

# NEXTO XF

5th Altus' PLC Generation

**New Modular  
PLC**

**altus**



# POSITIONING

## TARGET MARKETS AND HIGHLIGHTS





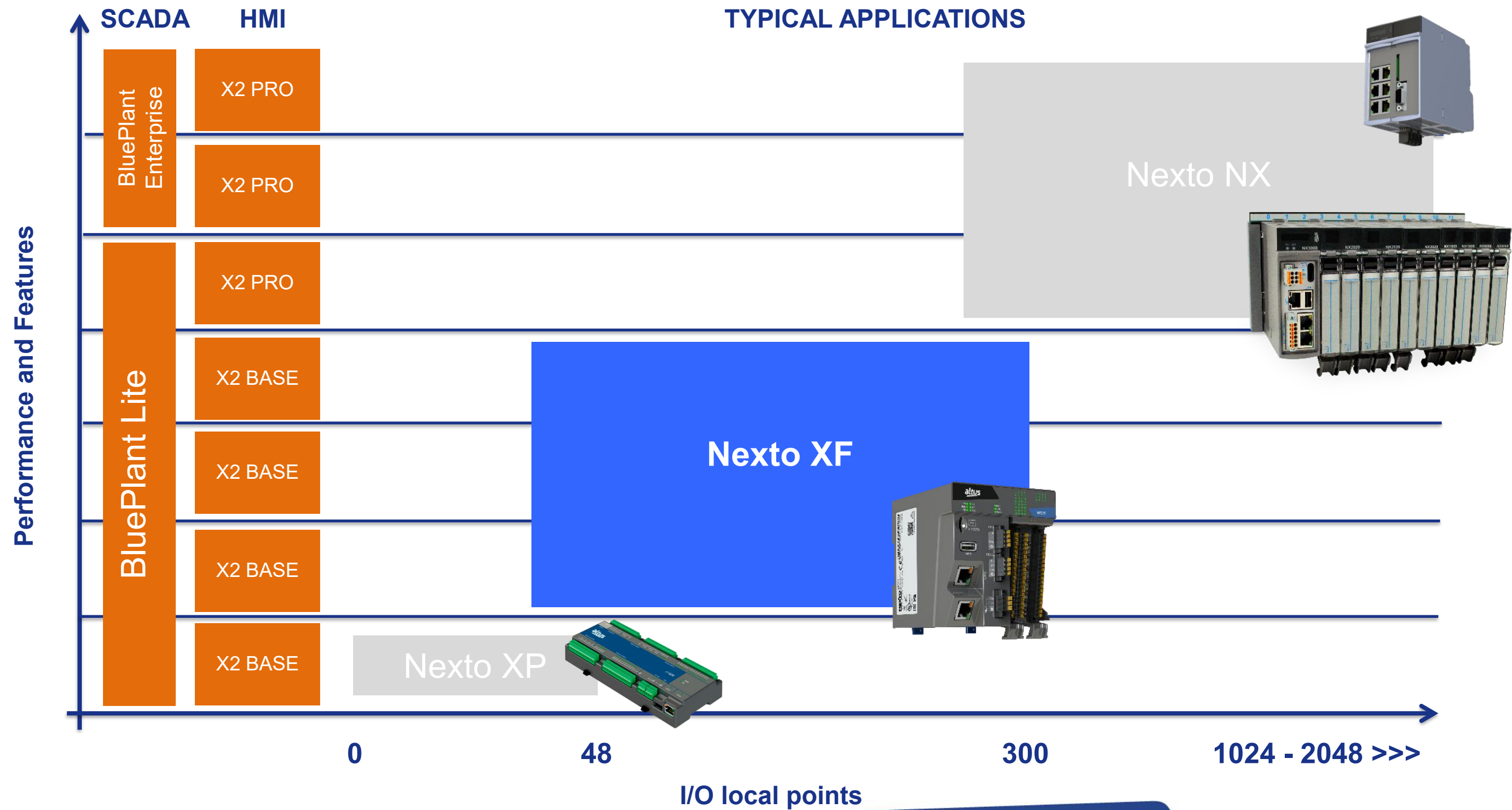
# MARKETS

SOLUTIONS TO THE DEMANDS OF EVERY MARKET

OEM MACHINES | FOOD & BEVERAGE | TEXTILE | MARINE  
BUILDING | WATER & WASTEWATER | INFRASTRUCTURE



CONTROLLERS



## KEY SELLING POINTS

# PRODUCT HIGHLIGHTS



### INDUSTRY 4.0

Multiprotocol  
MQTT / TLS  
VPN / FTP  
Docker  
Cyber Security

### PERFORMANCE

64-bit ARM 1GHz  
Dual-Core  
1,000 PID loops < 2 ms

### OPEN

PROFINET  
OPC DA/UA  
MODBUS TCP  
MODBUS RTU  
CANOpen

### SMART

USB (WiFi / 4G  
support)  
Cloud Connection  
MSSQL

### MASTERTOOL

Easy to use  
software, online  
changes and off-  
line simulation.  
Based on

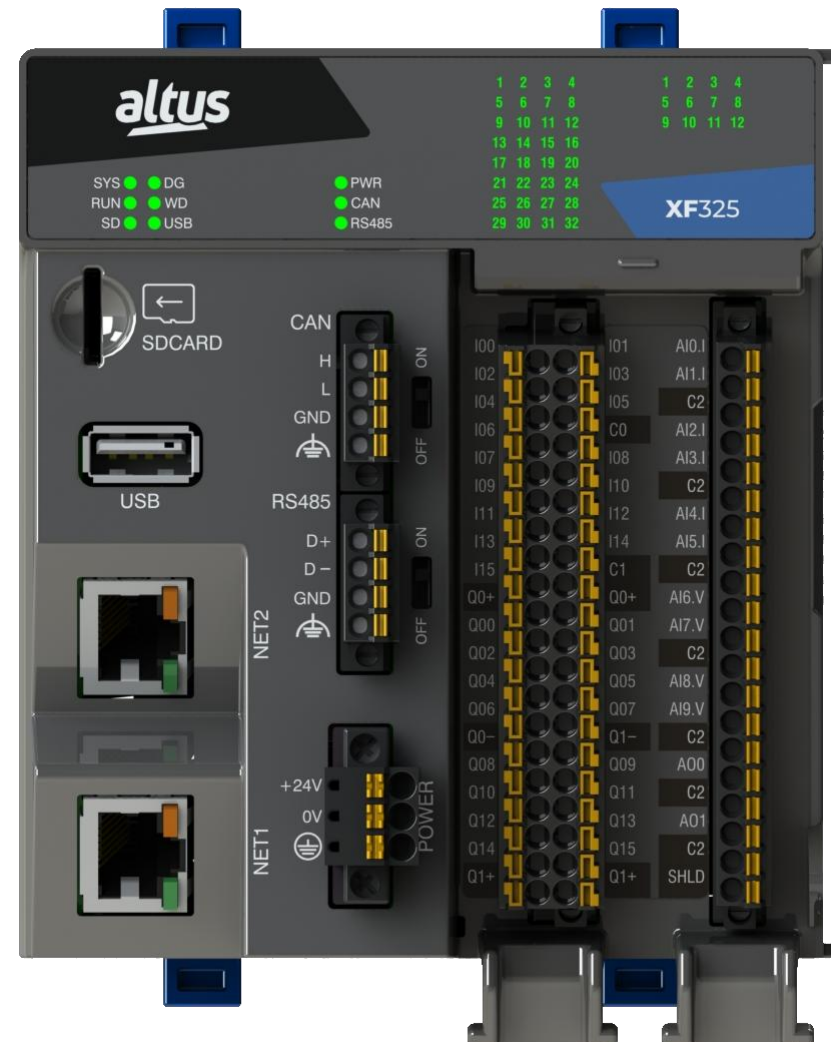


CODESYS

### SCALABLE

The Nexto  
family covers  
small to  
medium  
