

PLCnext Technology Ecosystem

PLCnext Technology

Much more
than just a great vision –
enhanced automation today!



PLCnext TechnologyTM
Designed by PHOENIX CONTACT



PLCnext Technology[®]

Designed by PHOENIX CONTACT



PLCnext Control

Open Control Platform

Devices in various performance classes including PLCnext Runtime System and accessories



PLCnext Engineer

Engineering Software

Engineering tool for commissioning, configuring and programming PLCnext Control



PLCnext Store

Software Store

Apps for functional extension of PLCnext Control and PLCnext Engineer



PLCnext Community

Collaboration & Resources

We offer our community information, support and helpful resources, including FAQs, forums, tutorials, and a GitHub presence

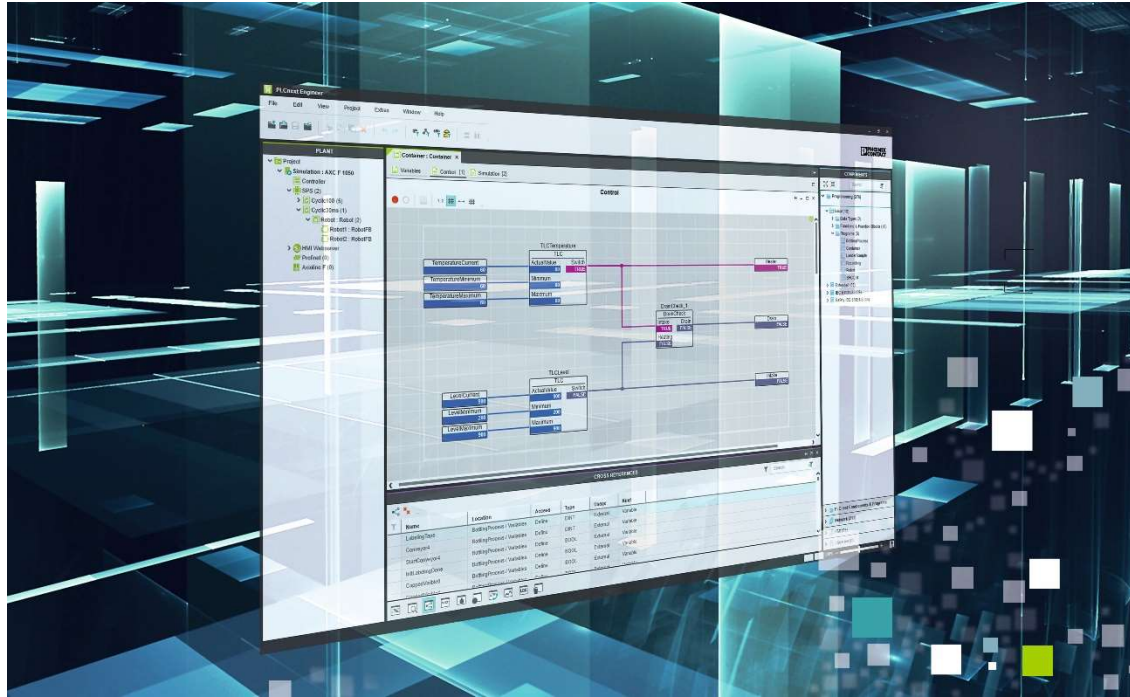


PLCnext Engineer
Engineering Software

Agenda

PLCnext Engineer

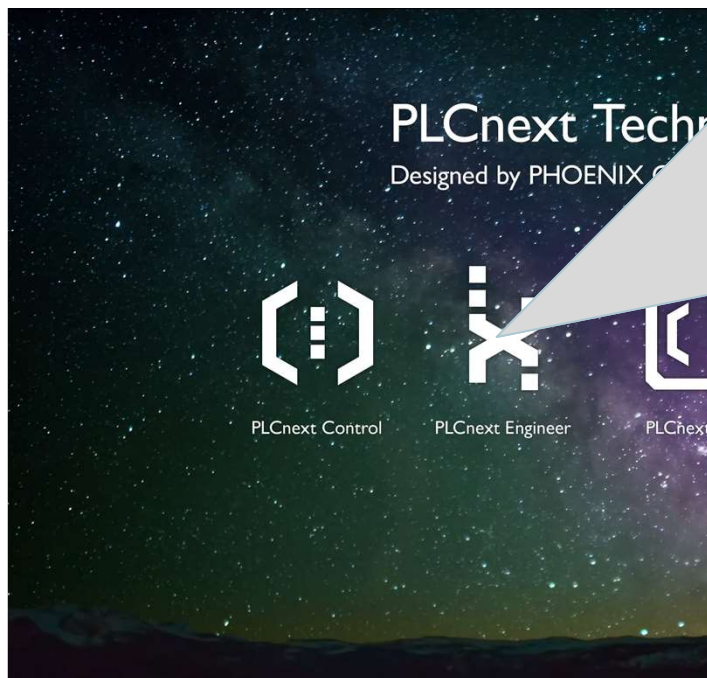
- PLCnext Engineer
- Tipos de Software
- Equipos Objetivos
- Ejemplos de Utilización



PLCnext Engineer

PLCnext Ecosystem

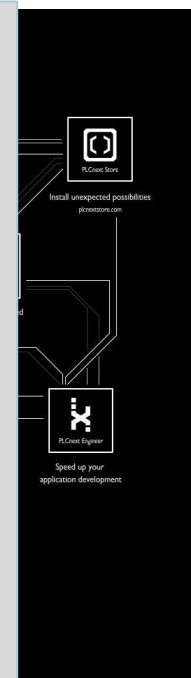
PLCnext Technology



The image shows the PLCnext Engineer software box, which is white with a grey 'X' logo and the text "PLCnext Engineer Engineering Software" and the PHOENIX CONTACT logo. Surrounding the box are various feature labels in colored boxes: SFC+, Code Analysis, Trending, Application Control, IEC 61850, Service Programming, Alarming, C#, Safety Basics, and Source Code Management.

Engineering Software

Engineering tool for commissioning, configuring, and programming PLCnext Controls

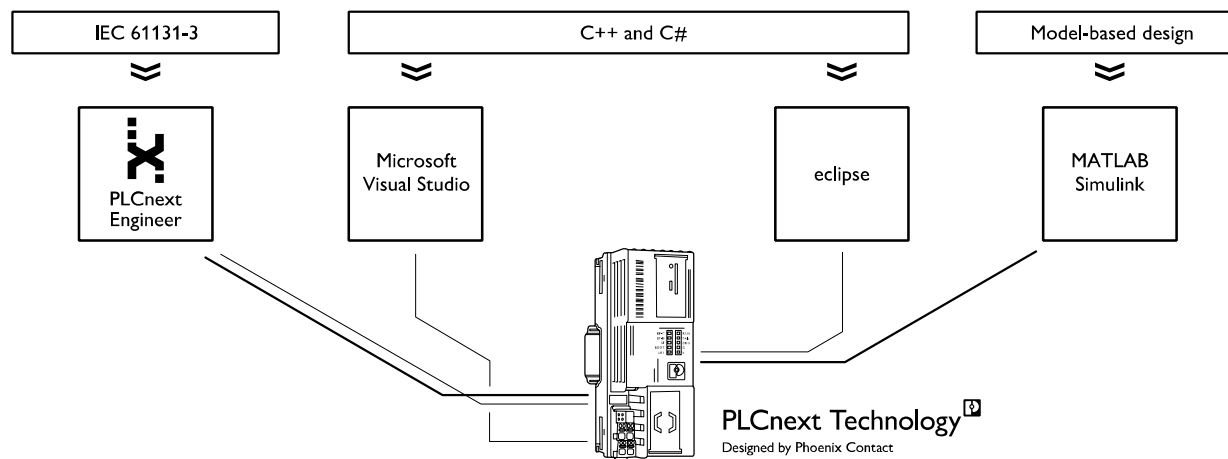


enhanced convenience

Engineering and Application Development

PLCnext Technology³

Designed by Phoenix Contact

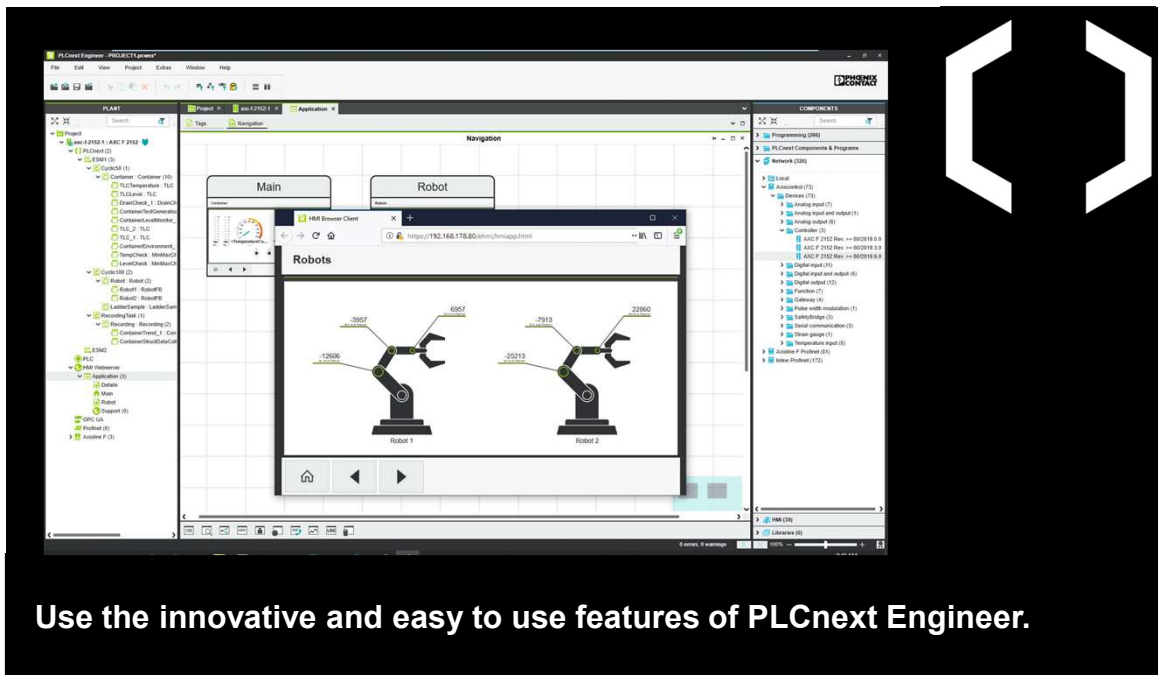


With PLCnext Technology, several developers from different generations, with different skill sets and expertise can work on one controller program, in parallel and yet independently, using different programming languages.

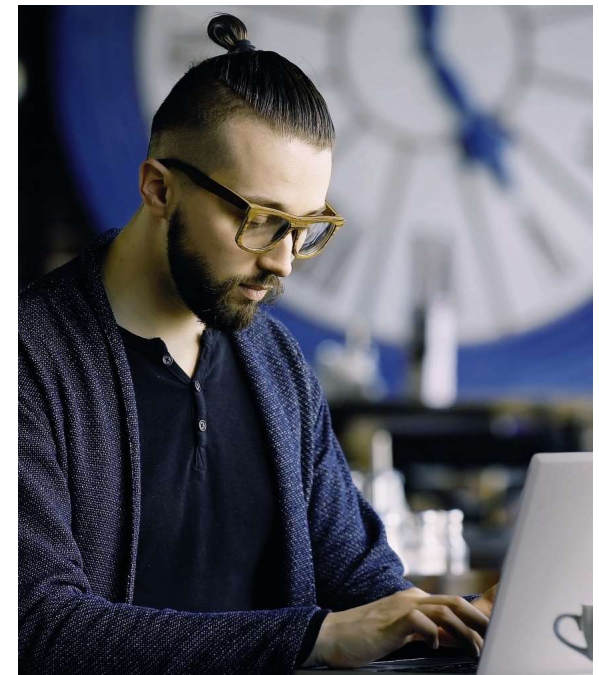
enhanced convenience

IEC 61131-3 Programming with PLCnext Engineer

PLCnext Technology 
Designed by PHOENIX CONTACT



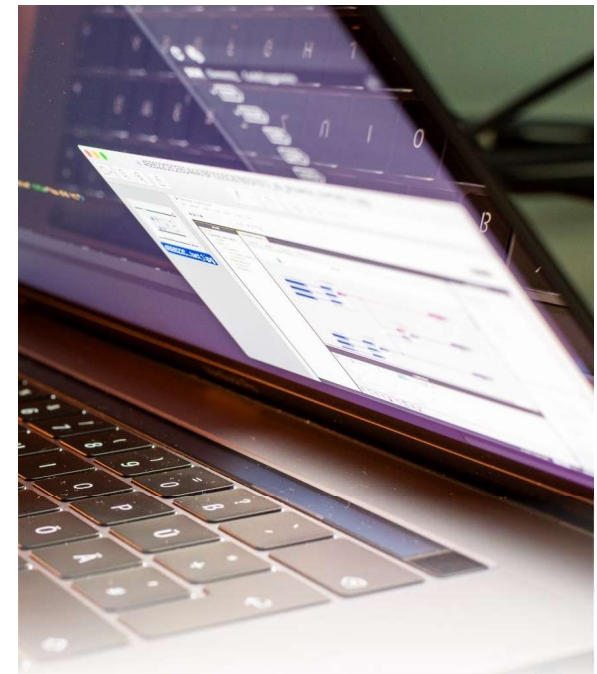
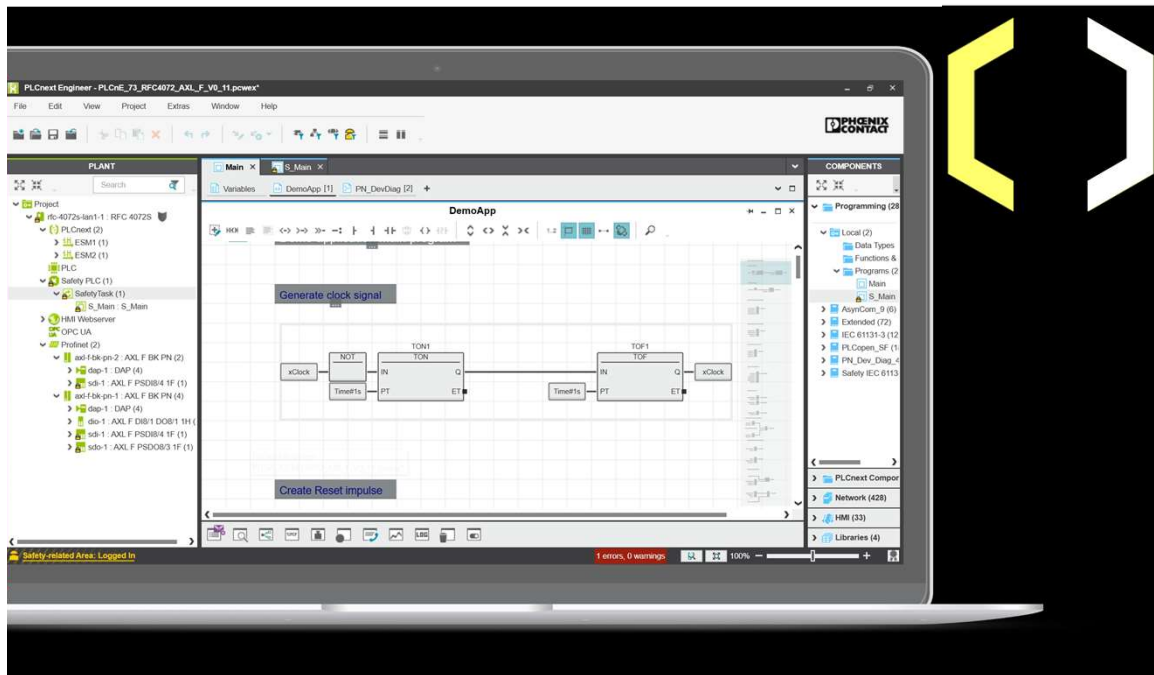
Use the innovative and easy to use features of PLCnext Engineer.



Standard and safety programming in one engineering software

PLCnext Engineer

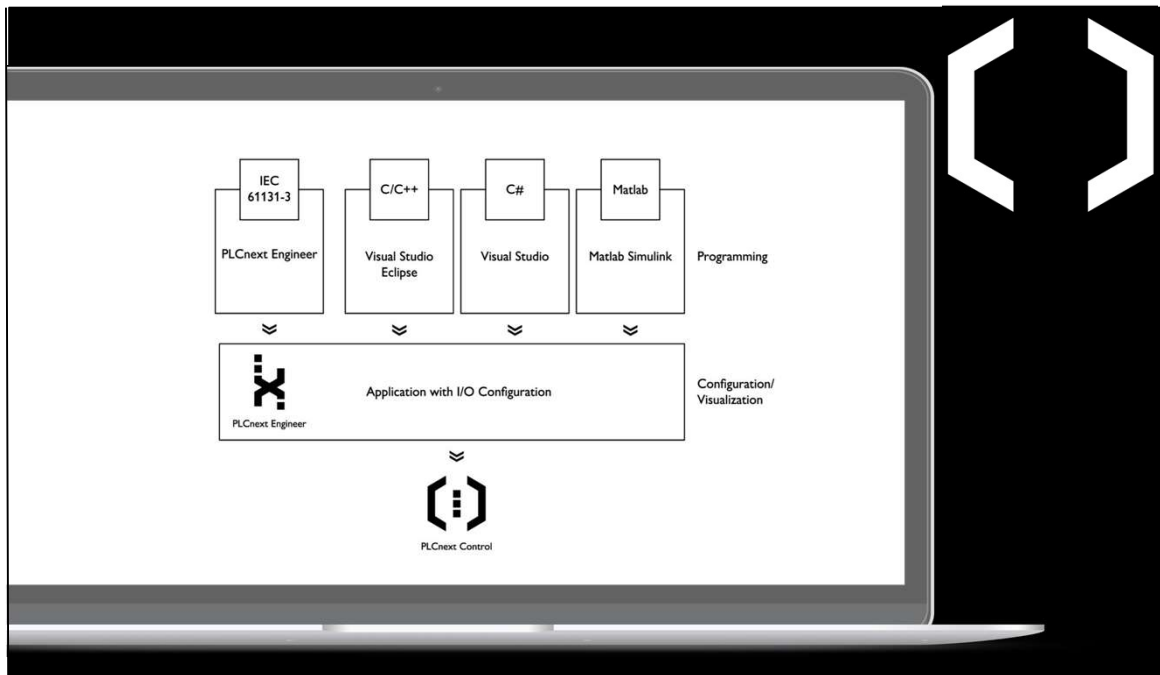
PLCnext Technology 
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PLCnext Technology – Limitless engineering options

PLCnext Engineer

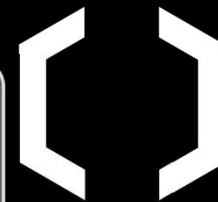
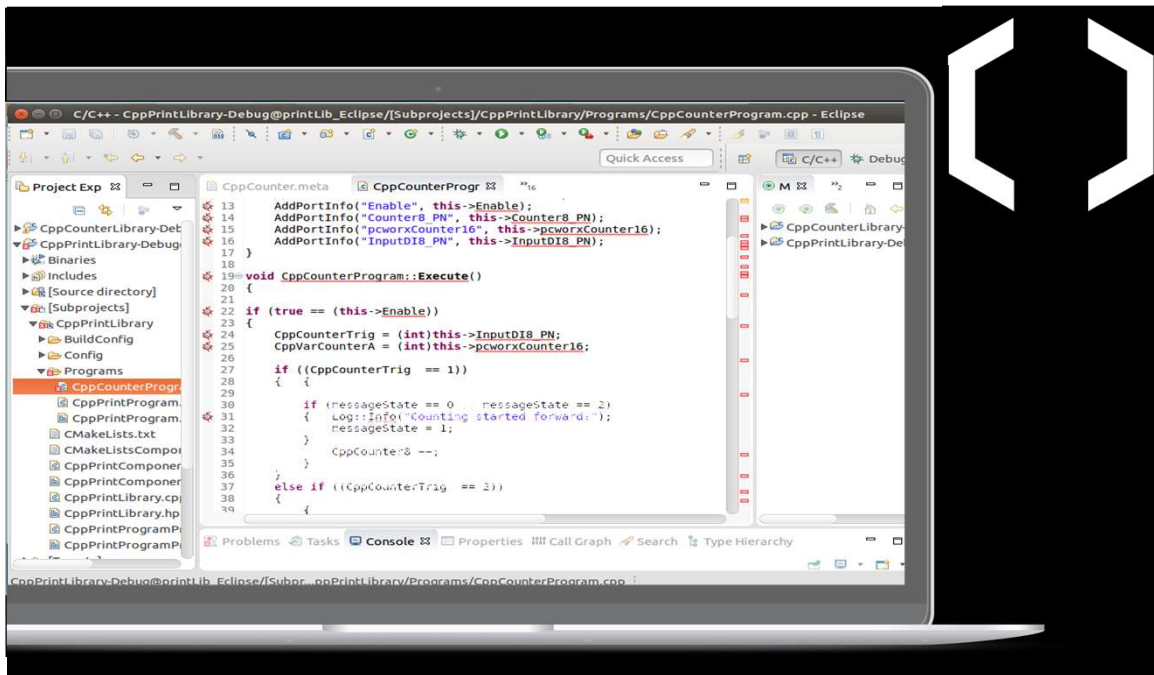
PLCnext Technology [®]
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Programming – C/C++

PLCnext Technology 
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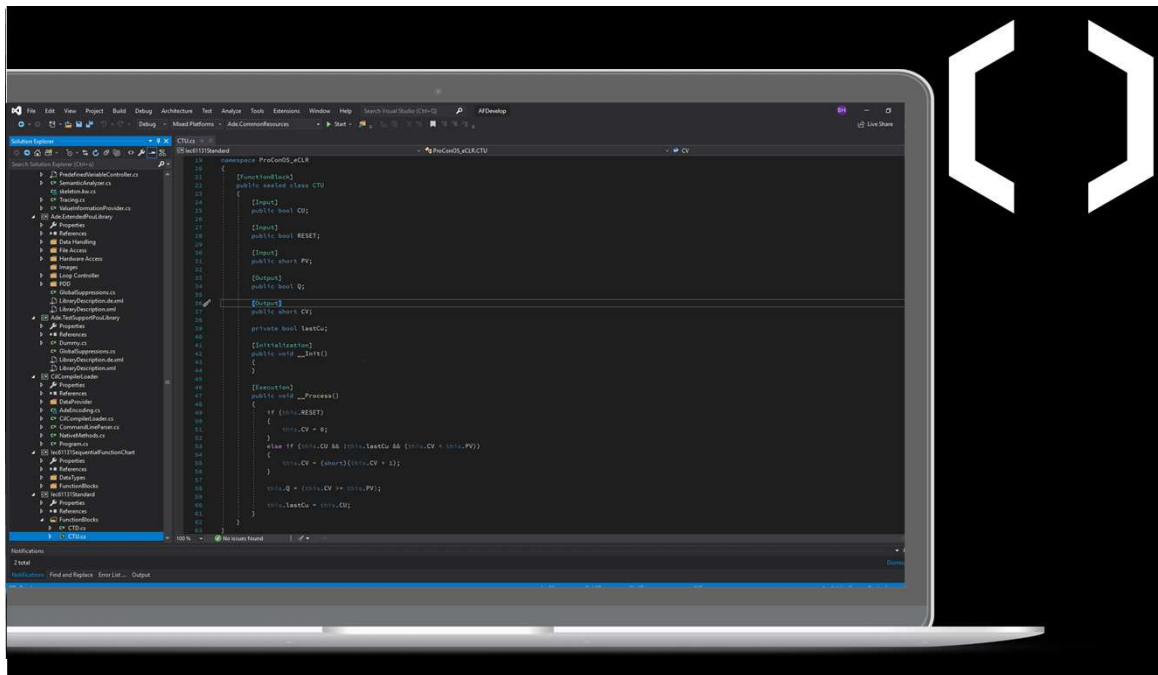
 eclipse

- C/C++ acc. to standard
- Easy interface to the PLCnext Runtime System
- Support of remote debugging
- Use the tool you are familiar with

enhanced convenience

Programming – C/C++

PLCnext Technology 
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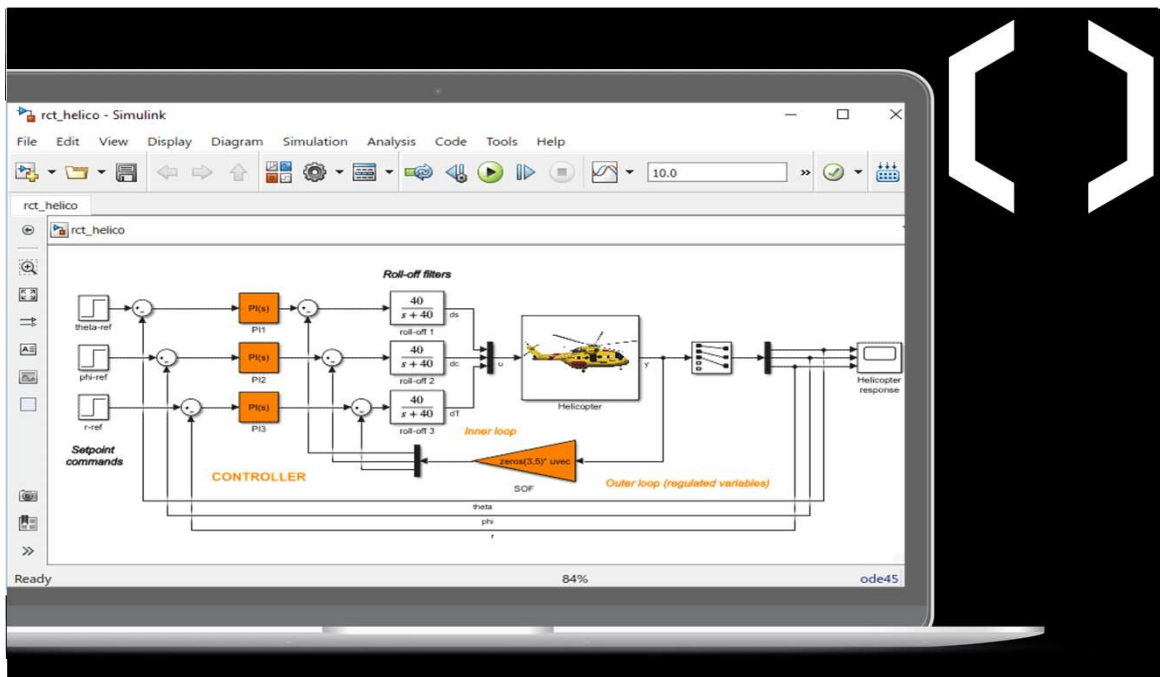


- Development and integration of function blocks with C#
- Dedicated plug-in for Visual Studio.
- Execute C# function blocks in real-time with the eCLR runtime system.

