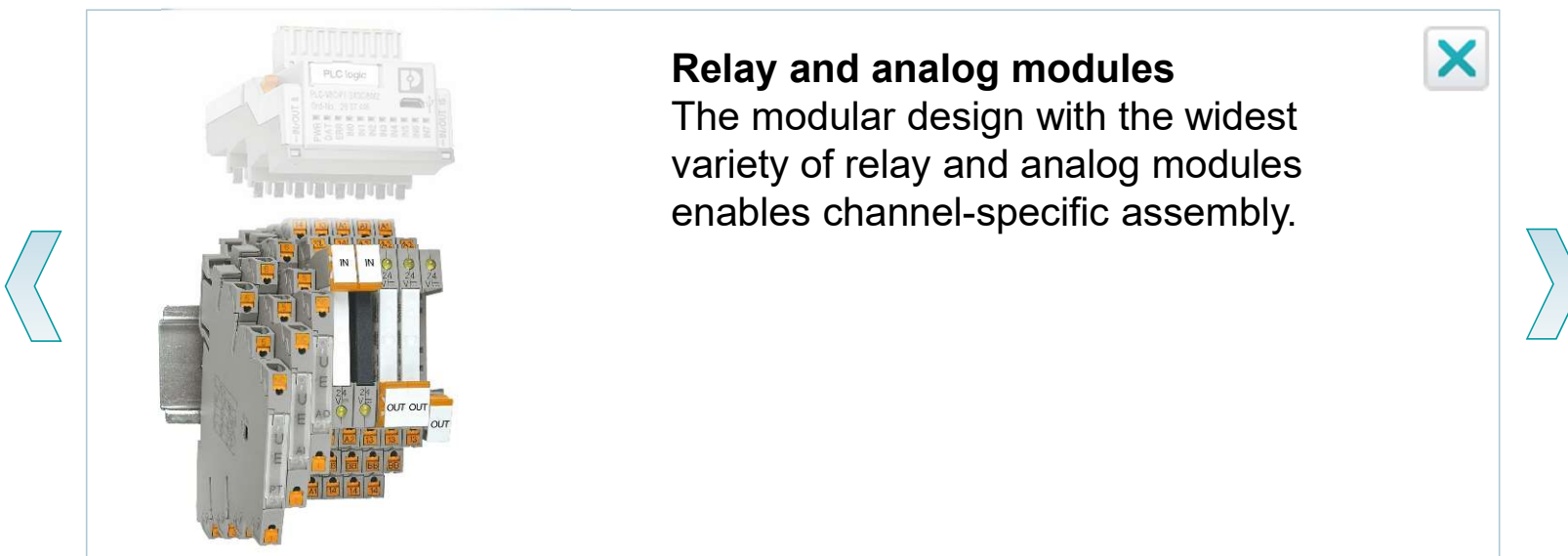




# PLC logic – Product overview

## Programmable logic relay system

System Availability	Easy handling
	Time saving
Space saving	



# PLC logic – Product overview

## Programmable logic relay system



### Touch panel

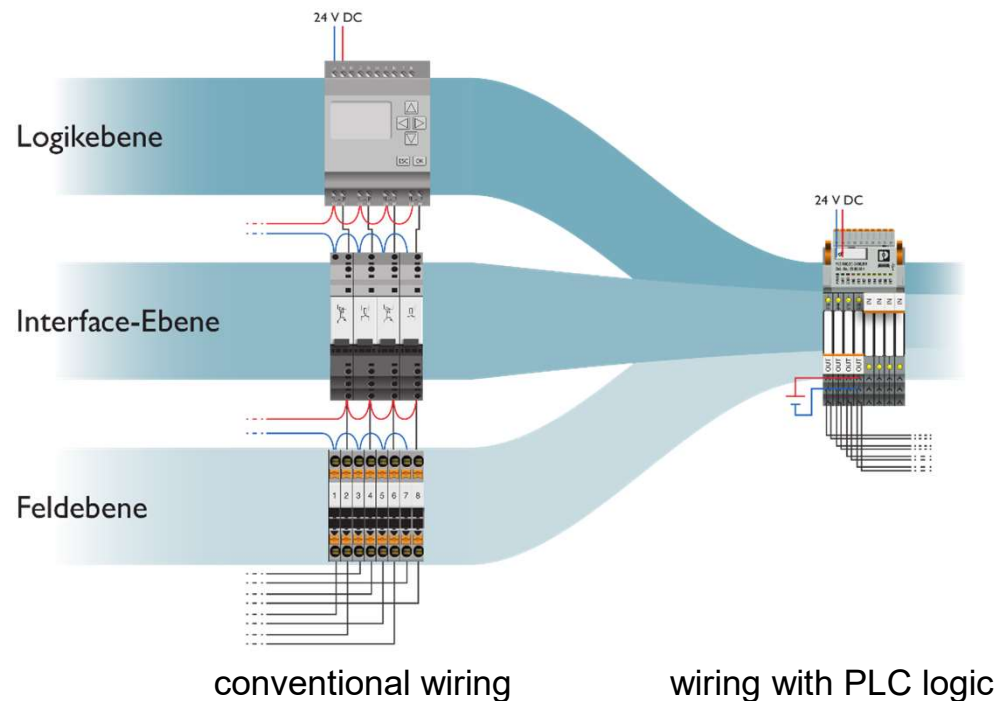
For jobs requiring control, operation, and monitoring, the BTP 2000 series HMIs go perfectly with PLC logic. Basic touch panels can be used to visualize all the logic module process data.

Three different display sizes enable clear representation, from simple alphanumeric images to graphics-intensive images with object animation.



# PLC logic – Comparison of solutions

## Programmable logic relay system



On conventional logic modules, module wiring is complex and time consuming.

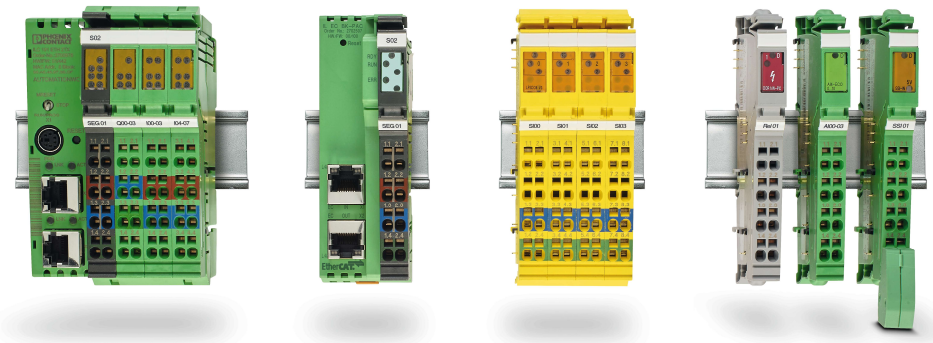
To avoid the disadvantages of permanently soldered relays, additional relay modules are often used in front of the inputs and outputs.

PLC logic replaces conventional switching and control devices and reduces the wiring required.



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- Software
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- PLCnext Control



# General overview controls

## Inline

- The modular PLC for small and medium-sized applications

## Axioline

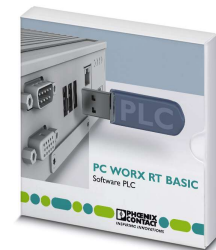
- The fast and robust modular PLC for any application

## RFC

- The compact PLC for complex applications and the highest requirements

## Software PLC

- Transform your industrial PC into a PLC



# Modular Inline controllers – General data

IEC 61131-3

PROFI<sup>®</sup>  
NET

Web Server

FTP-Server



Parameterization  
memory up to 2GB



Real-time clock (buffered)





## Modular Inline controller – differences

	1x1 ETH	1x1 GSM	1x1 ME AN   INC	3xx
Engineering	PC Worx or PC Worx Express	PC Worx or PC Worx Express	PC Worx or PC Worx Express	PC Worx
Profinet	Device	-	Device	Controller/Device
Memory card	Optional SD-Flash	Optional SD-Flash	Optional SD-Flash	Required CF card
Modbus TCP	Server/Client	Server/Client	Server/Client	-
HTML5	✓	-	✓	-
Onboard DI/Os	8/4	16/4	8/4	12/4
Other specials		GPRS/GSM Modem	RS 485/422/ PWM	
			2/2 AIO    2 counter	

## Modular Inline controller – differences

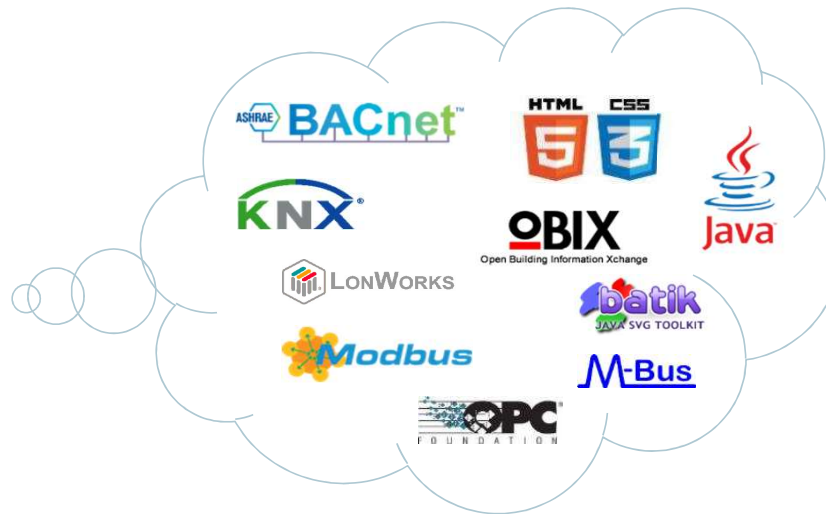
	Program memory	Mass storage	Retentive mass storage
ILC 131 ETH (XC*)	192 kByte	192 kByte	8 kByte
ILC 151 ETH (XC*)	256 kByte	256 kByte	8 kByte
ILC 151 GSM/GPRS ILC 171 ETH	512 kByte	512 kByte	48 kByte
ILC 191 ETH ILC 191 ME/AN ILC 191 ME/INC	1 MByte	1 MByte	48 kByte
ILC 350 PN	1 MByte	2 MByte	48 kByte
ILC 370 PN ILC 390 PN	2 MByte	4 MByte	96 kByte

\*XC temperature range: - 40°C – 60°C

# Special Controller: ILC 2050 BI

- New application fields: Infrastructure, energy & building
- Integrated: 4x LAN, 2x USB & 2x RS-485 interfaces
- Programming with Niagara 4 Framework
  - Expandable by self-programmed functions
- Supported protocols:

niagara  
framework



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# Modular Axioline controllers – General data

JAVA

IEC 61131-3

PROFI<sup>®</sup>  
NET

Web Server

FTP-Server



Parameterization  
memory up to 2GB



Real-time clock (buffered)