solutions with  
the same I/O  
solution

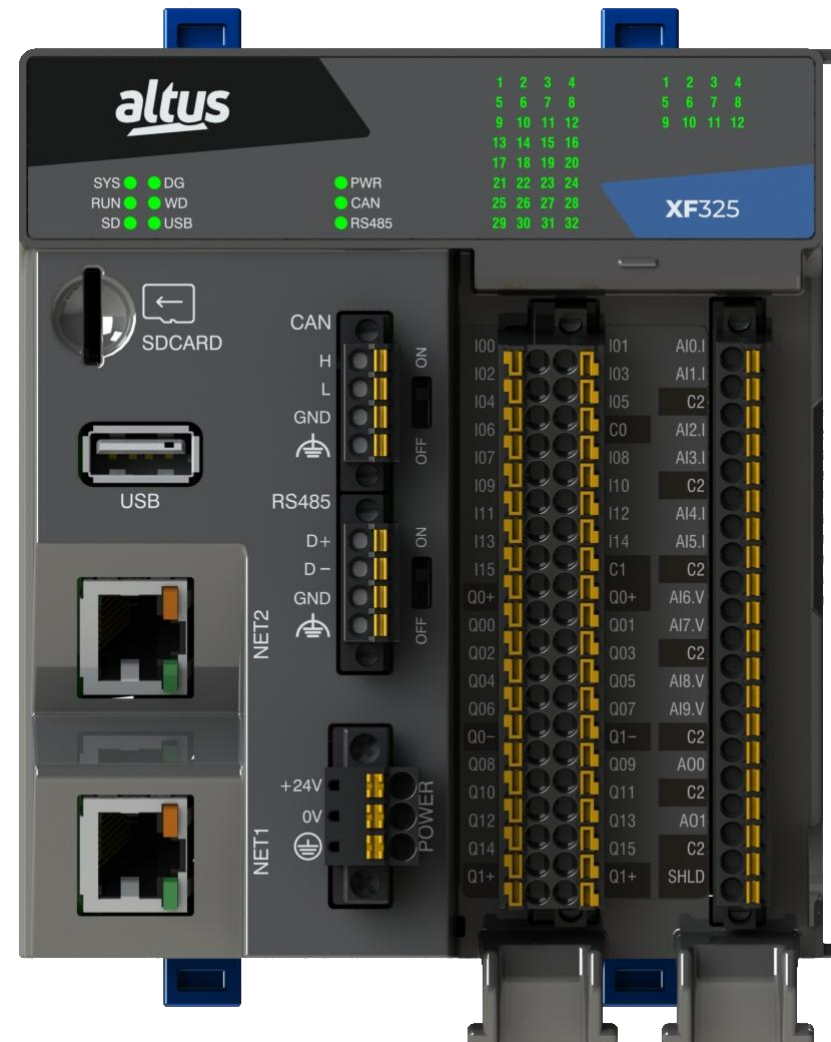
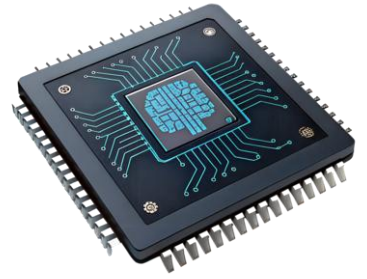
## DESIGN HIGHLIGHTS



- DIN rail mount
- Compact design
- I/O expansion (up to 10 I/O modules)
- 24 Vdc power supply input
- Embedded I/O (up to 44 I/O points)
- LEDs for inputs/outputs state indication and diagnostics
- Internal webserver for maintenance and diagnostics
- Removable terminal blocks
- User-friendly communication ports location
- Memory card slot (microSD)
- 2x Ethernet ports

## GENERAL FEATURES

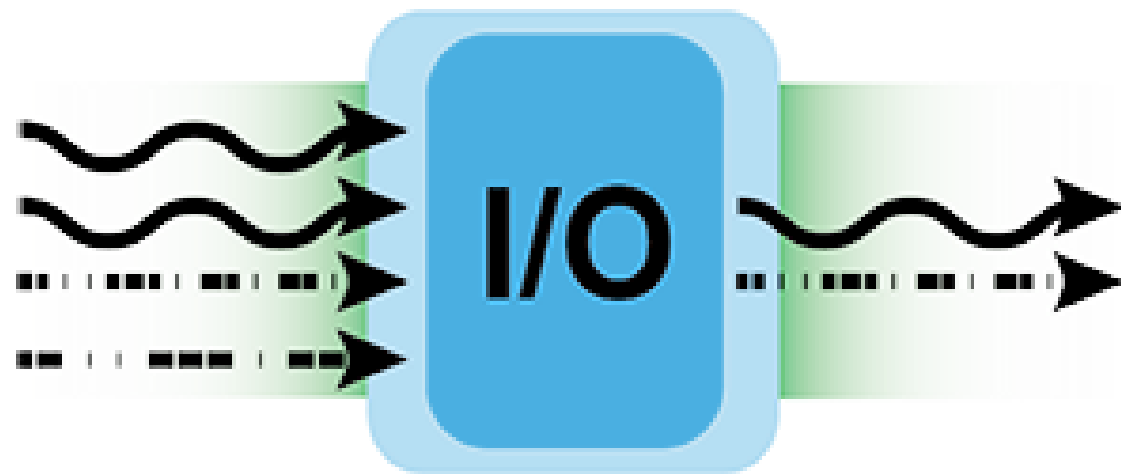
# CPU HIGHLIGHTS



- 64-bit ARM-based Dual-Core processor (1 GHz)
- 512 MB RAM DDR4 and 8 Gb NVM (eMMC)
- 128 Kb retain/persistent memory
- Docker support
- Real-time clock (RTC) (no battery inside)
- CODESYS Webvisu (embedded webserver that allows the creation of supervision and monitoring pages)



