

# straton soft PLC

Flexible and scalable software  
for industrial automation  
applications



**straton**

by COPA-DATA

# straton meets your challenges

## REDUCE TIME TO MARKET

**Do you want to reduce the time to market of your products without losing quality?**

straton supports a wide range of communication protocols dedicated to the automotive, building automation and energy sectors. The drivers and function blocks already implemented are designed to ensure fast development of applications.

## MODULARITY

**Do you want to remain flexible and not depend on a specific programming language?**

The straton software is based on the IEC 61131-3 standard which defines 5 different programming languages. You can choose your programming language, switch at any time, or opt for C or C++ programming to create your own function blocks, add Matlab or Simulink code, or integrate widgets.

## AGILITY

**Do you want to be free to evolve and use your applications on any type of hardware?**

The straton software is compatible with all operating systems and thus all types of hardware. Thanks to its flexibility and low footprint, the developed applications do not require any additional compilation to be integrated on specific hardware.

## OPENNESS

**Do you want to use your existing applications on new equipment?**

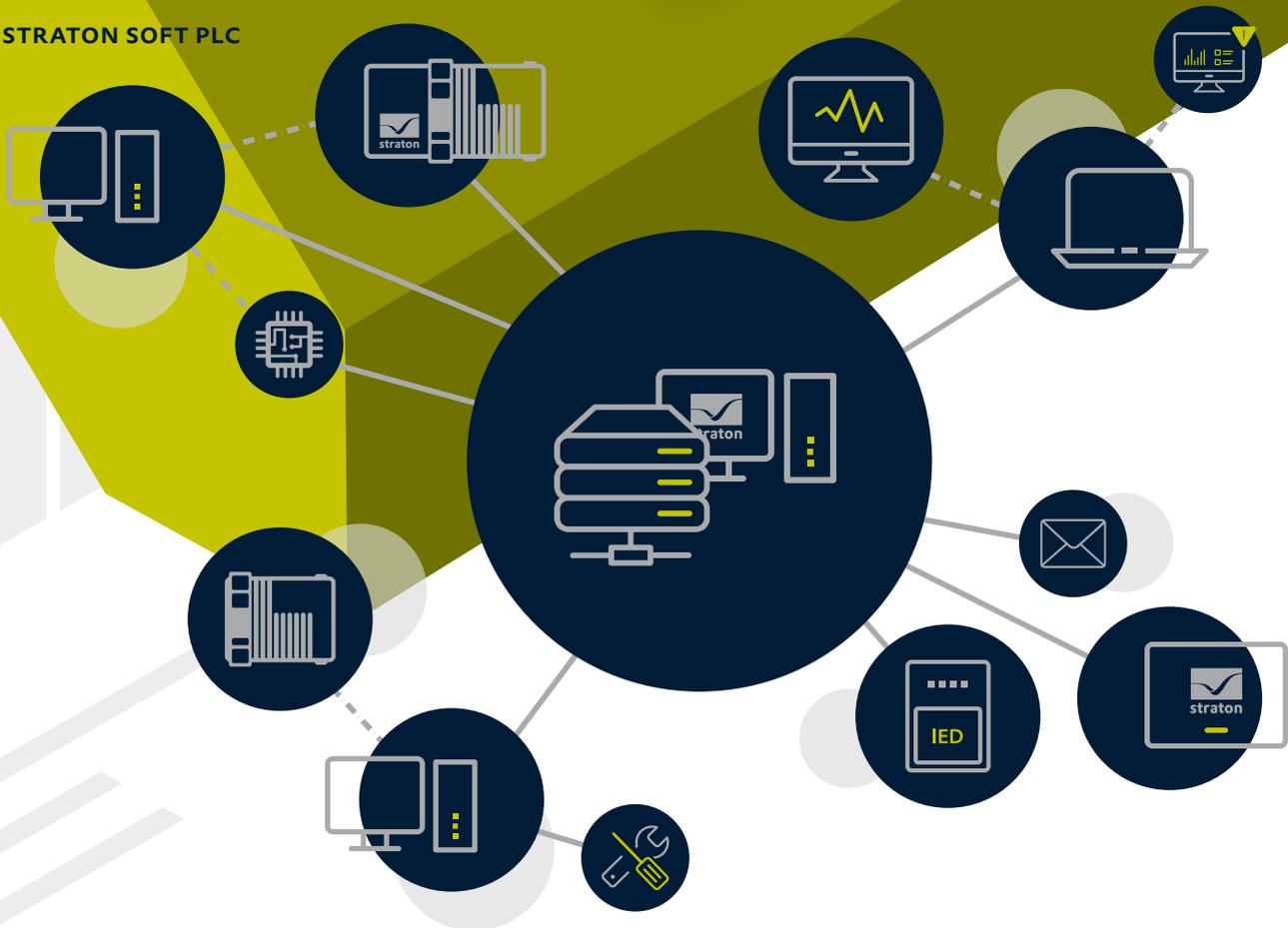
Thanks to the IEC 61131-3 programming standard, straton keeps its openness and programming flexibility. So you can both take over the application for a new equipment and interface with the already developed code (C, C++).

