# HMS



# Anybus®

## PCI - PC Interfaces

**Intelligent PCI interface cards**
**connecting PC-based applications**
**with industrial networks**

► Profibus
► Profinet
► DeviceNet
► EtherNet/IP
► Modbus-TCP
► FL-Net
► AS-Interface

*Connecting Devices™*

# Intelligent PC interfaces supporting many fieldbuses and industrial Ethernet protocols. Based on proven Anybus technology!

**The intelligent Anybus-PCI cards are competitively priced and provide high performance and full network interchangeability. They are used to connect PC based applications with industrial networks including many fieldbus and industrial Ethernet protocols. The industrial Ethernet versions also provide industrial IT functions such as an embedded web server and E-mail client. For Master configuration of Profibus and DeviceNet networks, HMS provides the comprehensive configuration software "Anybus NetTool". Typical applications include PC based PLC's, CNC's and robot controllers, as well as HMI's and intelligent visualization systems.**



Fieldbus versions of the Anybus-PCI card built on standard Anybus technology

## Master and slave, fieldbus and industrial Ethernet cards, all with high performance and functionality

The Anybus-PCI range offers master and slave fieldbus versions for Profibus and DeviceNet and a master version for AS-Interface. In addition, the Anybus-PCI family includes versions for industrial Ethernet with Profinet, EtherNet/IP, Modbus-TCP or FL-Net protocol. All cards operate at both 3.3 and 5 V. The powerful on-board microprocessor handles all communication with the network, thus off-loading the host PC from time critical tasks.

The application programming interface (API) used on the PCI cards simplifies development drastically by taking care of low level functions such as handshaking and communication control. Furthermore, the API provides a plug-and-play interface compatible with all available Anybus master and slave interfaces. The Anybus-PCI interface is based on a Dual Port RAM memory that provides high data throughput.

The intelligent PCI cards contain all electronic components required to connect to the specific fieldbus or Ethernet network. They include a powerful on-board microprocessor with Dual Port RAM and Flash memory as well as network specific ASICs, DC/DC converters, opto couplers and line drivers. The Ethernet versions provide a 100 Mbit/s fast Ethernet interface.



Industrial Ethernet versions with integrated Anybus hardware and software

## Standardized software interface (API)

The software interface (API) is fully standardized. It provides users with a network independent interface for their application software. The interface between the PCI cards and the CPU of the PC is based upon a powerful Dual Port RAM. This guarantees a constant high data throughput and supports data consistency for the process data. The network configuration is created and loaded into the Anybus PCI cards with the Windows based NetTool configuration software from HMS.

## Included OPC Server

Included in the scope of supply of Anybus-PCI cards is a free OPC server. The Anybus OPC server is installed on a Windows PC and communicates with the Anybus-PCI card, enabling users to connect field devices to industrial or office PCs. The OPC server supports, data access (DA) v1.0, 2.05, 3.0 enabling access to cyclic process data and also includes a tag editor, online diagnostics and an online viewer/editior for monitoring and modification of process tag data.
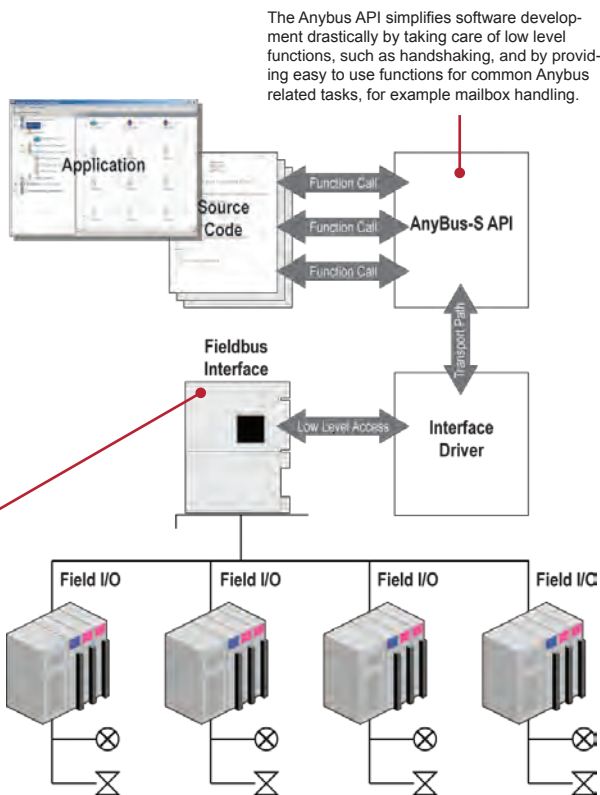
### ✳ WHY USE ANYBUS PCI CARDS?