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MATLAB Simulink

PLCnext Technology 
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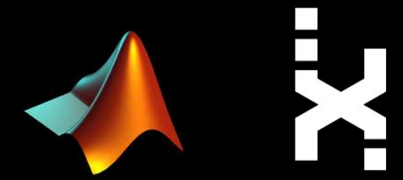
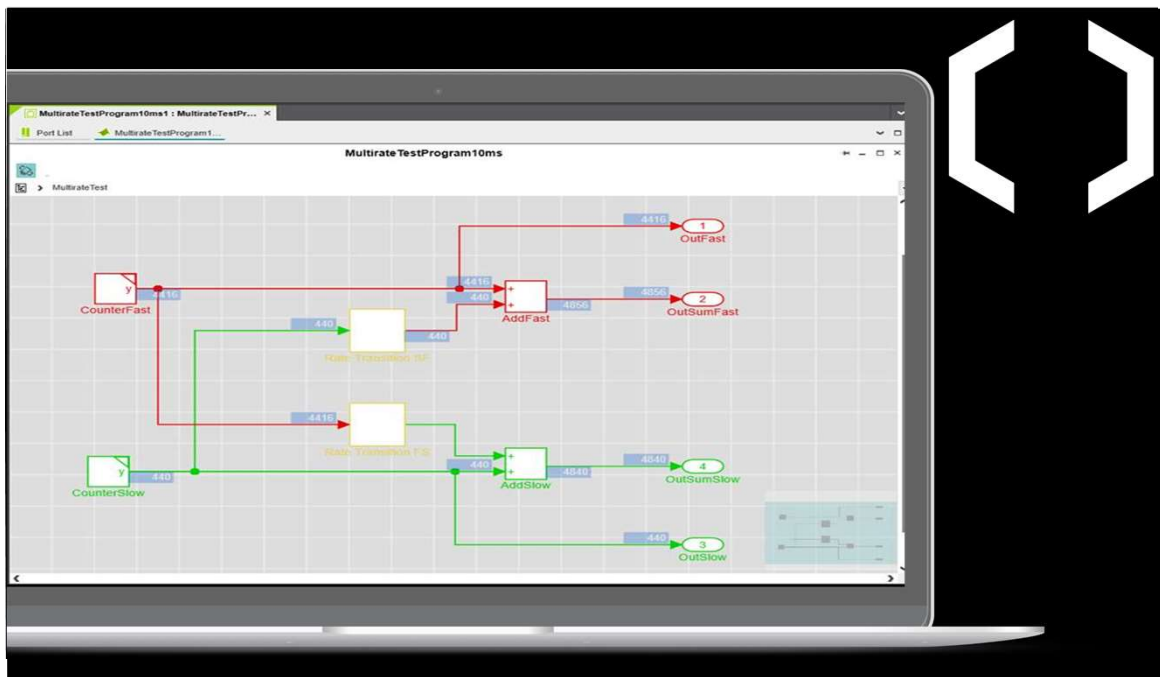


Seamless integration of model-based design & development with MATLAB Simulink.

enhanced convenience

MATLAB Simulink & PLCnext Engineer

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

enhanced development

Connected coworking

PC-Worx
Engineer

Microsoft
Visual Studio

Matlab
Simulink

Matlab
Simulink

eclipse

IEC 61131

C++

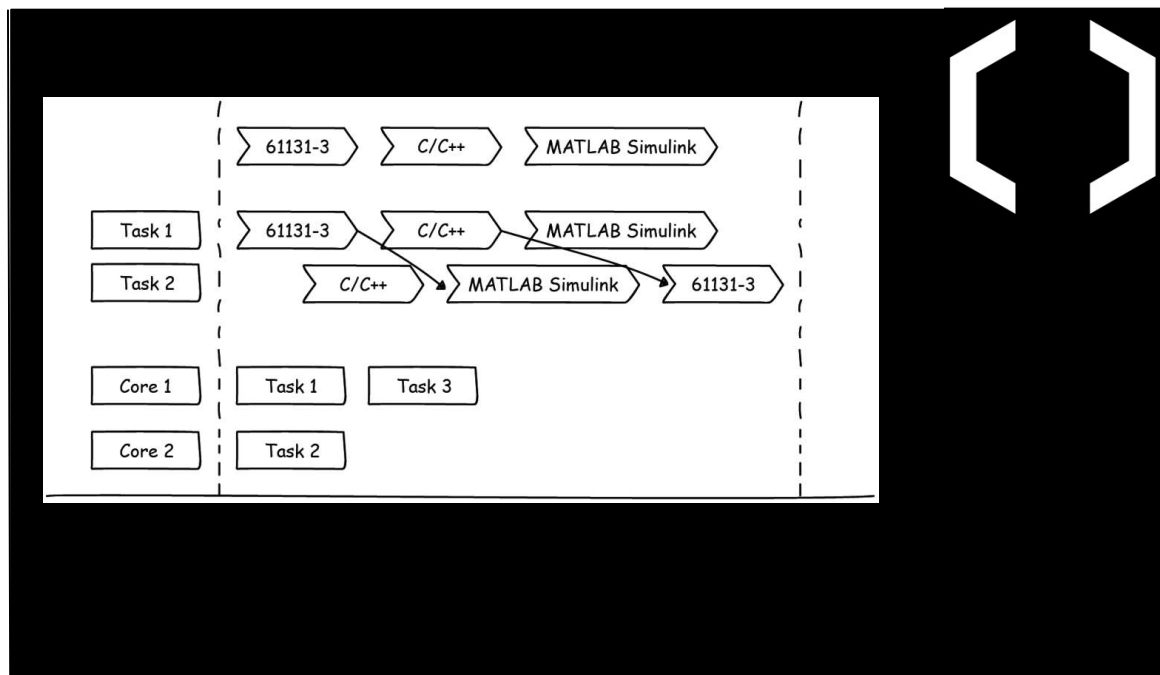
With PLCnext Technology, several developers from different generations can work on one controller program independently of each other using different programming languages. Thus, you can develop complex applications quickly using the advantages of the classic PLC world and the openness and flexibility of PLCnext Technology.

PLCnext Technology 

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enhanced performance – PLC-typical Real-time Performance

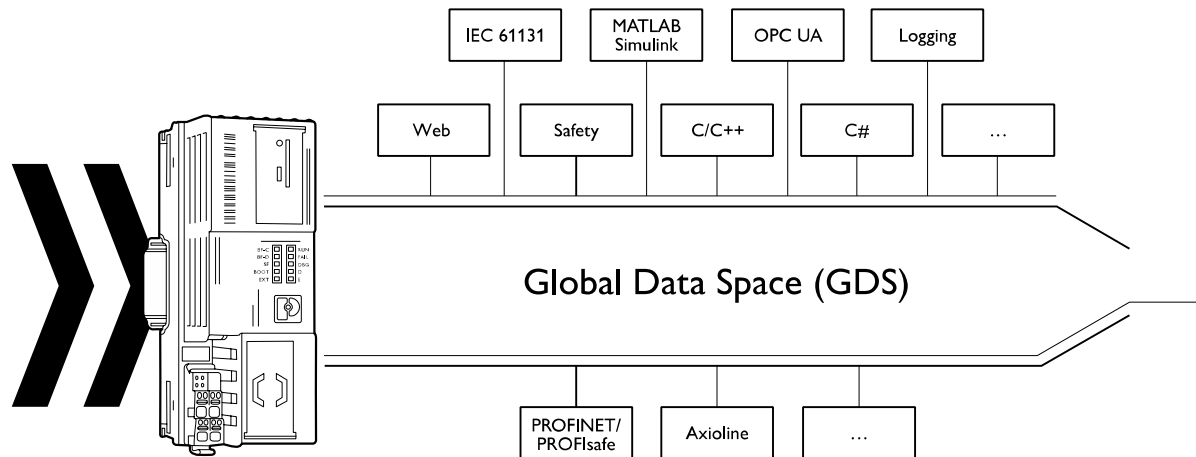
Execution & Synchronization Manager



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.

PLCnext Technology

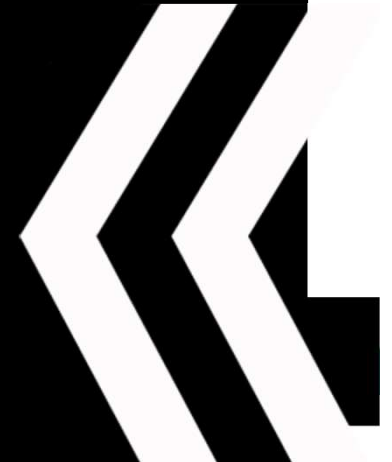
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PLCnext Engineer modular software platform



PLCnext Engineer

Speed up your
application development



PLCnext Engineer

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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

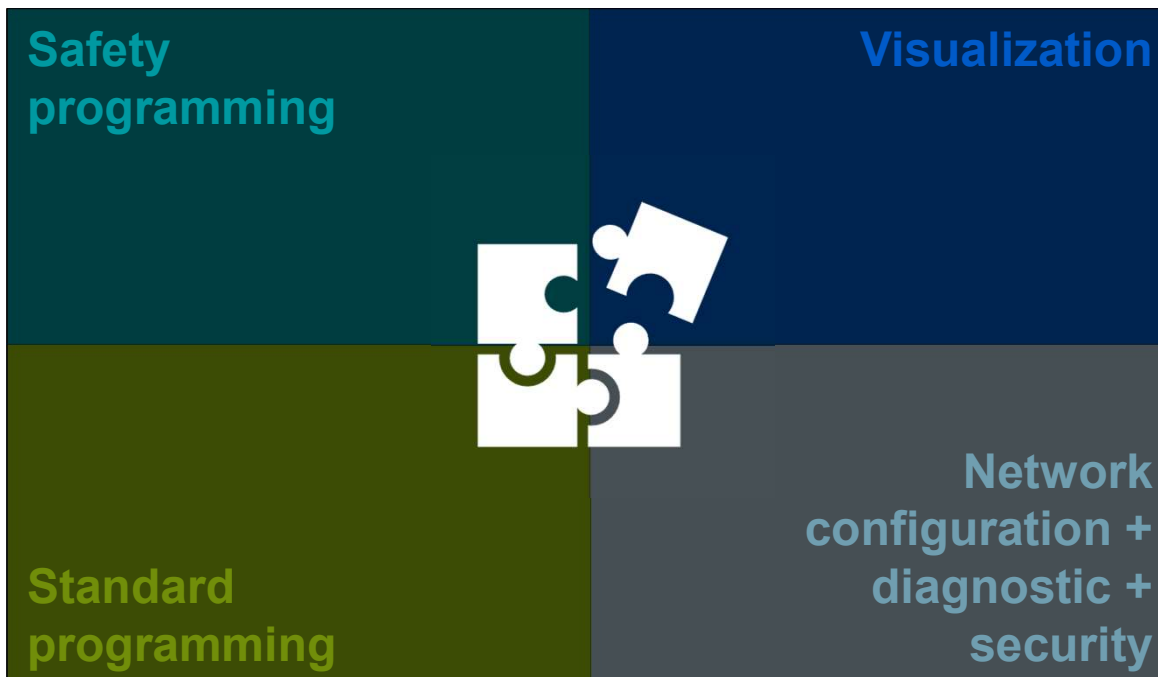
- Intuitive user interface
- Clear structures

The software for configuration and engineering



PLCnext Engineer

Complete Integrated System

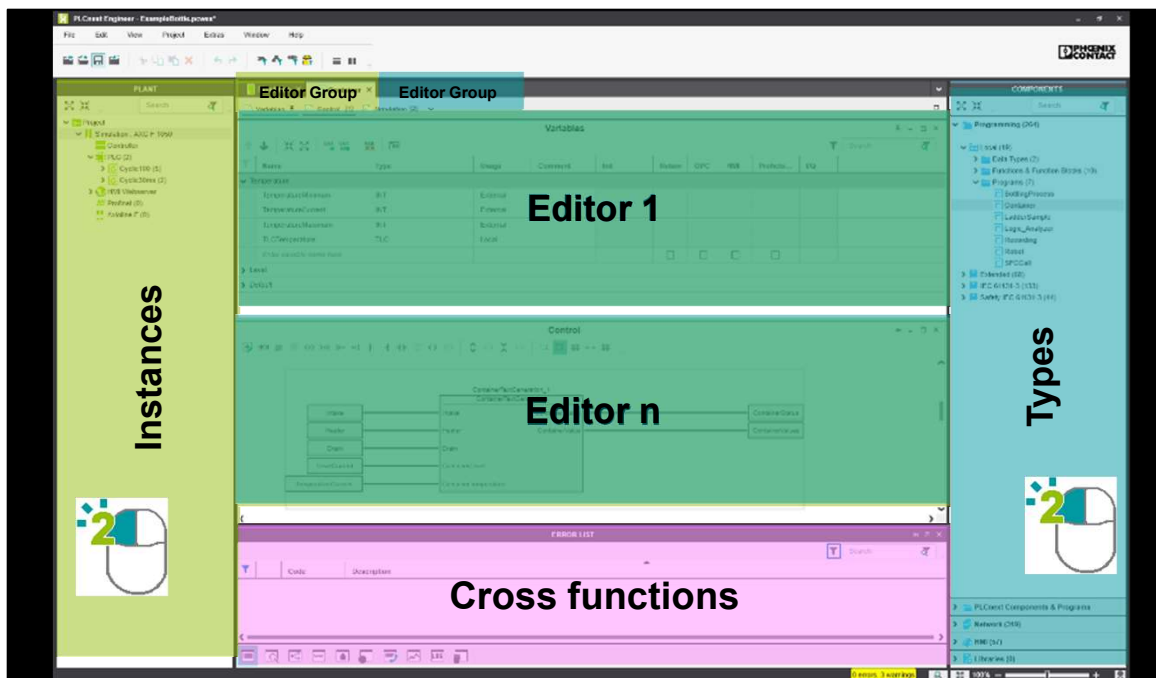


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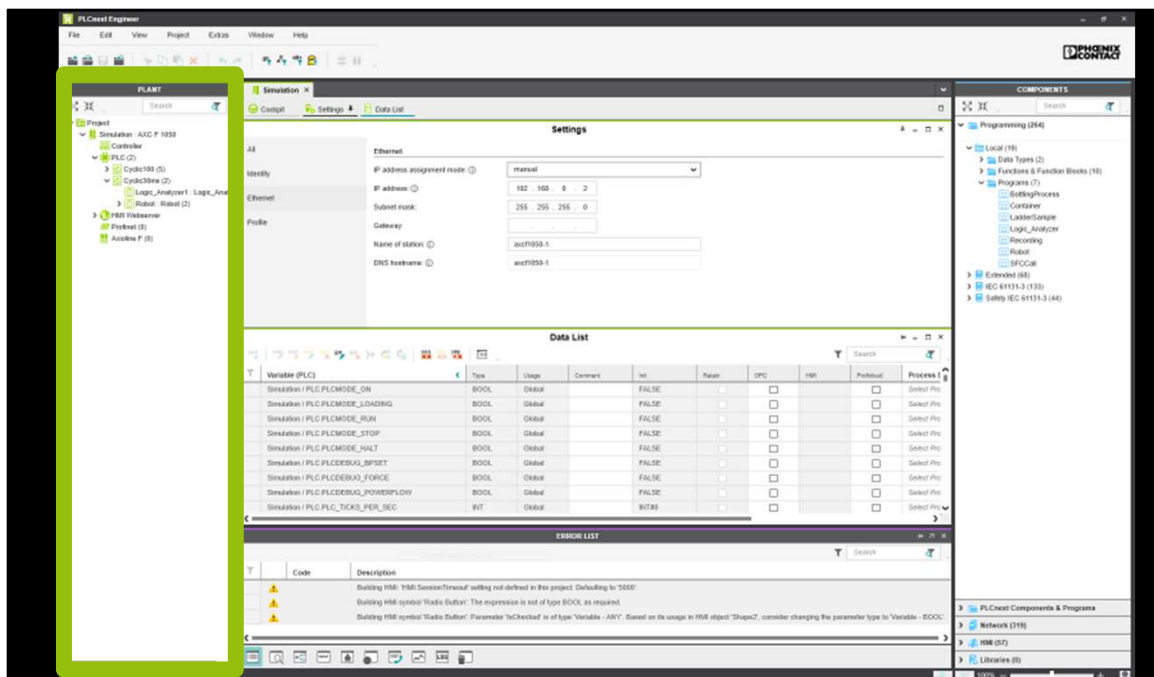
PLCnext Engineer – User Interface

Information Architecture



PLCnext Engineer – User Interface

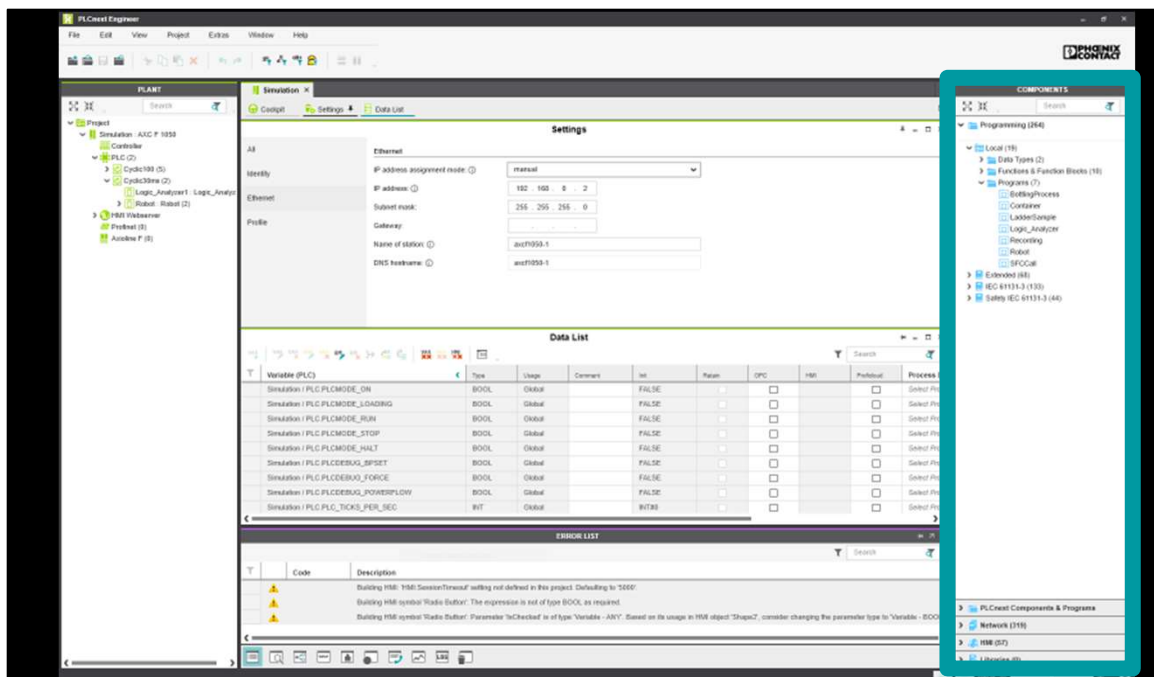
The User Interface – Plant Area



- Instance trees
 - Programs
 - Visualization pages
 - IO configuration
- Task configuration
- Controller configuration
- Central Cockpit
 - Application control
 - Device information

PLCnext Engineer – User Interface

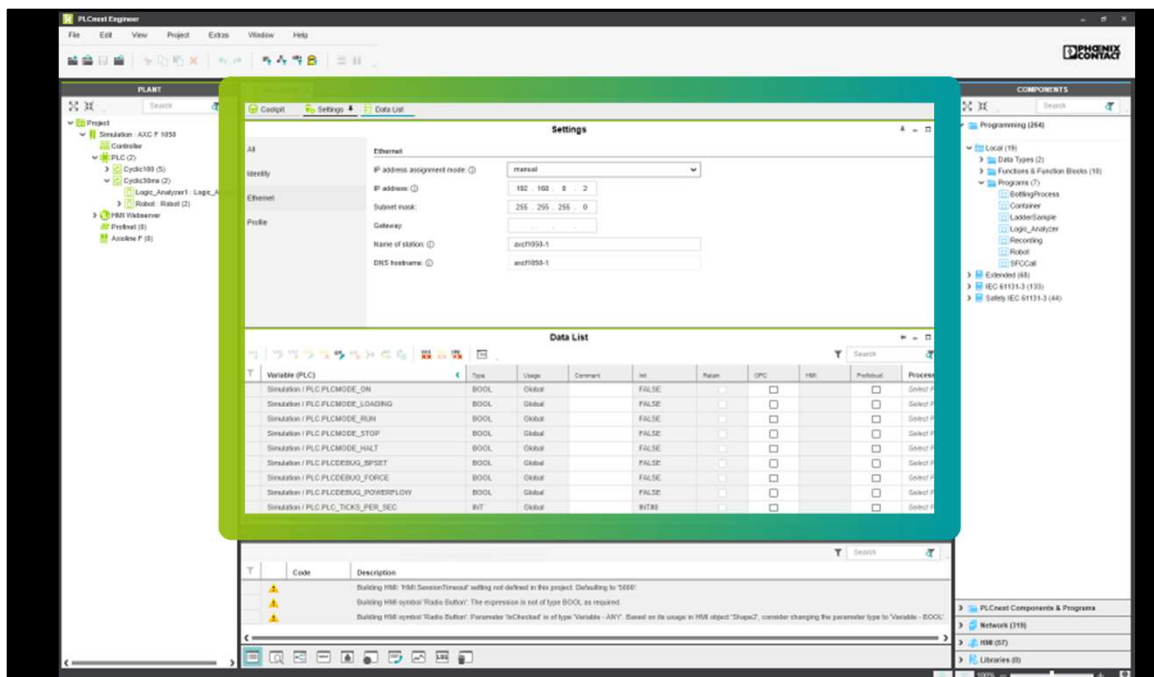
The User Interface – Component Area



- IEC 61131-3
 - Programs, functions and function blocks
 - Data types
- Device catalogue
 - Import of devices
- Visualization symbol library
- References to libraries