## CPU HIGHLIGHTS



### INTEGRATED DIGITAL INPUTS

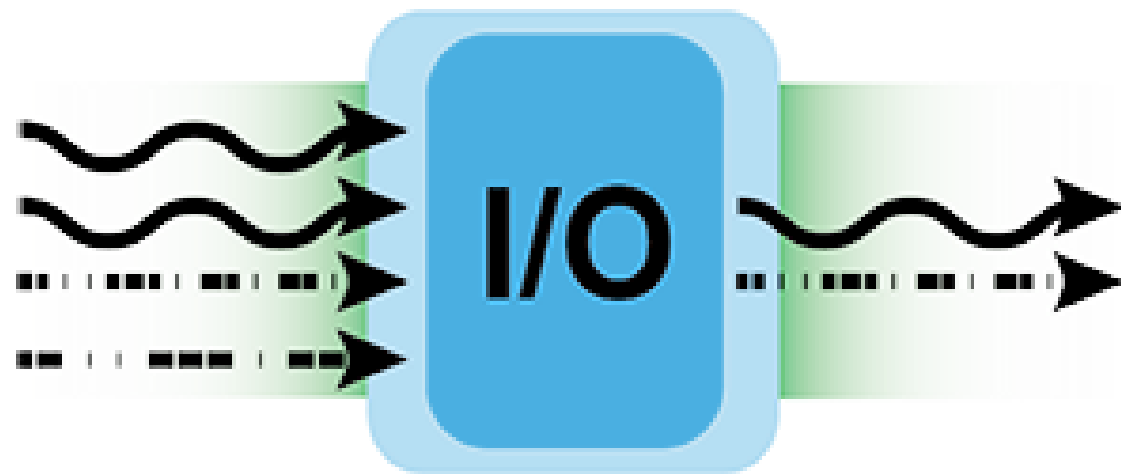
- 16 digital inputs
- Two 24 Vdc input groups
- Optoisolated (sink)
- Up to 3x high-speed counters and/or external interruption (9 fast inputs)

### INTEGRATED DIGITAL OUTPUTS

- 16 digital outputs
- Two 24 Vdc transistor output groups
- Optoisolated (source)
- Up to 4x PTO / Up to 8x PWM/VFO (8 fast outputs)
- 1.5 A per channel (6 A per group)



## CPU HIGHLIGHTS



### INTEGRATED ANALOG INPUTS

- 10 analog inputs
- 12-bit resolution
- Available inputs (fixed):
  - 4x voltage inputs: 0 to 10 Vdc
  - 6x current inputs: 0 to 20 mA, 4 to 20 mA

### INTEGRATED ANALOG OUTPUTS

- 2 analog outputs
- 12-bit resolution
- Available outputs (software selectable):
  - Voltage input: 0 to 10 Vdc
  - Current input: 0 to 20 mA, 4 to 20 mA

## CPU HIGHLIGHTS



### 2x **ETHERNETs**

- MODBUS TCP Client/Server
- OPC DA/OPC UA
- MQTT Publisher/Subscriber/SPB (TLS 1.2)
- PROFINET Controller
- EtherNet/IP Scanner
- EtherNet/IP Adapter
- EtherCAT Master
- SNTP/SNMP
- Webserver
- MRP/RSTP
- Programming and configuration

### 1x **RS-485**

- MODBUS RTU Master/Slave

### 1x **CAN**

- CANopen Master
- J1939 Manager
- CAN *low level* (proprietary protocols)

### 1x **USB Host**

- Datalogger (external memory)
- RS-232, WiFi, 3G/4G adapters
- Ethernet converter

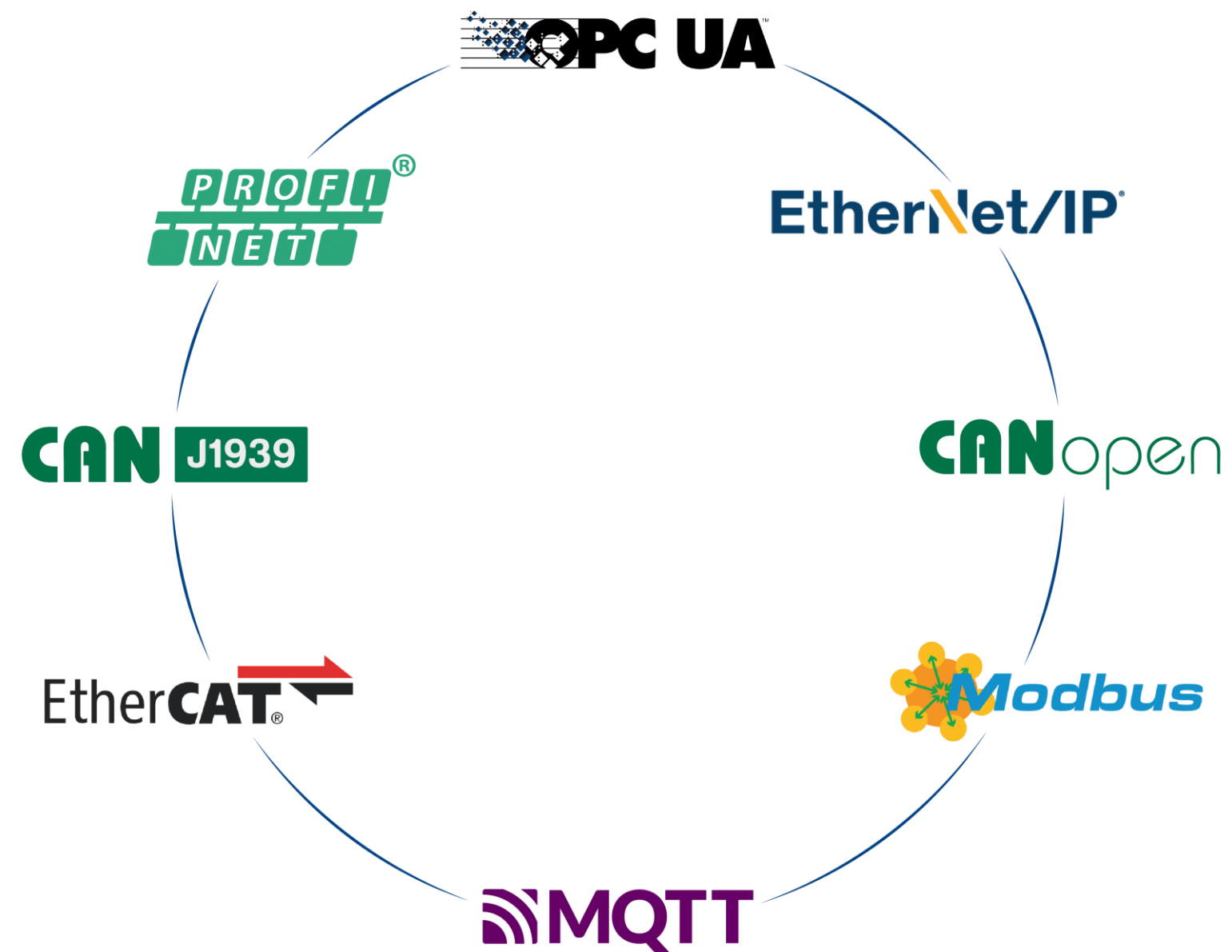
### 1x **micro SD Card**

- Datalogger (external memory)