## Modular Axioline controller – differences

	1050 (XC*)	3050	Cloud
Engineering	PC Worx or PC Worx Express	PC Worx	PC Worx PC Worx Express
Profinet	Controller/Device	Controller/Device	Controller and Proficloud-Device
Memory card	Optional SD-Flash	Optional SD-Flash	Optional SD-Flash
Modbus TCP	Server/Client	Server/Client	
Ethernet	2x (switched internally)	3x	2x (switched internally)
Other specials			<ul style="list-style-type: none"> <li>▪ Cloud controller for decentralized use of I/Os</li> <li>▪ Global availability</li> <li>▪ Cloud Credits - runtime licenses</li> </ul>



## Modular Axioline controller – differences

	1050 (XC*)	3050	Cloud
Program memory	1 MByte	4 MByte	1 MByte
Mass storage	2 MByte	8 MByte	1 MByte
Retentive mass storage	48 kByte	128 kByte	48 kByte

\*XC temperature range: - 40°C – 70°C

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## RFC – General data



FTP-Server

IEC 61131-3



Controller & Device

Diagnostic display

Web Server

Parameterization  
memory up to 2GB





Ethernet 3x



Real-time clock (buffered)

## RFCs - differences

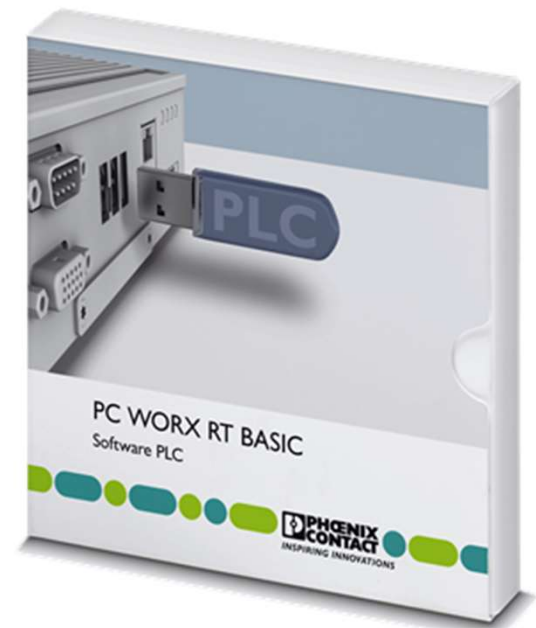
	RFC 460R PN 3TX	RFC 470 PN 3TX	RFC 470S PN 3TX
Engineering	PC Worx	PC Worx	PC Worx
Onboard DI/Os	-	5/3	5/3
Interbus	-	✓	✓
Other specials:			
Redundancy	✓ AutoSync Technology <sup>®</sup> <small>Designed by PHOENIX CONTACT</small>	-	-
Safety Controller	-	-	✓  

## RFCs - differences

	RFC 460R PN 3TX	RFC 470 PN 3TX	RFC 470S PN 3TX
Program memory	8 MByte	8 MByte	8 MByte
Mass storage	16 MByte	16 MByte	16 MByte
Retentive mass storage	120 kByte	240 kByte	240 kByte

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- Software
- New products
- Competitors
- Application areas
- Phoenix Contact World





# Software PLC – General Data



FTP-Server

IEC 61131-3



Controller & Device

Web Server



SW for IPC or Windows



Real-time clock



## Software PLC - differences

	PC Worx RT Basic	PC Worx SRT
Engineering	PC Worx	PC Worx
Installation on	IPC	Windows or IPC
Performance class	High control performance and large-sized memory	Compact controller
Real-time capability	Yes	No
Interbus	✓ only in conjunction with an INTERBUS master controller board	-
Program memory	8 MByte	1 MByte
Mass storage	16 MByte	1 MByte
Retentive mass storage	240 kByte	48 kByte

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# Software - PC WORX 6.xx

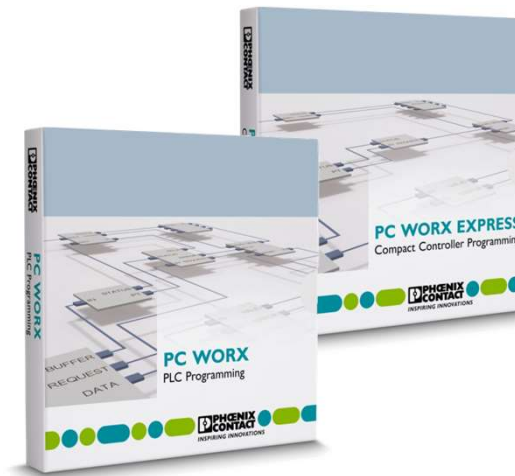
IEC 61131-3 Engineering tool

FBD, LD, ST, IL, SFC

Worldwide usable

Powerful debugging

Free graphical programming editors



Express

Basic license

Basic update

Pro license

Pro update

Demo

Pro license 180days

Pro lic copy

Basic → Pro upgrade lic

PLCnext Engineer

PLCnext Technology   
Designed by PHOENIX CONTACT

# PLCnext Technology Configuration and Engineering

## Fast and flexible configuration

- C-Code, Simulink models, function components, IEC61131-3, Safety, HMI

## Extendable

- By licensed add-ins like the Viewer for Simulink

## Easy handling

- Intuitive user interface
- Clear structures



**The software for configuration and engineering**

PLCnext Engineer

PLCnext Technology   
Designed by PHOENIX CONTACT

## Complete Integrated System





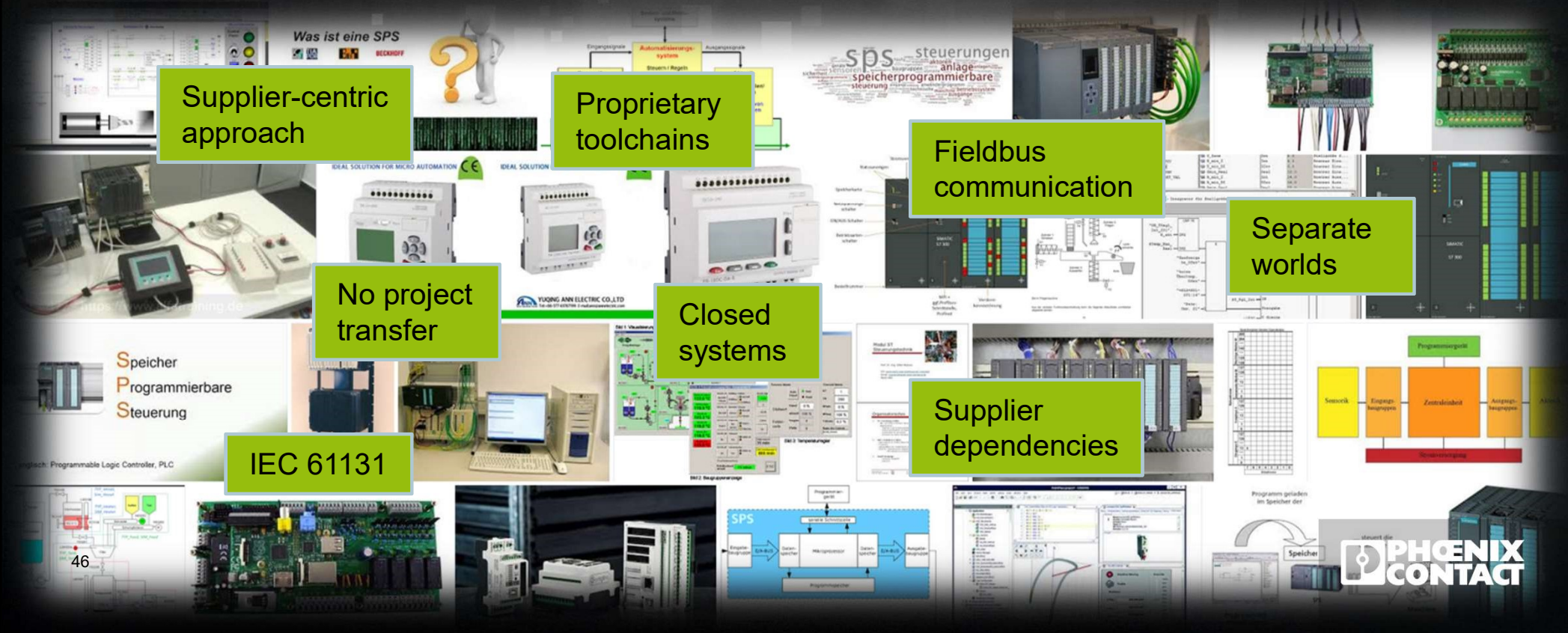
# Agenda

- General overview controls
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What Is PLCnext Technology?

# Where we come from – Control Technology yesterday



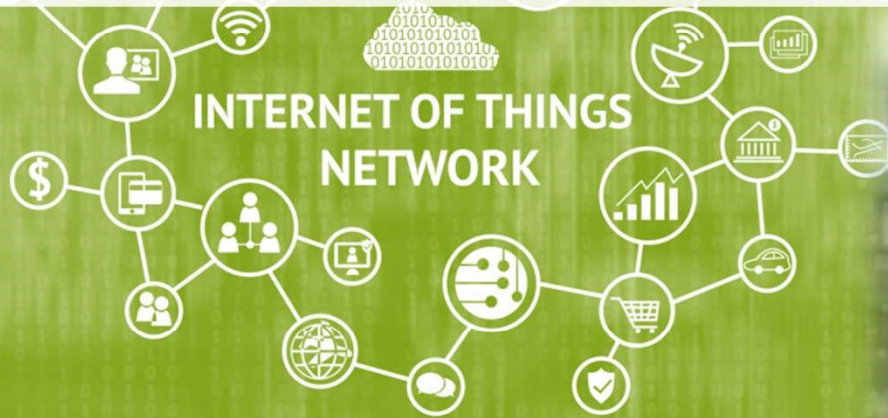


## What Is PLCnext Technology?

## Digitalization – Changing Market & Customer Requirements

PLCnext Technology   
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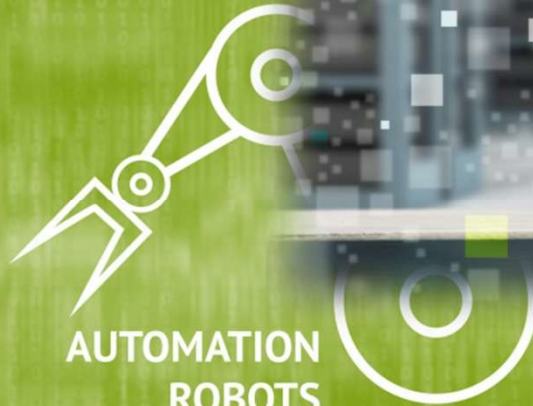
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## SMART FACTORY SOLUTION



