



straton
do it your way

Copalp – Tool Kits & Stacks



▶ IEC61131-3 PLC / STRATON® TOOL KIT

The straton® Tool Kit is a set of components easily portable and flexible to implement PLC engines and communication tools in your hardware platforms.

Virtual Machine Porting kit: Complete Toolkit for porting or adapting the straton® Virtual Machine to another operating system or hardware platform. Delivered with full source code, code generation wizards, interfaces and documentation, plus a rich set of samples and training.

Function Block Development Kit (FBDK): Toolkit with all necessary material for integrating new "C" written functions and function blocks to the straton® Virtual machine.

Driver Development Kit (DDK): Toolkit for developing new I/O drivers, typically dedicated to fieldbus I/Os, and integrating them to the straton® Virtual Machine. Wizard DLLs for managing the I/O configuration tree in the straton® fieldbus configuration tool can be implemented.

Communication Development Kit (CommDK): A set of DLLs for communicating with straton® PLCs. Typically used for writing OPC servers and special visualization applications, specific loaders and debugging or diagnostic tools.

Database Interfaces: A set of DLLs allowing access to the straton® Workbench database. Typically used for developing wizards that automatically generate straton® projects and templates. The contents of the straton® project database can be access by external tools.

File Transfer: Additional tool kit that enables the implementation of the straton® File Transfer protocol in a Virtual Machine. This protocol uses the same link as the Workbench and can be used to upload/download any files to the straton® PLC.

XML Library & Text Buffers: Set of ready to use function blocks for reading and parsing XML texts, plus a rich set of additional functions for managing text buffers longer than a STRING variable.

Binding porting kit: Additional tool kit that enables the easy implementation in a Virtual Machine of the straton® spontaneous protocol, in order to enable real time data exchange among PLCs.

Machine code compiling kit: Additional tool kit that enables the easy implementation in straton® Virtual Machine and Workbench of the support of machine code generation, based on the use of a cross "C" compiler.

Redundancy porting kit: Additional tool kit that enables the easy implementation of redundancy in a straton® Virtual Machine.

Motion Control Tool Kit: The straton® Motion Control Tool Kit is complete package for manufacturers of control systems and it provides an easy way to implement motion library within the IEC61131 environment. All interfaces are available as function blocks in the straton® Integrated Development Environment, and as 'C' APIs in the embedded straton® kernel.

Framework: The straton® Integrated Development Environment can delivered in components to integrate in your own framework to create your own tool or brand labeled with the name of your company/products.



► COMMUNICATION STACKS

COPALP supplies a complete range of services and support in order to help you in the development of your communication stack. Reliability, stability, reactivity and availability characterize the COPALP know-how.

MODBUS: The MODBUS tool kit enables the easy implementation of the MODBUS protocol in a Virtual Machine. MODBUS RTU and OPEN MODBUS over ETHERNET are supported, for both slave and master protocols.

CAN/CANopen: The straton® CAN communication stack implements all features necessary to manage CAN protocols. The communication stack is independent from the CAN hardware and uses the same configuration files. It also ensures high portability thanks to its independence from the Operating System and the main processor and its small memory footprint. The big advantage is that the same configuration can be loaded to different hardware using different CAN controllers.

AS-i: Easy implementation of the AS-i I/O driver in a Virtual Machine. Delivered with full source code, interfaces, documentation and a ready-to-use sample for Bihl+Wiedemann hardware.

BACNET: A portable BACNET stack for very small devices as for PLC controllers. The 'C' ANSI code of the stack implementation is portable to any hardware platform with minimal effort. The biggest advantage of the COPALP implementation is a very small footprint for the program and its associated memory space. The configuration of the BACNET stack parameters is done through an easy to use tool with tree-style navigation. Variables and parameters can be declared in an efficient way through the import of configuration files directly from databases or from CSV files.

PROFINET: The PROFINET IO controller stack is composed of two C++ APIs. The first encapsulates all functions required by the runtime application: configuration of cyclic data exchange, device connection management and data exchange using a shared memory area.

The second can be used for device discovery and configuration. It enables the user application to search for PN-IO devices in the local network and configure their PN-IO names.

DNP3: The DNP3 protocol is an international standard for energy and water industries. COPALP has developed tools to manage this protocol and a graphical tool with tree-style navigation for the configuration.

IEC60870: The IEC870 is an international standard for system monitoring and telecontrol in utilities for water distribution, gas and electricity distribution and energy power system. The straton IEC 870 stack supports both IEC 60870-5-101 and IEC 60870-5-104. Both protocols are identical on the application layer and as a result the configuration and implementation for both serial communication (-101) and TCP/IP networks (-104) is a single configuration tool in straton®.

IEC61850: The Energy and Water industries require more and more complex protocols and control applications to meet the growing demands for more information, more often. COPALP is developing a range of components for its customers in order to facilitate the integration of industry-standard protocols and applications and is simplifying the configuration process by providing the end customer with easy to use graphical tools. The IEC61850 is one new component to the COPALP offer that comes in addition to the existing one like IEC60870-101 slave, IEC60870-104 server and DNP3 slave protocols.



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