- Powerful intelligent communication interfaces enabling high data throughput independant of the workload of the main PC processor.

- Standardized application interface (API) providing network independent interface for the application software

- Attractively priced solutions due to mass produced Anybus interfaces

- Included free OPC enabling users to connect field devices to industrial or office PCs

- Based on proven Anybus technology used in over 950,000 industrial devices

PCI - PC INTERFACES

**Anybus®**

**Available for:**

Profibus-DPV1
DeviceNet
AS-Interface
Profinet
EtherNet/IP
Modbus-TCP
FL-Net

The Anybus API simplifies software development drastically by taking care of low level functions, such as handshaking, and by providing easy to use functions for common Anybus related tasks, for example mailbox handling.



The Anybus-PCI handles all fieldbus communication. The fieldbus interface is based on the proven Anybus technology.
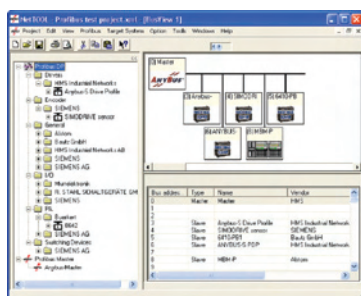
## KEY FEATURES

- 3.3 and 5 V support (universal keyed add-in)
- Competitively priced - high performance
- Easy plug-and-play interface
- 33 MHz PCI bus clock
- Common API used for all Anybus-PCI's - one driver for all buses
- Supports interrupt/polling
- Drivers and API supporting Win 98/ME/NT/2000/XP
- 2 kB Dual Port RAM (4 kB Profibus master)
- On-board microprocessor
- 256 byte mailbox interface extendable up to 2048 byte for parameter data
- Galvanically isolated fieldbus interface
- Free OPC server supporting data access (DA) v1.0, 2.05, 3.0
- Anybus WebTool for custom web page design
- comDTM driver for Profibus master
- CoDeSys support (Profibus Cards)
- 10/100MB Ethernet with included IT functions such as web server and E-mail client

# Master Configuration - Anybus NetTool

**Anybus NetTool-PB™
master configurator**

**PROFI BUS**



The Anybus-PCI Profibus master has been developed with its own configuration tool "Anybus NetTool-PB". This Windows-based drag-and-drop configurator provides optimal configuration features of your Profibus network without any compromise. In addition, the tool provides online diagnostics with monitor/modify of process I/O data. This complete stand-alone configuration tool can also be customized or integrated into a 3rd party software package as a Windows OCX component.

**Anybus NetTool-DN™
master configurator**

**DeviceNet™**



The Anybus-PCI DeviceNet master/ scanner uses a Windows-based drag-and-drop configurator which allows optimal configuration of your DeviceNet network without any compromise. Setup functions include full scanner and adapter on/off line configuration, online diagnostics, auto EDS-file generation and an online parameter editor. The Anybus-PCI DeviceNet master can also be configured with Rockwell's RSNetWorx.

## TECHNICAL SPECIFICATION

- Size: 100 x 120 x 22 mm (W x L x D) 3,94" x 4,72" x 0,87" (W x L x D) (Short PCI)
- Supply: 3,3 & 5 V 600 mA VDC
- Operating temperature: 0 °C to + 55 °C 32 °F to + 131 °F
- EMC Compliance: 89/336/EEC Emission: EN 61000-6-4: 2001 Immunity: EN 61000-6-2:2001
- Conformance: CE marked UL conformance
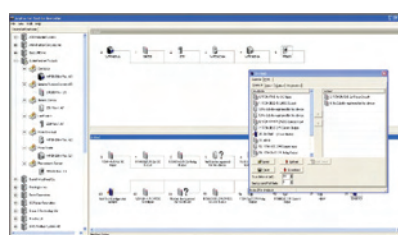- Tested & verified for Fieldbus and network conformance
- RoHS compliance