## REDUNDANCY & SAFETY

**Do you need a security proven software?**

Redundancy and security concerns have been taken into account all along the straton development cycle so that they are native features of the software.

## STRATON SOFT PLC



### PROTOCOLS AND FIELDBUS

- ▶ Standard protocols
- ▶ CAN protocol
- ▶ Industrial Ethernet protocols
- ▶ Energy protocols
- DNP3 M & S
- IEC60870-5-101 & 104
- IEC61850

### TOOL KITS FOR EMBEDDED DEVICES

- ▶ Driver development kit
- ▶ Data server
- ▶ Embedded graphic
- ▶ Validation tool

### IEC 61131-3 CERTIFIED EDITORS

- ▶ PLC Open certification
- ▶ Project automation
- ▶ Conversion between FBD, LD, ST and IL
- ▶ Brand labelling
- ▶ Controls / widget tool kit

straton is a flexible IEC-61131-3-based soft PLC and data processing environment for embedded platforms. straton is composed of a development tool kit, an integrated development environment, and a runtime. The development tool kit offers custom integration of the straton Runtime onto any hardware platform, regardless of the hardware configuration and operating system. Applications are realized in an IEC 61131-3 compliant environment. In addition, tools are available for fieldbus configuration, automated project engineering and online

diagnosis. straton Runtime carries out deterministic processing of the IEC 61131-3 application. straton also includes a range of communication stacks such as Modbus, Profinet, BACnet, CANopen, Powerlink, IEC 61850 and IEC 60870. Mainly dedicated to OEMs, hardware and software manufacturers, straton is available both as a full package and as individual software components. The powerful integration of straton within CO-PA-DATA's zenon Software Platform allows a seamless extension of applications from field to SCADA level."

# solution for embedded systems automation

COPA-DATA offers an efficient solution for all electronic platforms manufacturers who want to integrate control functionalities and communication protocols into their equipment.

straton can be integrated with or without all operating systems electronics material: Systems-on-Chip (SoC) such as intelligent sensors, microcontrollers, RTUs and high-performance computers.

## DESIGNED FOR OEMS

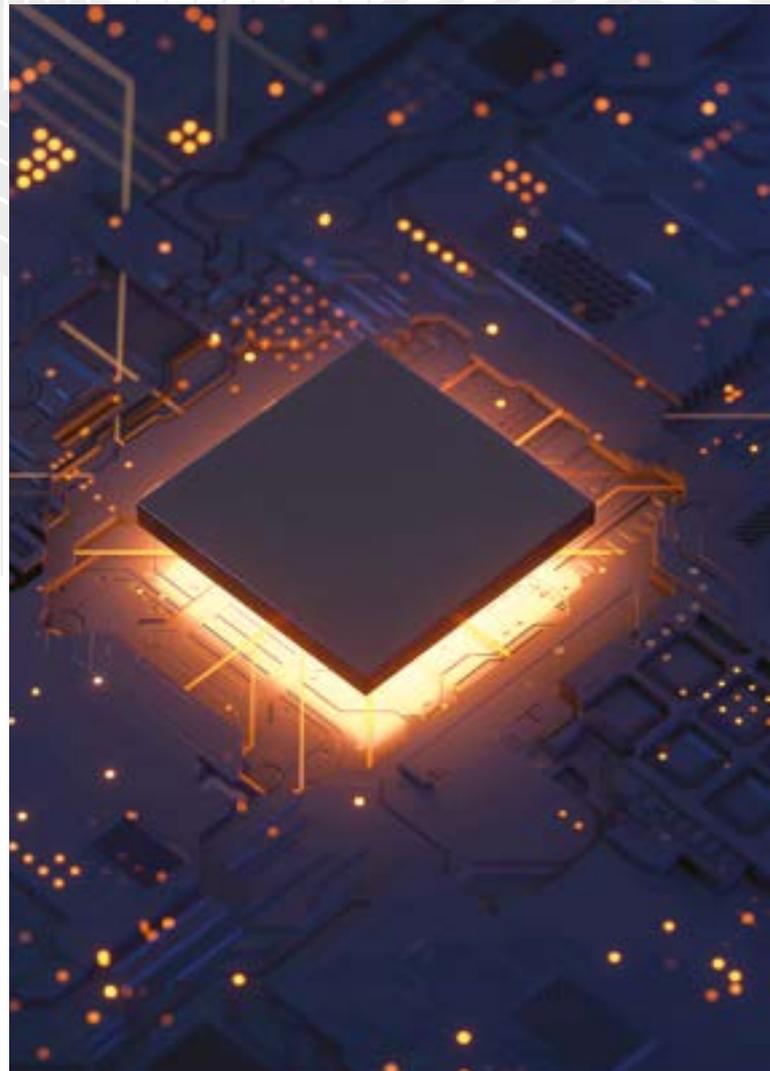
The role of equipment manufacturers (OEMs) is to create complete equipment or sub-assemblies for industry. They need to invest in flexible and open solutions that keep pace with industry developments in order to remain competitive and flexible. straton has been designed to meet market requirements. Indeed, being completely independent from the hardware material, it is possible to integrate one or more additional modules at any time.