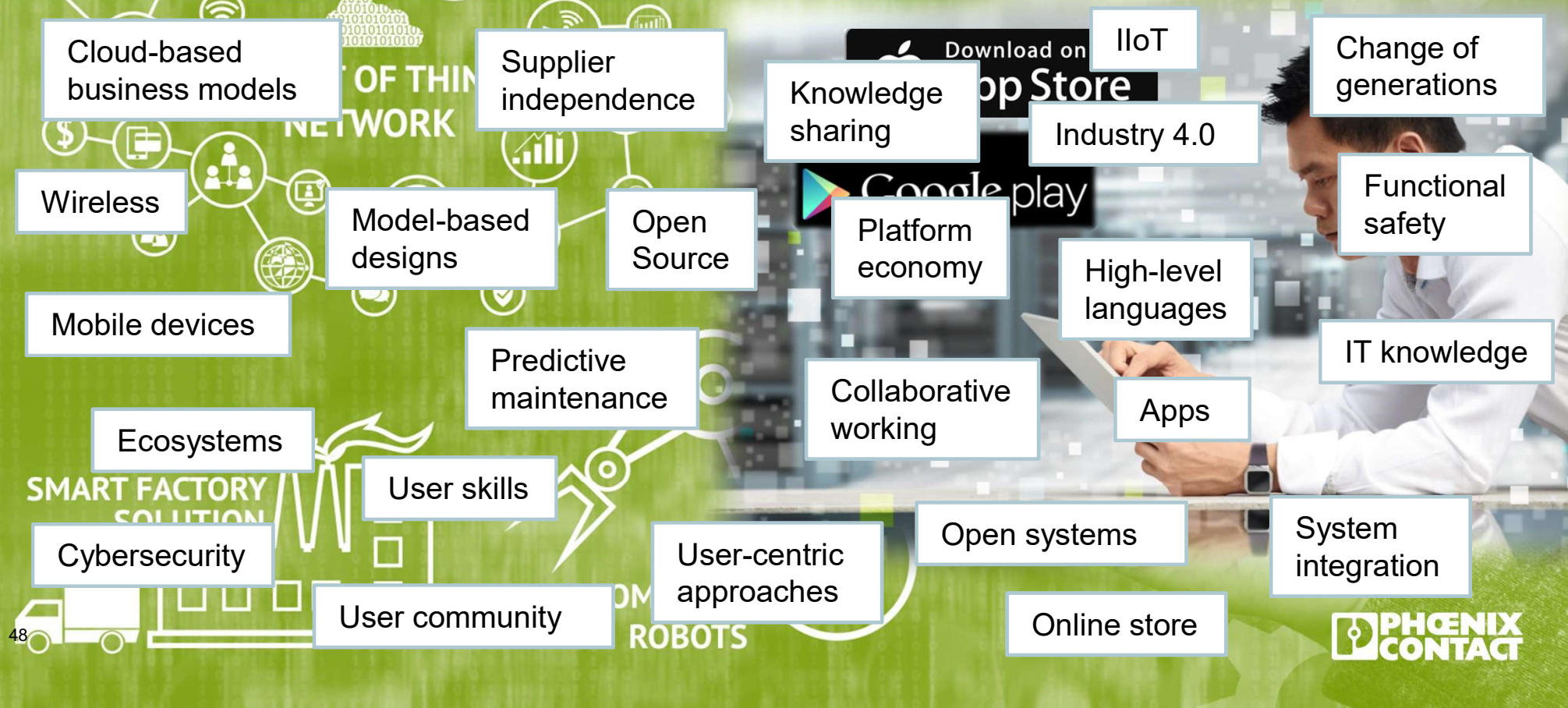
## AUTOMATION ROBOTS



What Is PLCnext Technology?

PLCnext Technology   
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## Digitalization – Changing Market & Customer Requirements





What Is PLCnext Technology?

PLCnext Technology   
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**Our Answer: An Open Ecosystem for Limitless Automation**



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CONTACT**

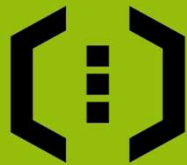
PLCnext Technology in a nutshell

PLCnext Technology   
Designed by PHOENIX CONTACT

# The Open Ecosystem for Limitless Automation

PLCnext Technology   
enhance your automation thinking

PLCnext Control



**Open Control Platform**  
PLCs in various performance classes including PLCnext Runtime System and accessories for PLCnext Technology

PLCnext Engineer



**Engineering Software**  
Engineering tool for commissioning, configuring, and programming PLCnext Controls

PLCnext Store



**Software Store for Automation**  
Apps for functional extension of PLCnext Control and PLCnext Engineer

PLCnext Community



**User Collaboration & Resources**  
Information, support, and helpful resources about PLCnext Technology including FAQs, forums, tutorials and a GitHub presence

 **PHOENIX  
CONTACT**

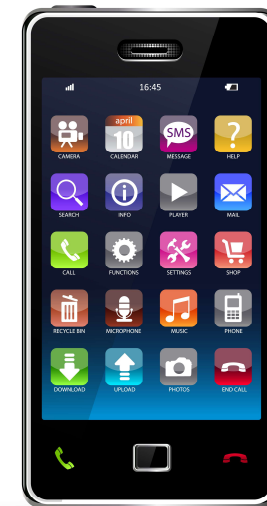
# PLCnext Technology

The reliability and robustness  
of the classical PLC world



enhances

with the openness and flexibility  
of Smart Devices.

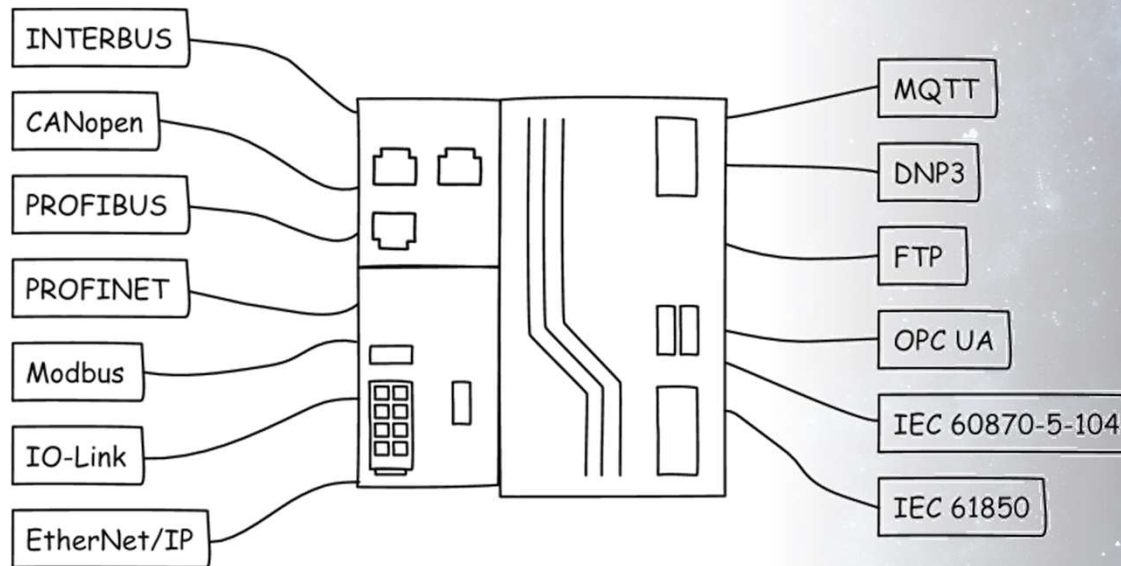




enhanced connectivity – Intelligent Networking

## Future-proof Connectivity

PLCnext Technology<sup>®</sup>  
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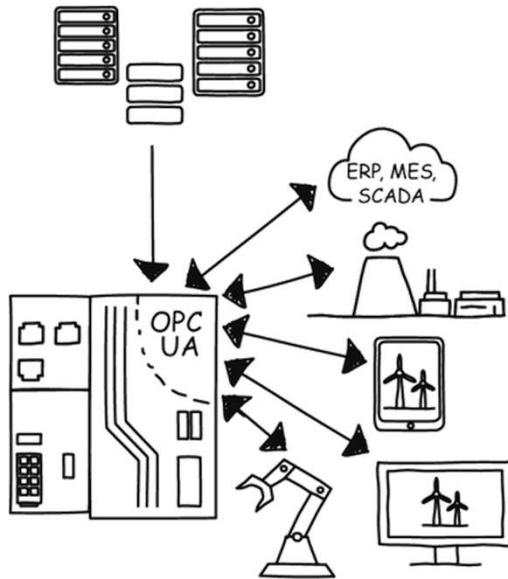


PLCnext Technology enables the integration of current and future interfaces and protocols for open communication in highly networked automation systems.



enhanced connectivity – Intelligent Networking

## Integrated OPC UA Server



PLCnext Technology<sup>®</sup>  
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# OPC UA

Data Access, Alarms and Conditions, Programs, Historical Access, Global Discovery Server

enhanced connectivity – Intelligent Networking

PLCnext Technology<sup>®</sup>  
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## PROFICLOUD, Public Cloud, Private Cloud – any Cloud!

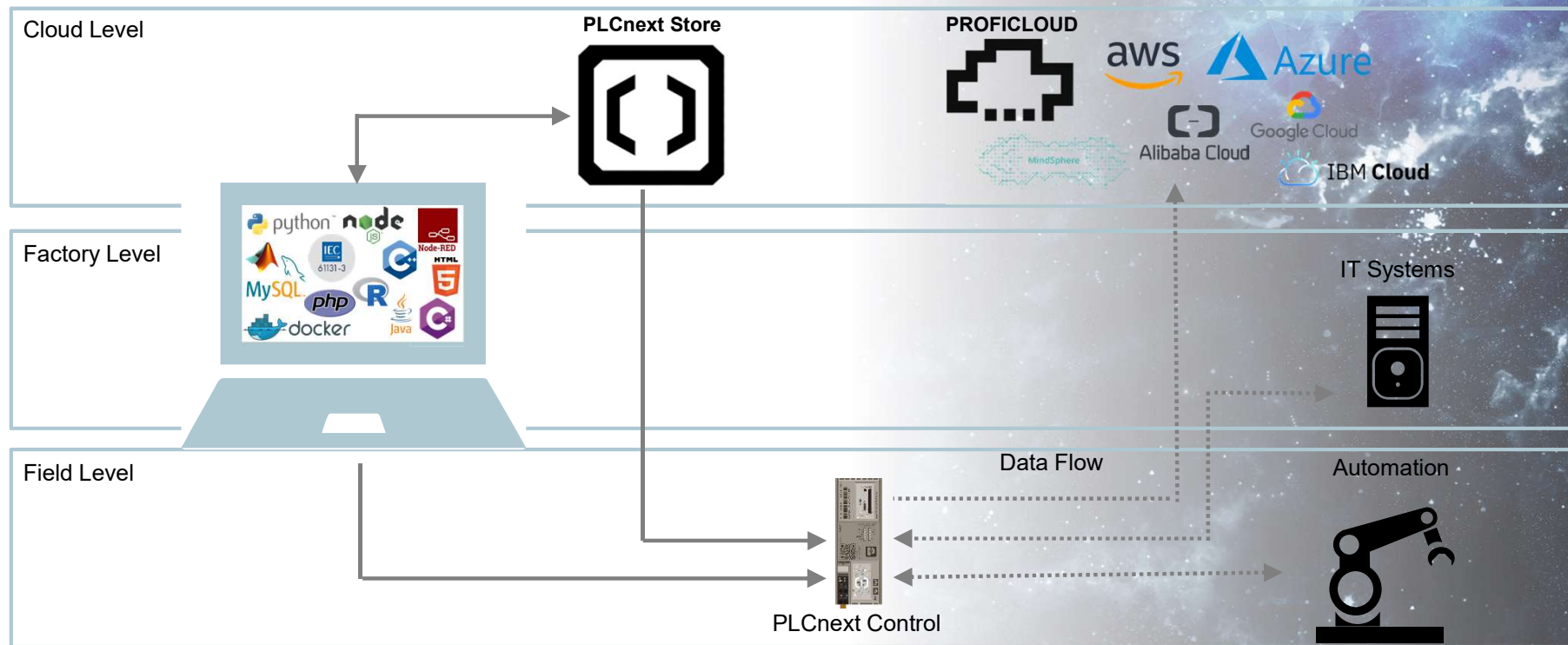


**Implement new IoT-based business models through direct connection to cloud-based services and databases.**

Benefit from the seamless integration of Phoenix Contact's PROFICLOUD and a cloud-agnostic strategy where the PLCnext Store delivers cloud connectors for every cloud. PLCnext Technology supports any customer cloud implementation – public, private, hybrid - including AWS, IBM, Azure, Alibaba, and MindSphere.

