

# PROFINET IO

## Device Protocol Software and Development Kit

### Your Device on PROFINET

The demand for PROFINET-compatible devices will increase significantly in the next few years. Devices that support PROFIBUS, Interbus or other bus systems today will then have to be integrated into PROFINET networks. This applies to not only to simple I/Os, but also to frequency converters, measuring instruments, and much more. The use of the portable and scalable protocol software from Softing guarantees flexible solutions with short implementation times. The implementation will comply with the defined conformance classes.

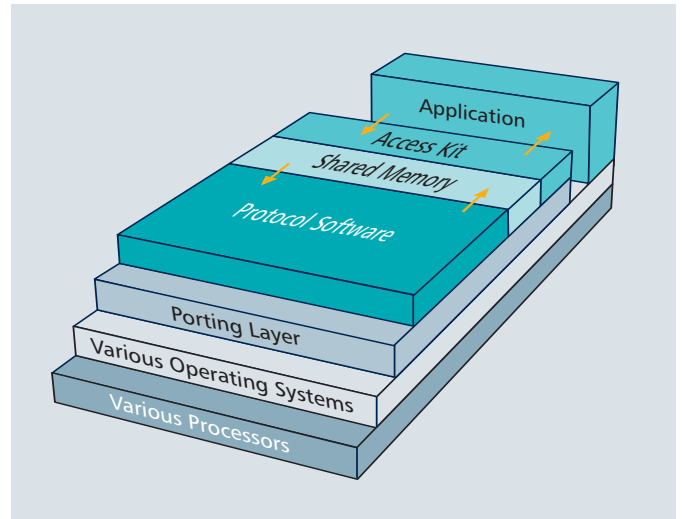
### Application Area

The software expands an existing device (I/O device, encoder, etc.) with Ethernet interface by the PROFINET IO Device functionality.

### Portability and Scalability

The stack implementation is designed for portability and scalability. Portability is ensured by the development process on the one hand, and by the use of a porting layer on the other hand. The porting layer comprises code for adapting and implementing specific functionality, such as memory allocation, task and thread management, access to Ethernet interfaces, etc. A list of the portations performed by Softing is provided on the next page. Scalability allows adapting the functionality to the customer's wishes. The software can support multiple instances, connections and modules.

## Product Information



Structure of the PROFINET IO Development Kit for devices:  
Porting layer for maximum flexibility

The stack architecture supports both, single-processor and multi-processor solutions. To exchange functions and data between the device application and the stack, the device application uses the services of an access kit which is also portable and scalable. A shared memory is provided between the access kit and the stack to ensure easy integration of the stack into existing devices. The software comes with various tools and samples, which allow instant use of PROFINET.

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## Product Information

### PROFINET IO: Device Protocol SW and Development Kit

## Product Components

PROFINET IO Device protocol stack Documentation	Communication software and access kit in portable form as C code Description of the interface, the software structure, the porting process, the sample program, and commissioning
Sample program in source code	Application program with simulated I/O; program can be expanded and customized
GSD file for sample program	Can be used for projects
STEP 7® project (Version 5.3) for interaction with PROFINET IO Device	Project for a Siemens CPU317 for accessing a PROFINET IO Device with the sample program
PC WorX® project (Version 5.00) for interaction with PROFINET IO Device	Project for a Phoenix Contact ILC 350 PN for accessing a PROFINET IO Device with the sample program
Etherreal for bus diagnostics with description	Tool for checking data exchange

## Scope of Functions

Context Management	RTC	RTA	DCP	PTCP	RTC over UDP	RTA over UDP	MRP	ARP	ICMP	LLDP
✓	✓	✓	✓	☞	☞	☞	☞	✓	✓	☞
Legend:	✓ = available	☞ = planned								

## Performance Characteristics

I/O data	Parameter data	Channels	ROM	RAM
<= 1440 Byte	<= 1440 Byte	>= 1	< 512 kByte	< 128 kByte

## Porting Carried Out for

Operating systems	Processors
Win32, VxWorks, Linux, Net+OS 6.2	x86, PPC, hyNet32, NetARM

## Recommended System Requirements

32-bit processor
Free memory space for at least the data volumes indicated above

## Additional Products and Services

PROFINET Technology Seminar
PROFINET IO Device Evaluation Kit XS

## Purchase Order No.

PN-IO-DEV/SC	Development kit with source code
PN-IO-DEV/OC	License for object code
PN-IO-DEV/MAIN	Maintenance contract for 1 year, renewable

## Customer Benefits

- Expansion of a device with Ethernet interface by PROFINET IO Device functionality
- Standard-compliant implementation by independent technology provider with extensive experience in industrial communication
- High-performance, resource-efficient solution
- Additional products and services available, e.g. training, evaluation kit, etc.
- Comprehensive documentation, samples and commissioning support
- Portability to various platforms possible and well proven

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