SIEMENS

SIMATIC NET
Development Kit DK-5613

Product information   11/99

Designed for industry

- Development Kit for software for integration of PROFIBUS modules CP 5613 (master) and CP 5614 (master/slave) in all PC-based operating system environments
- Source codes for PC operating system as basis
- Manuals for Development Kit and CP 5613/CP 5614
- Simple integration and high performance through direct connection to the PROFIBUS modules' dual-port RAM interface

Applications

With the Development Kit DK-5613, the two PROFIBUS modules CP 5613 and CP 5614 can be incorporated in any operating system environment with a standard PCI slot. The kit includes the required source code, including its description in PDF format.

With the CP 5613/CP 5614, systems with a standard PCI slot can be connected to PROFIBUS.
With the CP 5613/CP 5614, high-performance control tasks can be implemented (soft control, numeric control, robot control).

Support and update

A registration card is included with the Development Kit for registration with your support contact person. Updates are available in the Internet.

Fig. 1: Development Kit DK-5613

Functions for PROFIBUS-DP
Access to process data

The CP 5613/CP 5614 functions as PROFIBUS-DP master module. In its DP RAM, it holds the process image (input/output and diagnostic data). The high-performance data exchange via PROFIBUS is performed independently by the hardware of the CP 5613/CP 5614. The user has direct access to the DP-RAM. The additional slave module of the CP 5614 is also accessed via the DP RAM.

Data consistency

The process data of the connected PROFIBUS slaves can always be addressed consistently, i.e. the user receives the data from one and the same DP cycle across the entire slave data length (up to 244 bytes).

Event/filter mechanism

The user receives current data via two access mechanisms:

- Cyclic polling of the DP slaves (high host CPU load)
- Messaging with an innovative event and filter mode, which transmits messages with data change of a slave (low host CPU load)

FastLogic (fast shutdown)

FastLogic means that the CP 5613/CP 5614 can respond independently to up to four system states resulting in an extremely short response time and independence from the host application.

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DP programming interface

The DP programming interface of the CP 5613/CP 5614 covers the following functionality:

- DP master class 1 incl. acyclic DP extensions
- DP master class 2 and acyclic extensions (available soon)
- DP master and DP slave with own interface (CP 5614)

Process data is accessed directly via the DP-RAM. Besides providing fast access as DP master/ DP slave (CP 5614), the DP RAM interface also forms a basis for portability to other operating system environments (e.g. VXWorks, QNX, RMOS etc.).

Administrative function calls (initialization and management services) are available in a DP master library (DP_BASE.DLL) and in a DP slave library (DPS_BASE.DLL additionally) for CP 5614.

Configuration

The stand-alone COM PROFIBUS software is used for configuring PROFIBUS-DP.
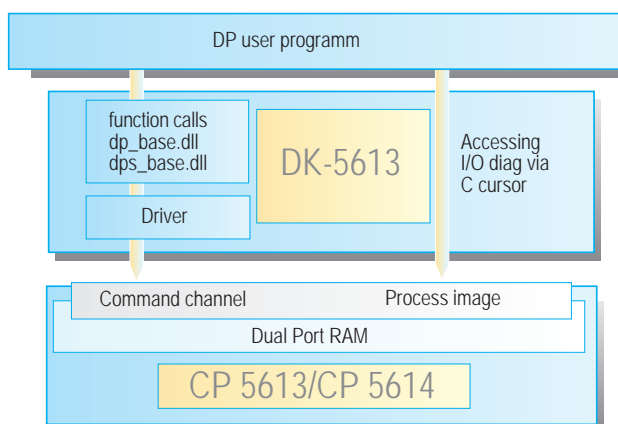

Fig. 2: Basic configuration

The configuration settings made with COM PROFIBUS are saved in a file (LDB file) and can then be loaded onto the CP.

Advantages

- Simple software porting to other operating systems
- Updates available on the internet
- Hotline support with contacts in Germany and the U.S.A.
- Drivers for DOS in the source code
- Parallel operation of up to four CPs
- Fast access to process data
- Short response time
- Relief of host CPU through events and filters
- Simple installation and commissioning (plug & play)
- Consistent process data

Ordering data

Development Kit DK-5613	Free of charge
Software Development Kit for CP 5613/CP 5614 integration in all operating system environments with PCI slot	(see notes at the right)
Package content of the Development Kit [1]	
▪ Source code for porting	
▪ User manuals	
▪ PROFIBUS network manual	
▪ Product information	
▪ Contact/support information	
▪ List of important Internet addresses from SIMATIC NET	
CP 5613	**6GK1 561-3AA00**
PCI card for connection to PROFIBUS-DP, including Windows NT 4.0 driver, DP RAM interface for DP master and configuration software	
CP 5614	**6GK1 561-4AA00**
PCI card with master and slave link to PROFIBUS DP, including Windows NT 4.0 driver, DP RAM interface for DP master and DP slave and configuration software	

1) Note:
The CP 5613 or CP 5614 hardware must be ordered separately.

Notes about using the Development Kit

From the first quarter of the year 2000, the Development Kit is available free of charge at the following Internet address:

http://www.ad.siemens.de/net/dk5613

Prior to that, the Development Kit is available free of charge by calling one of the following fax numbers:

- Siemens AG
  A&D
  Fuerth/Germany
  Fax with heading "DK-5613" to
  +49-911-750-2100
- Siemens Energy & Automation Inc.
  Johnson City/U.S.A.
  Fax with heading "DK-5613" to
  +1-423-461-2103

Please note:
Support is available only to registered users.
You can register directly via support or in the Internet.

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