PCI - PC Interfaces

High performance Master and Slave PCI interfaces supporting Profibus, DeviceNet, AS-Interface and Industrial Ethernet

- Profibus
- Profinet
- DeviceNet
- EtherNet/IP
- Modbus-TCP
- FL-Net
- AS-Interface
Powerful Master and Slave PC-Interfaces supporting Profibus, DeviceNet, AS-Interface and Industrial Ethernet.
Based on proven Anybus technology.

The Anybus-PCI cards are based on the proven Anybus technology. As a result, HMS can offer a very competitively priced PCI solution which includes both, high performance and interchangeability. Added to this, is the new range of PCI cards supporting the Industrial Ethernet protocols, Profinet, EtherNet/IP, Modbus-TCP & FL-Net which also features IT Functions such as a Web server, Email, FTP and more.

For Master configuration of Profibus and DeviceNet networks, HMS provides the comprehensive configuration software “Anybus NetTool”. Typical applications for Anybus-PCI cards are embedded PCs and PC based PLC’s, CNC’s and Robot controllers, as well as HMI’s and intelligent visualization systems.

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. Added to this a new range of PCI cards supporting the Industrial Ethernet protocols, Profinet, EtherNet/IP, Modbus-TCP and FL-Net.

All cards operate at both 3,3 and 5V. An on-board powerful 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 card 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 contains a Dual Port Ram that allows the module and the host device to independently address different memory areas.

The PCI cards also contain an on-board microprocessor, fieldbus ASIC, DC/DC converters, opto couplers and line drivers in order to fulfill all requirements for each fieldbus. Provided additionally through the Anybus module is a “Mailbox interface”. Through this interface it is possible to customize the PCI card to be more device-specific and present itself on the network as a custom product.

Supplied with free OPC Server

Free OPC Server included

Included with the scope of supply of Anybus-PCI cards is a free OPC server. Together, the PCI card and the OPC Server, allow users of software applications, such as Scada systems, Soft PLC's or HMIs (OPC Clients), to access real-time data from devices connected to an Industrial Network. The OPC Server supports Data Access (DA) V1.0, 2.05, 3.0 and includes a Tag Editor.

The OPC server has been developed in cooperation with Matrikon Inc, the worlds leading supplier of industrial OPC technology.

Standardized software interface (API)

The Software interface (API) is fully standardised. 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.

WHY USE ANYBUS PCI CARDS?

- Powerful intelligent communication interfaces enabling high data throughput independent of the workload of the main PC processor.
- Standardized Application interface (API) providing network independent interface for the application software
- Free OPC server included with the scope of delivery
- Attractively priced solutions due to mass produced Anybus interfaces
- Based on proven Anybus technology used in over 400,000 industrial devices
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.

**Available for:**
- Profibus-DPV1
- DeviceNet
- AS-Interface
- Profinet
- EtherNet/IP
- Modbus-TCP
- FL-Net

**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
- Free OPC Server
- Drivers and API supporting Win 98/ME/NT/2000/XP
- SDK included (CD, Drivers, DLL’s, Sample Code)
- 2 kB Dual Port RAM (4 kB Profibus Master)
- On-board microprocessor
- 256 byte mailbox interface extendable up to 2048 bytes for parameter data
- Galvanically isolated fieldbus interface
- comDTM driver for Profibus Master
- CoDeSys support (Profibus Cards)
- 10/100MB Ethernet with included IT functions, Web, FTP server and more

**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)
- Power Supply: 3,3 & 5 V 600 mA VDC
- Temperature: Operating 0° to +55°C
- 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