## CPU HIGHLIGHTS

IoT-READY PLC PREPARED TO FACE THE CHALLENGES OF THE INDUSTRY 4.0



CPU HIGHLIGHTS

BUILT-IN DIAGNOSTICS AND MAINTENANCE WEBPAGES

- Device general overview
- Webpage with password protection
  - CPU firmware update
  - Configuration for VPN, Firewall, FTP server and USB devices
  - RTC settings and IP addresses
  - Network analysis and system logs

altus | NX3008

English | Português

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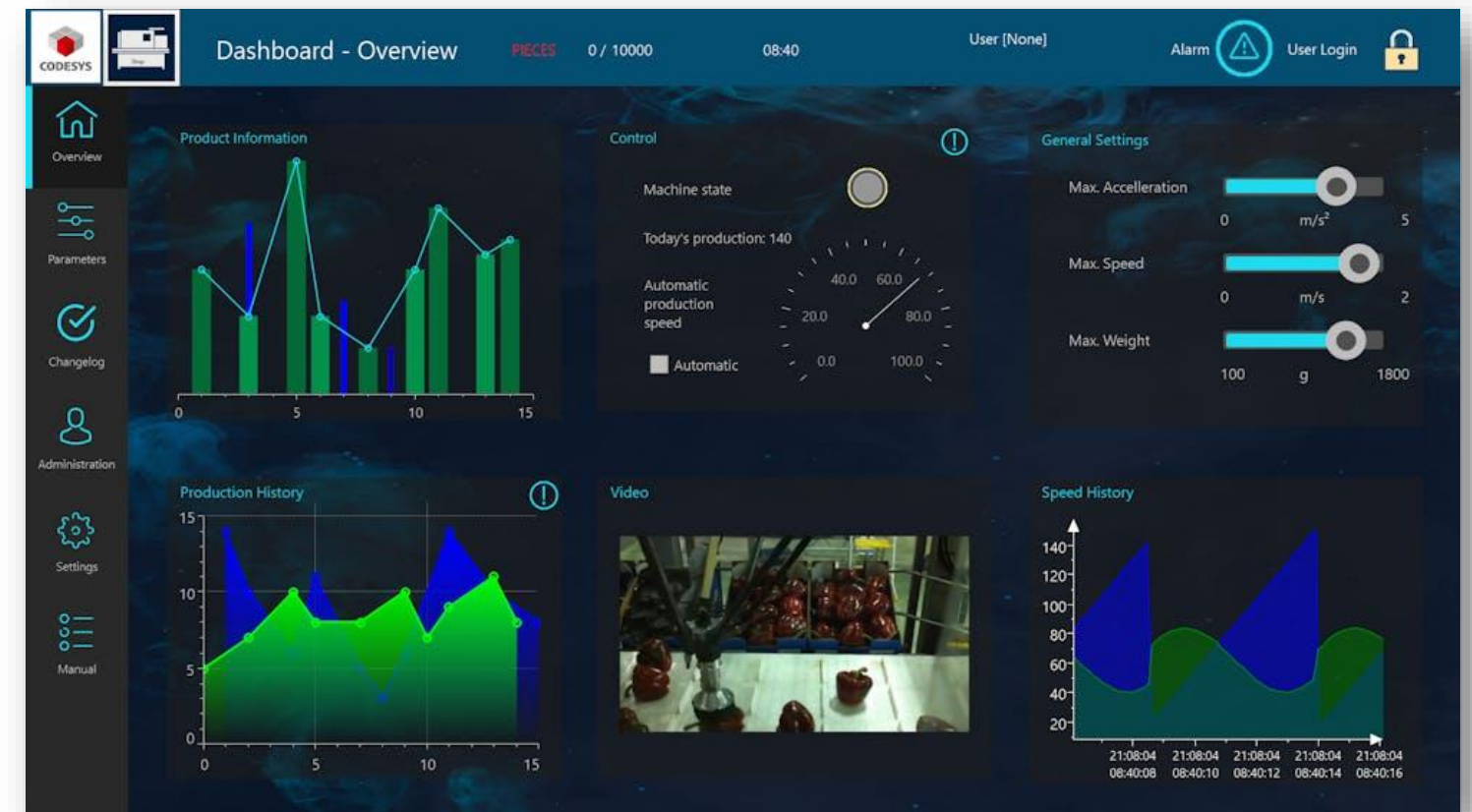
General Overview		Bus Information	Management
Model	NX3008		
Tag	CPU		
Description	Nexto CPU		
Configured Racks	0		
Rack	0		
Slot	0		
Firmware Version	1.12.29.0		
Bootloader Version	1.0.1.0		
Auxiliar Processor Version	2.0.32.0		
Power Processor Version	2.0.18.0		
System State	Stop		
Active Diagnostics	0		
Forced Values	No		
USB Device	Not Found		