PLCnext Engineer – User Interface

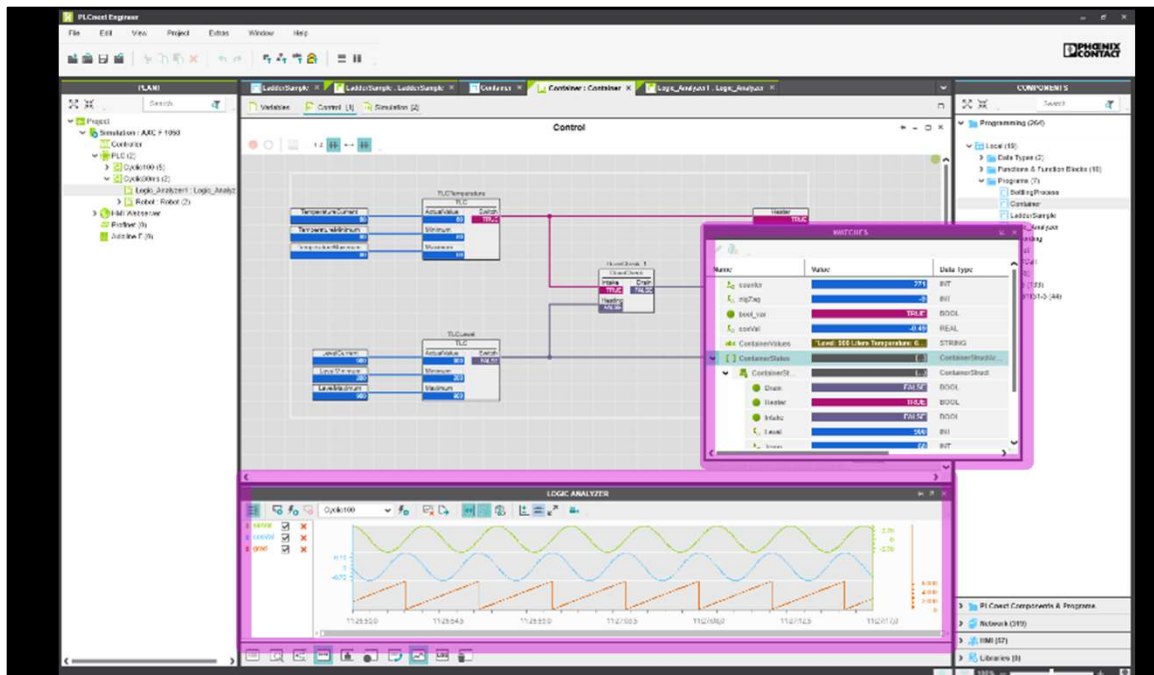
The User Interface – Editor Area



- Central editing
- Split view windows
- Full screen windows
- Arrange multiple editor windows
- Type or instance Editor color highlighted

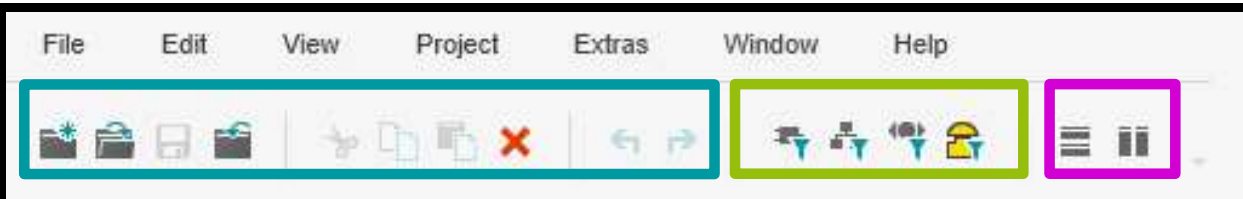
PLCnext Engineer – User Interface

The User Interface – Cross Function Area



- Undockable windows
- Message window
- Global find & replace
- Cross references
- Watch window
- Debug information
- Logic analyzer
- Logging
- Recycle bin
- PLC Online state

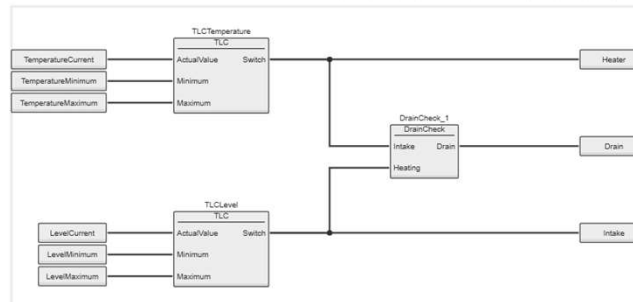
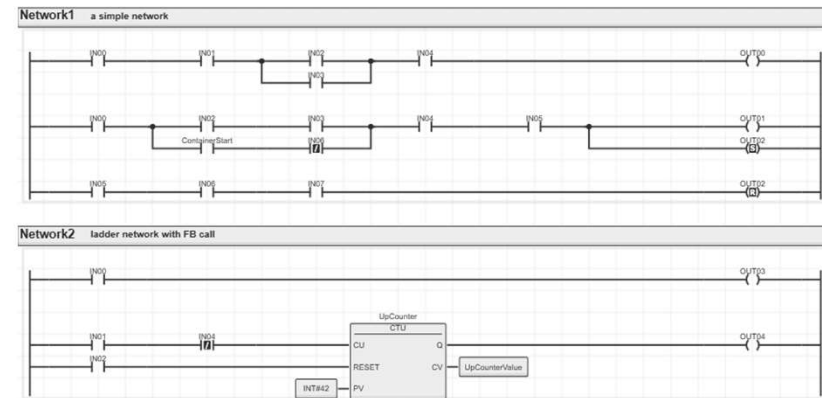
User Interface – Menu Bar



- **Standard functions**
Windows conform
 - Project handling
 - Cut / copy / paste objects
 - Delete objects
 - Undo / redo
- **System filter**
Show or hide information
 - Programming objects
 - Network related objects
 - HMI related objects
 - Safety related objects
- **Split Screen function**
Arrange two editor groups
 - Horizontal split mode
 - Vertical split mode

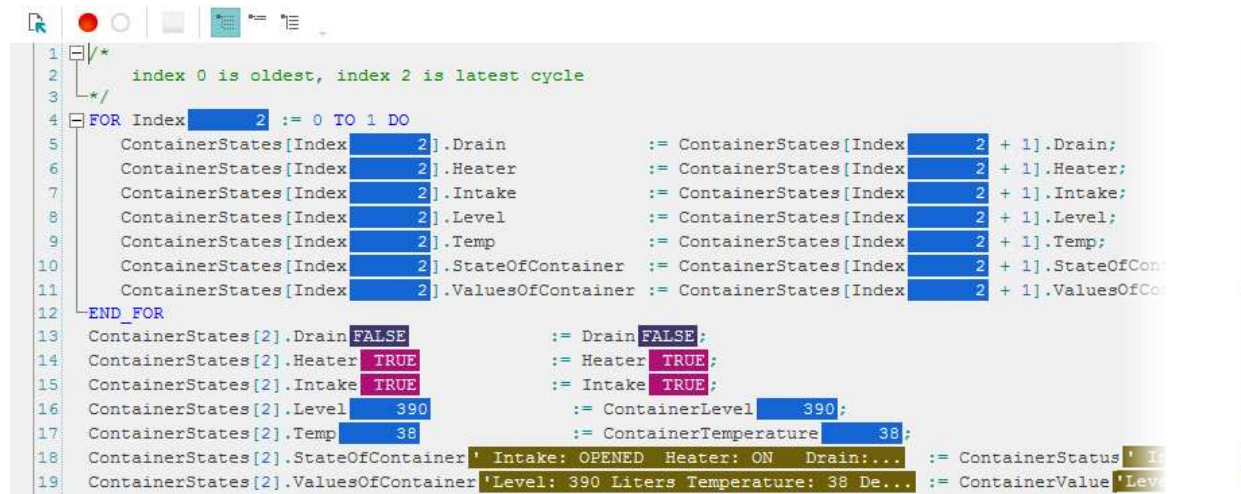
IEC 61131-3 Editors

- Graphical programming
 - Function Block Diagram (FBD)
 - Ladder (LD)
 - Network based or free graphical editor
 - Methods on function blocks in graphical languages



IEC 61131-3 Editors

- **Structured Text (ST)**
 - Syntax highlighting
 - Autofill assistant
 - IntelliSense function
 - Folding of code segments
 - RolePicker assistant
 - Templates for statements
 - Methods on function blocks



```

1  /*
2  |   index 0 is oldest, index 2 is latest cycle
3  | */
4  FOR Index := 0 TO 1 DO
5      ContainerStates[Index].Drain := ContainerStates[Index + 1].Drain;
6      ContainerStates[Index].Heater := ContainerStates[Index + 1].Heater;
7      ContainerStates[Index].Intake := ContainerStates[Index + 1].Intake;
8      ContainerStates[Index].Level := ContainerStates[Index + 1].Level;
9      ContainerStates[Index].Temp := ContainerStates[Index + 1].Temp;
10     ContainerStates[Index].StateOfContainer := ContainerStates[Index + 1].StateOfContainer;
11     ContainerStates[Index].ValuesOfContainer := ContainerStates[Index + 1].ValuesOfContainer;
12 END_FOR
13 ContainerStates[2].Drain := Drain;
14 ContainerStates[2].Heater := Heater;
15 ContainerStates[2].Intake := Intake;
16 ContainerStates[2].Level := ContainerLevel;
17 ContainerStates[2].Temp := ContainerTemperature;
18 ContainerStates[2].StateOfContainer := ContainerStatus;
19 ContainerStates[2].ValuesOfContainer := ContainerValue;
    
```

PLCnext Engineer

Integrated Visualization Editor

- **Deeply integrated**
 - Based on central handling
- **Scalable**
 - From small scale controllers to IPCs
- **No client installation**
 - Modern web browser
- **Technology-neutral**
 - Screens are stored in neutral format
- **Lightweight**
 - Low resource demands on PLC

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PLCnext Engineer

Integrated Visualization Editor

- Definition of single line expressions
 - IntelliSense completions
 - Semantic analysis
- Integrated online mode
 - Everything in one environment

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Integrated Visualization Editor

- Navigation Editor
 - Graphical definition of basic navigation structures (swipe up, right, left, or down)
 - Easy assembly of navigation structures through drag & drop
 - Content of a page is displayed within thumbnails
- Consistent library handling
 - Easy to use symbol editor



PLCnext Engineer

Integrated Visualization Editor

- User Management
 - Access right configuration of objects
 - Management via IEC 61131-3 function blocks possible
 - Authentication object template

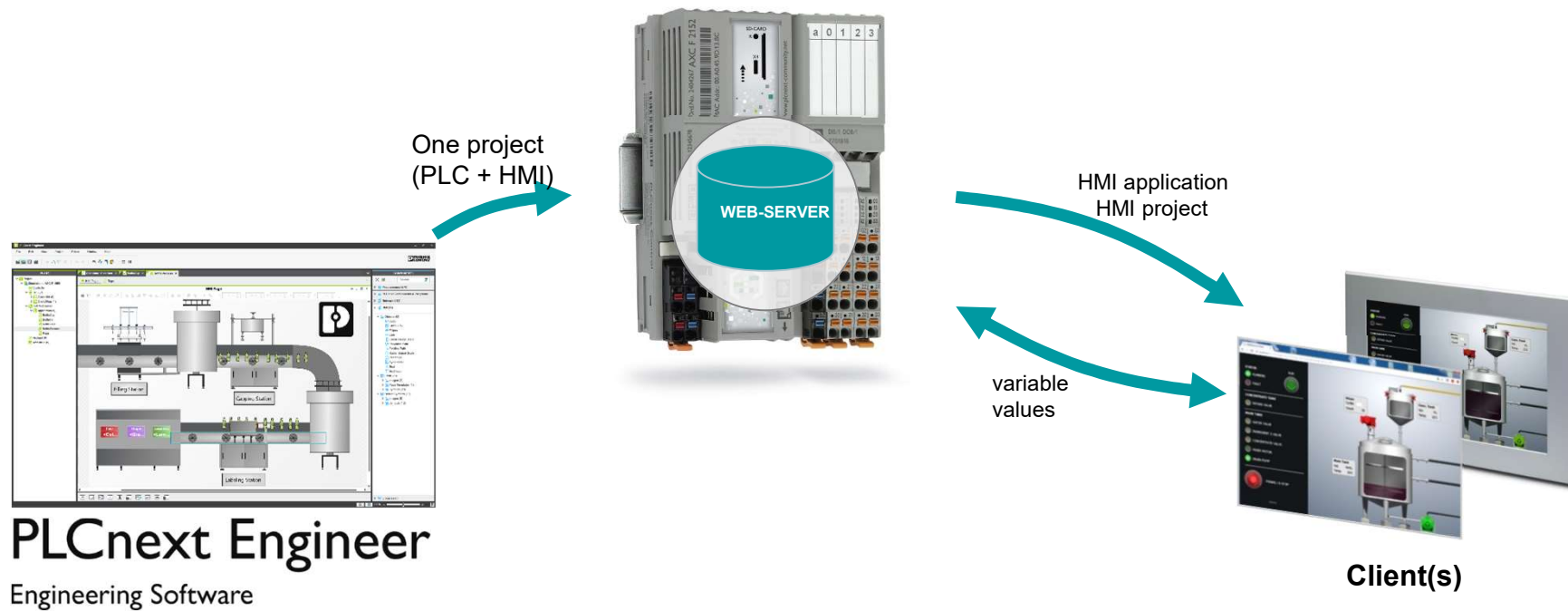
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PLCnext Engineer

Visualization Runtime Concept

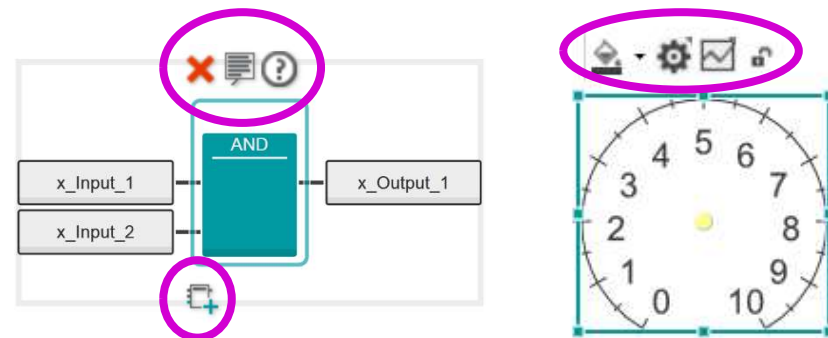
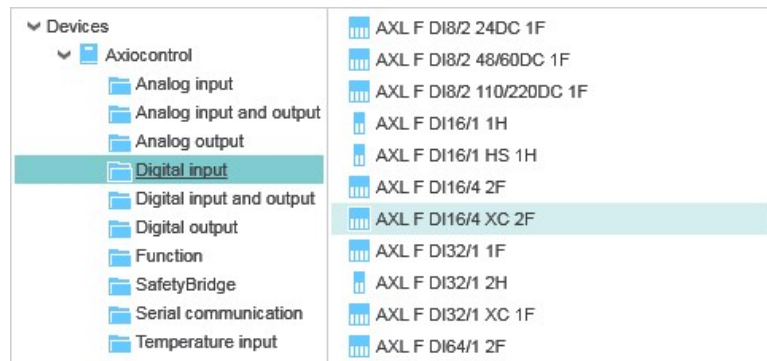
PLCnext Technology 
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Usability Features Examples

InPlace Actions

- Placed directly beside graphical objects
- Offer the most important functions

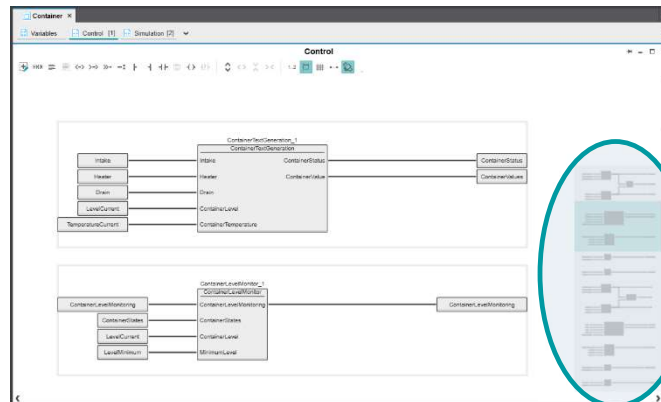


RolePicker

- Offers only usable objects
- Smart filter mechanism
- Pre-selection in categorized folders
- Shown in hardware selection
- Shown in process data assignment, ...

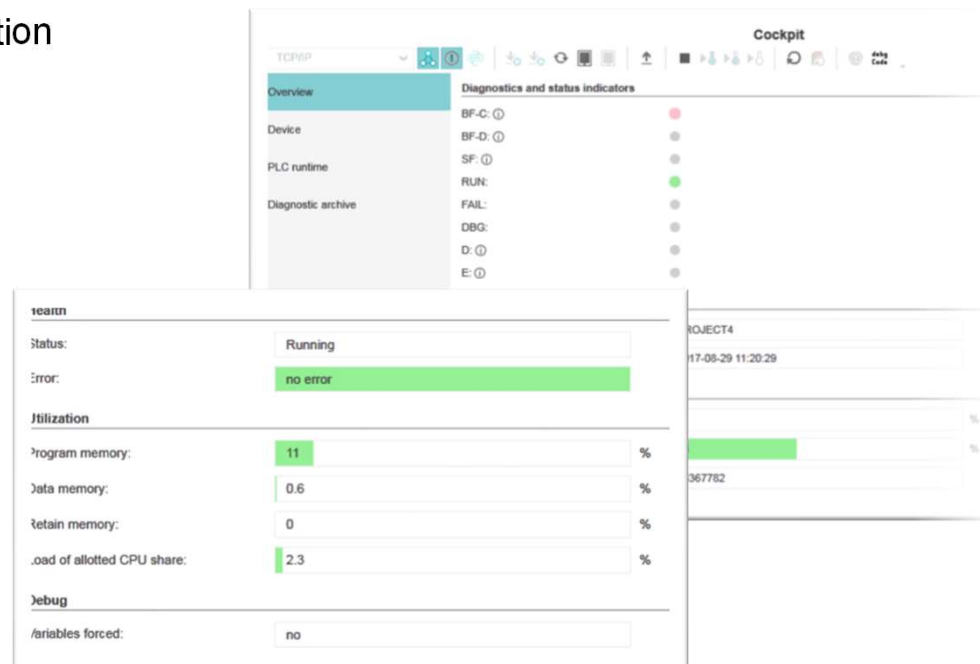
Fast Navigation through Graphical Code

- Overview windows for graphical code editors
 - Switch off and on by button
 - Zoom in and out in overview window



Commissioning and Troubleshooting









- Central Cockpit with application information
 - Send and control the application
 - Get controller status
 - Get application status
 - Diagnostic archive
- Logic analyzer
- Watch windows
- Breakpoints / single step
- Online debugging in libraries
- Instance / Function debugging
- Execution value









Network Configuration

- Local bus configuration of controller
 - Configuration with RolePicker
 - Read in connected devices
- Profinet IO configuration
 - Complete device catalogue
 - Import devices via GSDML standard
 - Discover and connect online devices
 - Read in online devices

Online Devices

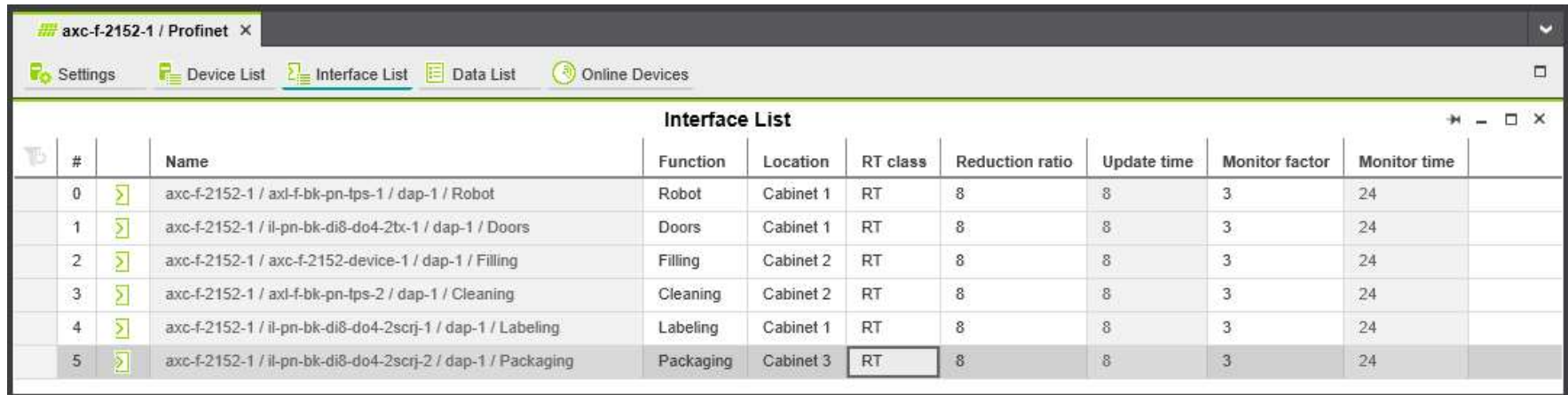
LAN-Verbindung 3 Realtek RTL8168D/8111D-Famil...        

6 entries

Name of station (Project) >	Status	Name of station (Online) <	Function	Location
il-pn-bk-di8-do4-2bx-1		Select online device here		
il-pn-bk-di8-do4-2scrj-1		Select online device here		
axl-f-bk-pn-xc-1		Select online device here		
axl-f-bk-pn-tps-1		Select online device here		
axl-f-bk-pn-scrj-1		Select online device here		
axl-f-bk-pn-1		axl-f-bk-pn-1		

Profinet Configuration

Most important settings are now available in one table and will be improved for further settings

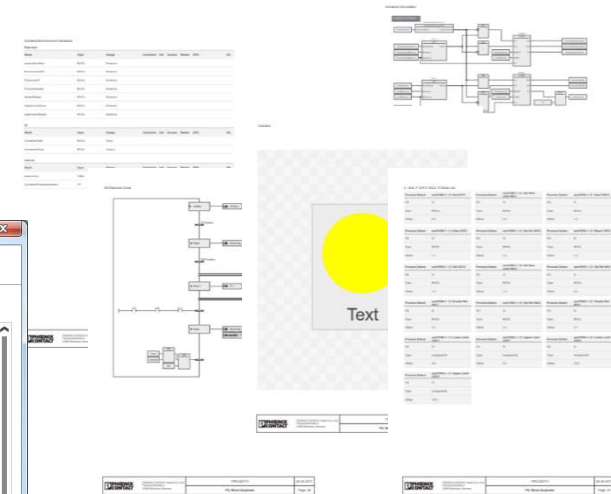
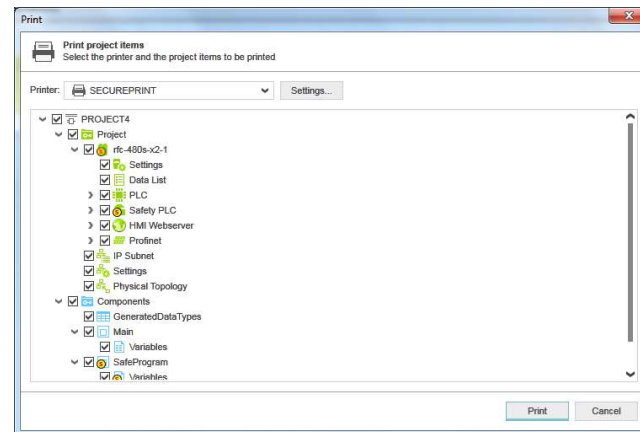


The screenshot shows the 'Interface List' window in the PLCnext Engineer software. The window title is 'axc-f-2152-1 / Profinet'. The navigation bar includes 'Settings', 'Device List', 'Interface List', 'Data List', and 'Online Devices'. The table below lists the configured interfaces with their respective parameters.

