

SIMATIC IPC Support Package for VxWorks



SIMATIC IPC Support Package for VxWorks V1.0

The SIMATIC Embedded and High-end IPC devices of the D generation (except IPC227D) are supported with the SIMATIC IPC Support Package for VxWorks.

The following SIMATIC IPCs can therefore now be operated along with their PROFINET, PROFIBUS and hardware-based functions with the real time VxWorks V6.9 operating system:

- IPC427D
- IPC627D
- IPC827D
- IPC647D
- IPC847D

The PROFINET onboard interfaces of the SIMATIC IPCs offer diverse options for the integration of real-time solutions with SIMATIC IPC into PROFINET networks. PROFINET RT (real-time) is supported by the standard Ethernet interface of the IPC; PROFINET IRT (isochronous real-time) is supported by the onboard PROFINET interface.

Benefits

Real-time applications in industrial environment

- Implementation of industrial applications with high performance requirements.
- Implementation of short response times of 10µs on a rugged hardware platform
- VxWorks can be used as a rugged, time-proven real-time operating system for industrial use

Integration in the SIMATIC automation environment

- PROFINET on-board for the high-performance, cyclic and isochronous transmission of user data via Industrial Ethernet
- PROFIBUS onboard as a tried and true, widespread fieldbus makes it possible to integrate a large number of field bus networks
- Use of the extended SIMATIC IPC monitoring functions (battery, temperature, fan), operating hours counter, and support of retentive memory, watchdog, S.M.A.R.T. to avoid system downtimes

Free programming and know-how protection

- Automation solutions can be efficiently programmed in C/C++
- Open programming interfaces
- Protection of technological expertise (application only available as executable code in the target system)

Application

The SIMATIC IPC Support Package for VxWorks V1.0 supports application programmers during the implementation of real-time applications, e.g. for control of printing machines, chip handlers and test setups.

Through the provision of all drivers for the onboard interfaces of the SIMATIC IPCs and the programming interfaces required for PROFINET, PROFIBUS and hardware functions, the SIMATIC IPCs can be optimally integrated into the control infrastructure.

Design

The VxWorks real-time operating system as well as the corresponding development and runtime licenses are not part of the support package.

The customer must obtain a development license for VxWorks from Windriver and use it to create his or her VxWorks image.

The customer receives VxWorks support from Siemens for the functions listed above in the form of an additional component.

The Siemens component comprises drivers, header files, libraries, documentation and examples. For licensing reasons, Siemens is unable to deliver turnkey VxWorks systems.

The SIMATIC IPC Support Package for VxWorks V1.0 is a runtime license and must be obtained separately for each target system.

Technical specifications		SIMATIC IPC Support Package for VxWorks V1.0	
Development system			
Component		Requirements	
Hardware		PC	
Operating system		Windows 7 (32-bit or 64-bit)	
Configuration software for PROFIBUS DP		<ul style="list-style-type: none"> • STEP 7 version 5.5 SP3 Hotfix 3 or higher (optional) • TIA V13 or higher (optional) • NCM PC version 5.5 SP3 or higher (optional) 	
Configuration software for PROFINET		<ul style="list-style-type: none"> • STEP 7 version 5.5 SP3 or higher (optional) • TIA V12 or higher (optional) • NCM PC version 5.5 SP3 or higher (optional) 	
Development tools		Workbench V3.3 for VxWorks V6.9	
Target system			
Component		Requirements	
Hardware		<ul style="list-style-type: none"> • SIMATIC IPC427D or • SIMATIC IPC627D or • SIMATIC IPC647D or • SIMATIC IPC827D or • SIMATIC IPC847D 	
Operating system		VxWorks V6.9 (32-bit)	