## CPU HIGHLIGHTS

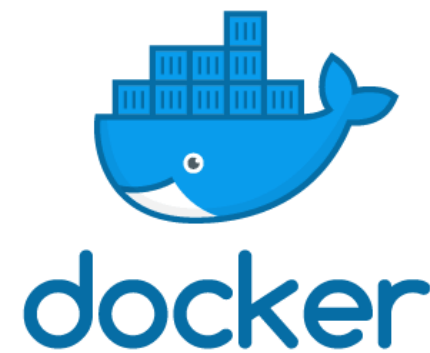
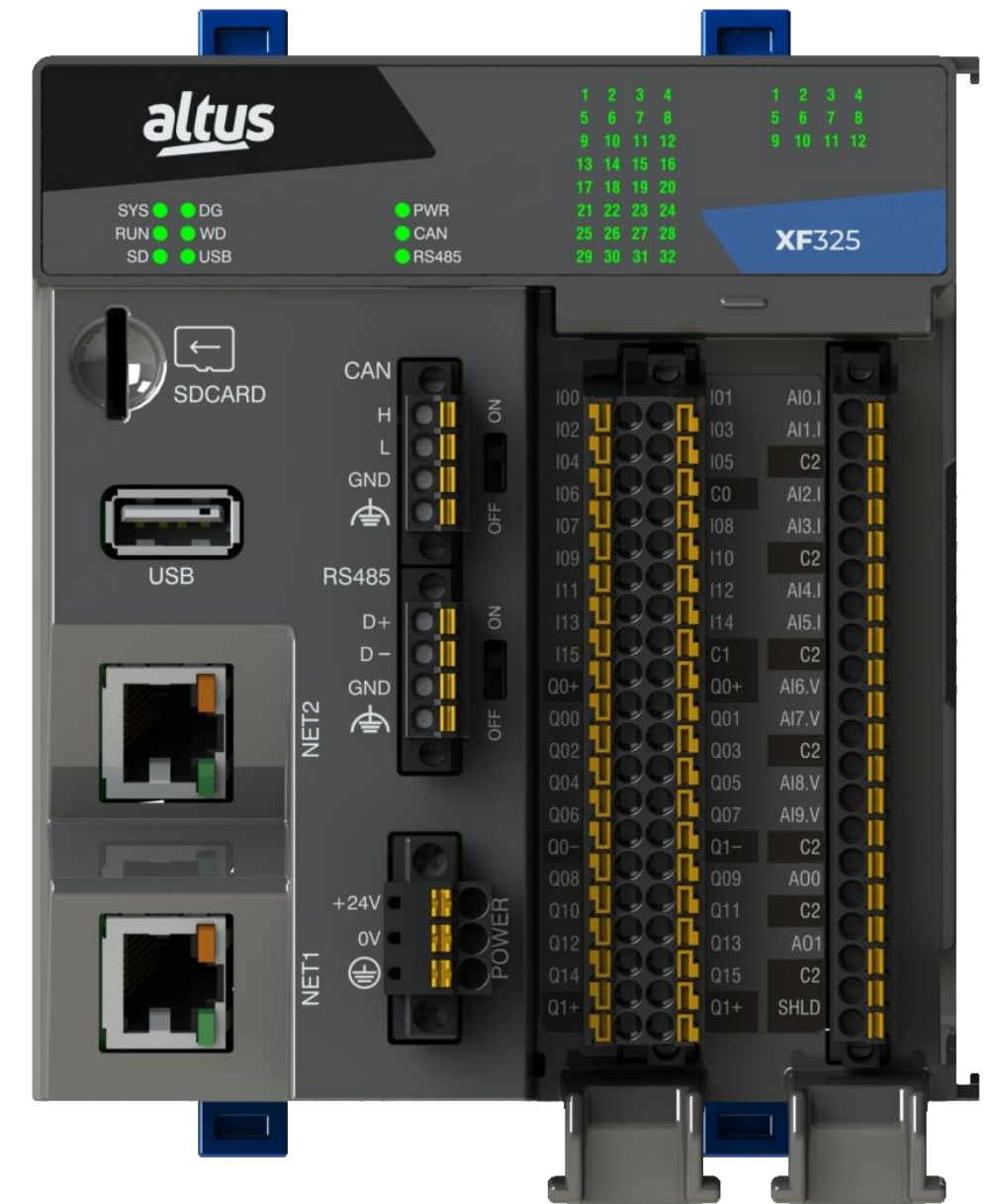
### FLEXIBILITY IN THE DEVELOPMENT OF SMALL AND MEDIUM APPLICATIONS

- System that allows the creation of supervision and monitoring screens without the use of a SCADA software
- Embedded in the controller's memory, it's possible to access the screens through a Web browser directly from the computer, tablet or smartphone
- Control and supervision application on a single programming software
- Considerable cost reduction in the project



## CPU HIGHLIGHTS

- Cyber Security
  - Through the resources available on the processor, on the Linux kernel application level and by CODESYS
  - Firewall
- VPN tunnel support (P2P)
- FTP for file transfer
- Docker support
  - User Linux space to install containers to develop own applications or use common ones available at Docker Hub.

