

PROFINET IO

Controller Protocol Software

Product Information

New Market

The demand for PROFINET-compatible controllers will increase significantly in the next few years. Products that support fieldbus systems today will then have to be integrated into PROFINET networks. This applies to both classical PLCs and process controllers. The use of the portable and scalable protocol software from Softing guarantees flexible solutions with short implementation times. The implementations comply with the defined conformance classes.

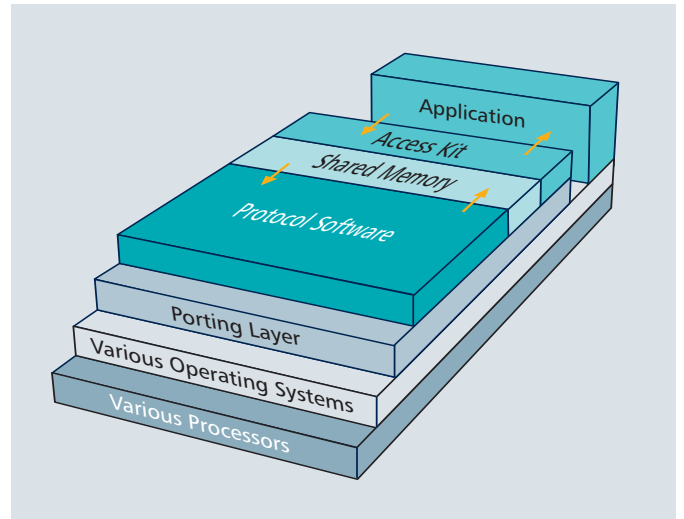
Application Area

The software expands an existing device (PLC, RC, CNC, process controller) with Ethernet interface by the PROFINET IO Controller 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 interface, etc. A list of the performed portations 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.

The stack architecture supports both, single-processor and multi-processor solutions. To exchange functions and data between the controller application and the stack, the controller 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.



Structure of the PROFINET IO controller software:
Porting layer for maximum flexibility

Configuration Interface

Besides a comprehensive interface documentation, the protocol software comes with sample programs and the Ethereal tool with a corresponding decoder DLL for bus diagnostics. A maintenance contract is available for the stack implementation.

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Product Information

PROFINET IO: Controller Protocol Software

Product Components

PROFINET IO Controller protocol stack	Communication software as object code and access kit in portable form as C code
Documentation	Describes the interfaces and the software structure; explains the porting process; describes the sample program and commissioning
Sample program in source code	Easy-to-use application program providing access to an ET200S; program can be expanded and customized
Ethereal for bus diagnostics with description	Tool for checking the data exchange between the controller and other PROFINET stations

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 pro device	<= 2 kByte pro Device	>= 1	< 1.5 MByte	> 1.5 MByte

Porting Carried Out for

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

Recommended System Requirements

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

Additional Products and Services

Technology Training
PROFINET IO Evaluation Kit
Services (porting or support during porting)

Purchase Order No.

PN-IO-CON/OC	PROFINET IO Controller protocol software
PN-IO-CON/MAINOC	Maintenance contract for 1 year, renewable

Customer Benefits

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

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