enhanced connectivity – Edge Device or PLC connecting all Levels

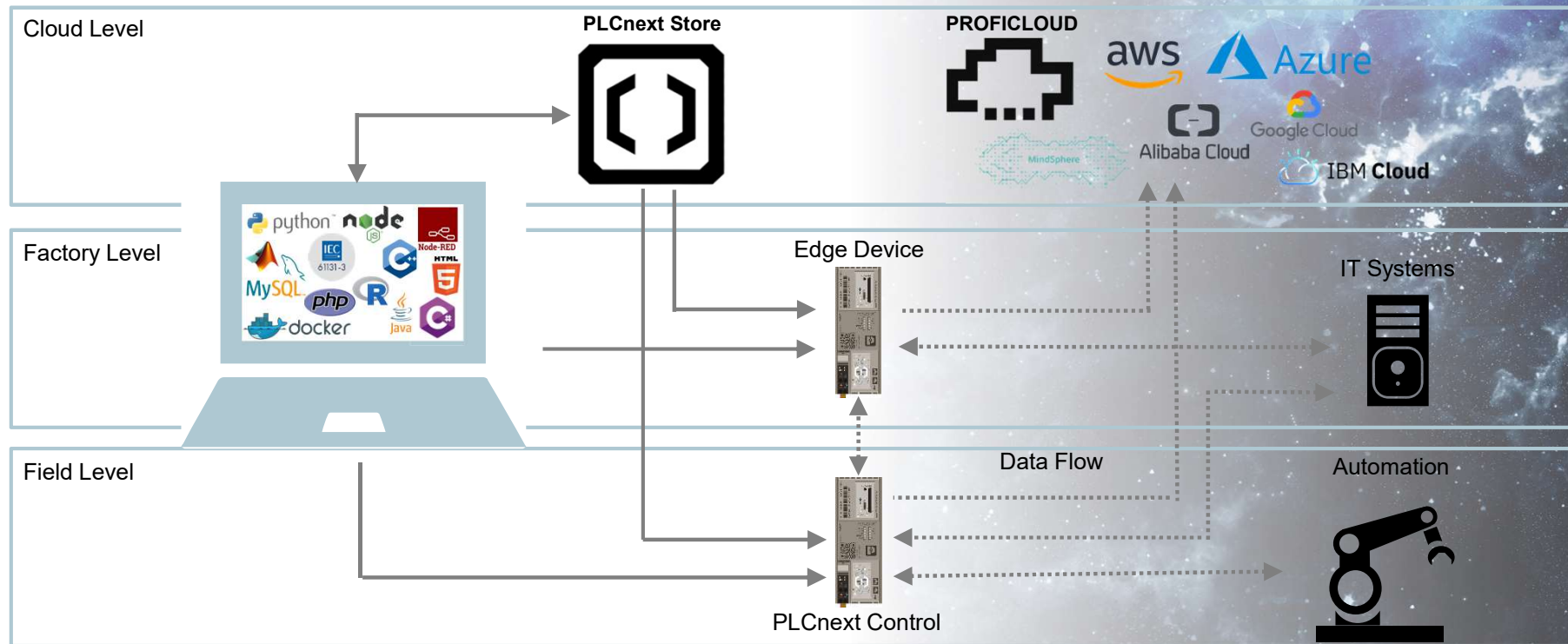
## PLCnext Control as PLC





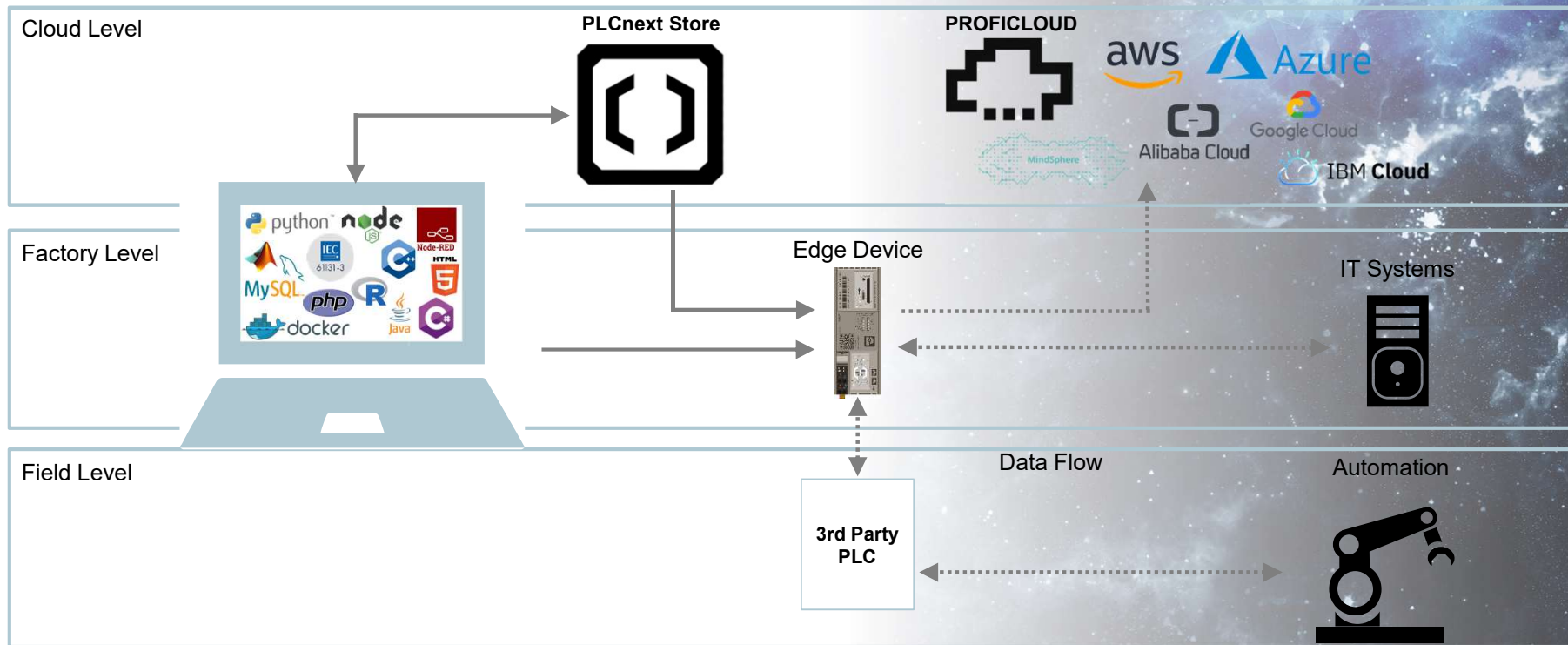
enhanced connectivity – Edge Device or PLC connecting all Levels

## PLCnext Control as PLC and Edge Device



enhanced connectivity – Edge Device or PLC connecting all Levels

## PLCnext Control as Edge Device





# enhanced freedom

Flexible integration of  
open source software and apps

PLCnext Technology<sup>®</sup>  
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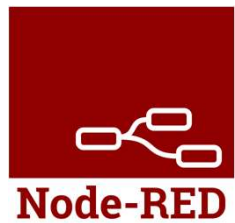
PLCnext Technology enables any desired combination of independently created program parts and complete applications. The use of open-source software and apps, e.g. from our PLCnext Store, improves the efficiency of your development processes. The sky is the limit when it comes to future expansions.





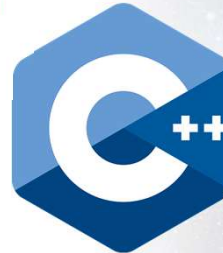
enhanced freedom

## Limitless Adaption Capability



PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT

docker



PLCnext Technology enables any desired combination of independently created program parts and complete applications. The use of open-source software and apps improves the efficiency of your development processes.



# PLCnext Technology

Designed by PHOENIX CONTACT

The openness of PLCnext Technology makes it possible to use your favorite programming language, be it IEC 61131 or high-level language. Develop your individual solution comfortably in a familiar development environment, such as PLCnext Engineer, Matlab Simulink, Eclipse, or Visual Studio.