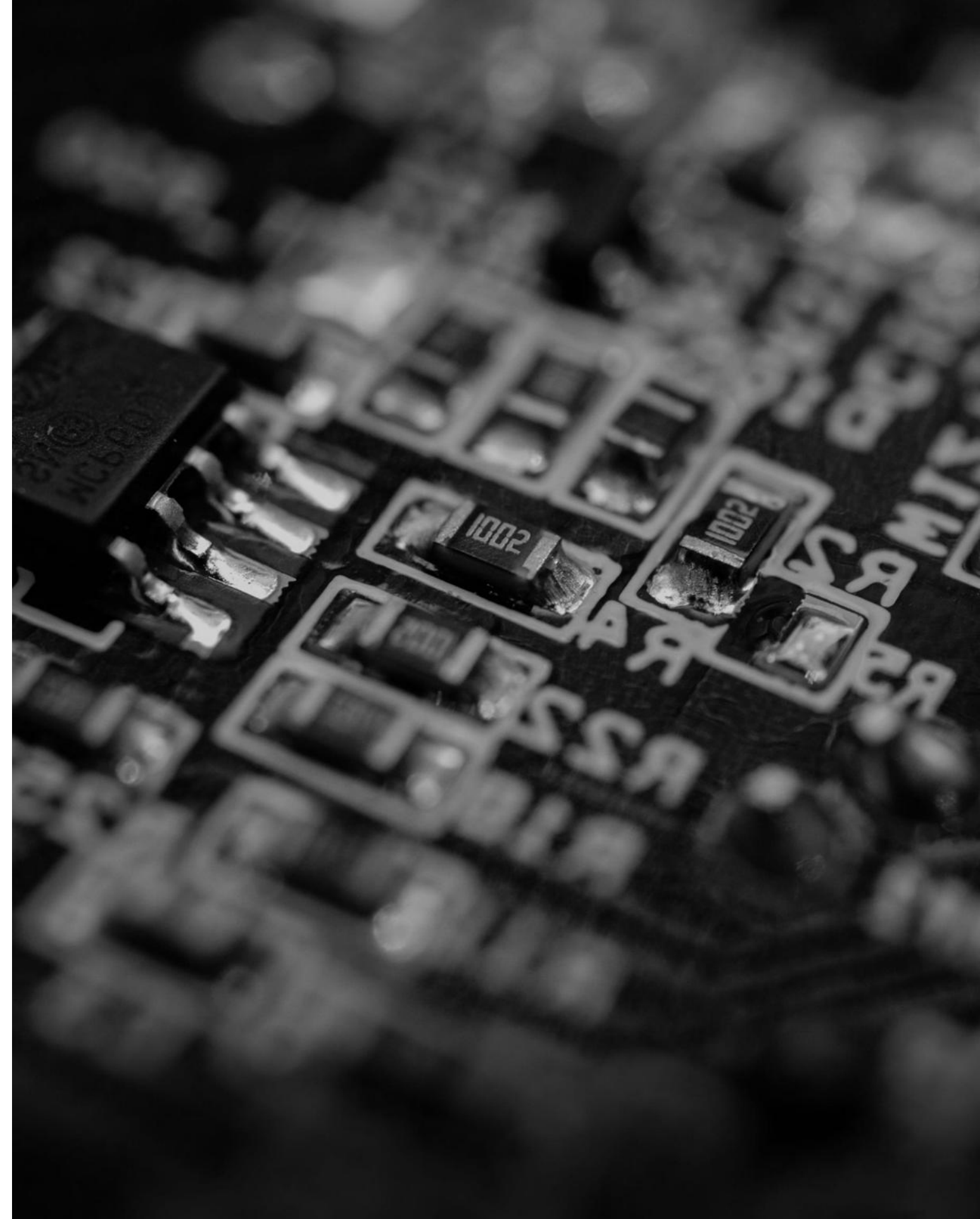




## PRODUCT HIGHLIGHTS

### PROTECTION AGAINST HAZARDOUS SUBSTANCES IN INDUSTRIAL ENVIRONMENTS

- Many industrial environments have hazardous substances on the air for printed circuit boards such as chemical components, air and moisture.
- In the conformal coating process a thin layer of nonconductive material is applied to protect against corrosion, extreme temperatures, sea air, humidity, among others.



## PRODUCT HIGHLIGHTS



**CLASS I, DIVISION 2**





# PORTFOLIO

## CPU MODELS AND I/O MODULES

CPU HIGHLIGHTS

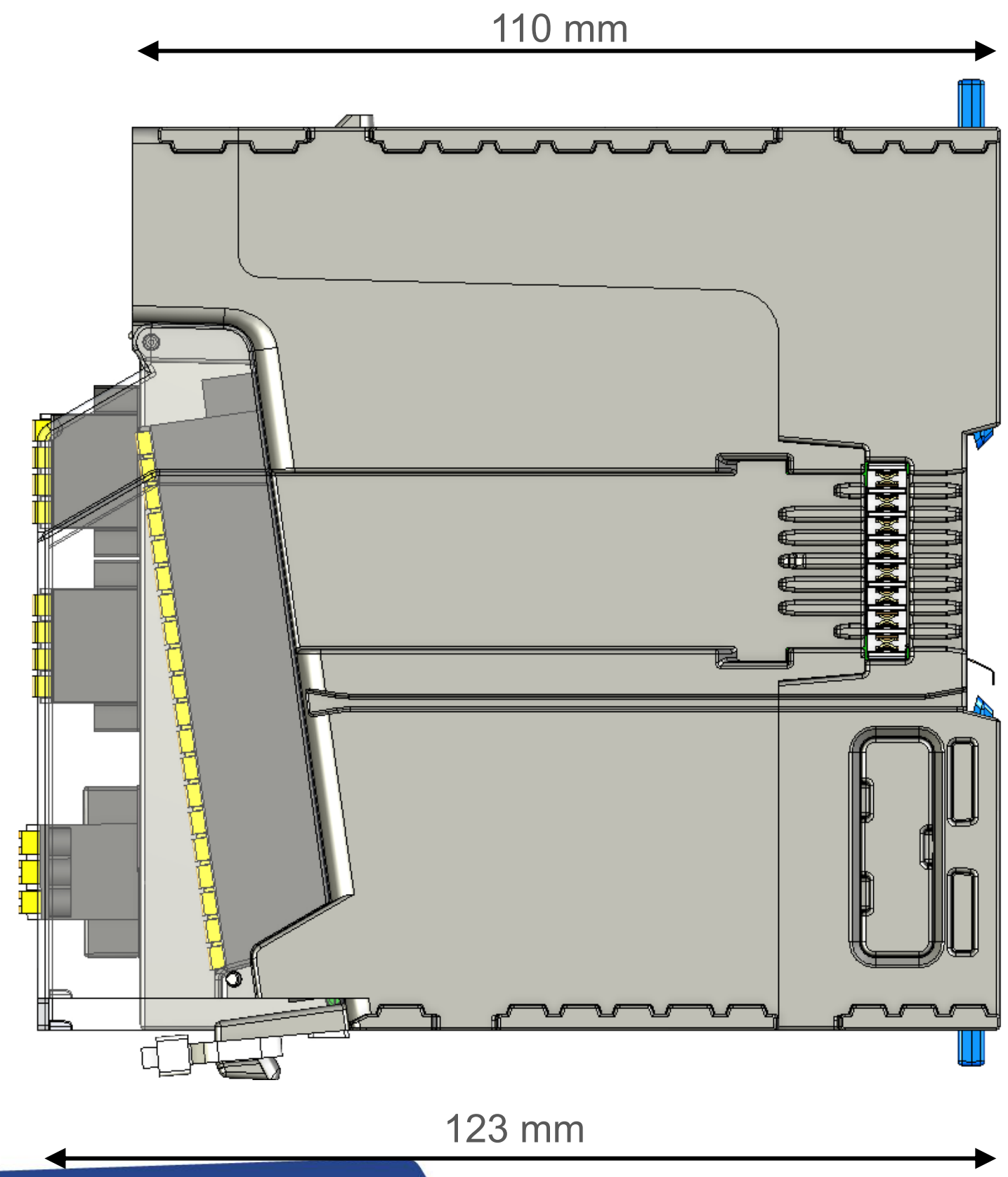
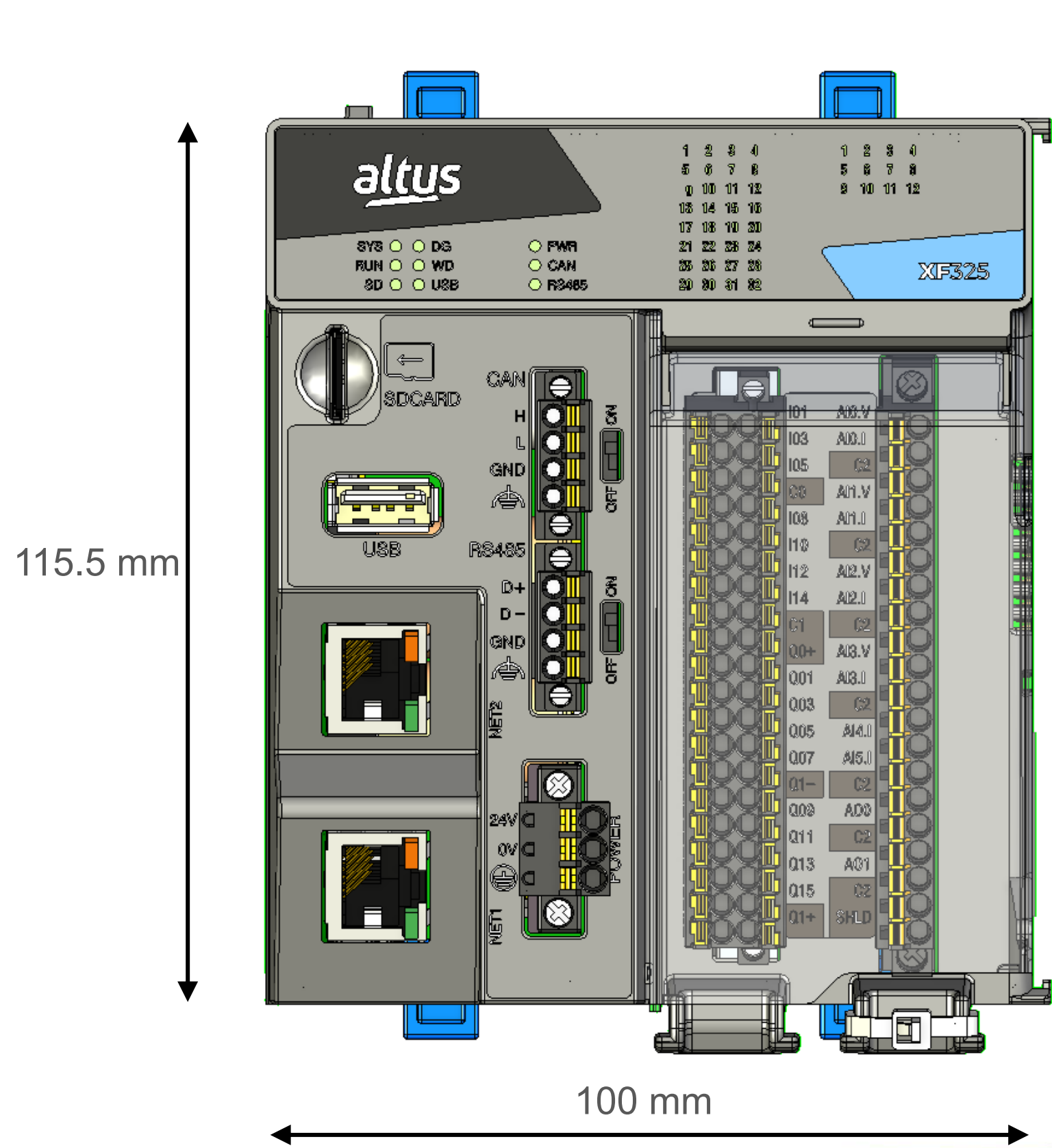
	XF300-B	XF300	XF315	XF325	XF325-W
Digital Inputs (DI)	16				
Digital Outputs (DO)	16				
Analog Inputs – V/I (AI)	-		10 (6 I + 4 V)		
Analog Outputs – V/I (AO)	-			2	
Ethernet TCP/IP interface	2				
Complex Fieldbus <small>(PROFINET Controller, EtherNet/IP Scanner, EtherCAT Master)</small>	-	Yes			
RS-485 interface	1				
CAN interface	1				
USB Host	1				
SD Card, Firewall, VPN and FTP	Yes				
Webserver (Webvisu)	-				Yes
Docker	-	Yes			