#	Name	Function	Location	RT class	Reduction ratio	Update time	Monitor factor	Monitor time
0	axc-f-2152-1 / axl-f-bk-pn-lps-1 / dap-1 / Robot	Robot	Cabinet 1	RT	8	8	3	24
1	axc-f-2152-1 / il-pn-bk-di8-do4-2tx-1 / dap-1 / Doors	Doors	Cabinet 1	RT	8	8	3	24
2	axc-f-2152-1 / axc-f-2152-device-1 / dap-1 / Filling	Filling	Cabinet 2	RT	8	8	3	24
3	axc-f-2152-1 / axl-f-bk-pn-lps-2 / dap-1 / Cleaning	Cleaning	Cabinet 2	RT	8	8	3	24
4	axc-f-2152-1 / il-pn-bk-di8-do4-2scrj-1 / dap-1 / Labeling	Labeling	Cabinet 1	RT	8	8	3	24
5	axc-f-2152-1 / il-pn-bk-di8-do4-2scrj-2 / dap-1 / Packaging	Packaging	Cabinet 3	RT	8	8	3	24

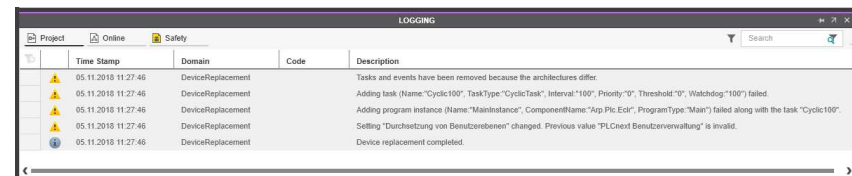
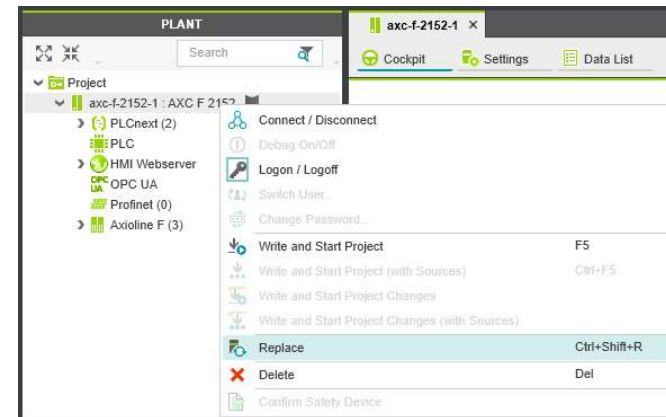
Project Documentation

- Function / location / reference instead of BMK
- Printout project:
 - Code
 - Data Lists
 - HMI screens and objects
 - Safety application



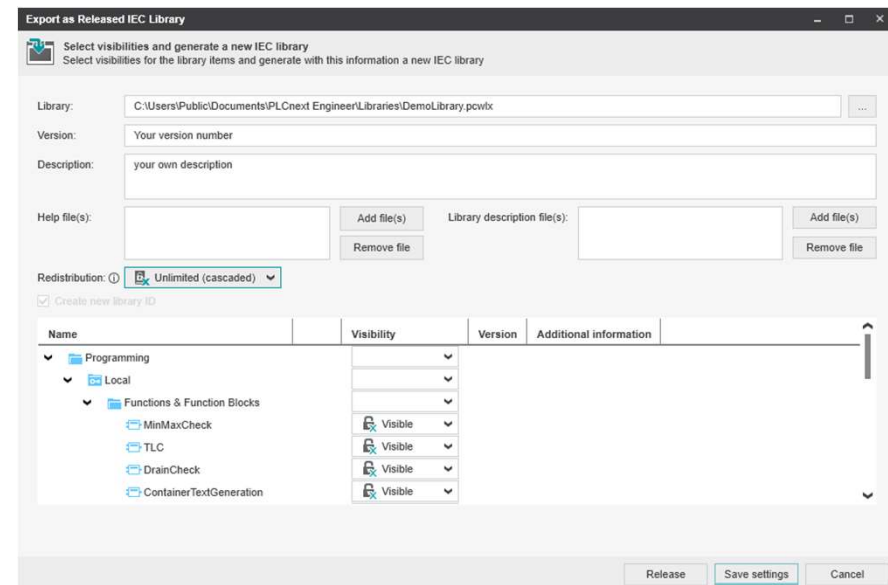
Device Replacement

- Replace device type at any level
 - Controller
 - Profinet device, module, submodule
 - Axioline F device,
 - IB Inline device
- Keep data of existing object
 - Subsystem
 - Process data connections,
 - Function & Location,
 - Parameters, Settings, Programs, ESM, HMI, ...



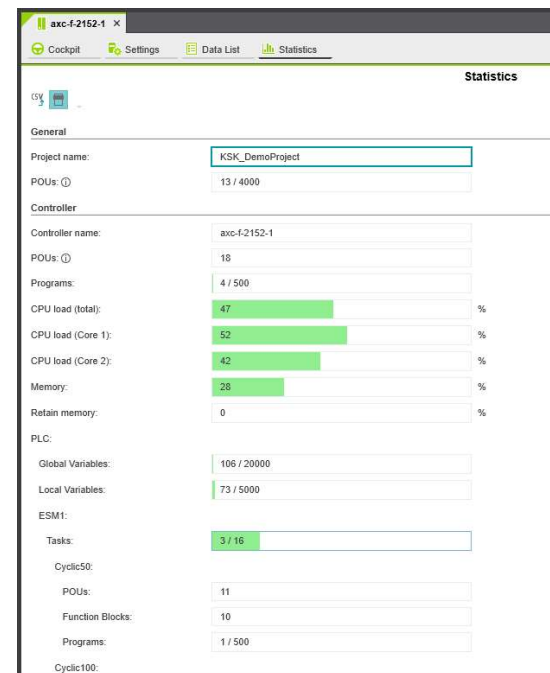
User Library Management

- One standard library release function for:
 - Standard IEC 61131-3 Code
 - Safety code
 - HMI symbols
 - Devices
- Additional features
 - *.chm Help integration for user POU's
 - Localized help
 - Library description via tooltip
 - PLCnext component libraries for MultiTargets



Project Statistics Page

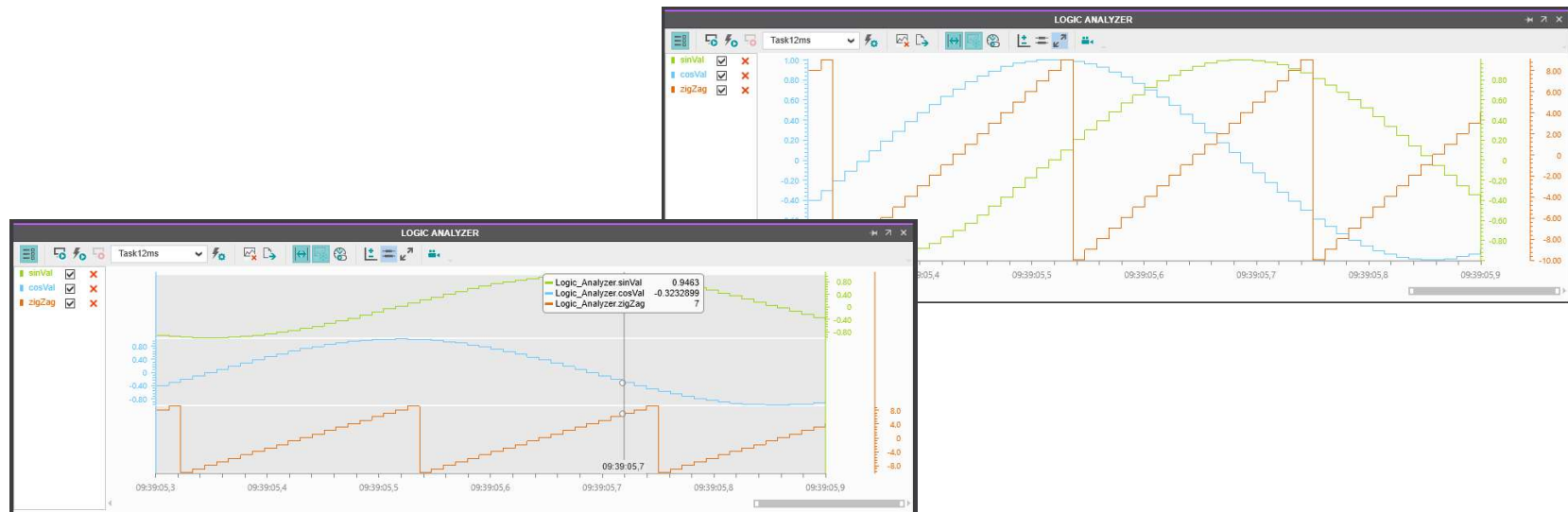
- First stage of a project statistic:
 - Project limits overview
 - POU usage in detail
 - Check of limits beforehand



PLCnext Engineer

Logic Analyzer

The **Logic Analyzer** function of PLCnext Engineer can now also be used with PLCnext Controls.



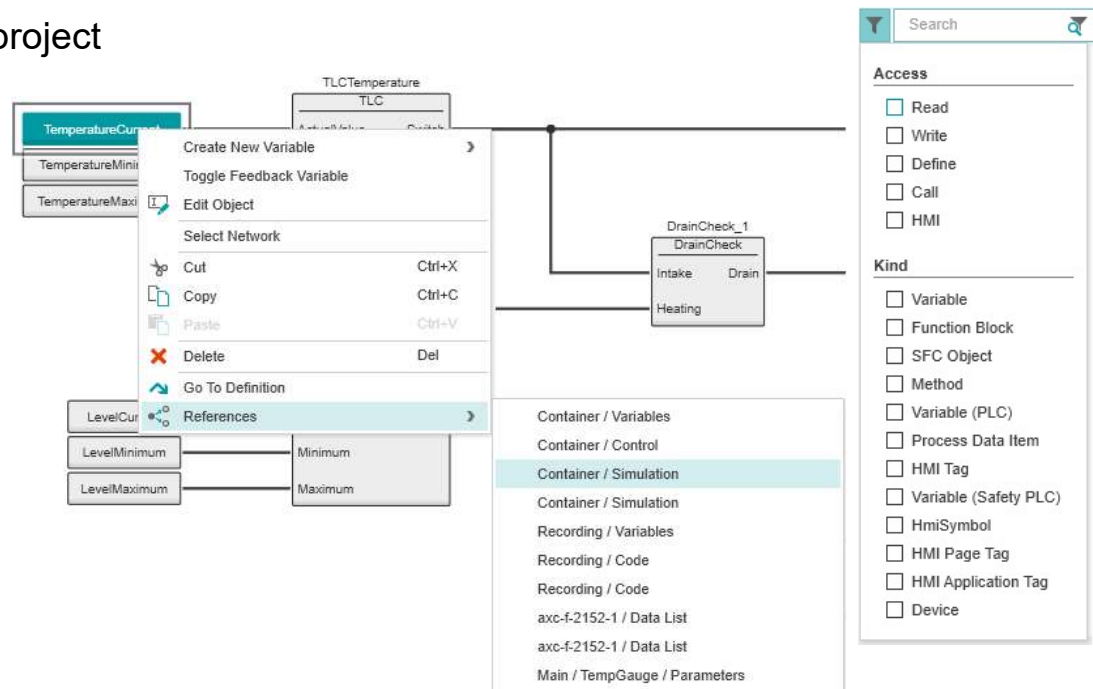
Extended Qualifiers in IEC 61131-3 Variable Names

- Option to switch on
 - Open the 'Compiler > IEC Compiler Settings' section in the Options dialog, activate the 'Allows extended identifiers' checkbox confirm.

- Rules for using
 - at least contain one alphabetical character.
 - not start with multiple underscores.
 - not start like a constant with `<literal_prefix>#` or keywords.
 - `/ * - + < >` are **regular operators** in textual programming languages, separated them by whitespaces.

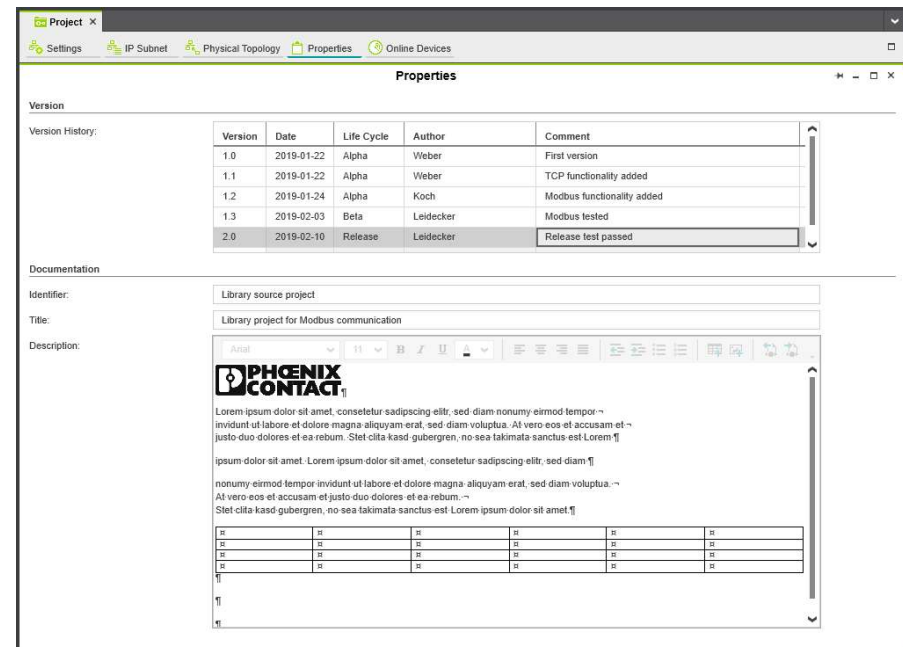
Find Variable Access faster

- X-Reference windows for the whole project
 - Additional „kind“ attribute
 - More HMI data
 - Symbol instances
 - Tags
 - Extended filter
 - Local X-References at each variable in context menu



Documentation

- Property editor for project and HMI symbols
 - Import/Export as HTML
 - Version table
 - Enhanced text properties
 - Insert tables
 - Insert pictures



PLCnext Engineer

How to learn

Ways of learning

PLCnext Engineer

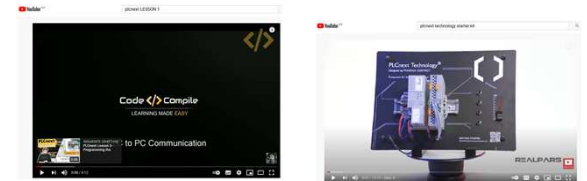
- E-Learning



- Youtube PLCnext Technology



- Learning with Expert Trainers



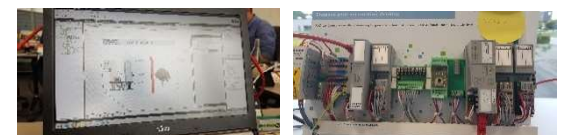
- PXC Webinars



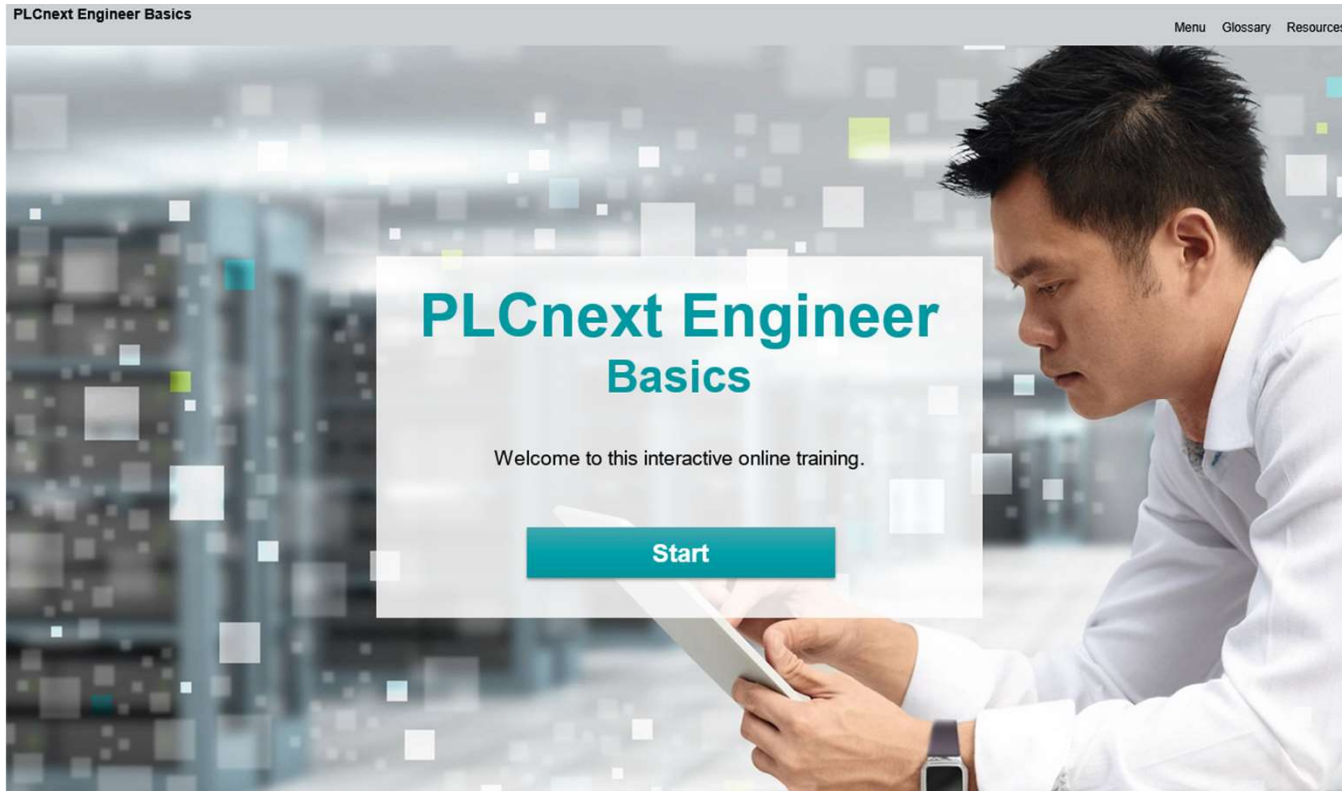
- Local Trainings MEXICO



- PLCnext Trainings in HQ



Different options of learning



PLCnext Engineering BASIC




PLCnext Engineer

eHMI

Welcome to the interactive online training.

Start

PLCnext Engineer eHMI



PLCnext Engineer
Engineering Software

Getting started
How to set up a new
IEC 61131-3 project

This video shows how to set up a new project...

PHENIX CONTACT
INSPIRING INNOVATIONS

0:01 / 4:23

How to set up a new project | Getting Started with PLCnext Engineer

How to set up a new project | Getting Started with PLCnext Engineer



The image shows a video player interface. On the left is a 3D rendering of the PLCnext Engineer software box, which features a large white 'X' on a grey background with colorful squares. The box text includes 'PLCnext Engineer Engineering Software' and the Phoenix Contact logo. To the right of the box, the text reads 'PLCnext Engineer Engineering Software' in a large teal font, followed by 'Getting started How to program with IEC 61131-3 languages' in a smaller black font. A video player control bar at the bottom shows a progress bar at 0:02 / 4:13, a play button, and the Phoenix Contact logo. A semi-transparent text box in the center of the video area contains the text: 'This video shows how to create a simple IEC 61131 program in PLCnext Engineer.'

PLCnext Engineer
Engineering Software

Getting started
How to program with
IEC 61131-3 languages

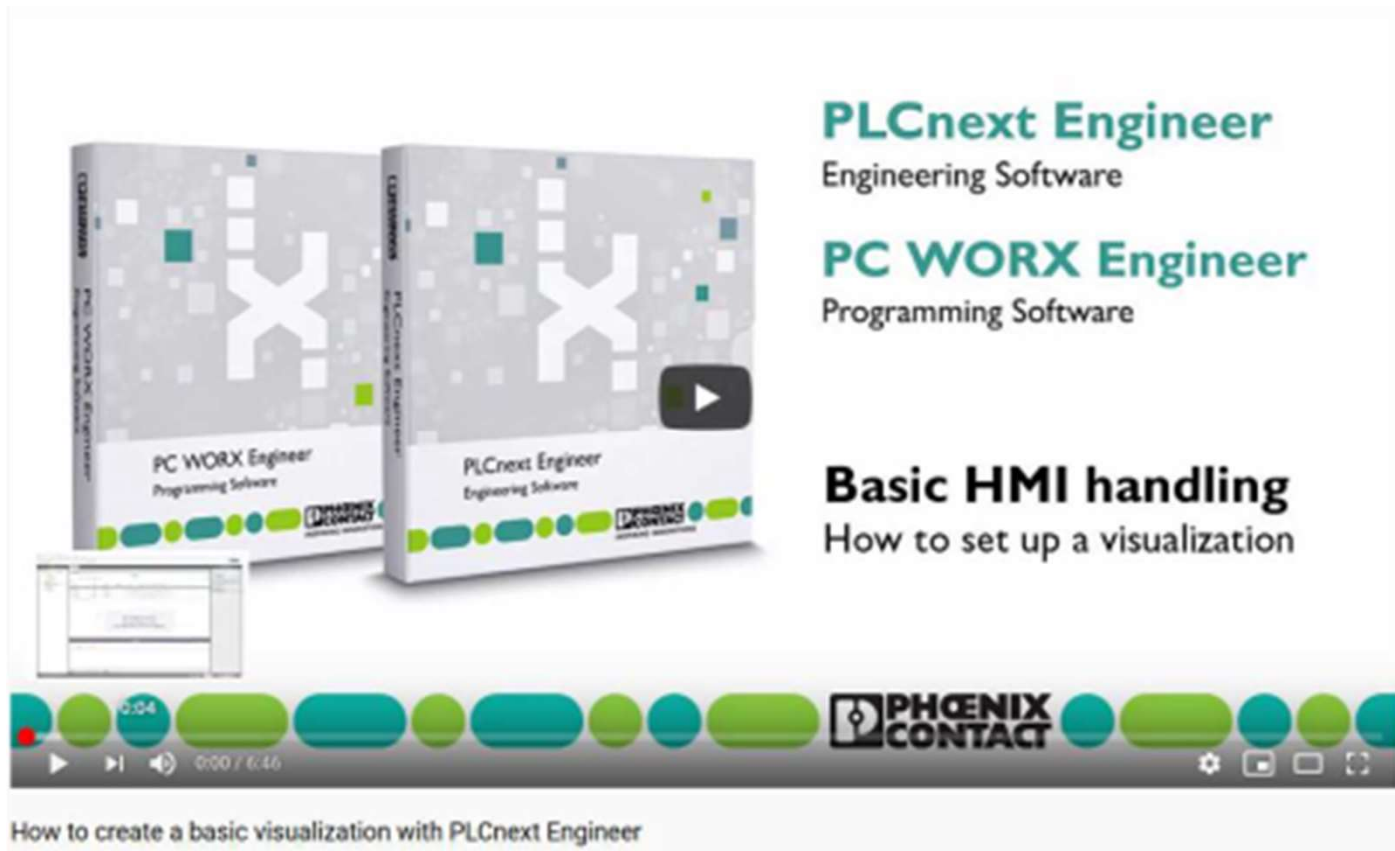
This video shows how to create a simple
IEC 61131 program in PLCnext Engineer.

PHOENIX CONTACT
INSPIRING INNOVATIONS

0:02 / 4:13

How to program a PLC in IEC 61131-3 languages | Getting Started with PLCnext Engineer

How to program with IEC 61131-3 languages| Getting Started with PLCnext Engineer



The image shows a video player interface. At the top left, there are two software boxes: 'PC WORX Engineer Programming Software' and 'PLCnext Engineer Engineering Software'. Below them is a small screenshot of a software window. The video player controls at the bottom show a progress bar, a play button, and a volume icon. The video title is 'How to create a basic visualization with PLCnext Engineer'. The Phoenix Contact logo is visible in the bottom right corner of the video player area.

