



SOFT PLC

PROCONOS® 3.3 WIN RT

ProConOS® Win RT is the high reliability and high performance software PLC for Windows® NT/2000/XP.

With ProConOS® Win RT a separate PLC is no more needed if an industrial PC is already used for operation and monitoring purposes. ProConOS® Win RT includes the loading and execution of PLC programs and supplies the debug functionalities for programming, commissioning and maintenance of PLC controlled machines and plants.

ProConOS® has been successfully used in the automation industry for more than 10 years in multiple thousands of installations. In order to realize the deterministic behavior necessary for automation tasks ProConOS® Win RT includes a Windows® realtime extension which has been developed by KW-Software, so that no additional costs for 3rd-party realtime extensions arise.

The IEC 61131 compliant ProConOS® supports realtime multitasking and highest performance by execution of native machine code. In addition online changes are possible while the PLC program is running.

ProConOS® Win RT includes ready-to-use drivers for Hilscher and Phoenix Contact field bus master cards.

Extensive interfaces allow system developers to realize manufacturer specific extensions.

PRODUCT DESCRIPTION

High Performance

- The integrated compiler of ProConOS® generates native machine code to be executed.
- On an Athlon 1 GHz processor 1000 instructions are executed within 1 μ s (see more performance data on the backside).

Windows® Realtime Extension

- Kernel mode extension which performs a deterministic re-scheduling every millisecond.
- The jitter of a realtime task is typically below 20 μ s and can be measured with the ProConOS® Win RT performance monitor for a specific PC hardware.

Blue Screen Protection

- ProConOS® Win RT "survives" the exception violation of the Windows® kernel. The appropriate action to put the application into a safe state can be defined in the PLC program.
- Furthermore MULTIPROG® can be connected to the RS232 during blue screen for debugging of the PLC application.

Preemptive Multitasking

- Preemptive scheduling of up to 16 PLC tasks.
- For each PLC task a watchdog can be set for supervision. In case of a realtime violation an additional associated user program can be executed.

Non volatile PLC data

- Cyclic writing of retain data into the Windows® file system by calling function blocks.
- Adaptation to hardware specific NVRAM is possible.

Standard I/O Drivers

- Task synchronous I/O access by I/O image.
- Intelligent field bus masters are supported (see list on the backside).
- Adaptation to specific I/O interfaces is possible.

Windows® File System

- Access of the Windows® file system.
- A PLC typical boot behavior is achieved by storing a boot project.

Communication , Debug and Commissioning

- Multi-client connection to several MULTIPROG® and/or OPC servers
- Breakpoints, address debug, single step, overwriting and forcing of variables, recipes, realtime logic analyzer
- Online changes while the PLC is running.

SYSTEM SPECIFICATION

PC System	Processor	Min. Pentium 90		
	RAM	Min. 32 MByte		
	Hard disk memory	Min. 10 MByte free		
	Communication	TCP/IP and/or RS232		
	Operating systems	Windows® NT 4.0 (> SP5), Windows® 2000 SP2, Windows® XP		
System Limits	PLC program size	Depends on available memory on the target, max. 16 MByte; default 4 MByte		
	PLC Data size	Depends on available memory on the target, max. 16 MByte; default 2 MByte		
	PLC Retain data	128 KByte (file based; NVRAM support on request)		
	ProConOS® size	Total memory consumption about 500 KByte		
	Tasks	Max. 16		
	I/O signals	Max. 64 KByte Input and 64 KByte Output signals		
Field Bus Interfaces		Supplier	Product designation	
	Profibus DP	Hilscher	CIF 30 PB, CIF 50 PB ⁽³⁾ , CIF 104 PB	
	INTERBUS	Hilscher	CIF 30 IBM, CIF 50 IBM ⁽³⁾ , CIF 104 IBM	
	CANopen	Hilscher	CIF 30 COM, CIF 50 COM ⁽³⁾ , CIF 104 COM	
	DeviceNet	Hilscher	CIF 30 DNM, CIF 50 DNM ⁽³⁾ , CIF 104 DNM	
	INTERBUS	Phoenix Contact	IBS PC ISA SC/I-T	No.: 2719234
	INTERBUS	Phoenix Contact	IBS PC 104 SC-T	No.: 2721701
	INTERBUS	Phoenix Contact	IBS PCI SC/I-T	On request
	Modbus/TCP			
Performance Data		P 233 MMX	P III 550	Athlon 1 GHz
	1000 instruction lines (IL) with global ⁽¹⁾ BOOL	10 µs	2 µs	1 µs
	1000 instruction lines (IL) with instance ⁽²⁾ BOOL	10 µs	2 µs	1 µs
	1000 instruction lines (IL) with global ⁽¹⁾ BYTE	10 µs	2 µs	1 µs
	1000 instruction lines (IL) with instance ⁽²⁾ BYTE	10 µs	2 µs	1 µs
	1000 instruction lines (IL) with global ⁽¹⁾ INT	12 µs	6 µs	1 µs
	1000 instruction lines (IL) with instance ⁽²⁾ INT	12 µs	3 µs	1 µs
	1000 instruction lines (IL) with global ⁽¹⁾ DINT	23 µs	5 µs	3 µs
	1000 instruction lines (IL) with instance ⁽²⁾ DINT	10 µs	2 µs	1 µs
	1000 instruction lines (IL) with global ⁽¹⁾ REAL	174 µs	54 µs	25 µs
	1000 instruction lines (IL) with instance ⁽²⁾ REAL	166 µs	48 µs	24 µs

(1) Resource global variables

(2) Function block instance variables

(3) Supported operating systems: Windows® NT 4.0 and Windows® XP

SCOPE OF SUPPLY

- Software on CD ROM for ProConOS® Win RT
- License agreement with softkey for one runtime license of ProConOS® Win RT
- ProConOS® Manual and ProConOS® Win RT Manual
- ProConOS® CIF Driver Manual and ProConOS® INTERBUS-G4 Driver Manual
- Installation Guide, Application Guide and Quick Start Guide

ORDERING INFORMATION

Order number	Designation
1-2033-1201-200-000	ProConOS 3.3 Win RT

PRODUCT RELATED TOOLS

Order number	Designation
1-4020-1201-101-E00	ProConOS OPC-Server 2.0 Desktop
1-2033-2001-200-E00	ProConOS Developer Toolkit Win RT

Germany

KW-Software GmbH
Lagesche Straße 32
32657 Lemgo
Germany
Phone +49 5261 9373-0
Fax +49 5261 9373-26
www.kw-software.com
info@kw-software.com

Far East

KW-Software GmbH
c/o Euro-Far East Co. Ltd.
Lilas Nogizaka Bldg. #9F
1-15-18 Minami Aoyama
Minato-Ku
Tokyo 107-0062
Japan
Phone +81 3 3470-8769
Fax +81 3 3478-8648
www.euro-fareast.co.jp
japan-info@kw-software.com

USA

KW-Software USA, Inc.
4242 Airport Road
Suite 2A
Cincinnati, Ohio 45226-1615
USA
Phone +1 513-321-9385
Fax +1 513-321-6992
www.kw-software.com
info@kw-usa.com