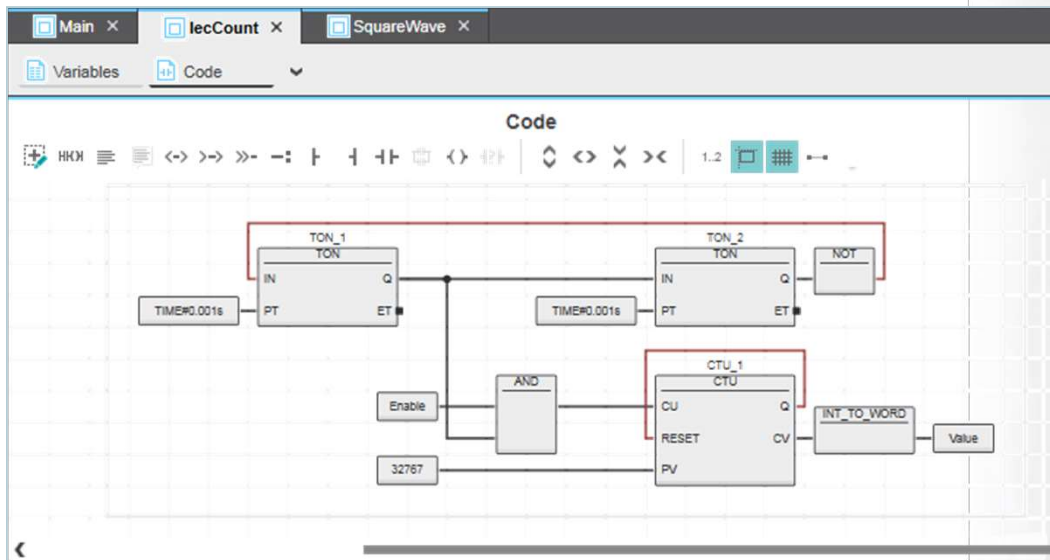
## enhanced convenience

using your favorite  
programming tool



enhanced convenience

## IEC 61131-3 Programming with PLCnext Engineer



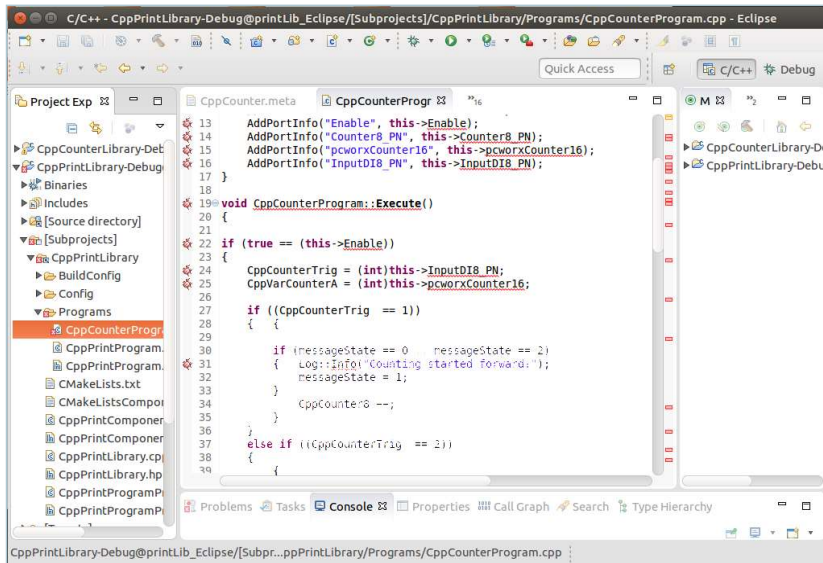
Use the innovative and easy to use features of PLCnext Engineer.

PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT



enhanced convenience

## Programming – C/C++



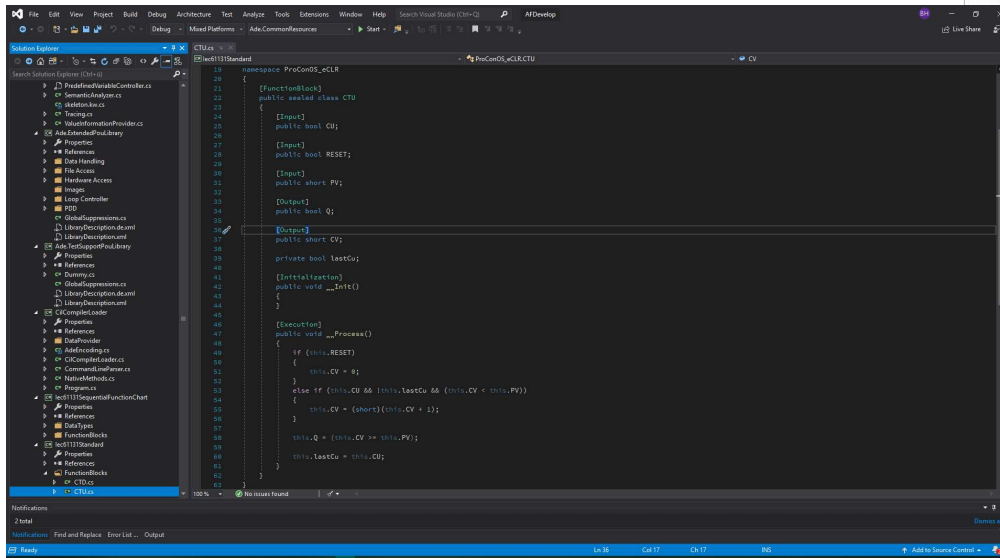
C/C++ acc. to standard, easy interface to the PLCnext Technology platform, support of remote debugging – use the tool you are familiar with.

PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT



enhanced convenience

## C# Function Blocks



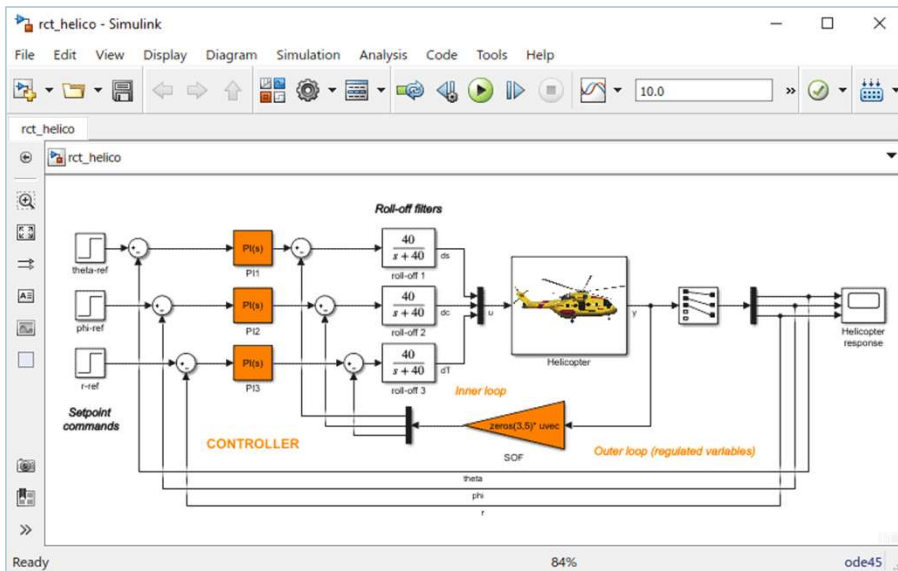
PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT

Visual  
Studio

Development and integration of function blocks with C# with a dedicated plug-in for Visual Studio.  
Create IEC 61131 function blocks with C# and execute them in real-time with the eCLR runtime system.

enhanced convenience

## MATLAB Simulink



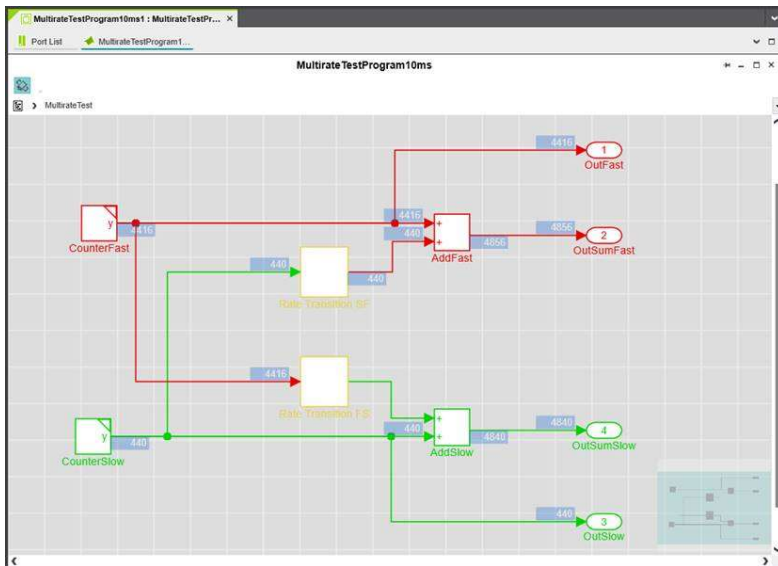
Seamless integration of model-based design & development with MATLAB Simulink.

PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT



enhanced convenience

## MATLAB Simulink & PLCnext Engineer



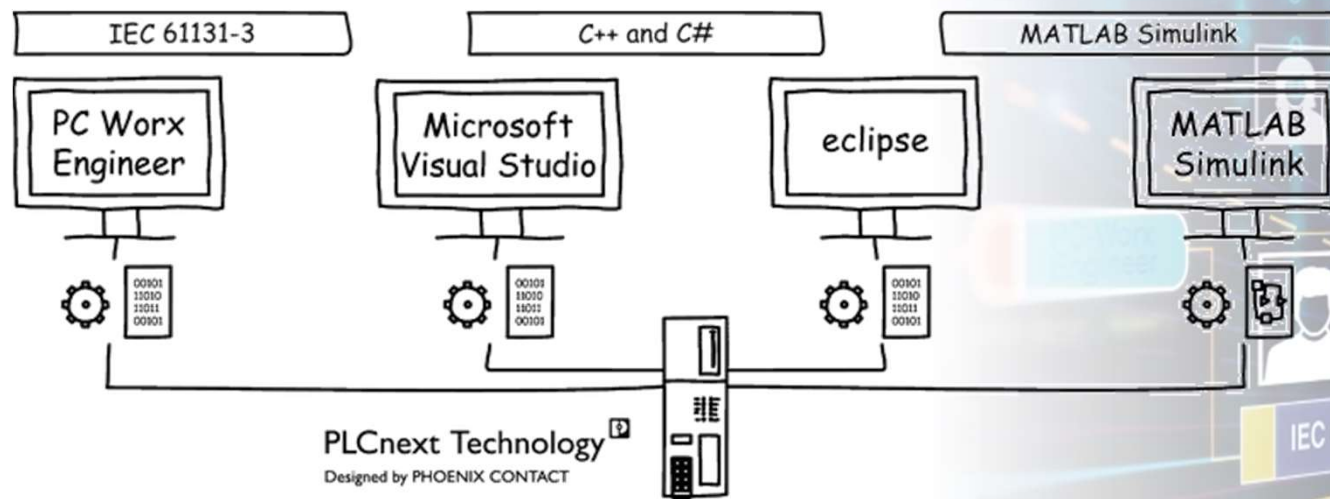
Seamless integration of model based design & development with MATLAB Simulink and PLCnext Engineer.

PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT



enhanced development

## Convenient Engineering & Application Development

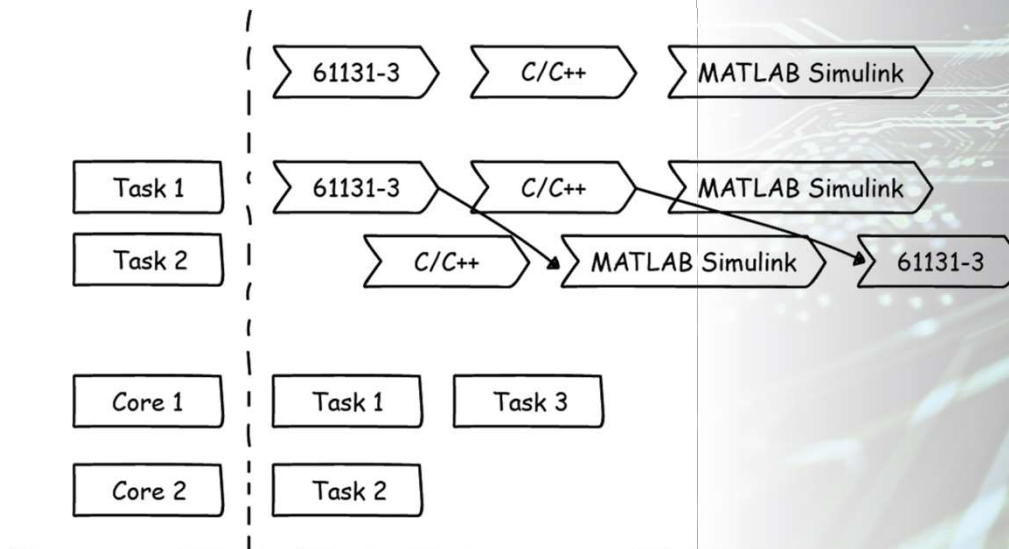


With PLCnext Technology, several developers from different generations, with different skill sets and expertise can work on one controller program, in parallel and yet independently, using different programming languages.

enhanced performance – PLC-typical Real-time Performance

PLCnext Technology<sup>®</sup>  
Designed by PHOENIX CONTACT

## Execution & Synchronization Manager

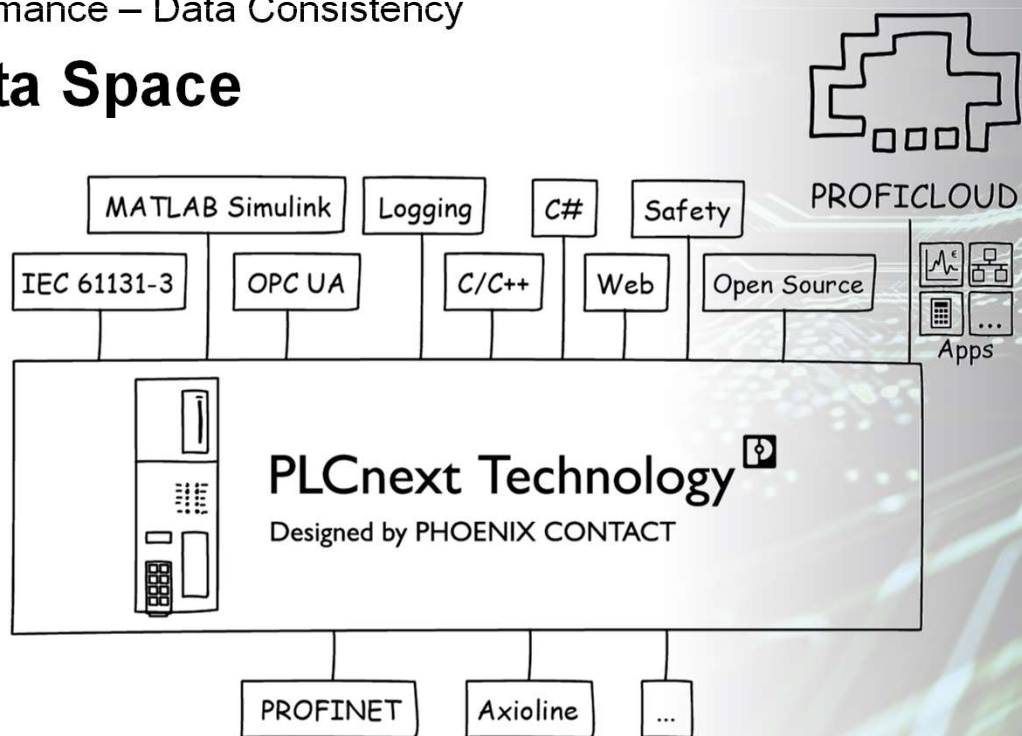


The patent-applied-for task handling of PLCnext Technology lets program routines of different origin run like classical IEC 61131 PLC code. Your high-level language programs become automatically deterministic.

enhanced performance – Data Consistency

## Global Data Space

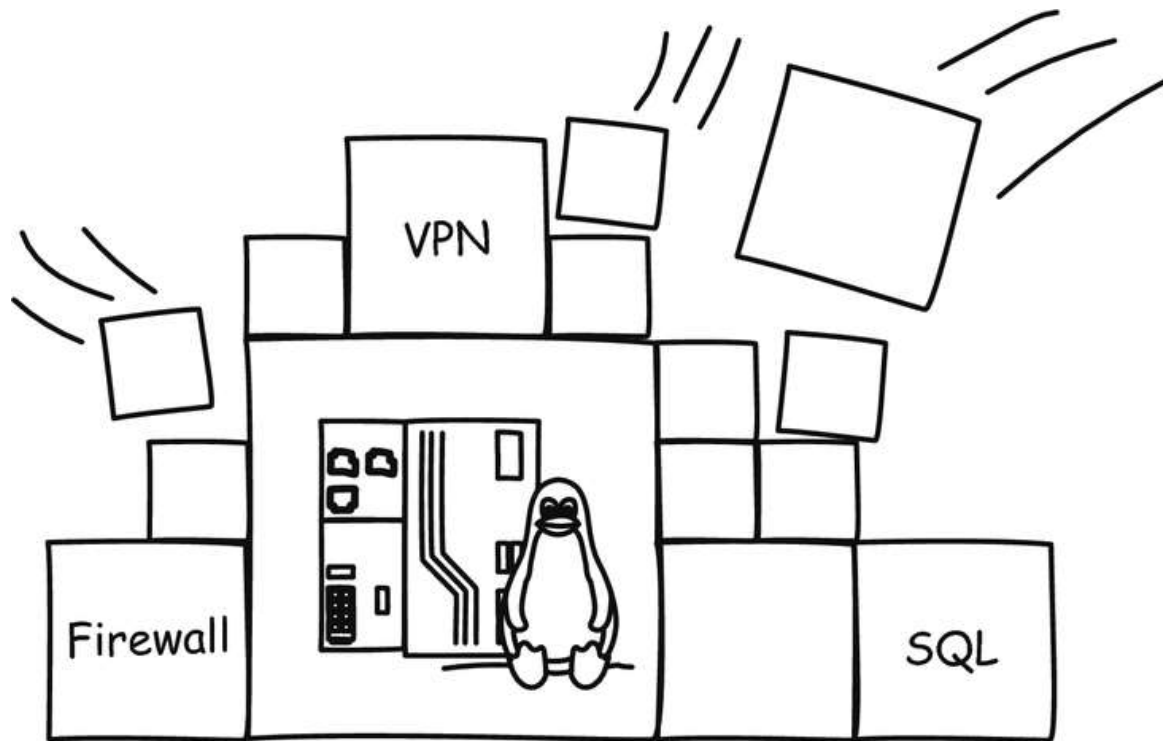
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Fast and consistent data exchange between user programs, fieldbuses, and system programs.  
Access via Data Logger, HMI, and OPC UA. Security aspects for user management.