PLCnext Engineer
Engineering Software

PC WORX Engineer
Programming Software

Basic HMI handling
How to set up a visualization

How to create a basic visualization with PLCnext Engineer

Basic HMI Handling

Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)





[1] PLCnext Engineer | Comenzando con PLCNext - Phoenix Contact

Youtube PLCnext Technology

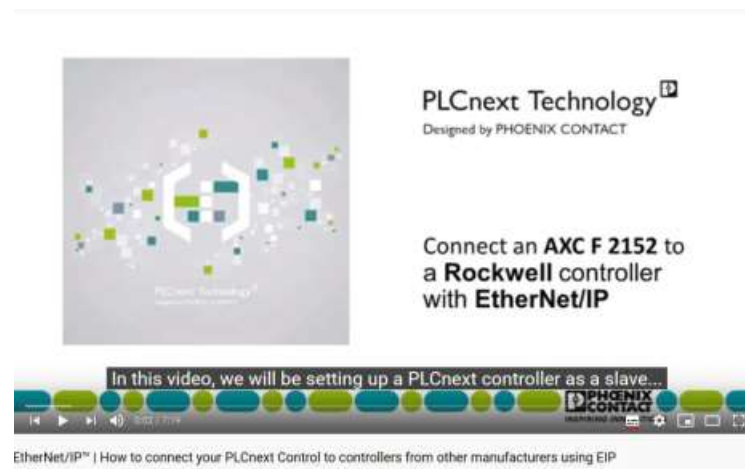
Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



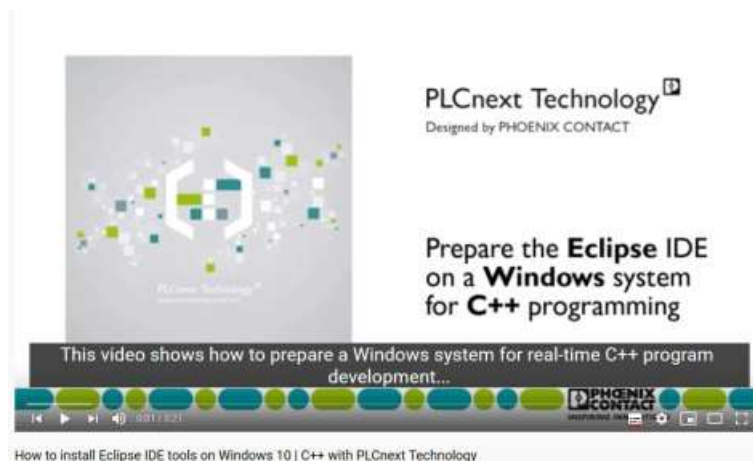
PLCnext Technology | DataLogger in IIoT | Configure the DataLogger for "Record on Time" mode



PLCnext Technology | DataLogger in IIoT | Configure the DataLogger for "Record on change" mode

Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



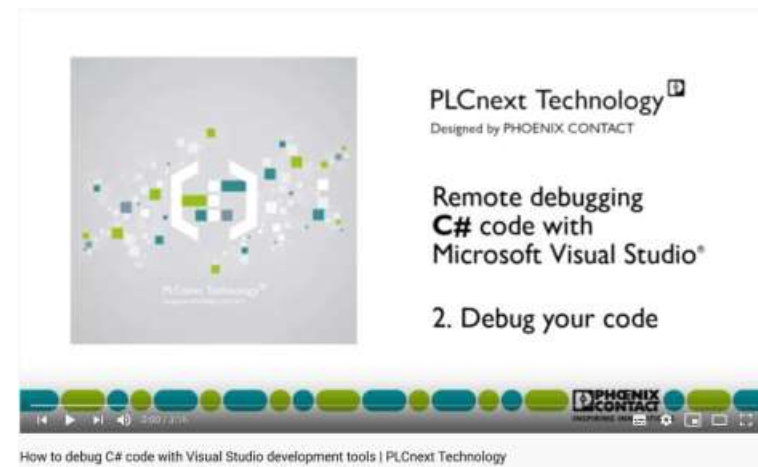
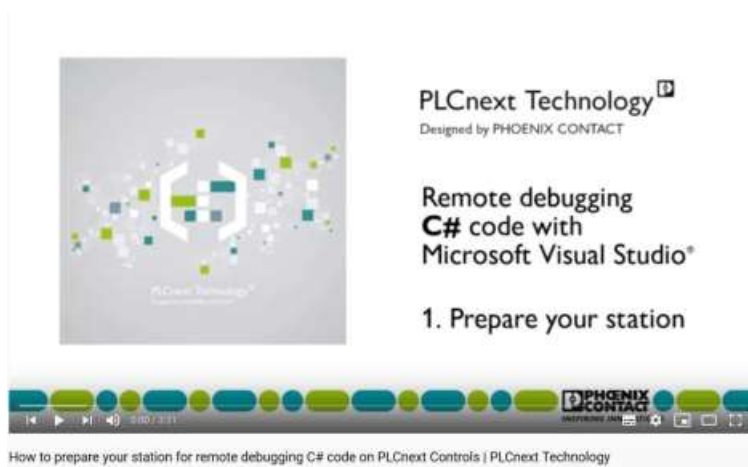
Video Youtube

PLCnext Engineer Tutorial(s)




Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)




PC WORX
PLC Programming

PC WORX
Target for
Simulink

PLCnext TechnologyTM
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How to prepare
a **Simulink®** model
for a specific PLC

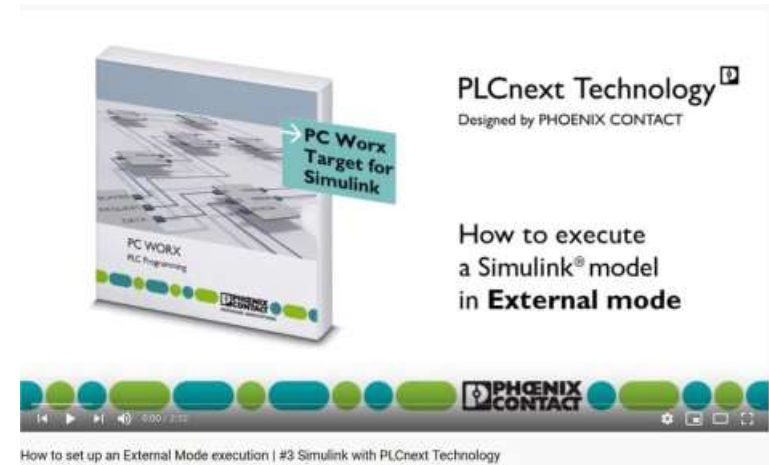
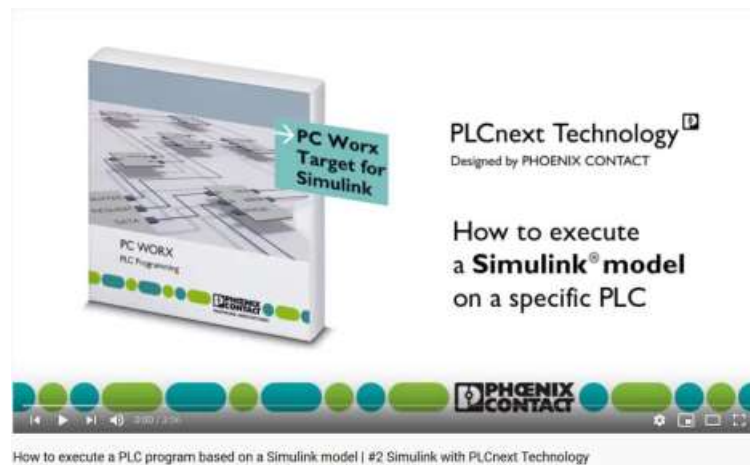


PHOENIX CONTACT
INSPIRING INNOVATIONS

How to prepare a Simulink model for PLC programming | #1 Simulink with PLCnext Technology

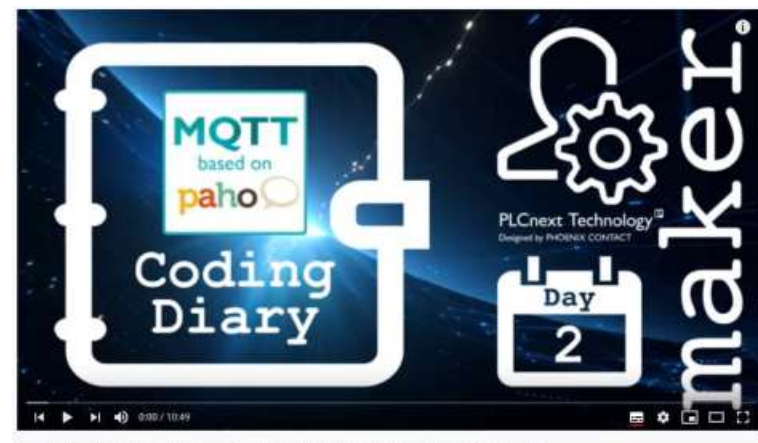
Video Youtube

PLCnext Engineer Tutorial(s)



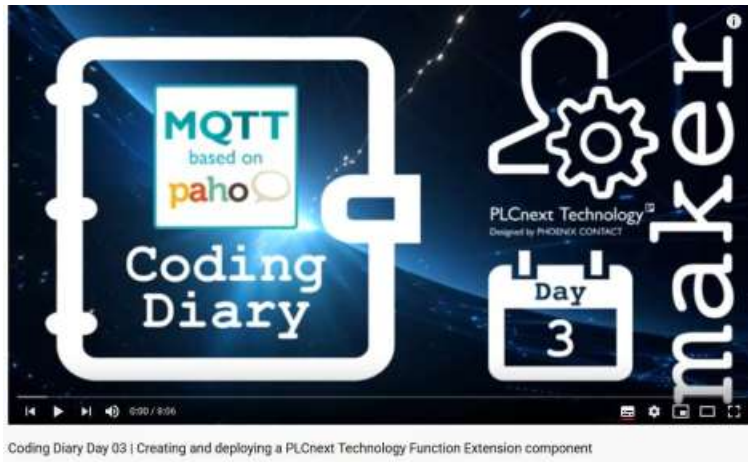
Video Youtube

PLCnext Engineer Tutorial(s)



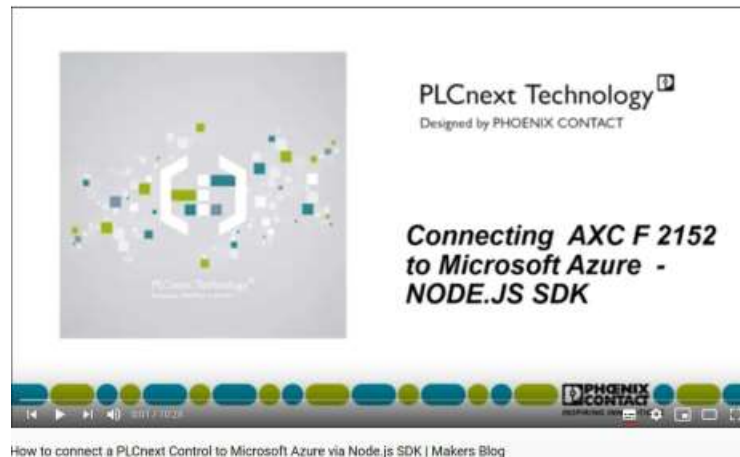
Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Youtube

PLCnext Engineer Tutorial(s)



Video Y
PLCne

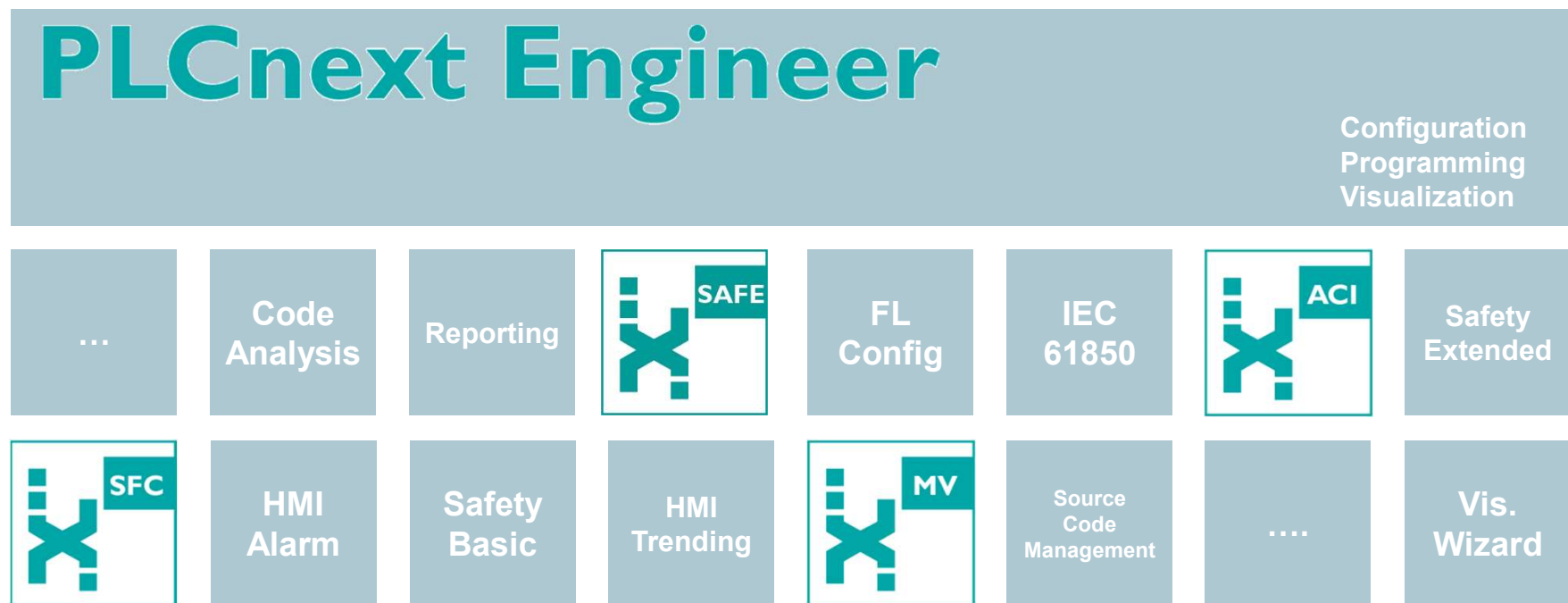


The image shows a YouTube video player interface. The video content is a black screen with white text that reads "Sending Magic Voice Commands Using PLCnext". The video player controls at the bottom show a progress bar at 0:02 / 5:43, a play button, and other standard controls. Below the video player, the video title "Sending Magic Voice Commands Using PLCnext" is visible, along with some hashtags like #RealTime, #PLCnext, and #SPS2018.



Tipos de Software

License Structure



PLCnext Engineer



License Structure


Free of charge


PLCnext Engineer

Configuration
Programming
Visualization

Licensed AddIns

...	Code Analysis	Reporting	 SAFE	FL Config	IEC 61850	 ACI	Safety Extended
 SFC	HMI Alarm	Safety Basic	HMI Trending	 MV	Source Code Management	Vis. Wizard

 78 Icon = available Add-In

 No icon = Idea about future Add-Ins




License Structure

Free of charge

PLCnext Engineer

Configuration
Programming
Visualization

Licensed AddIns

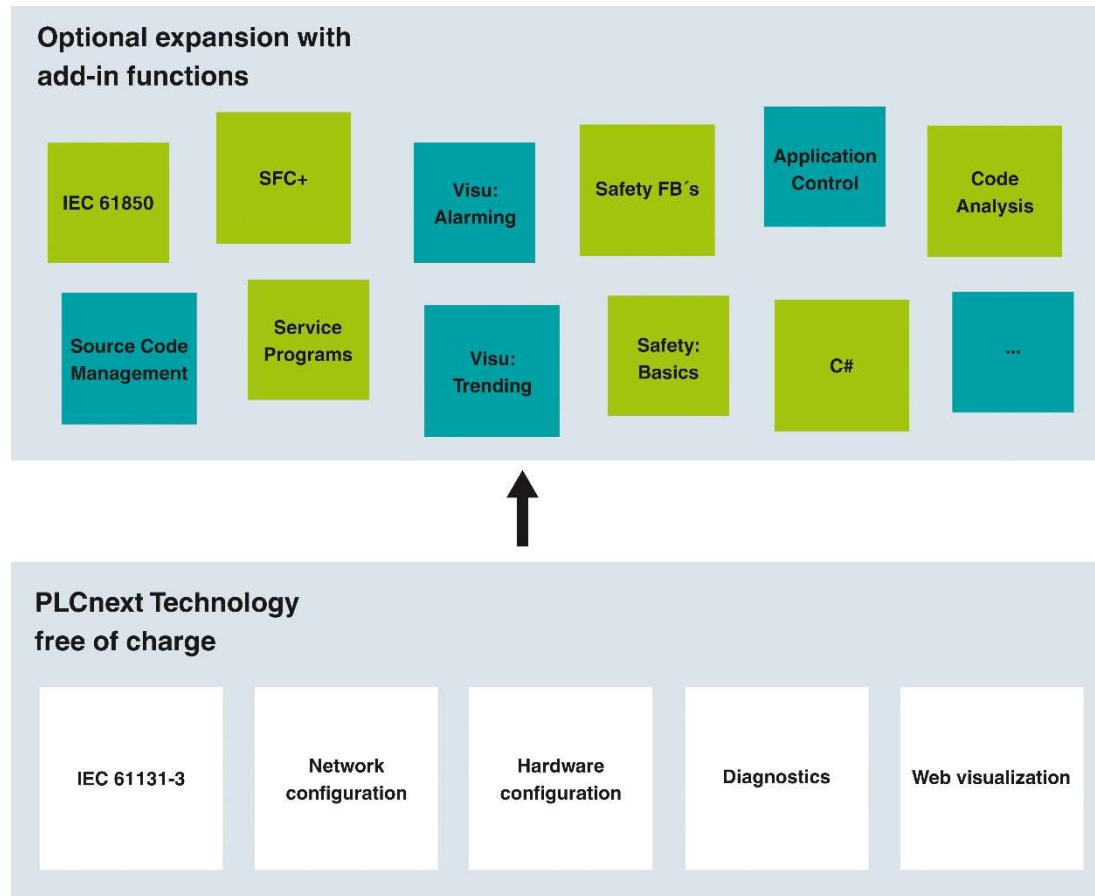
...	Code Analysis	Reporting					Safety Extended
	HMI Alarm		HMI Trending		Source Code Management	Vis. Wizard



Icon = available AddIn



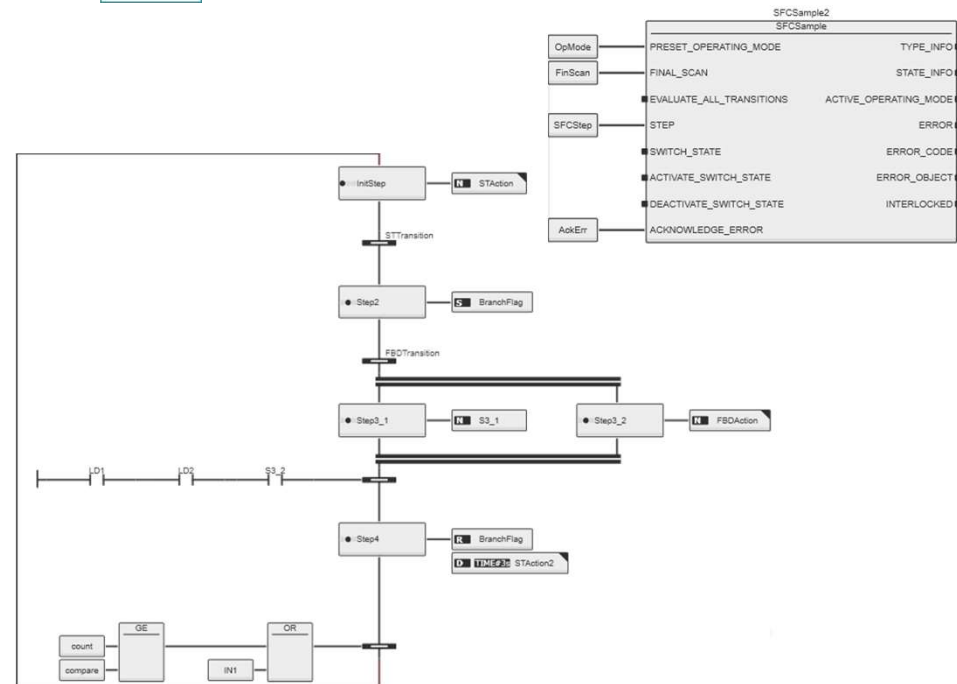
No icon = Idea about future AddIns



Sequential Function Chart – SFC



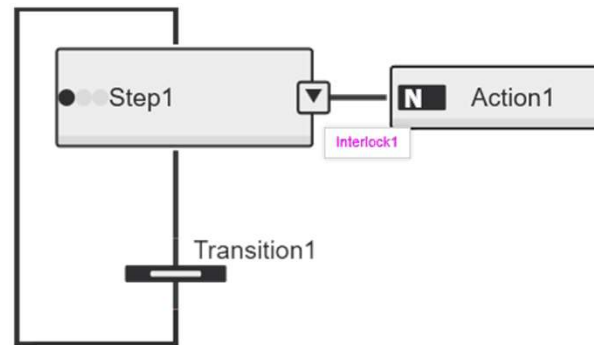
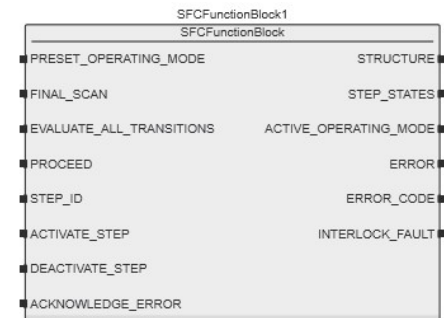
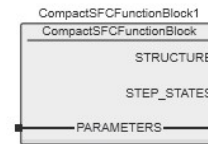
- Represented as a function block
- Automatic generated TypeInfo and StateInfo structure
- Error handling
- Directly connected transitions
- Transitions in separate worksheets (FBD, ST, LD)
- Operation modes:
Automatic, Manual Step, Halted



Sequential Function Chart – SFC



- Compact SFC
- STEP Interlock can be used to control the execution of actions associated to a step
- Pre-Execute worksheet
- Post-Execute worksheet



- Add Action
- Add Transition
- Add Interlock
- Add PreExecute
- Add PostExecute

PLCnext Engineer

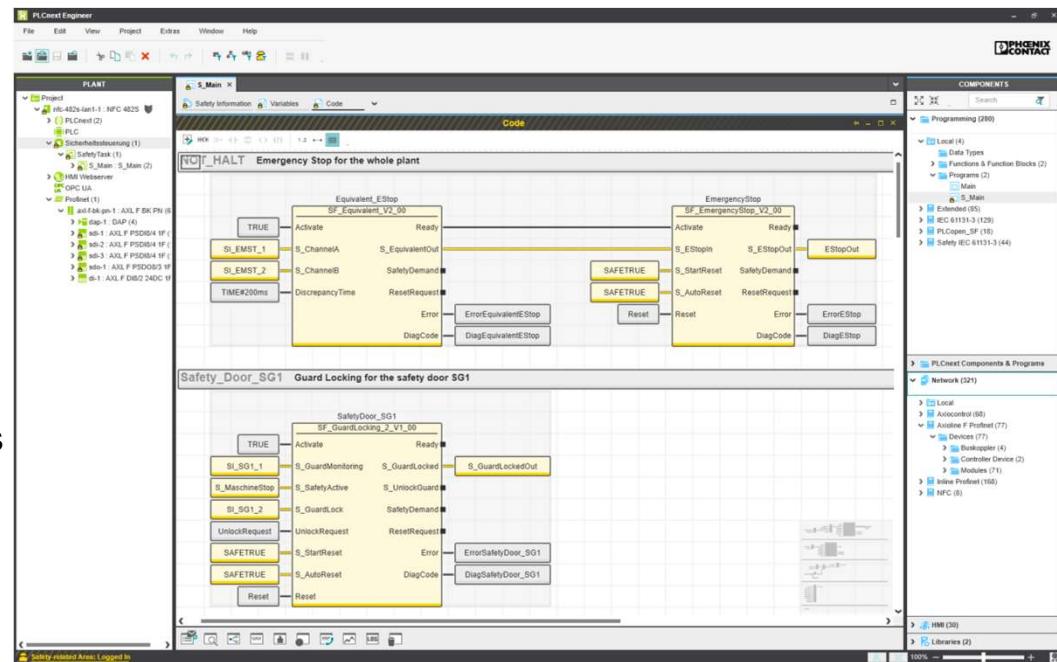
Functional Safety Programming



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Fully integrated Safety Programming

- TÜV Rheinland certified according to IEC 61508
- Editor with common behavior as known from standard FBD or LD editor
- Low Variability Language support
- Network granular CRC checksums
- PROFIsafe Support

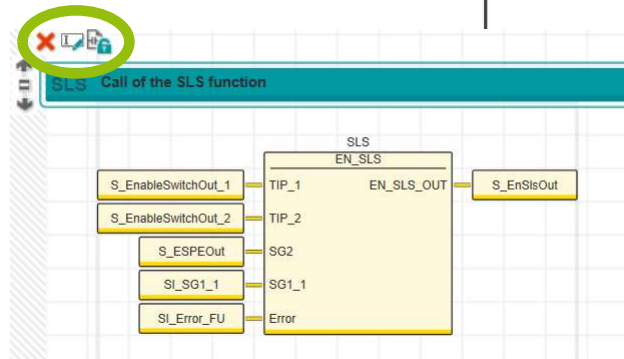
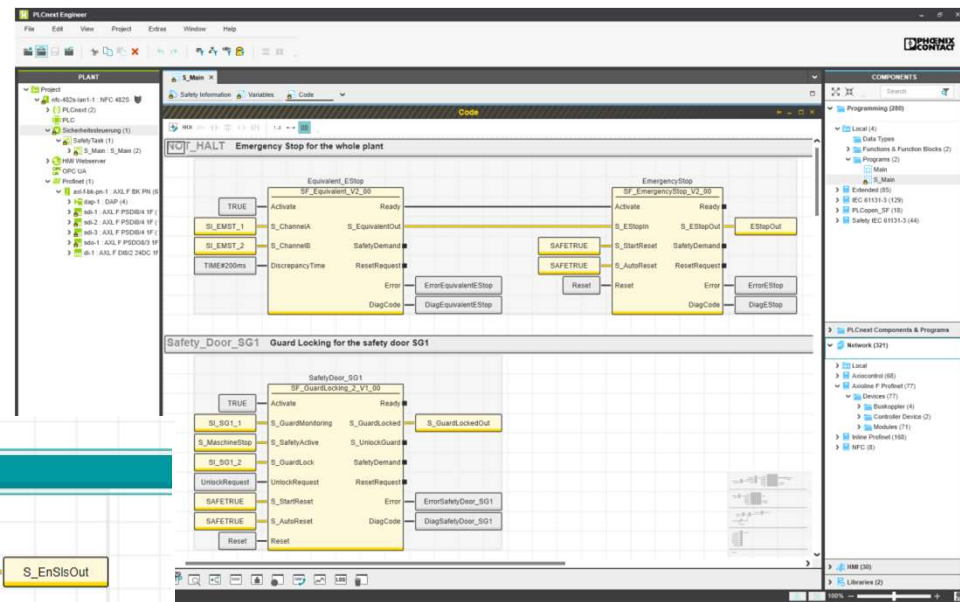


