

PROFINET IO

PRODUCTS AND SERVICES

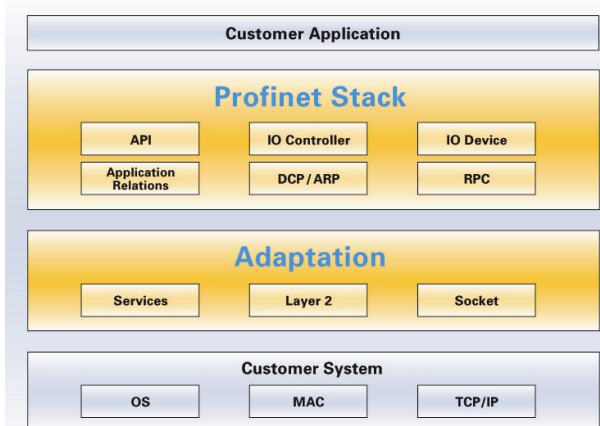
THE ROAD TO A PROFINET INTERFACE

KW-Software makes the simple integration of a PROFINET IO interface possible for device manufacturers and solution providers. We support you with a special portfolio of products and services.

CONTROLLER/DEVICE STACK

Since 2004, the PROFINET IO Controller Stack is proven in demanding automation projects. We constantly further develop the stack and verify the functionality by comprehensive system testing.

The PROFINET IO Controller Stack provides, among others, a comfortable management of Application Relations as well as extensive diagnosis functionality. The code of the PROFINET IO Stack is optimized in order to achieve highest performance thanks to short software execution times.

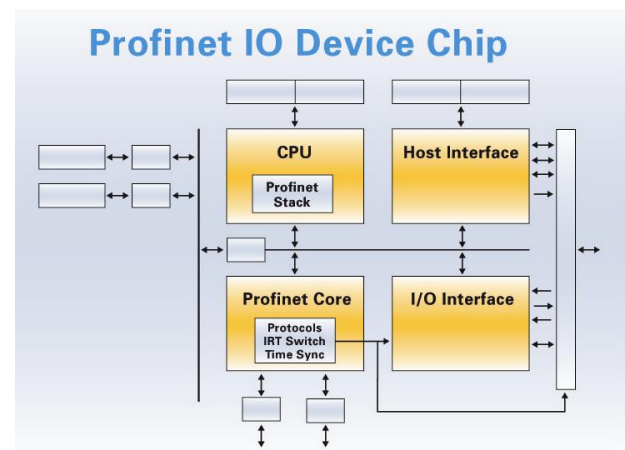


Application Relations are automatically established and monitored according to the network configuration. The status of all Application Relations is provided in the form of a life list. The application process can poll the diagnostic state of each PROFINET IO device at any time. The PROFINET IO Controller Stack allows the replacement of PROFINET devices during the running automation process without using a configuration tool or pluggable storage media.

The PROFINET IO Device Stack can be used as a pure device interface or in combination with the Controller Stack. The latter enables fast direct communication between several PROFINET IO controllers. Typical use cases are redundant applications or hierarchical automation networks with multiple controller levels.

DEVICE CHIP TPS-1

The TPS-1 provides a fast, easy and cost-saving integration of a PROFINET IO device interface to device manufacturers. It supports PROFINET Conformance Classes C and can thus be used for PROFINET IO devices of all performance classes. You get a flexible high-performance PROFINET IO interface as a single-chip solution at the price of a field bus interface.



The TPS-1 demonstrates its performance especially well in the field of compact I/O devices and drives. Its integrated CPU processes the complete PROFINET IO functionality. You can keep the existing hardware/software platform of your application. Versatile configurable interfaces for the connection of application CPUs or for the direct connection of input/output signals allow the easy development of a large number of various use cases.

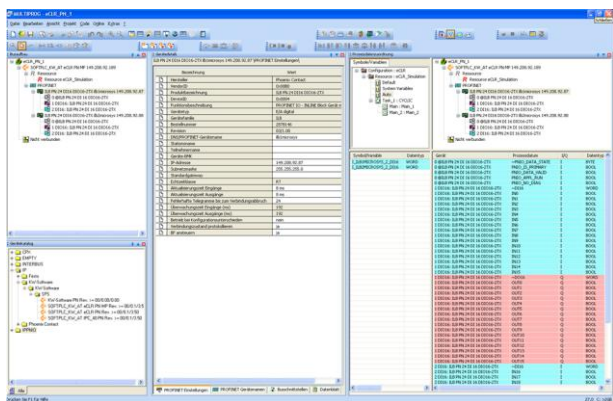
The internal structure of the TPS-1, optimized for the requirements of IRT, provides an extremely low bridge delay and a very high time stamp resolution. By providing special clock-synchronous I/O signals, even demanding synchronization demands can be met.

The PROFINET IO Device Chip provides two external Ethernet interfaces to support line structures in the PROFINET network. In combination with the integrated PHYs, the integrated IRT switch ensures a high-performance network connection. All PROFINET protocols including PTCP (Precision Transparent Clock Protocol) time synchronization are supported by the hardware. They affect neither the performance of the internal CPU nor of the application processor.

If fiber optic cables are used as transmission medium, the direct connection of special Digital Diagnostic Fiber Optic Transceivers for PROFINET is possible. The TPS-1 provides the corresponding diagnostic interfaces for monitoring the signal quality on the fiber optic transmission lines.

PROFINET CONFIGURATOR

The PROFINET Configurator enables you to configure your PROFINET IO network. You can insert PROFINET IO devices from the device catalog into the network view and parameterize them via device-specific menus.



New devices are simply imported into the device catalog via the standardized GSD format. The PROFINET Configurator converts your network configuration into an XML-based file which is directly processed by the PROFINET IO Controller Stack.

PROFISAFE F-HOST LAYER

Safety-related controls with PROFINET IO Controller function need an additional safe communication layer for safety-related communication via PROFINET. PROFIsafe V2 is the communication profile for safety technology on PROFINET IO.

The F-Host Layer implements the host functionality of the PROFIsafe V2 profile. Some selected features are:

- Independent from hardware and operating system
- Supports process data up to 12 octets
- CRC calculation can be performed using a formula or by using a look-up table
- Supports the optional transition T9 of the F-Host state machine to enable the permanent storage of safety faults

KW-Software GmbH
 Langenbruch 6
 32657 Lemgo
 Germany
 Phone +49 5261 9373-0
 Fax +49 5261 9373-726
 Email info@kw-software.com

INTEGRATION SERVICES

KW-Software supports you in integrating your PROFINET interface during all project phases by

- consulting and common concept development in the run-up
- porting of software to your specific platform
- integration tests
- documentation of hardware and software components including complete application diagrams
- support and maintenance
- updates and upgrades

YOUR BENEFIT AS OUR CUSTOMER

Performance / functionality

- You are using high-performance technology components that are well proven in demanding automation projects for many years.

Future-proof

- You benefit from the continuous improvement of leading PROFINET technology. Thus, your solution can keep up with new technical standards and features in the future.

Flexibility

- You can combine your PROFINET solution with other technology components by KW-Software, for example from the field of IEC 61131 programming or safety technology. This way, the combination of our technology and your application experience leads to an automation solution that is individually tailored to your requirements.

www.kw-software.com