

PROFINET CONTROLLER STACK

PROFINET Software Development Kit Controller as of version 6.0



Data sheet
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1 Description

PROFINET has developed globally into the leading Industrial Ethernet standard on the market.

Because of its integrated approach, PROFINET fulfills a wide range of requirements.

The PROFINET Software Development Kits (SDK) make it possible to implement device-specific PROFINET communication quickly and easily.

The PROFINET Controller Stack with integrated device supports PROFINET RT in acc. with Conformance Class B. An extension with the MRP protocol is optionally possible.

For a high level of system stability under Windows, a PROFINET network driver is available for the Intel® Ethernet Controller I210.

Features

- Integrated device
- PROFINET RT
- Conformance Class B
- Tested in acc. with PROFINET specification 2.3
- Fast Startup (FSU)
- Media redundancy (MRP manager and MRP client)
- Hierarchical diagnostics
- Shared device

2 Scope of supply

- PROFINET Stack Library (object code)
- PROFINET DLL (for Windows)
- PROFINET Header (source code in ANSI C)
- Samples (source code in ANSI C and C#)
 - Templates for configuration and initialization
 - Templates for using the API functions
 - Sample GSDML file of a PROFINET device
- Documentation
 - PROFINET SDK User Interface Description
 - PROFINET SDK OS Manual
 - PROFINET Stack Feature List

3 Supported operating systems

- Windows 7/8/10 (32 bit/64 bit)
- Linux (32 bit)
- VxWorks 6, VxWorks 7
- INtime® 32
- QNX



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This data sheet is valid for all products listed on the following page.

4 Technical data

PROFINET	
Conformity	Conformance Class B, Net Load Class 1
SNMP support	MIB 2 and LLDP MIB
I&M support	I&M 1 ... I&M 5
Asset management	Yes (device)
System redundancy	S2 (device)
PROFINET bus cycle time	1 ms ... 512 ms configurable
Fast Startup	Yes (controller)
MRP	Optional (with customer-specific switch hardware, manager and client)
Max. number of connections (AR)	256 (controller)
Status of the I/O data	Applicative access to RT frame including provider status and APDU status
Consistency of the I/O data	Per I/O device

General system requirements	
RAM	16 MB (typical)
Read-only memory	2 MB (typical)
System tick	1 ms
Network adapter	Supports VLAN-ID 0 as well as priorities 5, 6 and 7
Supported protocols	TCP/IP and UDP/IP via the respective operating system

System requirements under Windows 7/8/10	
Npcap 0.99r6 or higher	
Optional: Intel® Ethernet controller I210	
Microsoft Visual C++ 2015 Redistributable Package	
Microsoft .Net Framework Version 4.5.2 or higher	
Operation with administrator rights (operation without administrator rights only possible with limited functions)	

System requirements under Windows Embedded CE 6.0 and Windows Embedded Compact 7	
NDISUIO driver	

System requirements under Linux	
LibPcap: newest version preferred	
Kernel version 3.2 or higher with Real-Time Preemption Support and Real-Time Signal Support	
glibc version 2.15 or higher	

System requirements under VxWorks	
MUX interface	

Available products		
Operating system	PROFINET Software Development Kit	Required development environment
VxWorks 7.x VxWorks 6.x	PROFINET SDK/PowerPC PROFINET SDK/Intel PROFINET SDK/ARM	Wind River Workbench
Windows 7, 8 and 10	PROFINET SDK/Intel	Microsoft Visual Studio 2015
Linux	PROFINET SDK/PowerPC PROFINET SDK/Intel PROFINET SDK/ARM	KDE, Eclipse
QNX	PROFINET SDK/Intel	QNX Momentics IDE

Accessories	
Drivers	PROFINET network driver I210 for Intel® Ethernet Controller I210
Media Redundancy Protocol (MRP)	PROFINET MRP manager
Configuration software	PROFINET Configurator