Functional Safety Programming



Fully integrated Safety Programming

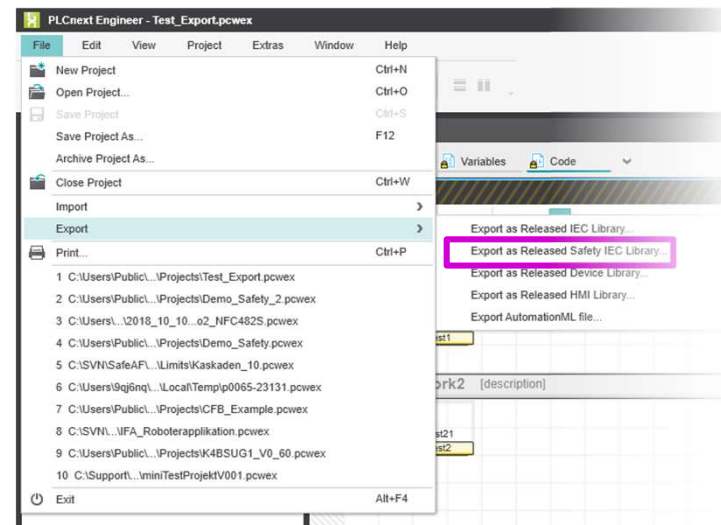
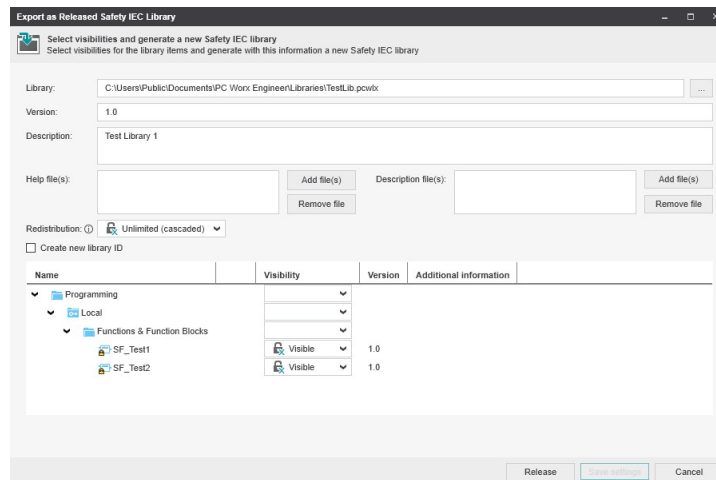
- Individual safety functions can be protected by a verification function
- Background signal path analysis
- Background safe semantic analysis
- Diversely-redundant code generator



Functional Safety User Libraries



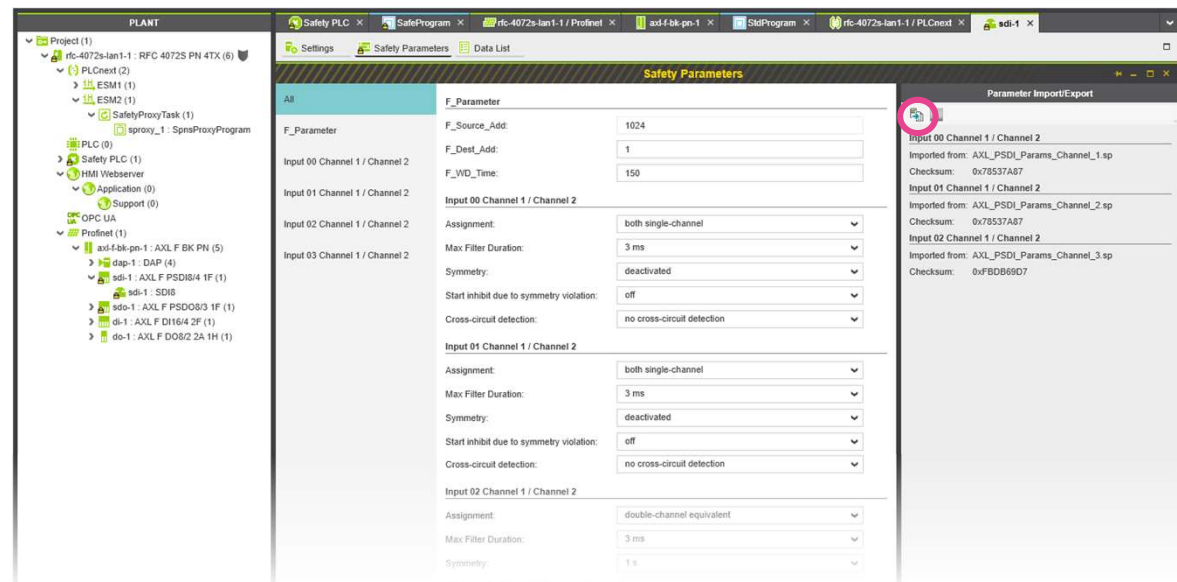
- Export of safety-related function blocks as new user library



Safety Parameterization



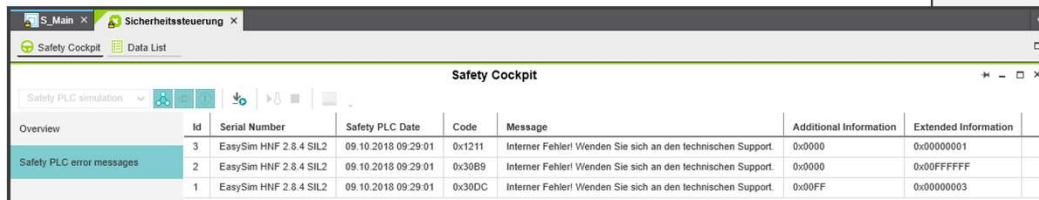
- Parameterization for PROFIsafe devices
- Export / Import
 - Parameter sets of the whole device
 - Parameter sets of a single group



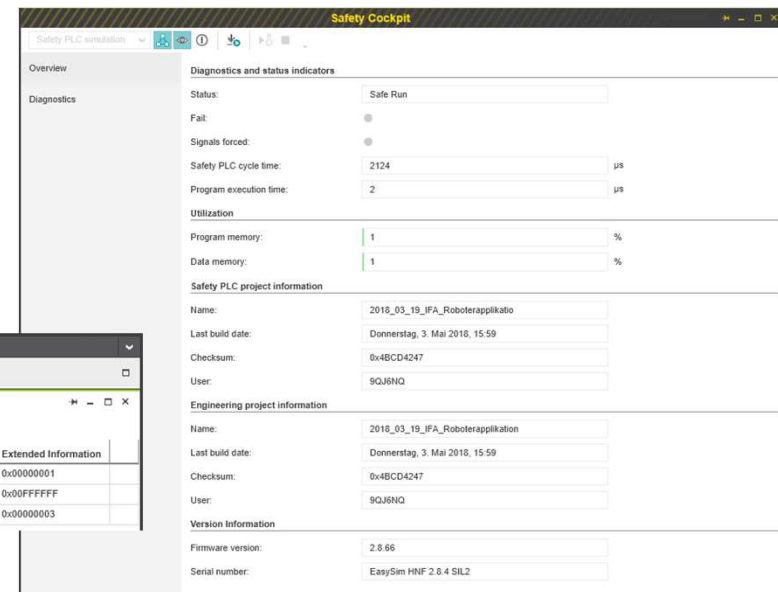
Safety Cockpit



- Display the status information from the safety-related PLC
- Display the error messages from the safety-related PLC



Overview	Id	Serial Number	Safety PLC Date	Code	Message	Additional Information	Extended Information
Safety PLC error messages	3	EasySim HNF 2.8.4 SIL2	09.10.2018 09:29:01	0x1211	Interner Fehler! Wenden Sie sich an den technischen Support.	0x0000	0x00000001
	2	EasySim HNF 2.8.4 SIL2	09.10.2018 09:29:01	0x30B9	Interner Fehler! Wenden Sie sich an den technischen Support.	0x0000	0x00FFFFFF
	1	EasySim HNF 2.8.4 SIL2	09.10.2018 09:29:01	0x30DC	Interner Fehler! Wenden Sie sich an den technischen Support.	0x00FF	0x00000003



Safety Cockpit

Safety PLC simulation

Overview

Diagnostics and status indicators

Status: Safe Run

Fail:

Signals forced:

Safety PLC cycle time: 2124 μ s

Program execution time: 2 μ s

Utilization

Program memory: 1 %

Data memory: 1 %

Safety PLC project information

Name: 2018_03_19_IFA_Roboterapplikatio

Last build date: Donnerstag, 3. Mai 2018, 15:59

Checksum: 0x4BCD4247

User: 9QJ8NQ

Engineering project information

Name: 2018_03_19_IFA_Roboterapplikatio

Last build date: Donnerstag, 3. Mai 2018, 15:59

Checksum: 0x4BCD4247

User: 9QJ8NQ

Version information

Firmware version: 2.8.66

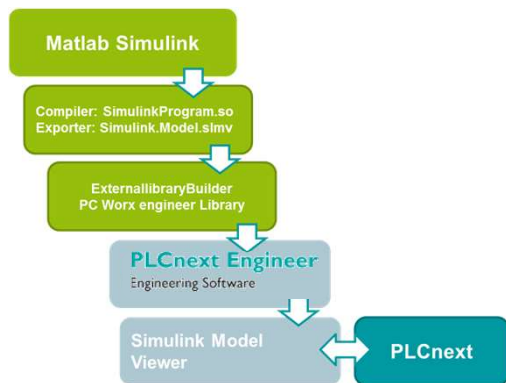
Serial number: EasySim HNF 2.8.4 SIL2

PLCnext Engineer

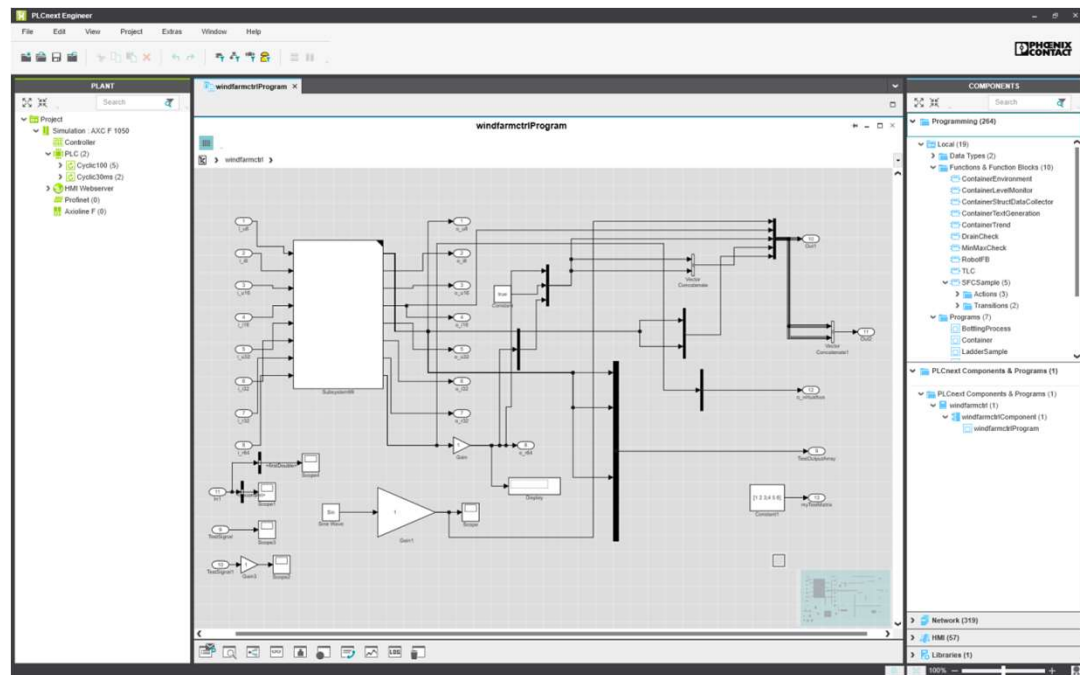
Viewer for Simulink



- Model export as part of a PLCnext library
- Drill-down into sub-models
- Online-values for In- and Out-Ports



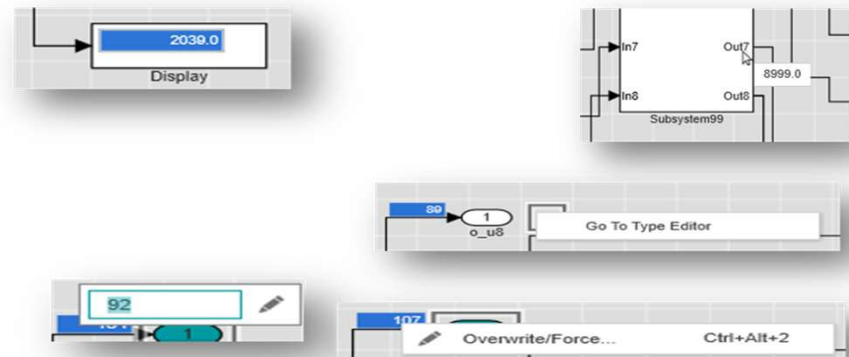
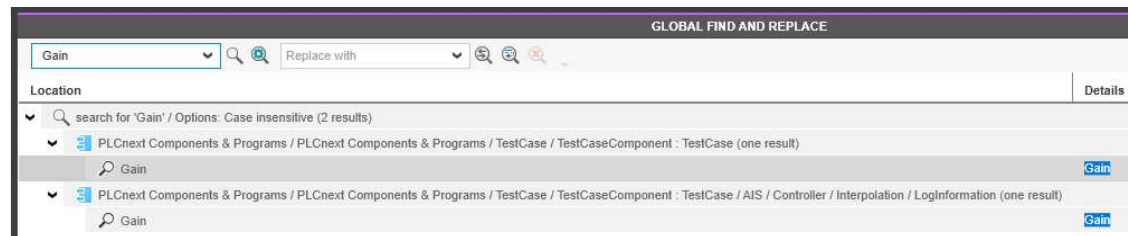
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Viewer for Simulink



- Global / Local Search
 - Jumpable objects selected
- Display block with online values
- Overwrite of GDS ports
- Jump to Type Model from Instance
- Online Indication on lines for boolean in /out ports

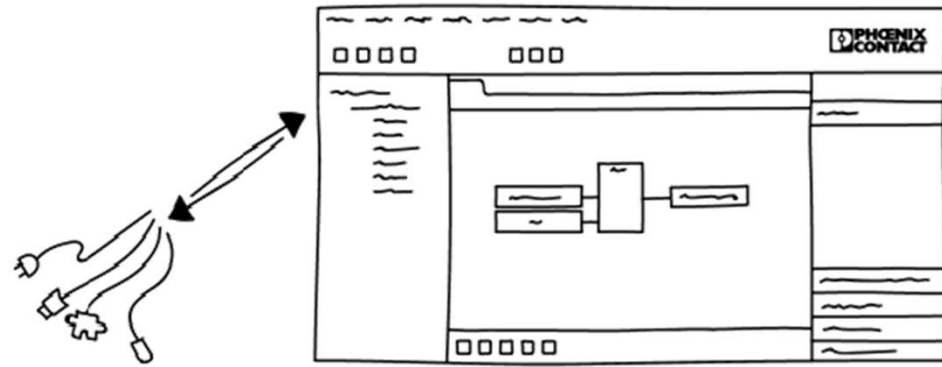


Application Control Interface (ACI)

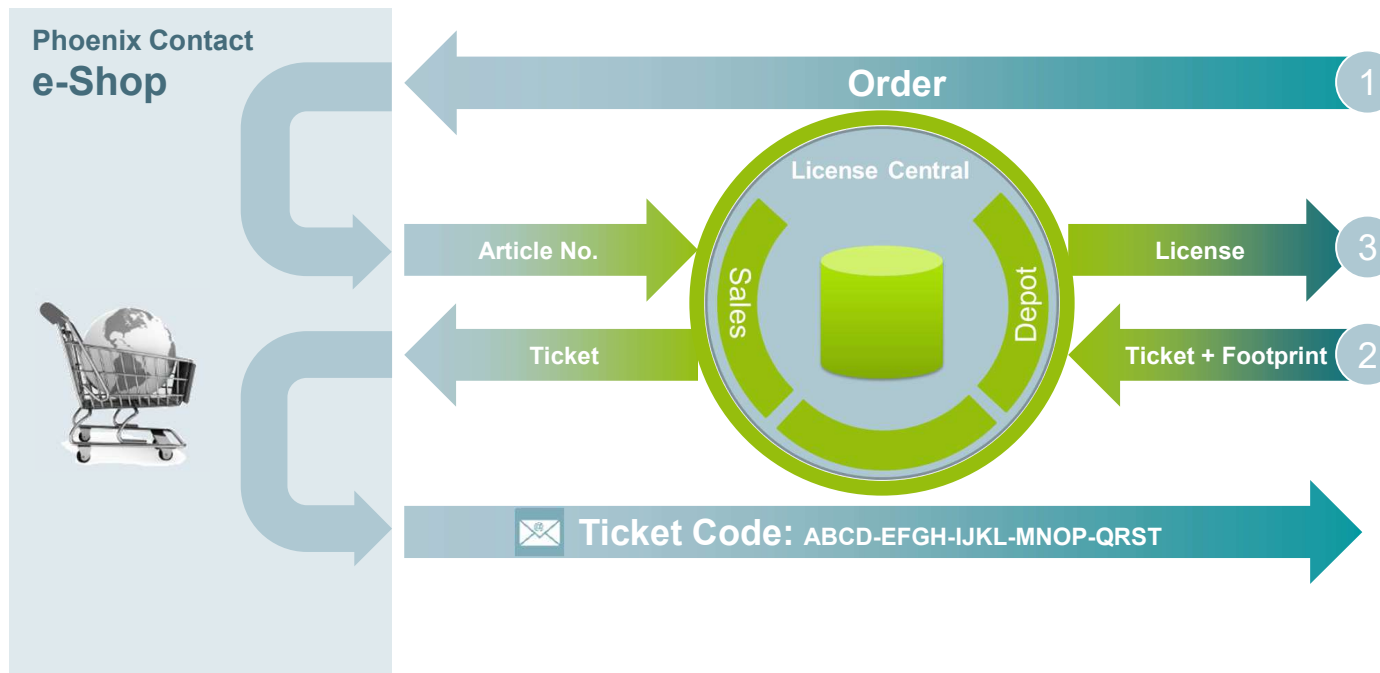


Remote Control of the software:

- ✓ Application.BuildPath (property)
- ✓ Application.OpenProject (method)
- ✓ Application.ProjectOpened (event)
- ✓ Project.Close (method)
- ✓ Project.Save (method)
- ✓ Project.SaveAs (method)
- ✓ Project.Closed (event)
- ✓



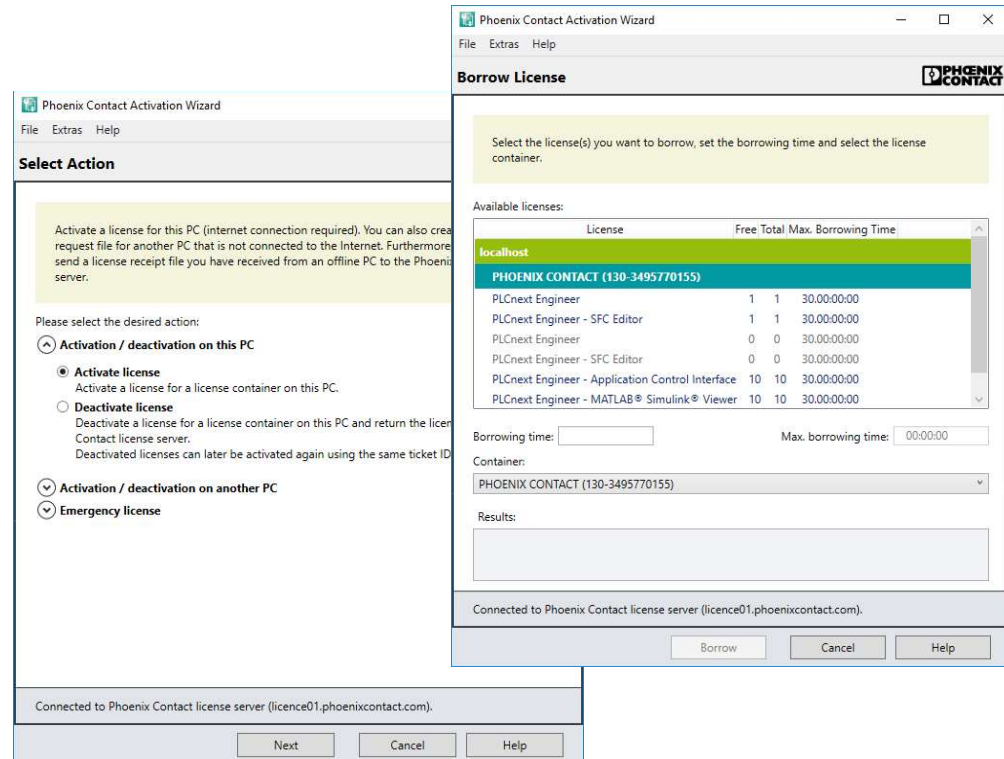
Software License Distribution



Activation Wizard

- Version 1.1 HMI 2018
 - Deactivating / Moving licenses

- Version 1.2 SPS 2018
 - Network server for licenses
 - Server list; authentication
 - Borrowing of licenses (can be returned to pool)




PLCnext Engineer

Electronic Software License on USB A


PLCnext Technology 
Designed by PHOENIX CONTACT

Software dongle - ESL STICK USB A - 1080084



CmDongle for saving licenses for various software products

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 current article

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Overview | [Technical data](#) | [Downloads](#)


Product Description

Up to 2000 licenses with different license models for various software tools can be stored on the license dongle. Licenses can be used flexibly by moving the dongle from one computer to another.

Use of a license dongle is recommended when using virtual machines. This means that licenses can still be used after virtual machines are copied or even if settings are changed on the virtual machine.

Using the "Activation Wizard" software tool, activate and deactivate licenses on the license dongle. Or use the "Activation Wizard" to migrate licenses from a PC hard drive to a license dongle (or vice versa), for example.

No additional drivers are required to operate the dongle. After it is connected to a computer, it can immediately be used without administrator rights.