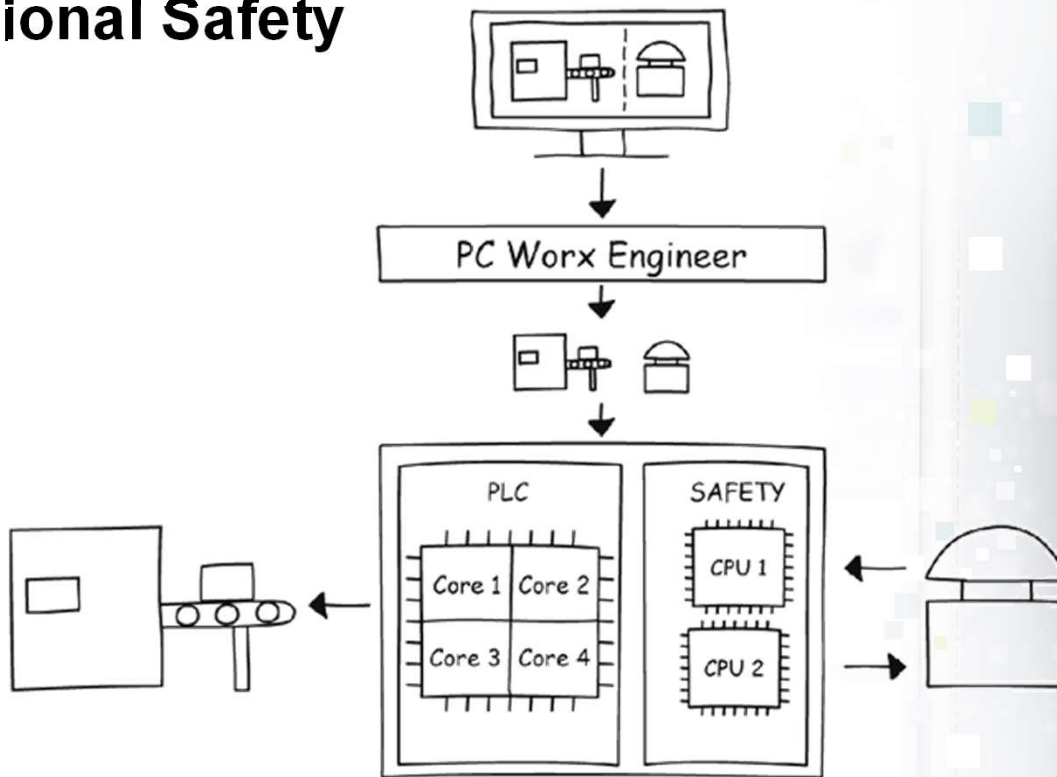


## Flexibility of Linux plus the Reliability of a PLC

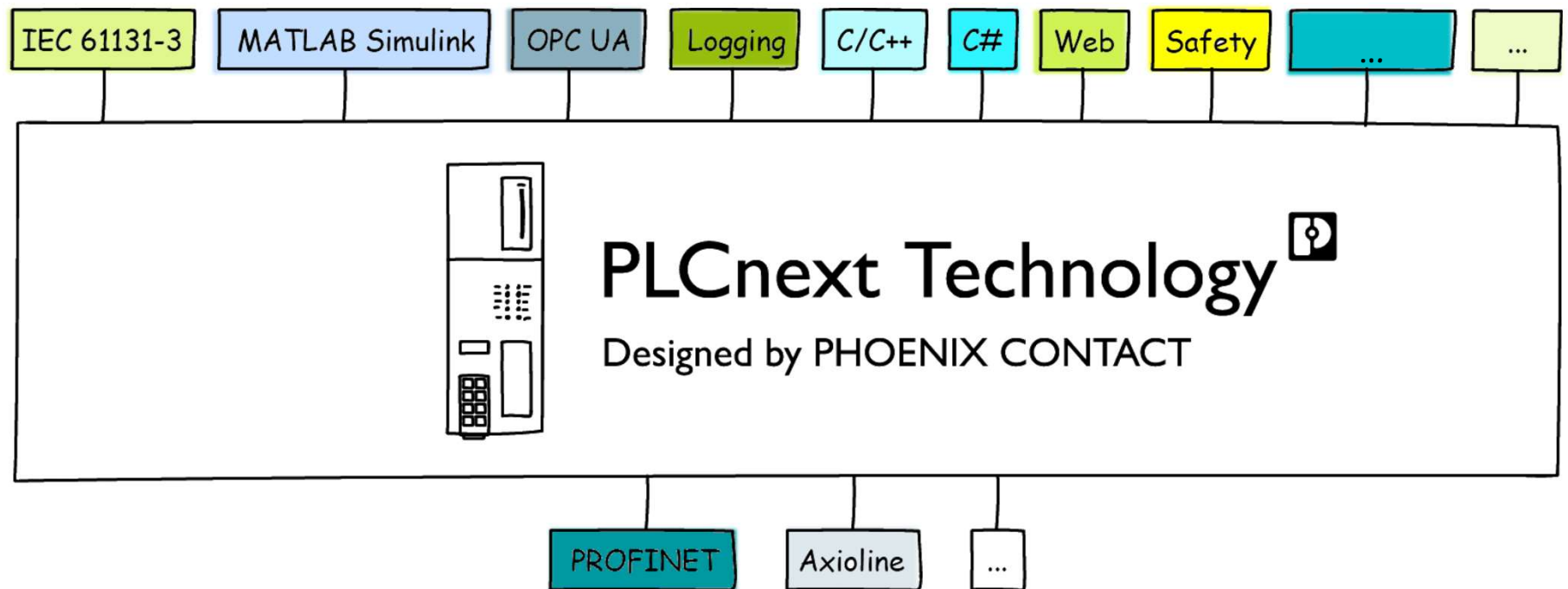


- **PLCnext Technology is based on Linux...**
  - Open source Linux Packages
- **... but as performant as a “classic” PLC!**
  - Easy task management
  - Precise synchronization
  - Cycle-consistent data exchange
  - No Linux knowledge needed

## PLCnext Technology – Safety Functional Safety



# New technology PLCnext Technology



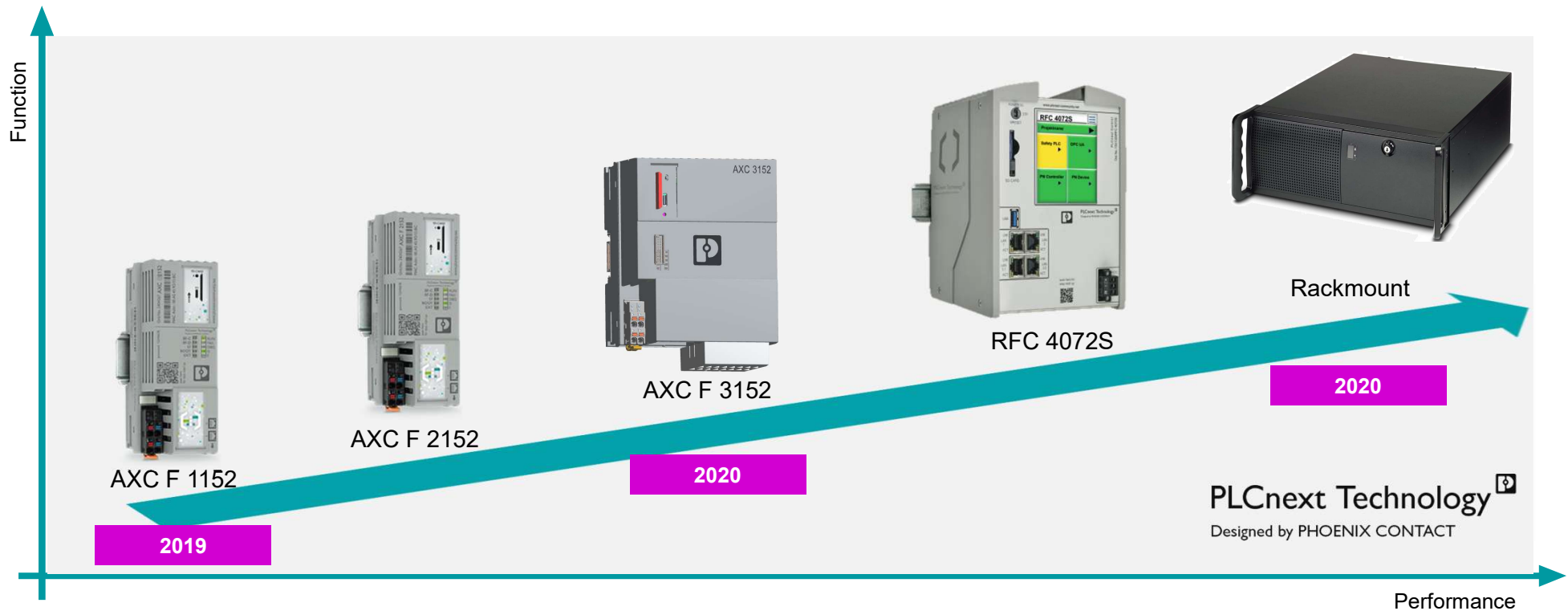
PLCnext Technology<sup>®</sup>  
enhance your automation thinking

**PLCnext Controls**

PLCnext Controls

## PLCnext Controls Portfolio

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PLCnext Controls

## PLCnext Control AXC F 1152



PLCnext Technology   
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- ✓ Cyclone 5 with ARM Cortex-A9 CPU 1 x 800 MHz
- ✓ Number Control-Tasks (IEC 61131): 8
- ✓ Min. cycle time (IEC 61131): 5 ms
- ✓ Profinet Controller & Device with 16 ARs
- ✓ 512 Mbytes RAM
- ✓ SD Flash card slot
- ✓ 1 x ETH-MAC interface (2 x 10/100 Mbit) switched
- ✓ Real-time clock
- ✓ Supports INLINE and AXIOLINE I/O modules
- ✓ Trusted platform module (TPM) for security
- ✓ Temperature range: -25°C up to +60°C

PLCnext Controls

## PLCnext Control AXC F 2152

PLCnext Technology   
Designed by PHOENIX CONTACT



- ✓ Cyclone 5 with ARM Cortex-A9 CPU 2 x 800 MHz
- ✓ 512 Mbytes RAM
- ✓ SD Flash card slot
- ✓ 1 x ETH-MAC interface (2 x 10/100 Mbit) switched
- ✓ Micro-USB type C
- ✓ Real-time clock
- ✓ Supports INLINE and AXIOLINE I/O modules
- ✓ Left side extension capability
- ✓ Trusted platform module (TPM) for security
- ✓ Temperature range: -25°C up to +60°C

## Feature Set Differences – AXC F 1152 vs. AXC F 2152

Feature	AXC F 1152	AXC F 2152
<b>CPU</b>	Cyclone 5 with ARM Cortex-A9 1 x 800 MHz	Cyclone 5 with ARM Cortex-A9 2 x 800 MHz
<b>Approvals</b>	UL, CE	UL, CE, Marine, ATEX
<b>Max. number of control tasks</b>	8 (1 x 8)	32 (2 x 16)
<b>PLCnext extension support (left-hand side)</b>	No	Yes
<b>PROFINET Features</b>	Controller & Device with max. 16 ARs	Controller & Device with max. 64 ARs
<b>Min. task cycle time</b>	5 ms	1 ms



PLCnext Controls

## PLCnext Control AXC F 3152



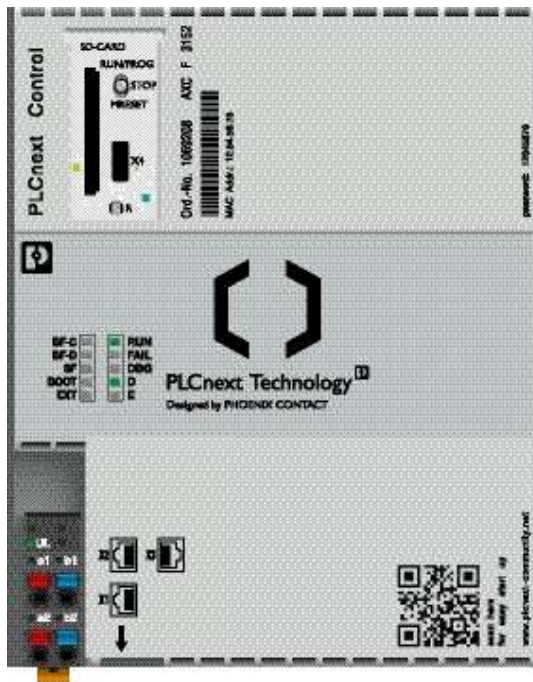
PLCnext Technology   
Designed by PHOENIX CONTACT

- ✓ Intel ATOM x5-E3930 dual-core CPU (2 x 1,3 GHz)
- ✓ 2 GB DDR4 dual-channel RAM
- ✓ 3 independent ETH-MAC interfaces (3 x 1 Gbit)
- ✓ Supports 2 PLCnext Control extensions (internal PCIe bridge)
- ✓ Supports INLINE and AXIOLINE I/O modules
- ✓ Integrated uninterruptible power supply (UPS) for targeted application shutdown
- ✓ SD card slot
- ✓ Diagnostic LEDs
- ✓ Real-time clock
- ✓ Temperature range: -25°C up to 60°C
  - ✓ Optional fan to increase service life

PLCnext Controls

## PLCnext Control AXC F 3152

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- ✓ Based on PLCnext Technology
  - ✓ Linux operating system
  - ✓ Supports high-level programming languages
  - ✓ PROFICLOUD Connection
- ✓ PROFINET Controller (up to 128 devices) + Device
- ✓ OPC UA
  - ✓ Easy integration of other fieldbus protocols (Linux OS)
- ✓ Prepared for TSN
- ✓ Trusted platform module (TPM) for security
- ✓ Approvals
  - ✓ UL (Hazloc), CUL
  - ✓ DNV/GL, LR, BV, ABS, ...
  - ✓ IEC Ex, ATEX

PLCnext Control Extensions

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## PLCnext Control Extensions Portfolio