<table>
<thead>
<tr>
<th>Profibus-DPV1 Master</th>
<th>DeviceNet Scanner</th>
<th>AS-Interface Master</th>
<th>Ethernet/IP Scanner</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB3502</td>
<td>AB3504</td>
<td>AB3505</td>
<td>AB3507</td>
</tr>
<tr>
<td>• Complete Profibus Class 1 &amp; Class 2 Master according to IEC 61158</td>
<td>• Complete DeviceNet 2.0 scanner implementation according to ODVA</td>
<td>• Complete AS-Interface Master supporting version 2.1 and also backwards compatible with version 2.0</td>
<td>• Complete EtherNet/IP Master/Scanner interface</td>
</tr>
<tr>
<td>• Up to 125 DP/DPV1 slaves can be connected</td>
<td>• Group 2 Client/Server / UCMM support</td>
<td>• Manages control of up to 62 AS-Interface slaves.</td>
<td>• Dual Port (DPRAM) parallel interface</td>
</tr>
<tr>
<td>• Upto 1536 bytes Input &amp; 1536 bytes Output data</td>
<td>• Baud rates: 125-500 kbit/s</td>
<td>• Up to 248 digital inputs &amp; 186 digital outputs</td>
<td>• Ethernet settings configurable through an inbuilt web server or with on-board DIP switches</td>
</tr>
<tr>
<td>• Supports Profibus baud rates up to 12 Mbit/s</td>
<td>• Optically isolated DeviceNet interface</td>
<td>• Up to 124 (16 bit) analog values</td>
<td>• EtherNet/IP level 4 I/O Client - ODVA Certified</td>
</tr>
<tr>
<td>• RS-485 optically isolated Profibus interface with on-board DC/DC converter</td>
<td>• Controls up to 63 DeviceNet Slave/Adapters</td>
<td>• Optically isolated interface.</td>
<td>• Transformer isolated Ethernet interface</td>
</tr>
<tr>
<td>• Configuration via Anybus NetTool Windows based configuration software</td>
<td>• Supports FLASH field upgrades</td>
<td>• Full extended master M1E</td>
<td>• IT functions Dynamic Web, and FTP server and Email client</td>
</tr>
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<tr>
<th>Profibus-DPV1 Slave</th>
<th>DeviceNet Adapter</th>
<th>Profinet</th>
<th>Ethernet/IP Adapter</th>
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<tbody>
<tr>
<td>AB3501</td>
<td>AB3503</td>
<td>AB3509</td>
<td>AB3506</td>
</tr>
<tr>
<td>• Complete Profibus-DPV1 Slave functionality according to Extensions of IEC 61158</td>
<td>• Complete DeviceNet 2.0 adapter implementation according to ODVA, Group 2 only server</td>
<td>• Complete Profinet-I/O device functionality</td>
<td>• Complete EtherNet/IP Slave/adapter interface</td>
</tr>
<tr>
<td>• Up to 244 bytes input &amp; 244 bytes output</td>
<td>• DIP switch select baud rate and MACID</td>
<td>• Max 1300 bytes of input and 1300 bytes Output data</td>
<td>• IP address settings configurable through on-board DIP switches, Webpage, DCP or DHCP</td>
</tr>
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<td>• Supports PA baud rate 45.45 kbit/s</td>
<td>• Baud rate: 125-500 kbit/s</td>
<td>• 100 Mbit full duplex transmission</td>
<td>• Baud rate: 10/100 MBit/s</td>
</tr>
<tr>
<td>• Supports Class 1 and Class 2 services</td>
<td>• Optically isolated DeviceNet interface</td>
<td>• RJ45 Connector</td>
<td>• EtherNet/IP level 2 I/O Server</td>
</tr>
<tr>
<td>• Automatic baudrate detection (9.6 Kbit/s - 12 Mbit/s)</td>
<td>• Up to 512 bytes Input &amp; 512 bytes Output data</td>
<td>• Powerful 32 Bit Processor for short cycle times</td>
<td>• Transformer isolated Ethernet interface</td>
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<td>• RS-485 optically isolated Profibus interface with on-board DC/DC converter</td>
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<td>• GSD file for easy config</td>
<td>• IT functions Dynamic Web, and FTP server and Email client</td>
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<th>FL-Net</th>
<th>AS-Interface Scanner</th>
<th>Profinet Scanner</th>
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<tr>
<td>AB3508</td>
<td>AB3510</td>
<td>AB3506</td>
<td>AB3507</td>
</tr>
<tr>
<td>• Complete Modbus/TCP server functionality</td>
<td>• Complete FL-Net server functionality</td>
<td>• Complete AS-Interface Scanner functionality</td>
<td>• Complete EtherNet/IP Scanner functionality</td>
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Customized versions for specific requirements available on request - Contact your nearest HMS office

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