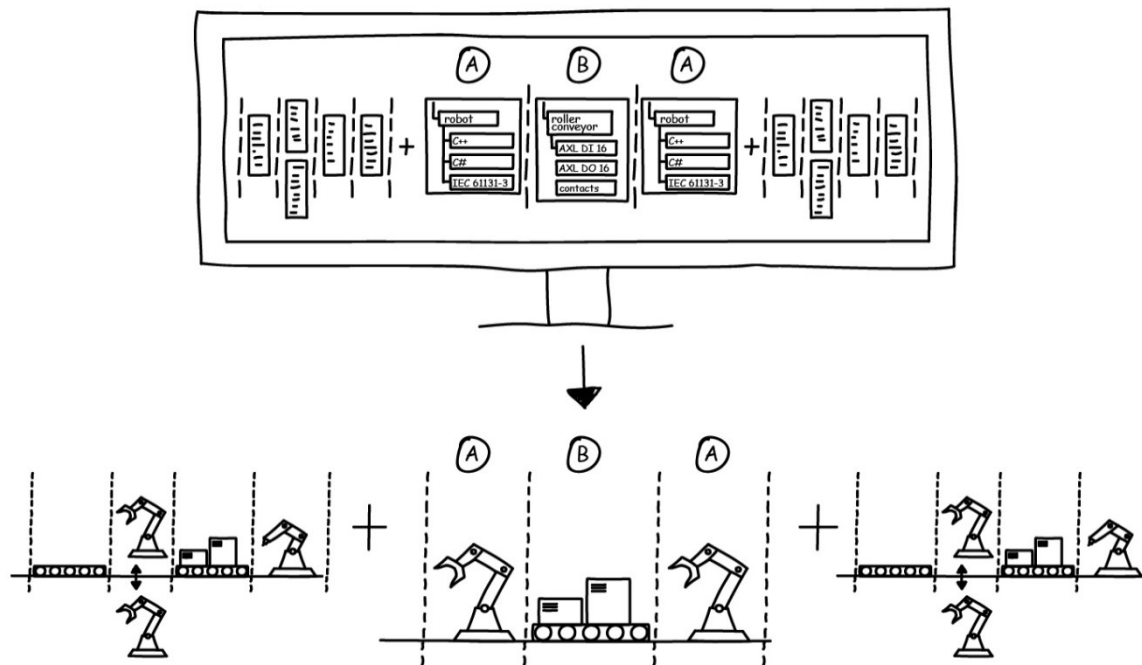
93



IF Design Award 2019



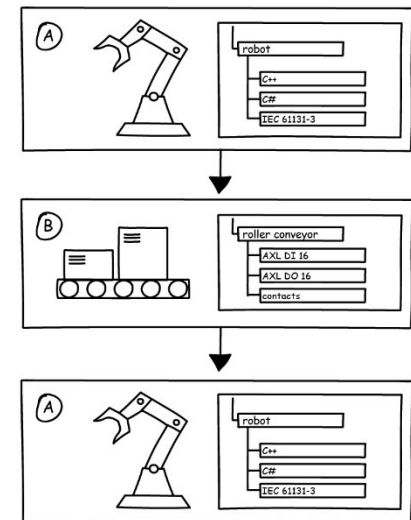
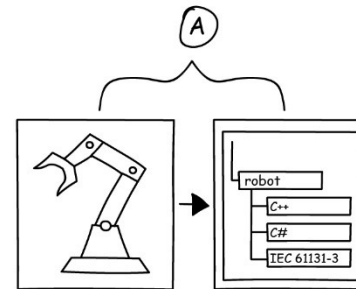
Automation Modules



Automation Modules

- **Reusability across all trades**
 - Can contain all items from the application
 - IEC 61131-3 Code
 - Visualization pages
 - Data connections
 - Hardware configuration
 - High language programs
 - Safety function

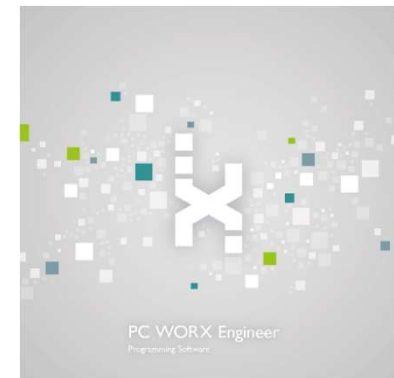
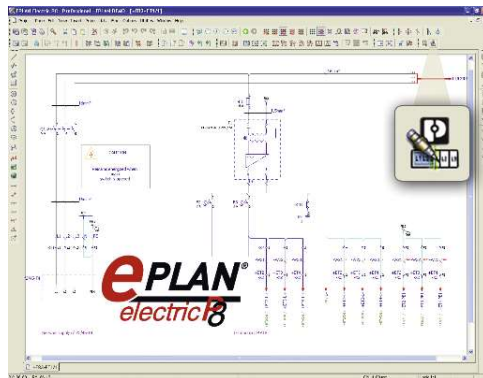
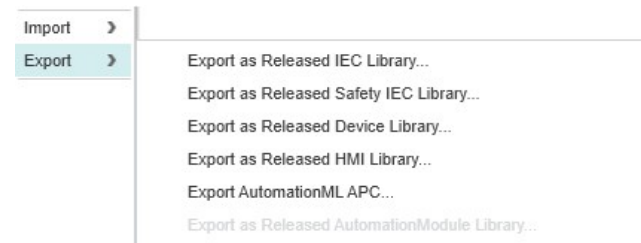
Orchestrate instead of programming!



AutomationML APC Interface

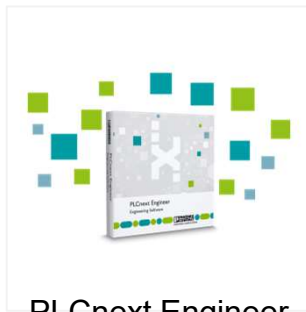
Automation Project Configuration

- Reuse identifier (devices, terminal points)
- Create prewired variables
- Import / Export / Synchronization

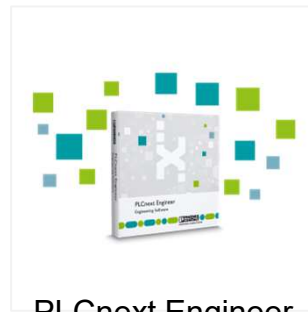


PLCnext Engineer Versioning

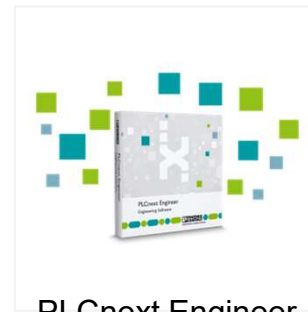
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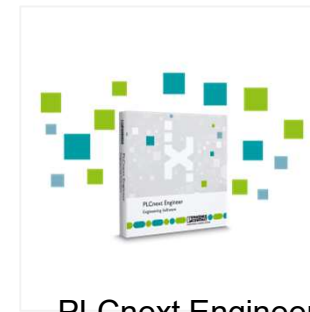
PLCnext Engineer
2020.0 LTS



PLCnext Engineer
2020.3



PLCnext Engineer
2020.6



PLCnext Engineer
2020.9



January
2020

March
2020

June
2020

September
2020

PLCnext Engineer

LTS Version

Wikipedia:

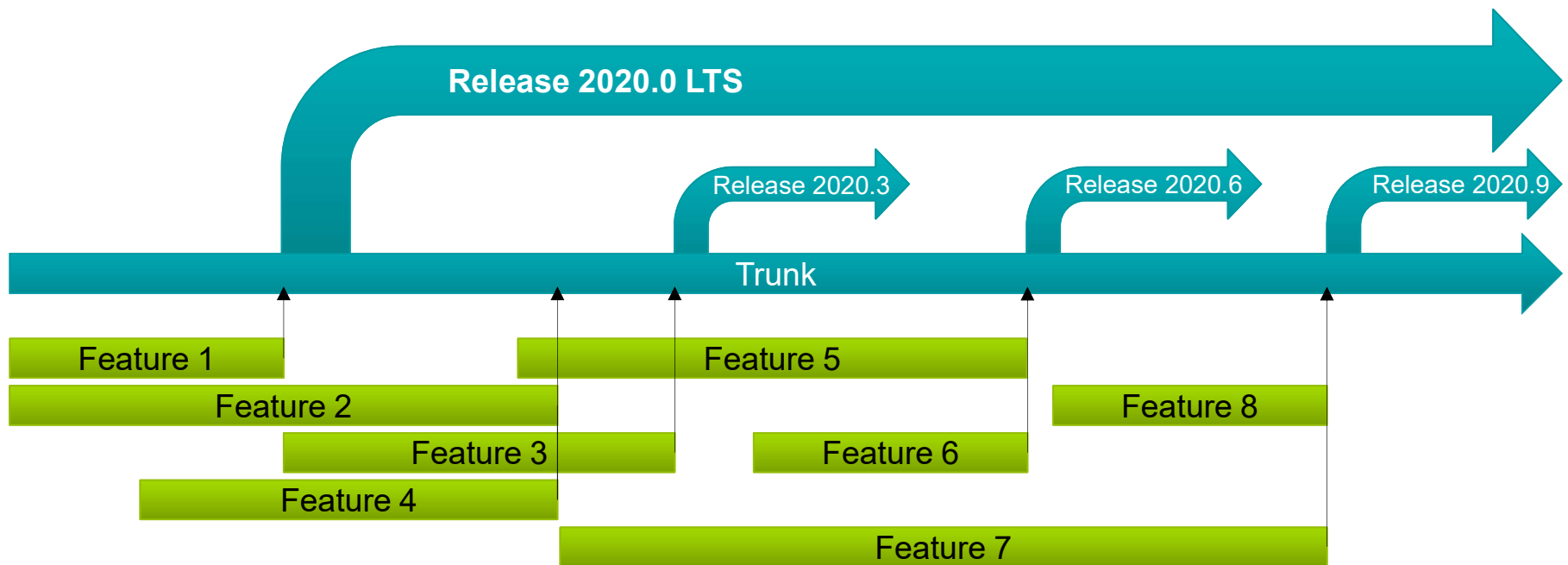
Long-term support (LTS) ...

... is a product lifecycle management policy in which a stable release of computer software is maintained for a longer period of time than the standard edition. The term is typically reserved for open-source software, where it describes a software edition that is supported for months or years longer than the software's standard edition.

Source 2019/01: https://en.wikipedia.org/wiki/Long-term_support



Feature-Driven Development



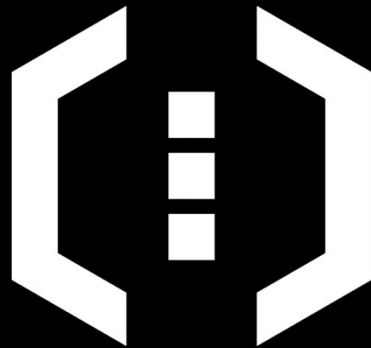


Equipos objetivo de PLCnext Engineer

PLCnext Technology

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Open control platform for flexible automation



PLCnext Control

Discover flexible
automation



PLCnext Ecosystem – PLCnext Control

PLCnext Control

PLCnext Technology [®]

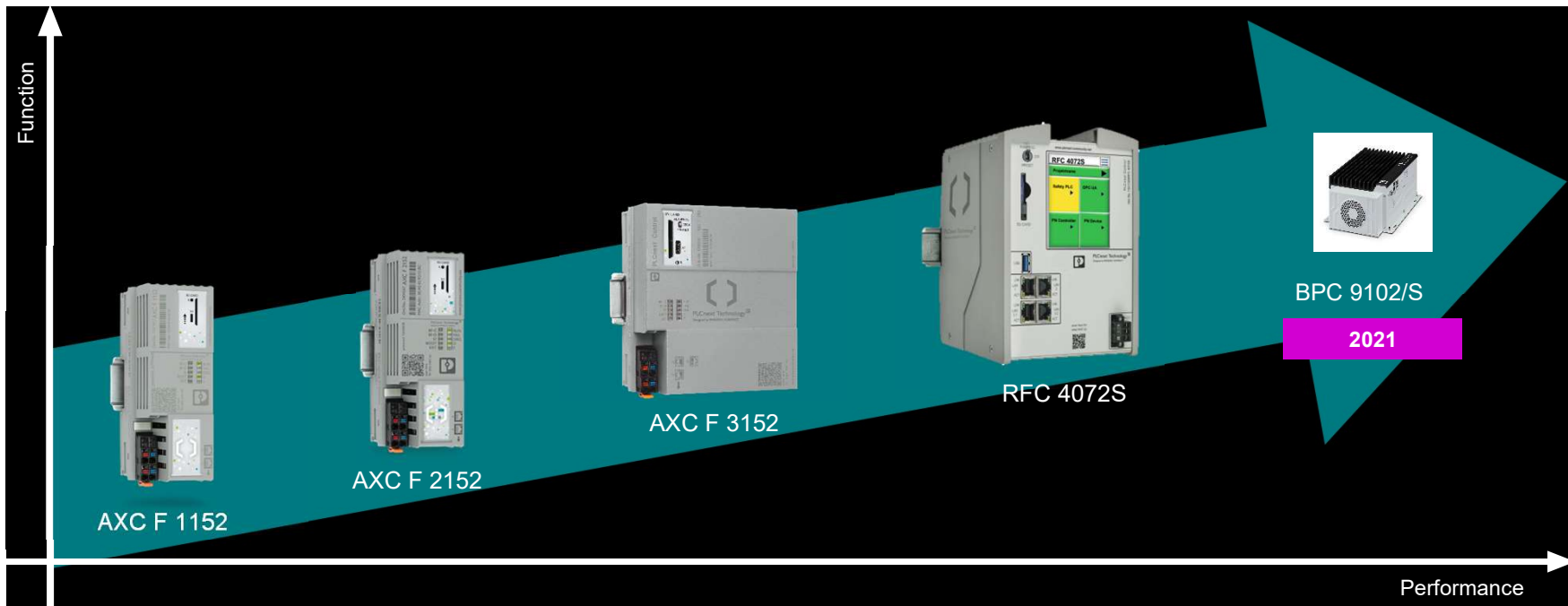
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PLCnext Ecosystem – PLCnext Control

PLCnext Control Portfolio Overview

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AXCF 1152



AXCF 2152

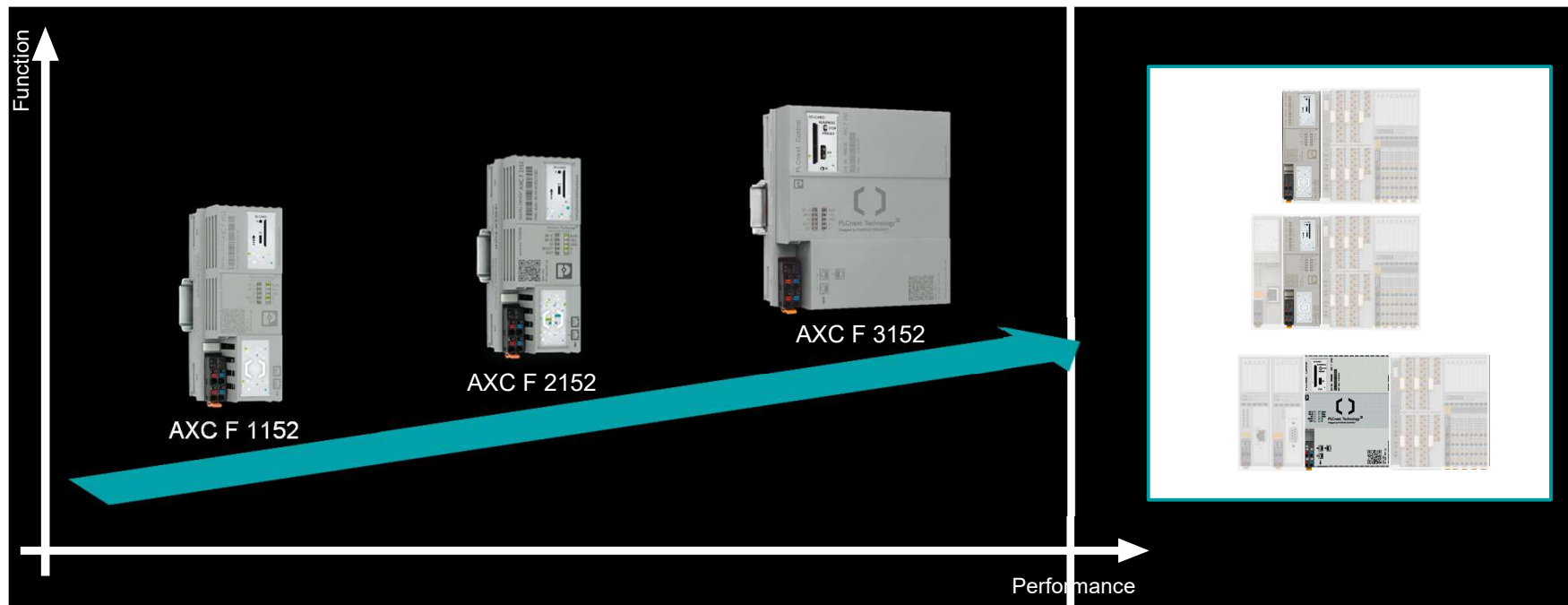


AXCF 3152

PLCnext Control

PLCnext Technology[®]
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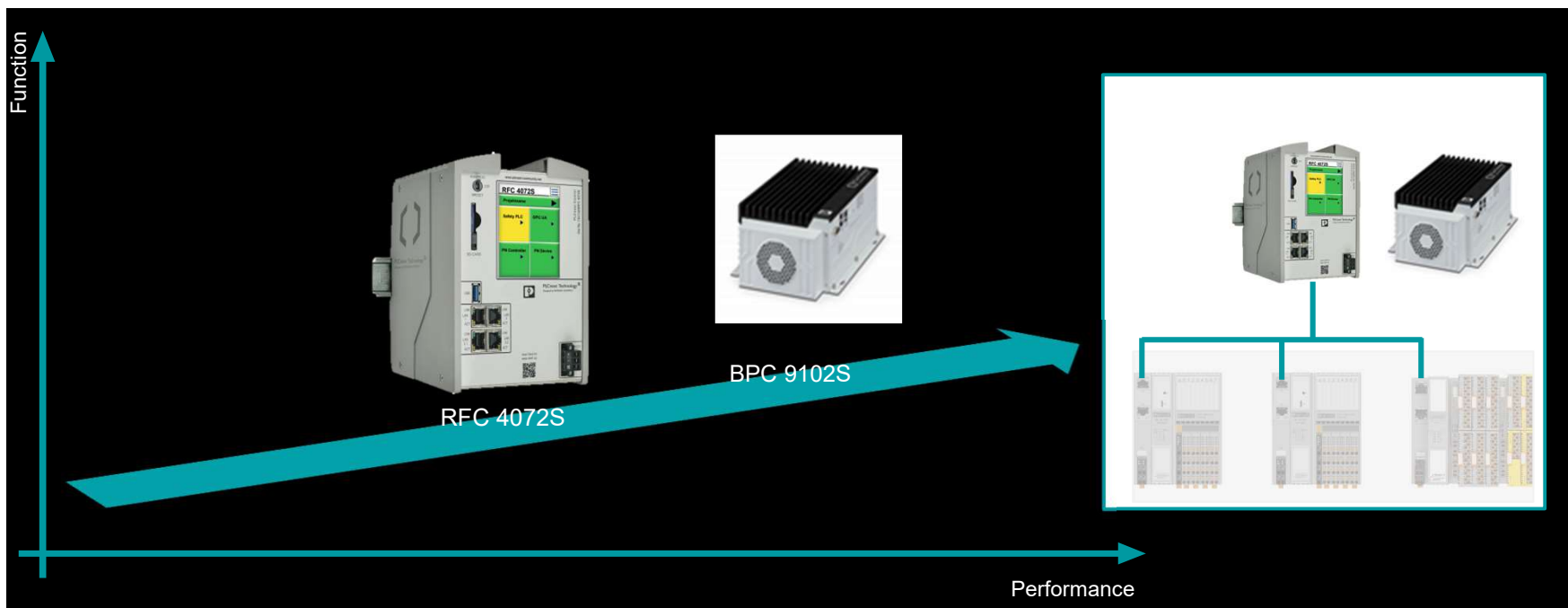
PLCnext Control for flexible automation with modular hardware platform

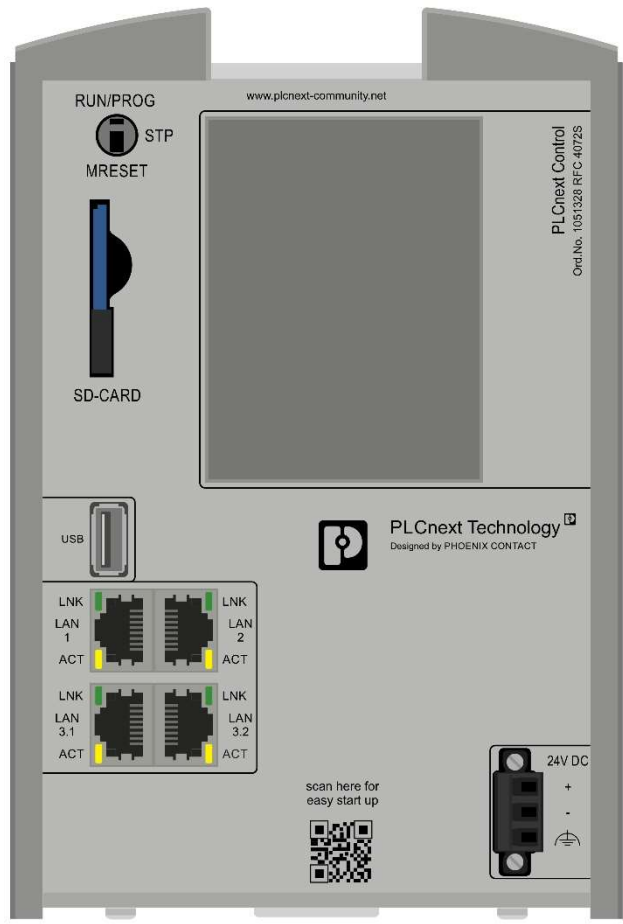


PLCnext Control

PLCnext Technology[®]
Designed by PHOENIX CONTACT

PLCnext Control for centralized applications with decentralized IOs

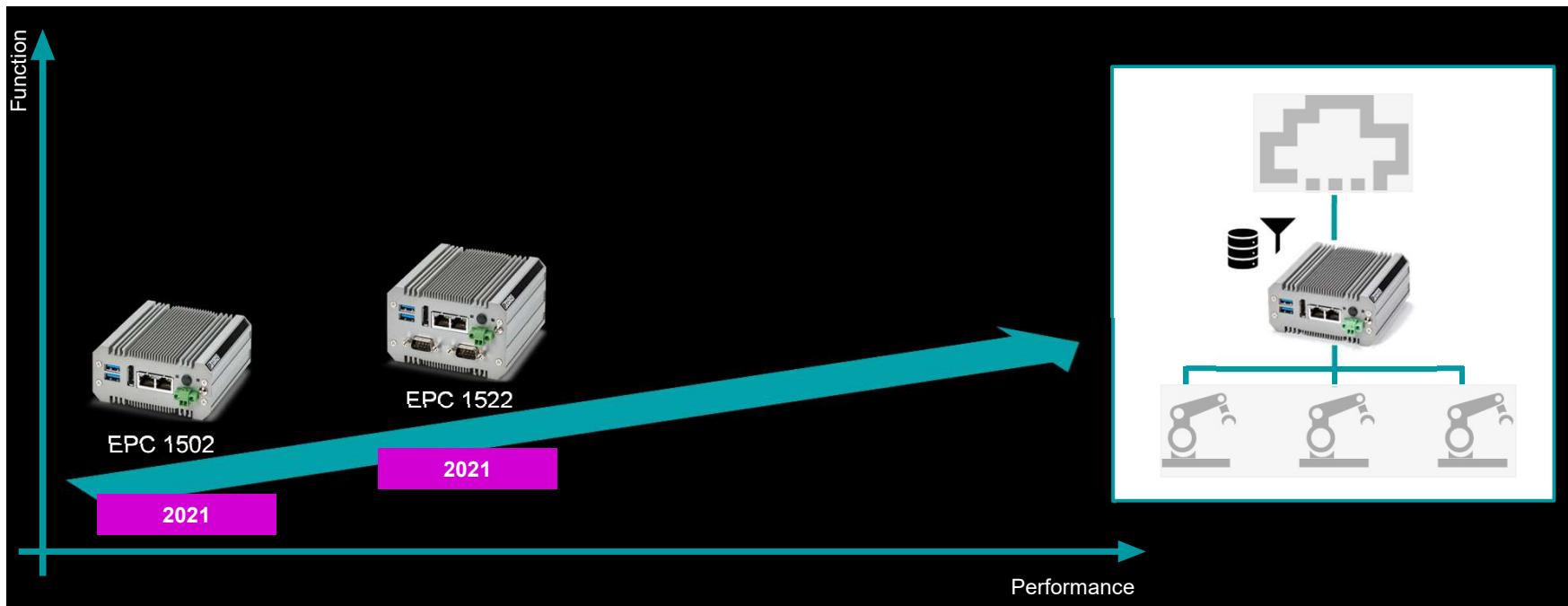




PLCnext Control

PLCnext Control for Edge Computing

PLCnext Technology [®]
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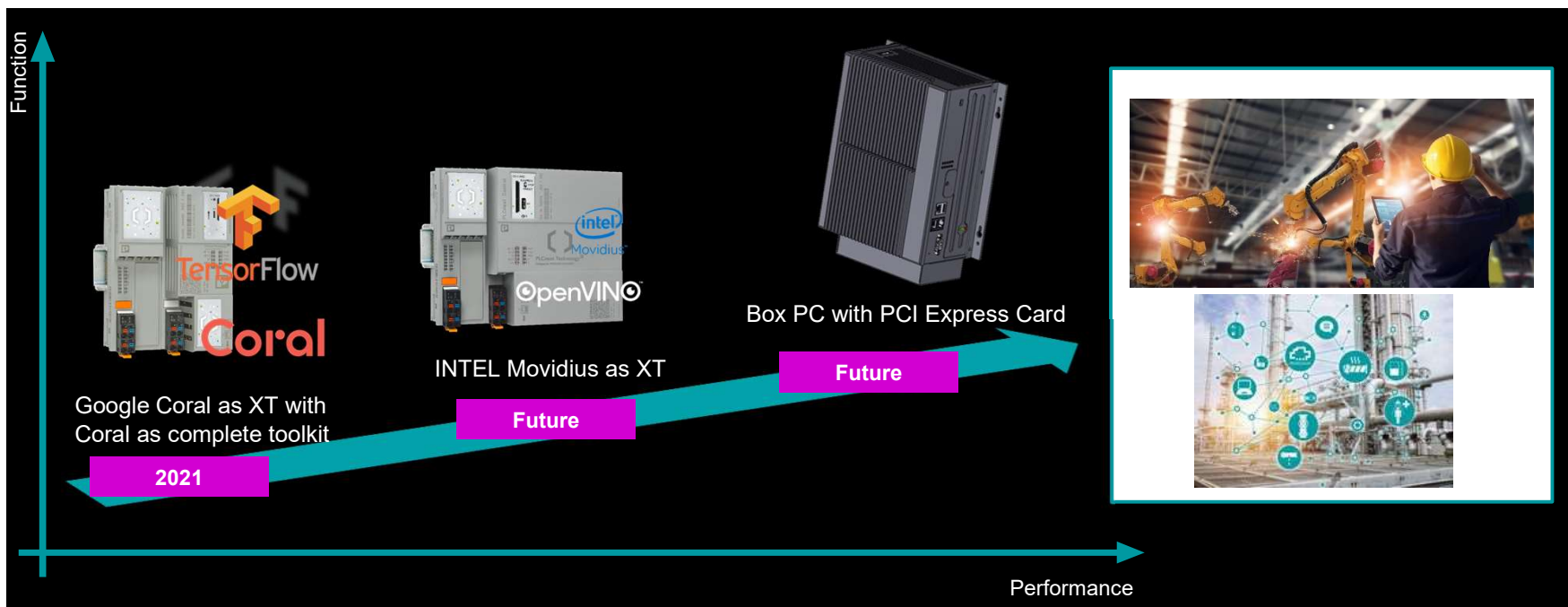