**AXC F XT ETH 1TX**  
Art. No: 2403115



Released

**AXC F XT IB**  
Art. No: 2403018



Released

**AXC F XT PB**  
Art. No: 1091657



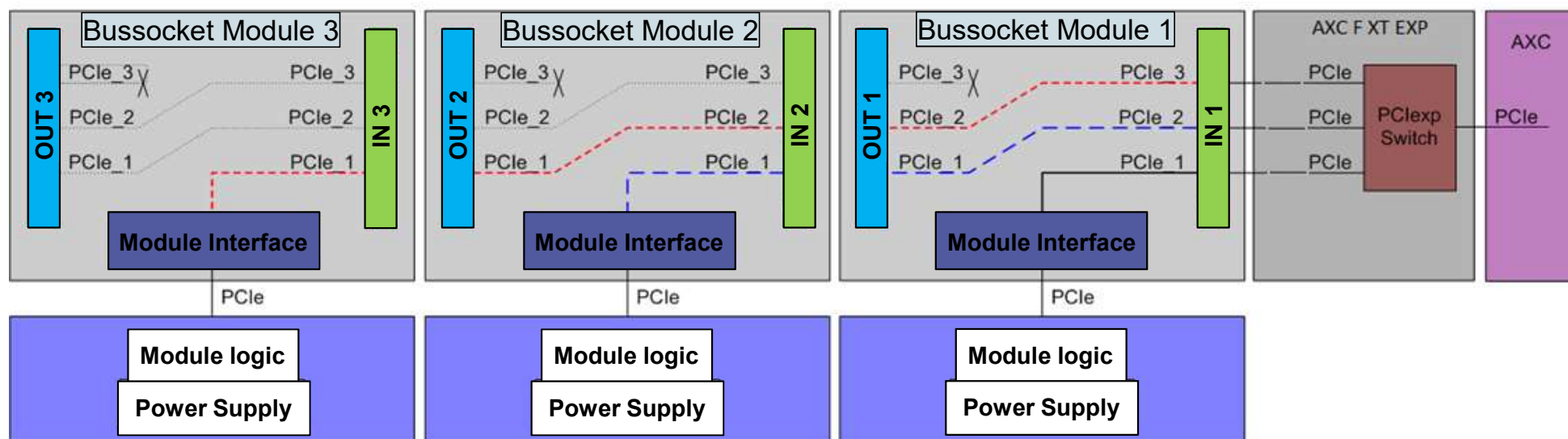
NEW

**AXC F XT EXP**  
Art. No: 1139999



NEW

## Bussocket function AXC F XT EXP



## PLCnext Control Extensions

# Expansions with AXC F 2152

AXC F 2152 have one PCIe Lane Gen 1. Usable is one Extension:

- AXC F XT ETH 1TX **or**
- AXC F XT IB **or**
- AXC F XT PB

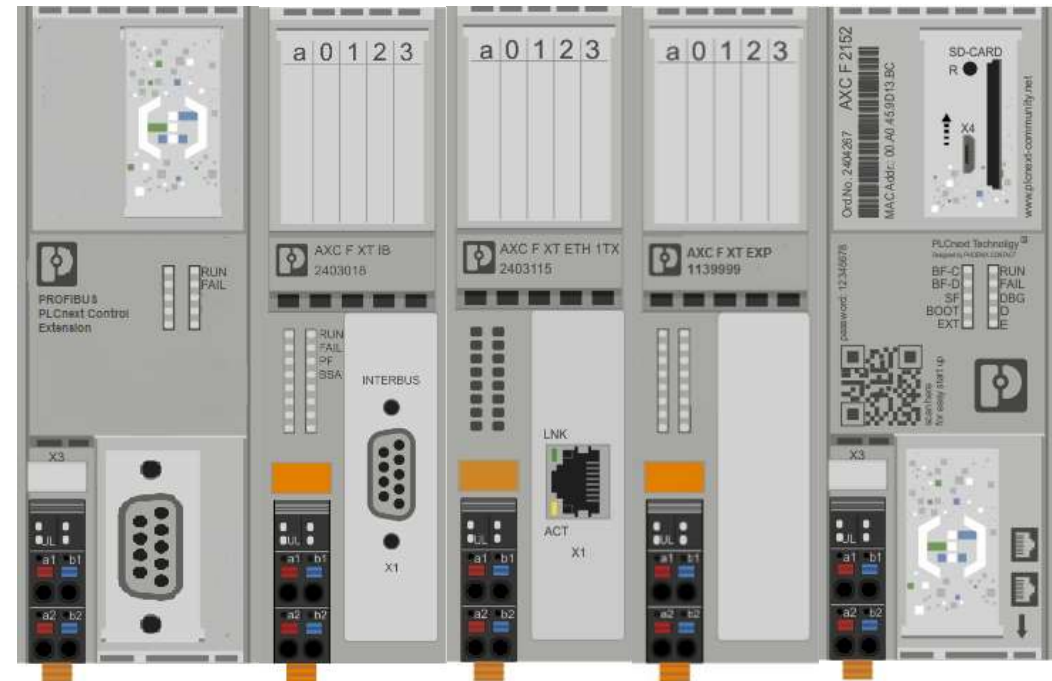


## PLCnext Control Extensions

# Extensions with AXC F 2152

AXC F 2152 with AXC F XT EXP - Three Extensions are usable simultaneously:

- AXC F XT EXP and
- AXC F XT ETH 1TX and
- AXC F XT IB and
- AXC F XT PB



PLCnext Controls

## PLCnext Control RFC 4072S

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- ✓ Intel i5 6300U 2 x 2,4 GHz processor
- ✓ 8 GB DDR 4 dual channel RAM
- ✓ Profisafe integrated (up to 300 F-Devices)
- ✓ Operation Mode Switch
- ✓ Touch display
- ✓ SD Flash card slot
- ✓ 3 ETH-MAC interfaces  
(2 x 1 Gbit, 1 x 100 Mbit switched)
- ✓ Real-time clock
- ✓ Trusted platform module (TPM) for security
- ✓ Temperature range: 0°C up to 55°C with fan



# PLCnext Technology

enhance your automation thinking

**Security by design  
acc. to IEC 62443**

# IEC 62443: IT-Security for Industrial Automation Control Systems



# IEC 62443

*Industrial Automation  
Basis Standard*

# IEC 62443 Structure and Systematics

General	IEC-62443-1-1 Concepts and models	IEC-62443-1-2 Master glossary of terms and abbreviations	IEC-62443-1-3 System security conformance metrics	IEC-62443-1-4 IACS security life-cycle and use-cases	Role: Asset owner
	IEC-62443-2-1 Security program requirements for IACS asset owners	IEC-62443-2-2 IACS protection levels	IEC-62443-2-3 Patch management in the IACS environment	IEC-62443-2-4 Security program requirements for IACS service providers	
	IEC-62443-2-5 Implementation guidance for IACS asset owners				
Policies and procedures					Role: System integrator
System	IEC-62443-3-1 Security technologies for IACS	IEC-62443-3-2 Security risk assessment and system design	IEC-62443-3-3 System security requirements and security levels		Role: Device manufacturer
	IEC-62443-4-1 Product security development life-cycle requirements	IEC-62443-4-2 Technical security requirements for IACS components			
Component					

 Process requirements  
 Functional requirements  
 PHOENIX CONTACT Certifications



Secure Product Development according to IEC 62443-4-1

# IEC 62443-4-1 Secure Product Development Lifecycle Certificate

**CERTIFICATE**  
No. Q4B 029429 0007 Rev. 00

Holder of Certificate: **PHOENIX CONTACT GmbH & Co. KG**  
Flachmarkstr. 8  
32825 Blomberg  
GERMANY

Factory(ies): **PHOENIX CONTACT Electronics GmbH**  
Industry Management and Automation  
Business Unit Control Systems  
Dringenaue Strasse 30, 31812 Bad Pyrmont, GERMANY

**PHOENIX CONTACT Software GmbH**  
Langenbruch 6, 32657 Lemgo, GERMANY

Certification Mark: 

Scope of Certificate: **Secure Product Development Lifecycle**

Applied Standard(s): IEC 62443-4-1:2018  
PPP 15002A:2018 (IEC 62443-4-1 Full Process Profile)

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a management system which meets the requirements of the listed standards. The results are documented in a report. See also notes overleaf.

Report No.: 18CR015007

Valid until: 2021-07-29

Date, 2018-08-01 

Page 1 of 1  
TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 55 • 80339 Munich • Germany



ID	Requirement	Maturity Level
<b>Practice 1 – Security Management</b>		
SM-1	Development Process	3
SM-2	Identification of Responsibilities	2
SM-3	Identification of Applicability	2
SM-4	Security Expertise	2
SM-5	Process Scoping	2
SM-6	File Integrity	2
<b>Practice 2 – Specification of Security Requirements</b>		
SR-1	Product Security Context	2
SR-2	Threat Model	2
SR-3	Product Security Requirements	2
SR-4	Product Security Requirements Content	2
SR-5	Security Requirements Review	2
<b>Practice 3 – Secure by Design</b>		
SD-1	Secure Design Principles	2
SD-2	Defense In Depth Design	2
SD-3	Security Design Review	2



## IEC 62443-2-4 - ICS-Security Service Provider Certificate



As an ICS service provider we are offering

- Security services
- Design and commissioning of an automation system for acceptance as system integrator



ICS = Industrial Control System



PLCnext Technology Security

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## Secure Product Development according to IEC 62443-4-1



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## Functional Product Requirements for IACS acc. to IEC 62443-4-2



Ecosystem & PLCnext Store

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# The Open Ecosystem for Limitless Automation

PLCnext Technology   
enhance your automation thinking

PLCnext Control



**Open Control Platform**  
PLCs in various performance classes including PLCnext Runtime System and accessories for PLCnext Technology

PLCnext Engineer



**Engineering Software**  
Engineering tool for commissioning, configuring, and programming PLCnext Controls

PLCnext Store



**Software Store for Automation**  
Apps for functional extension of PLCnext Control and PLCnext Engineer

PLCnext Community



**User Collaboration & Resources**  
Information, support, and helpful resources about PLCnext Technology including FAQs, forums, tutorials and a GitHub presence

 **PHOENIX  
CONTACT**

# Phoenix Contact

[www.phoenixcontact.com/global](http://www.phoenixcontact.com/global)

[www.proficloud.net](http://www.proficloud.net)

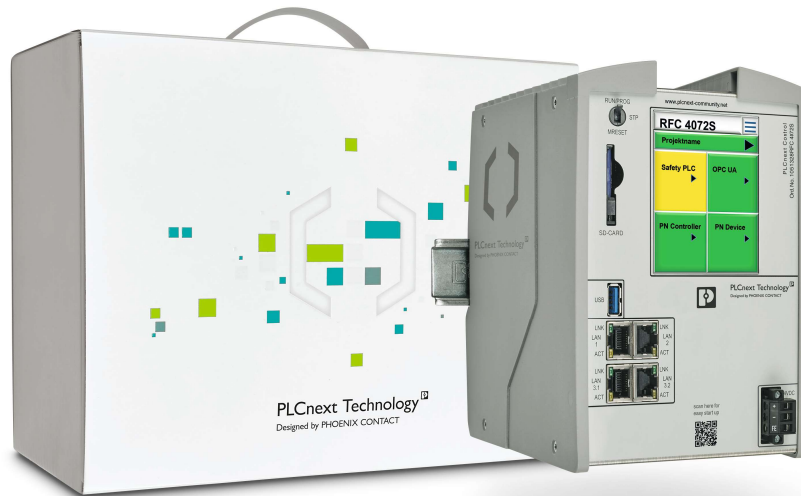
[www.plcnext-community.net](http://www.plcnext-community.net)

[www.phoenixcontact.com.mx](http://www.phoenixcontact.com.mx)

Actividades 2020 Folletos Presentaciones Webinar



Antonio Gordillo / Product Manager ICE IMA



# Thank you