# PRODUCT DESIGN AND HARDWARE



PRODUCT HIGHLIGHTS

DESIGN IS NOT FINAL



# SOFTWARE

## MASTERTOOL X

SOFTWARE

## PRODUCT HIGHLIGHTS



### MASTERTOOL X

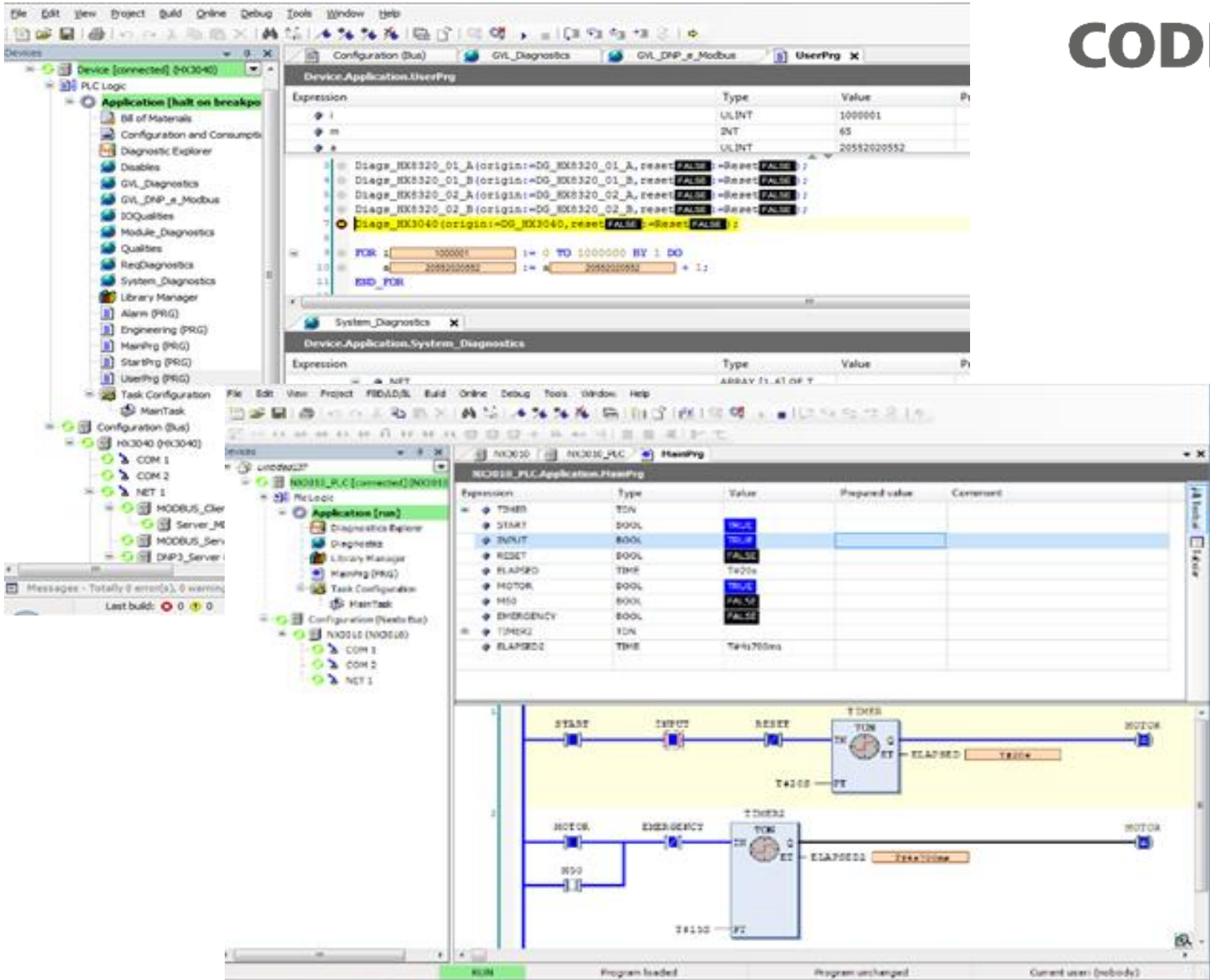
- One easy-to-use software environment for all your automation needs
- Friendly user interface and easy to use
- Single control platform with modern programming environment
- 6 programming languages
- Online programming
- Powered by