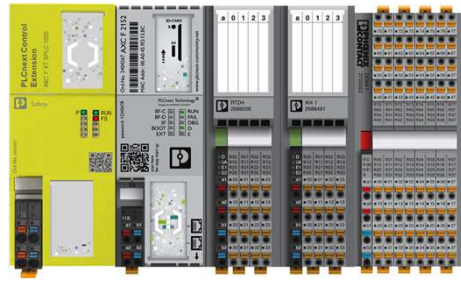
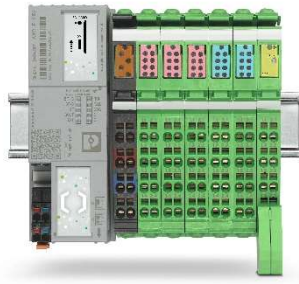


EPC 1502

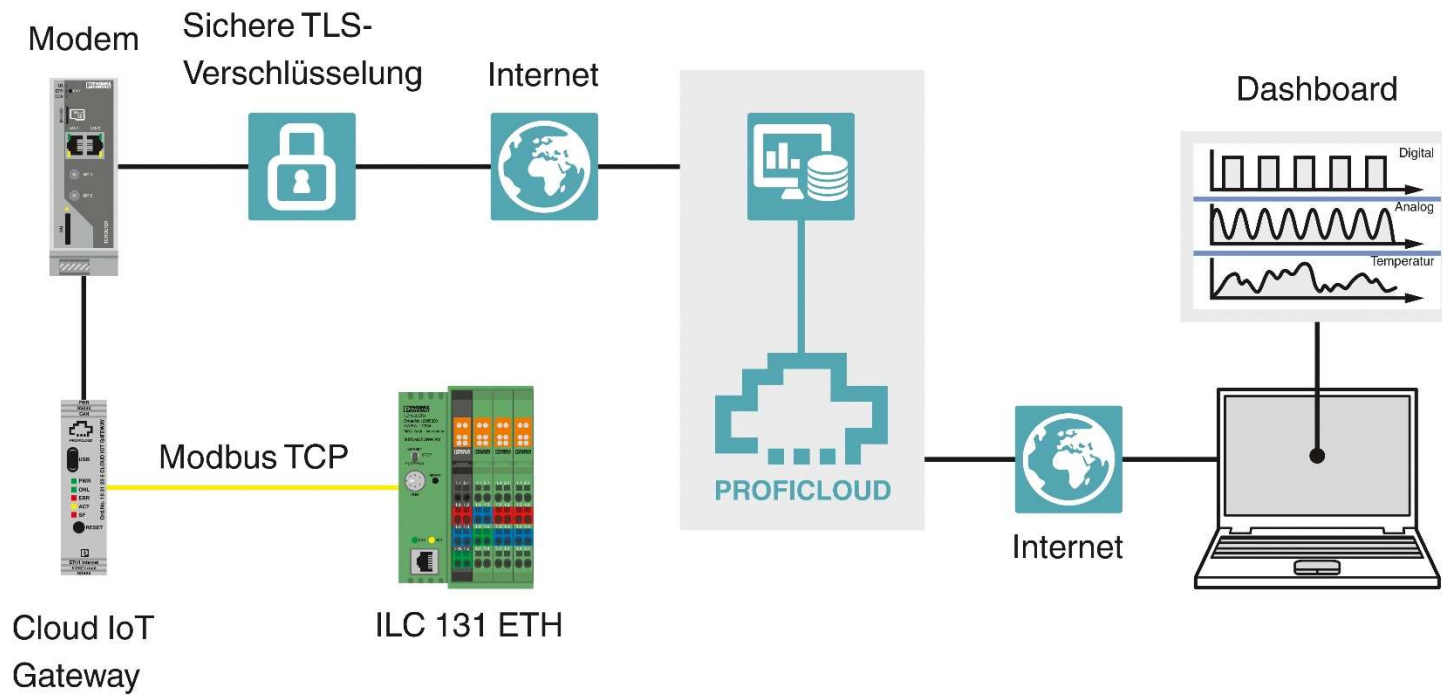
EPC 1522

PLCnext Control for intelligent applications with Artificial Intelligence

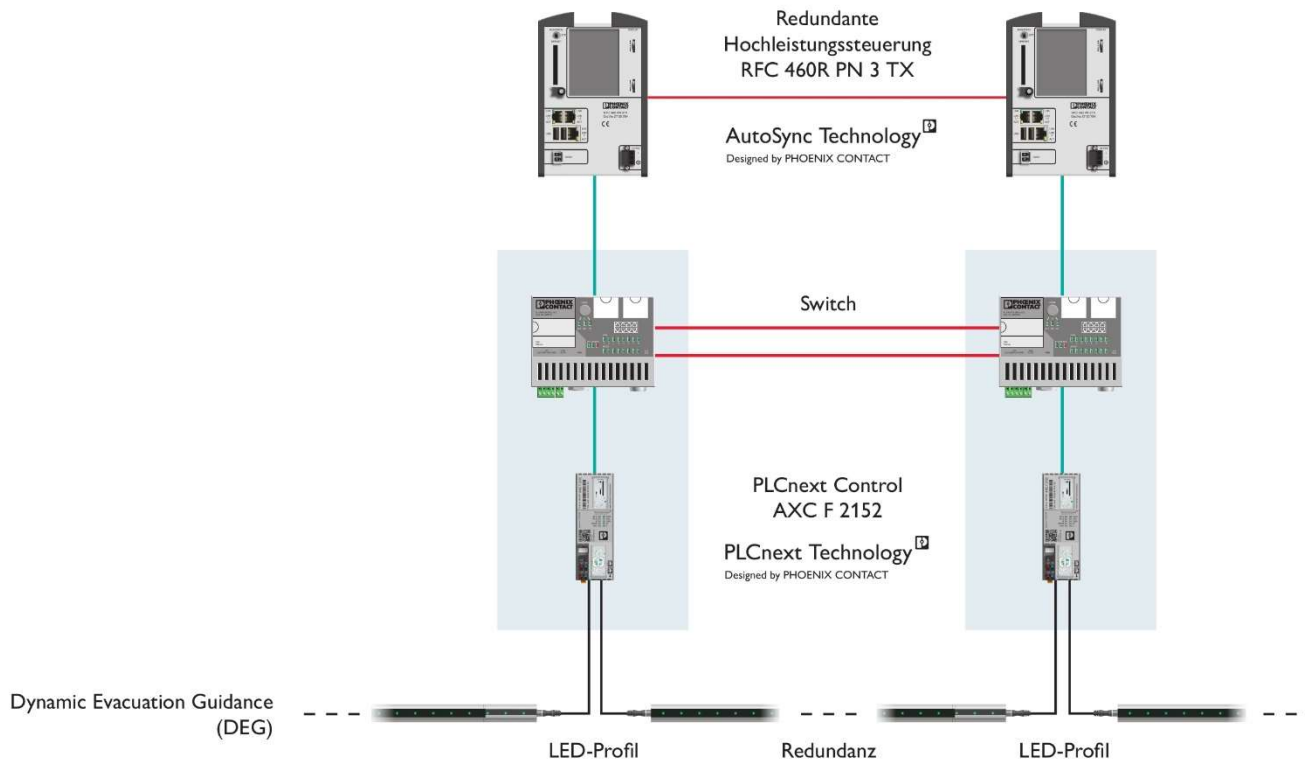




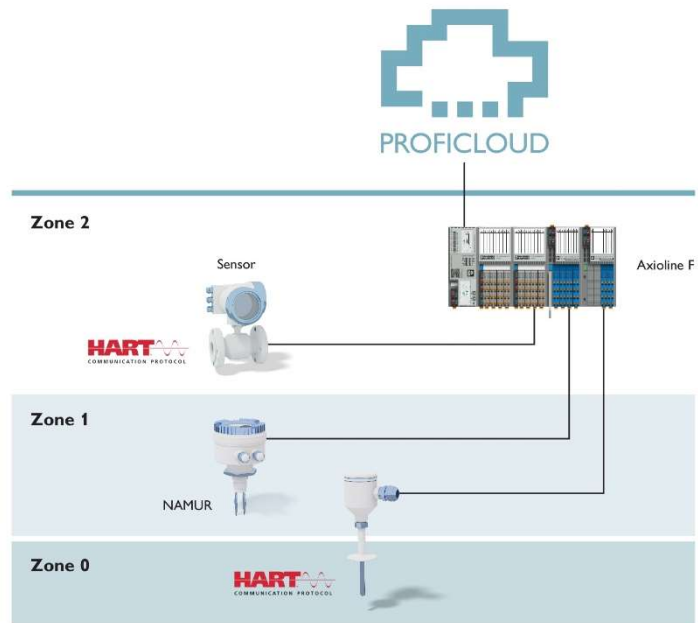
Ejemplos de Utilización



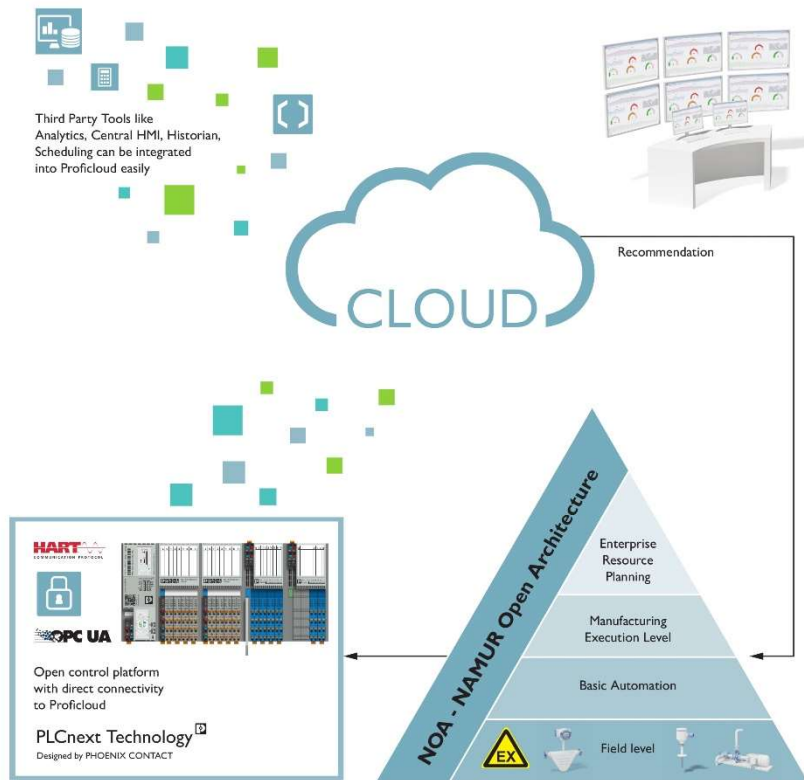
All Installed Base... to CLOUD / Analytics / Predictive / Efficiency



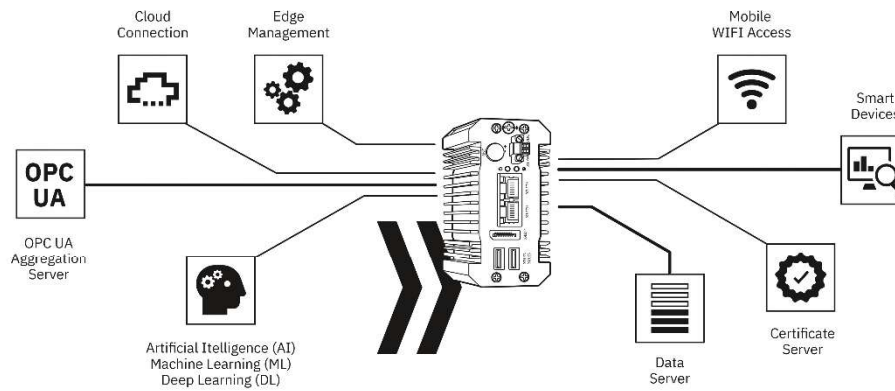
Infrastructure Application Redundancy needs Open & Flexibility



Every Automation PROCESS could connect to CLOUD










NOA Application with PLCnext Technology CLOUD Analytics Predictive Maintenance




EDGE Application needs connectivity

Ecosystem & PLCnext Store

PLCnext Community – Global Exchange & Collaboration

<p>More about PLCnext Technology</p>  <p>plcnextcommunity.com</p>	<p>Upload or download apps</p>  <p>plcnextstore.com</p>	<p>Ask a question in the forum</p>  <p>phoe.co/PLCnextForum</p>	<p>Watch and learn with tutorials</p>  <p>phoe.co/PLCnextTutorials</p>
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Designed by PHOENIX CONTACT

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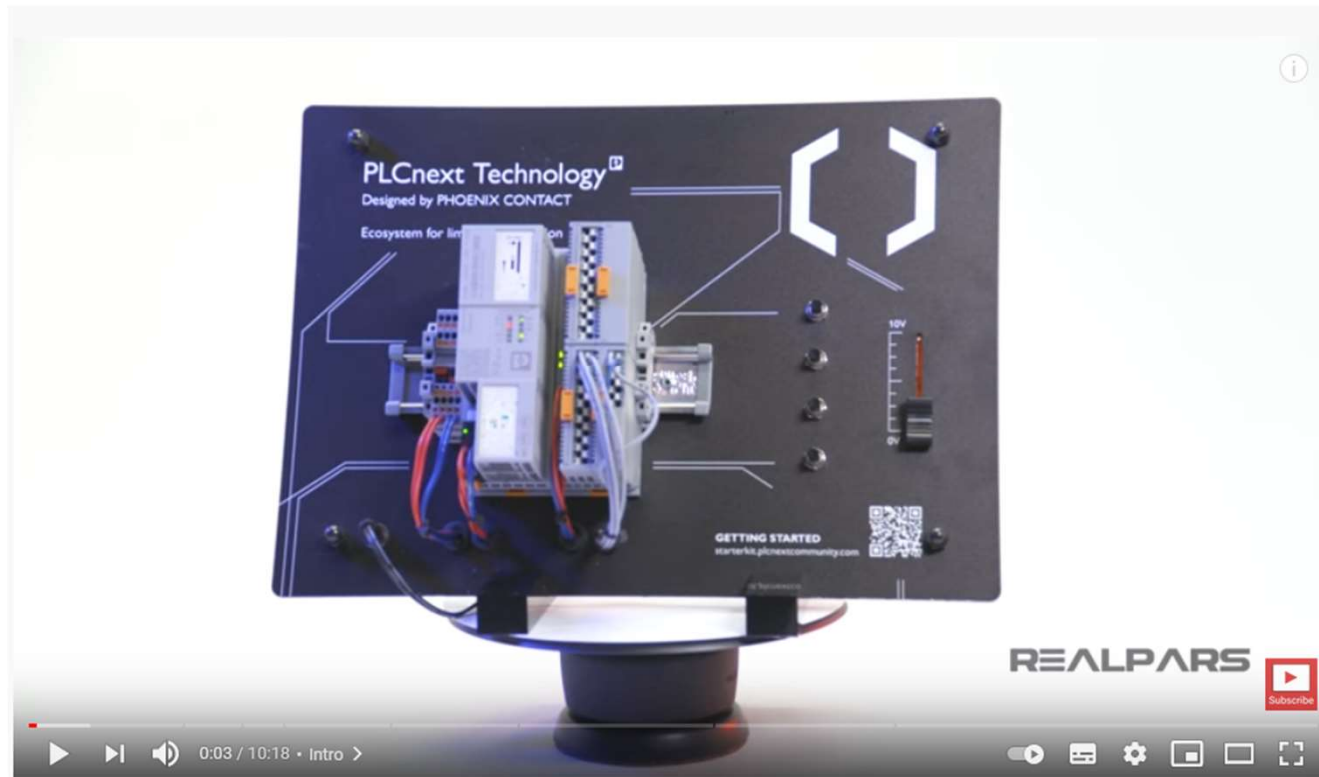


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From Vision to reality: made with PLCnext Technology → Advancing Interfaces





Starterkit Part 1 What's in the Starterkit Box?



Starterkit Part 2 Create a New Project and Configure Ethernet Port



Starterkit Part 3 Configuring the I/O



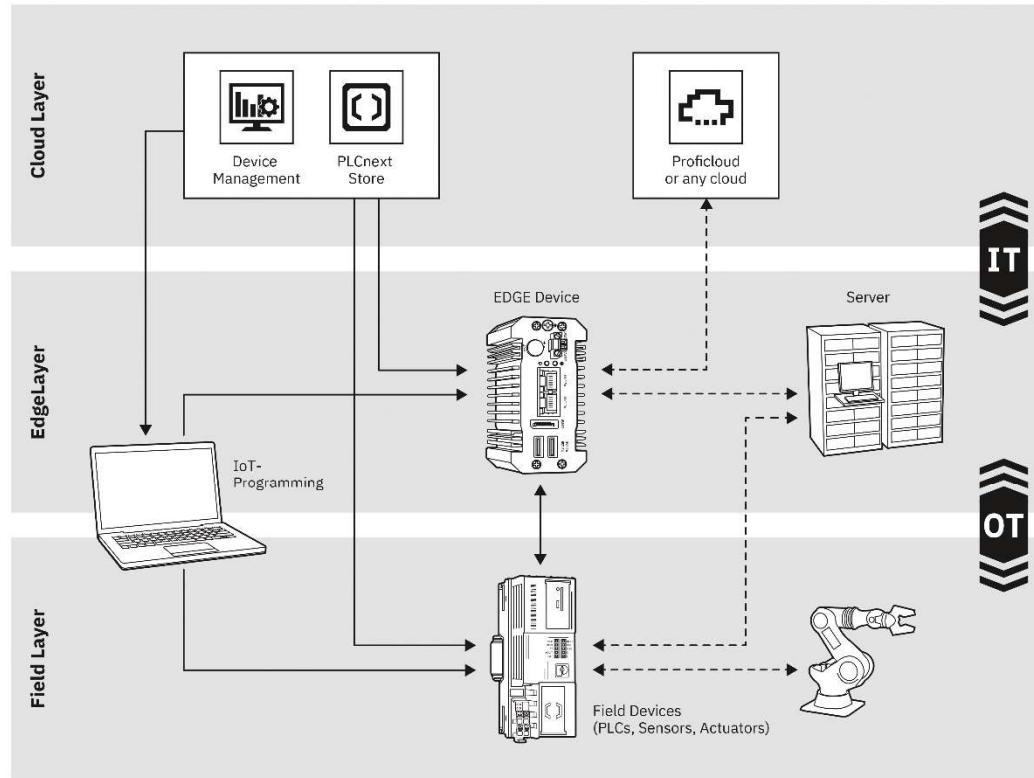
Starterkit Part 4 REALPARSHow to Easily Create Ladder Logic Programs



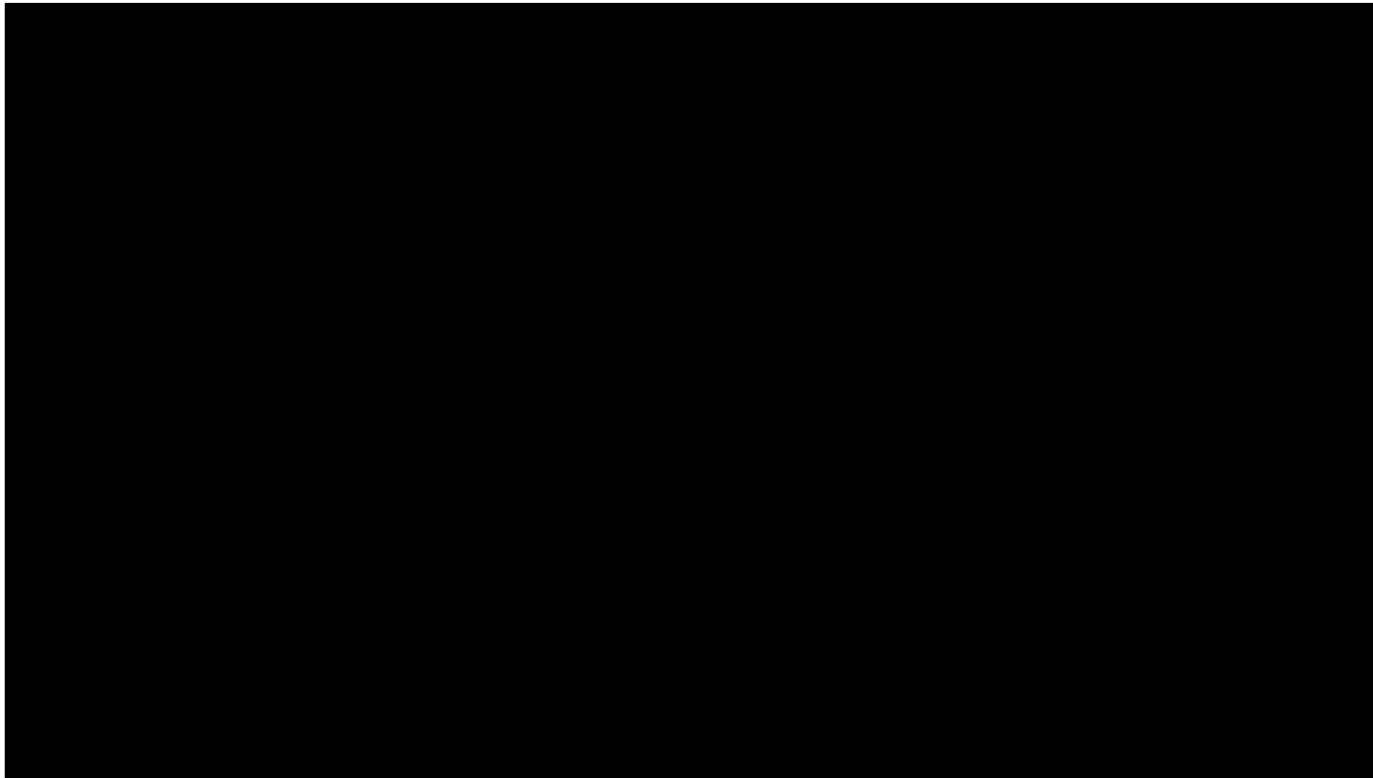
How to connect Inline modules to PLCnext Control ?

From Vision to reality: made with PLCnext Technology → Collaborative Solutions





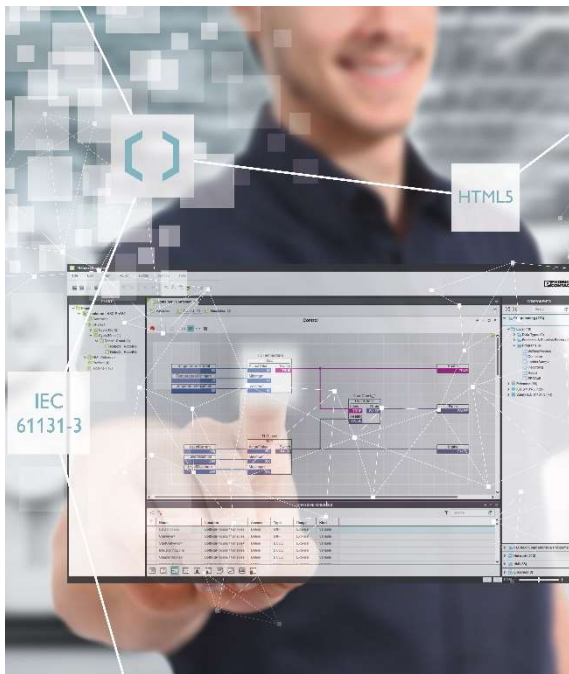
EDGE



Digital Factory Data collection

Antonio Gordillo / Marketing IMA / agordillo@phoenixcontact.com.mx

PLCnext Engineer



Thank you