straton software also includes a wide range of communication protocols (BACnet, CAN, EtherNet/IP, J1939, MODBUS, POWERLINK, PROFINET...) which can be integrated at any time thanks to the included configuration tools and can be easily deployed in an existing product.

## QUICK AND EASY INTEGRATION

With a few kilobytes of memory footprint only, the straton runtime integrates easily into any environment and is the most flexible multi-platform programming tool of its generation.

The straton embedded solution integrates all the COPA-DATA expertise in a stable and high-performance environment that has proven itself for almost 20 years. Its openness and simplicity offer exceptional flexibility and reactivity for all users, allowing integration of the solution in just 2 days!



## EASY TO USE

COPA-DATA offers an intuitive and easy-to-use development environment. Based on the IEC 61131-3 standard which defines the international programming languages FBD, ST, LD, SFC and IL. The straton development environment offers a high degree of flexibility in programming applications. With straton it is possible to create an application using any combination of the five programming languages and to switch between them as required. The use of internationally standardized programming languages ensures maximum compatibility.

Openness is one of straton's main assets. Completely independent of the hardware, it is possible to integrate additional modules at any time.

Machine builders who understand the advantages of having IEC 61131-3 control and automation software in their appropriate hardware platforms can outperform their competitors.

# Automation for the Energy and Utilities market

straton has been developed to meet the growing demand for security and interconnection in the energy sector, which requires increasingly complex protocols and control applications. All primary and secondary equipment such as electrical transformers, electrical autotransformers or high voltage circuit breakers are concerned.

COPA-DATA is developing a range of components that bring together all the basic features of this equipment and simplify the configuration of standard industrial protocols, to make IEC61131 & IEC61850 standards fully integrated in a single tool.

## ENERGY STANDARDS AND PROTOCOLS

Automation systems must provide more and more information to the control room and SCADA system. In order to provide access between systems and components, a number of standards have been developed: DNP3, IEC 60870-101, IEC 60870-104, IEC 61850 and IEC 61400.

straton is compatible with these standards to allow you a quick integration thanks to a proven and certified solution. Moreover, our work integrates the support of the latest developments related to cybersecurity (IEC 62443 and IEC 62351).

## REDUNDANT AND SECURE APPLICATION

Safety and reliability are essential in the distribution of energy. RTUs and BCUs should provide an effective means of securing the application. The ability to provide solutions that allow redundancy of the substation's main controller is not only a requirement, but, is mandatory. With straton, users can configure their applications to operate in redundant mode with just a few clicks.



## DISTRIBUTED APPLICATION

Energy projects are integrating more and more functionalities. This is done using a main automation system, but it is also important to keep some logic close to the process by using a distributed application. The straton integrated development tool contains a wide range of tools to manage multiple platforms, to communicate with other platforms, to simulate, to download/upload programming and configuration data and to debug and commission your application.

## TOOLS TO REDUCE PROGRAMMING TIME

The straton editor includes numerous function block libraries that facilitate and reduce programming time.

The IEC 61131 automatic project generator, the import tools and/or the application generator are indispensable tools for a fast and reliable development of your application. These functions can easily be integrated into straton to provide a smooth user interface.

## COPA-DATA

Rue du Sextant  
38130 Echirolles  
France

T +33 (0)4 38 26 00 75

[sales.straton@copadata.com](mailto:sales.straton@copadata.com)  
[www.straton-plc.com](http://www.straton-plc.com)



## ABOUT COPA-DATA

COPA-DATA is the manufacturer of the zenon® and straton® software platform, used in the manufacturing and energy industries for the automated control, monitoring, and optimization of machines, equipment, and power supplies. Founded by Thomas Punzenberger in 1987 and headquartered in Salzburg, Austria, the independent, family-owned company employs approximately 285 workers around the globe. The distribution of software on an international scale is made possible through the company's eleven subsidiaries and numerous distributors. In addition, more than 270 certified partner companies ensure efficient software implementation for end users in the food & beverage, energy & infrastructure, automotive, and pharmaceutical industries.



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