# Network specific supported features - Anybus-PCI cards

### Profibus-DPV1 master
### AB3502

- Complete Profibus class 1 & class 2 master according to IEC 61158
- Up to 125 DP/DPV1 slaves can be connected
- Upto 1536 byte Input & 1536 byte Output data
- Supports Profibus baud rates up to 12 Mbit/s
- RS-485 optically isolated Profibus interface with on-board DC/DC converter
- Configuration via Anybus NetTool Windows based configuration software

### DeviceNet Scanner
### AB3504

- Complete DeviceNet scanner (DML Ver 3.011)
- Group 2 client/server with UCMM support
- DeviceNet baud rate 125-500 kbit/s
- Optically isolated DeviceNet interface
- Max 512 byte of Input & 512 byte Output data.
- Manages up to 63 DeviceNet slaves
- Support for "Quick Connect"
- Support for "ADR" automatic device recovery
- Configuration via Anybus NetTool-DN or RSNetWorx.

### AS-Interface master
### AB3505

- Complete AS-Interface master (M4 Ver 3.1)
- Controls up to 62 AS-Interface slaves
- 248 digital Inputs and 186 digital Outputs.
- Support for analog value processing
- Easy to use, text based configuration interface via on board RS-232 port
- Automatic slave address programming
- Complete access to network configuration via the application interface
- Analog slave profiles
- Backwards compatible with previous versions
- Alternative configuration via the standard Windows Hyper terminal program on your PC

### EtherNet/IP Scanner
### AB3507

- Complete EtherNet/IP master/scanner interface
- Dual Port RAM (DPRAM) parallel interface
- Ethernet settings configurable through a inbuilt web server or with on-board DIP switches
- EtherNet/IP level 4 I/O Client - ODVA certified
- Transformer isolated Ethernet interface
- IT functions dynamic web, and FTP server and E-mail client

### Profibus-DPV1 slave
### AB3501

- Complete Profibus-DPV1 slave functionality according to extensions of IEC 61158
- Up to 244 byte Input & 244 byte Output
- Supports PA baud rate 45.45 kbit/s
- Supports class 1 and class 2 services
- Automatic baud rate detection (9,6 kbit/s - 12 Mbit/s)
- RS-485 optically isolated Profibus interface with on-board DC/DC converter

### DeviceNet Adapter
### AB3503

- Complete DeviceNet 2.0 adapter implementation according to ODVA, group 2 only server
- DIP switch select baud rate and MACID
- Baud rate: 125-500 kbit/s
- Optically isolated DeviceNet interface
- Up to 512 byte Input & 512 byte Output data

### Profinet
### AB3509

- Complete Profinet-IO device functionality
- Max.1300 byte of Input and 1300 byte Output data
- 100 Mbit/s full duplex transmission
- RJ45 connector
- Powerful 32 bit processor for short cycle times
- GSD file for easy config
- IT functions dynamic web, and FTP server and E-mail client

### EtherNet/IP Adapter
### AB3506

- Complete EtherNet/IP slave/adapter interface
- IP address settings configurable through on-board DIP switches, webpage, DCP or DHCP
- Baud rate: 10/100 MBit/s
- EtherNet/IP level 2 I/O server
- Transformer isolated Ethernet interface
- IT functions dynamic web, and FTP server and E-mail client

### Modbus-TCP
### AB3508

- Complete Modbus/TCP server functionality
- IP address settings configurable through on-board DIP switches, webpage, DCP or DHCP
- Baud rate: 10/100 MBit/s
- Transformer isolated Ethernet interface
- IT functions dynamic web, and FTP server and E-mail client

### FL-Net
### AB3510

- Complete FL-Net server functionality
- Supports shielded (STP) & unshielded (UTP) cables
- FL-NET Class 1 node
- Customizable identity/profile information
- Up to 512 byte cyclical I/O in each direction
- Dual Port RAM (DPRAM) parallel interface
- Transformer isolated Ethernet interface

Customized versions for specific requirements possible - Contact your nearest HMS office

## About HMS

HMS Industrial Networks is the leading independent supplier of network technology for automation devices. HMS develops and manufactures solutions for interfacing automation devices to industrial networks.

Development and manufacturing takes place at the head office in Halmstad, Sweden. Local sales, support and training is provided by the branch offices in Chicago, Beijing, Karlsruhe, Milan, Mulhouse and Tokyo and by a global distribution network spanning 30 countries. HMS employs over 150 people and is reporting sales of over €30 million. HMS is a public listed company on the NASDAQ OMX Nordic exchange in Stockholm, ISIN-code: SE0002136242

**For more information please visit:**

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