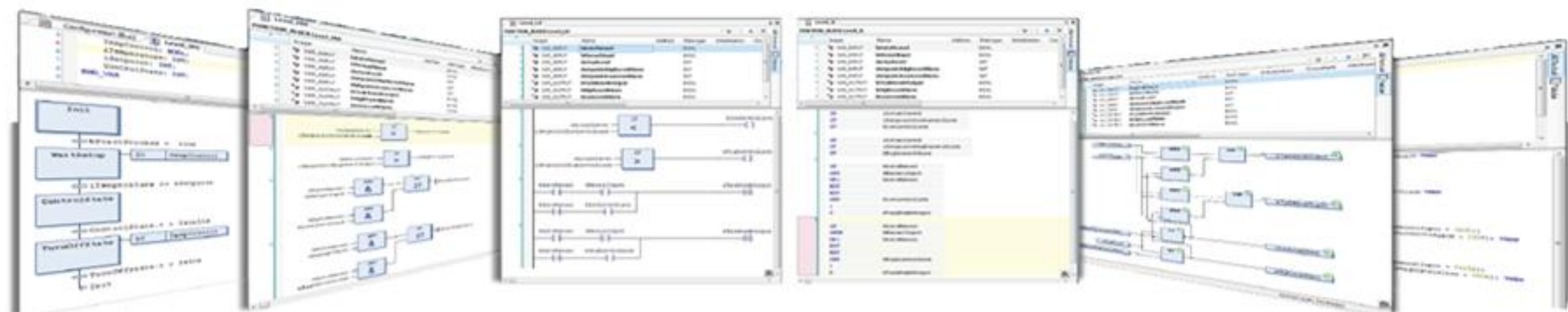
## ENGINEERING AND BACKUP FEATURES

- Online debugging and monitoring
- Online changes
- Offline simulation
- Symbolic variables
- Easy hardware configuration
- System diagnostics
- Global variable lists
- Source code memory area



**IEC 61131-3 – PROGRAMMING LANGUAGES**

- Structured Text (ST)
- Sequential Function Chart (SFC)
- Function Block Diagram (FBD)
- Ladder Diagram (LD)
- Continuous Function Chart (CFC)
- Support of different languages in the same project



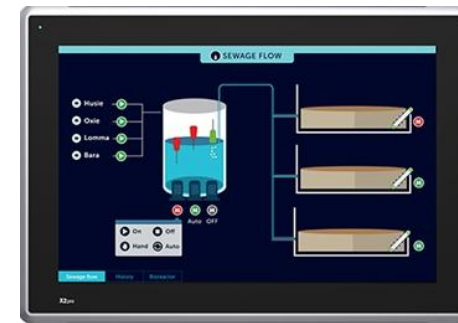
# APPLICATIONS & MARKETS



## PRODUCT HIGHLIGHTS

### FACTORY MACHINES

- Labeling
- Filling
- Blowers
- Washers
- Injection Machines
- Packaging
- Presses
- Flow packs



OPC UA  
MODBUS TCP  
CODESYS ARTII



CANopen  
MODBUS RTU

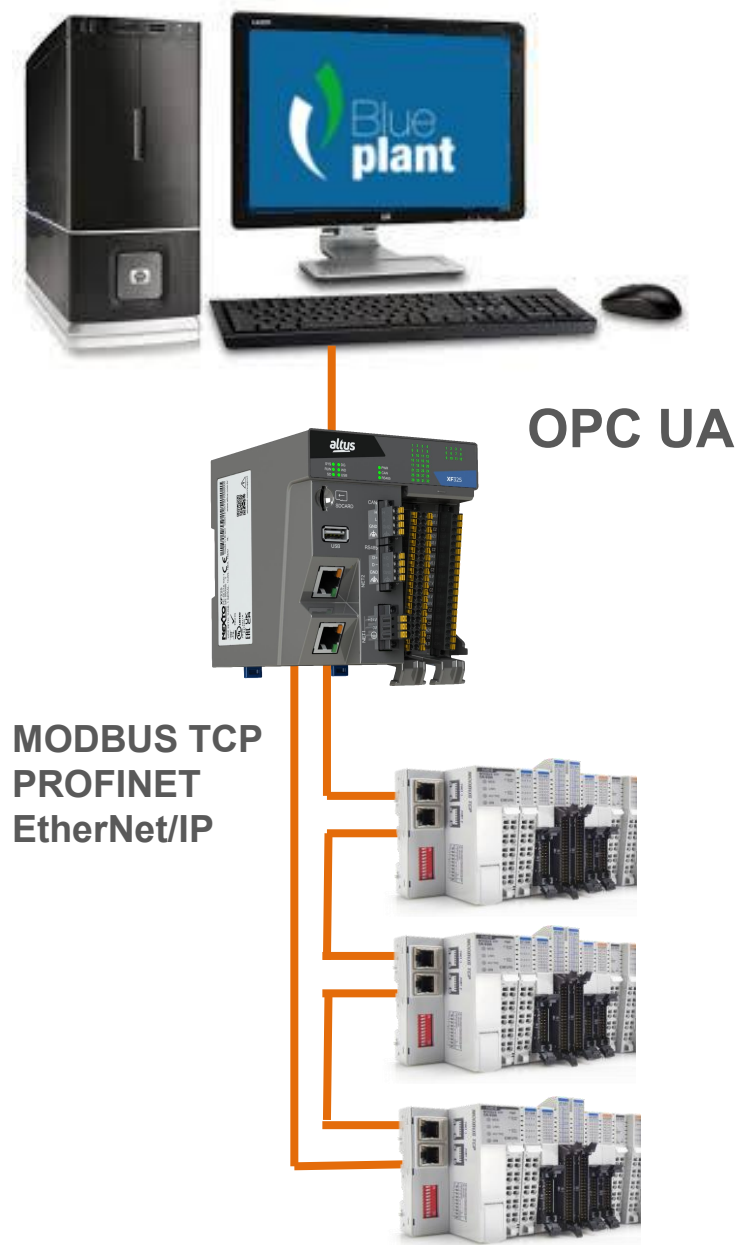




## PRODUCT HIGHLIGHTS

### BUILDING AUTOMATION

- Lights
- Climate
- Supervision
- Conveyors
- Access Control



### WATER & WASTEWATER

- Remote control sites
- Pumping stations
- Reservoir level control





 altus-automation  /altussa



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