

PROFIBUS



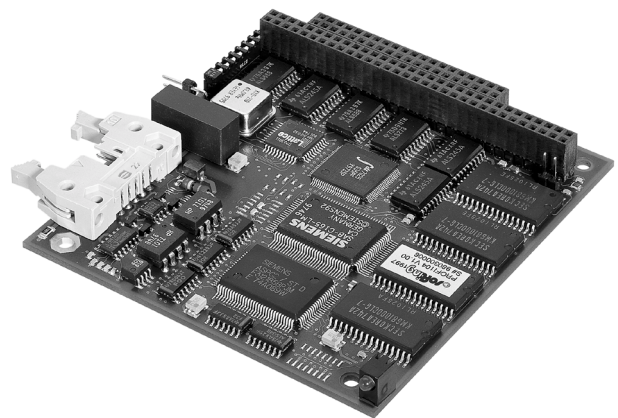
PROFI104 Master/Slave

APPLICATION

PROFI104 is an intelligent PC/104 board to integrate embedded systems into a PROFIBUS network in a cost effective and easy-to-use way.

Major advantages of PROFI104 are :

- Various PROFIBUS protocols are supported. The board can be used extremely flexibly and within changing application environments. The following options are supported:
 - DP master class 1 and class 2
 - Enhanced DP functions (DP/V1)
 - DP slave
 - FMS (Fieldbus Message Specification) master or slave
 - FDL (Fieldbus Data Link)
- All the options listed above are contained in the standard scope of delivery. No protocol upgrades are required to switch between options.
- There is no external copy protection. The user will not be burdened by loss or malfunctioning of hardlocks, software tokens, etc.
- The application interface of PROFI104 is compatible to those of other Softing PROFIBUS interfaces such as PROFIboard (ISA board) and PROFIcard (PCcard).
- Software updates can be downloaded via Internet.
- A well-trained support team will assist you by phone, fax or email in case of support requests.



SCOPE OF FUNCTIONS

PROFI104 provides the complete PROFIBUS protocol of layers 1, 2 and 7 as specified in the European standard EN 50 170, part 2. Sophisticated ASICs (ASPC2, SPC3) perform time-critical operations, designating the interface for transfer rates up to 12 Mbit/s.

Intelligent communication capabilities are ensured through the microprocessor SAB-C165. The board is equipped with a DC-isolated, RS-485 transceiver and interfaces to the PROFIBUS cable via a ribbon cable with a 9-pin, sub-D female connector.

The easy-to-use application interface features by Windows NT driver. In addition, an MS-DOS library and a Windows 16-bit DLL are available. For other operating systems, the specification of the DP-RAM structure can be provided (see options 4 and 5 overleaf).

TECHNICAL DATA

Hardware

| | |
|--------------------------------|---|
| Unit | 16-bit PC/104-compliant board |
| CPU | Microprocessor Siemens SAB-C165 |
| Memory | <ul style="list-style-type: none"> ■ 512 Kbyte Flash ■ 512 Kbyte SRAM ■ 16 Kbyte DPRAM |
| Supported PC interrupts | 5, 10, 11, 12, 15; PC/104 interrupt sharing possible via jumper setting |
| PROFIBUS ASIC | Siemens ASPC2 and SPC3 |
| Physical interfaces | Galvanically isolated RS-485 |
| Connector type | 9-pin sub-D female |
| Connector pinning | According to EN 50 170, part 2 |
| Hardware configuration | The I/O address is set by a switch on the board; all other settings via software |
| Power supply | +5V (\pm 5%); typ. 700 mA |
| Permissible ambient conditions | Operating temperature: 0 °C up to 55 °C; storage temperature: -20 °C up to 70 °C |
| Transfer rate | 9.6 Kbit/s up to 12 Mbit/s |

Firmware

| | |
|-------------------|---|
| PROFIBUS services | <ul style="list-style-type: none"> ■ FMS Client and Server ■ DP Master class 1 and class 2 ■ DPV1 Master services ■ DP Slave ■ FDL access; Management services |
|-------------------|---|

Hardware requirements

IBM PC/AT or compatible PC with 16-bit PC/104 slots

Software requirements

To use PROFI104 in applications, one of the following software packages is required:

- **Option 1: PROFI-DMK-NT**
PROFIBUS Application Program Interface (PAPI) for Windows NT; demo programs; PAPI user manual (English version); Windows NT driver
- **Option 2: PROFI-DMK-3**
PROFIBUS Application Program Interface (PAPI) for Windows (16-bit) or MS-DOS; demo programs; PAPI user manual (English version)
- **Option 3: PB-DMK-DPS**
PROFIBUS Application Program Interface (PAPI) for MS-DOS; demo programs; slave user manual (English and German version)
- **Option 4: PB-TK-M**
Toolkit to develop customer-specific driver software consisting of PROFIBUS Application Program Interface (PAPI) user manual (English version); DP-RAM structure (CMI-specification); PAPI source code in C for MS-DOS
- **Option 5: PB-TK-DPS**
Toolkit to develop customer-specific driver software consisting of PROFIBUS Application Program Interface (PAPI); slave user manual (English and German version); DP-RAM structure (CMI-specification); PAPI source code in C for MS-DOS

Scope of delivery

- PROFI104 interface board
- Hardware user manual (English version)

Ordering information

PB-PC104-MS

According to the software requirements, optionally:

- PROFI-DMK-NT
- PROFI-DMK-3
- PB-DMK-DPS
- PB-TK-M
- PB-TK-DPS

Please ask for more information and assistance



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