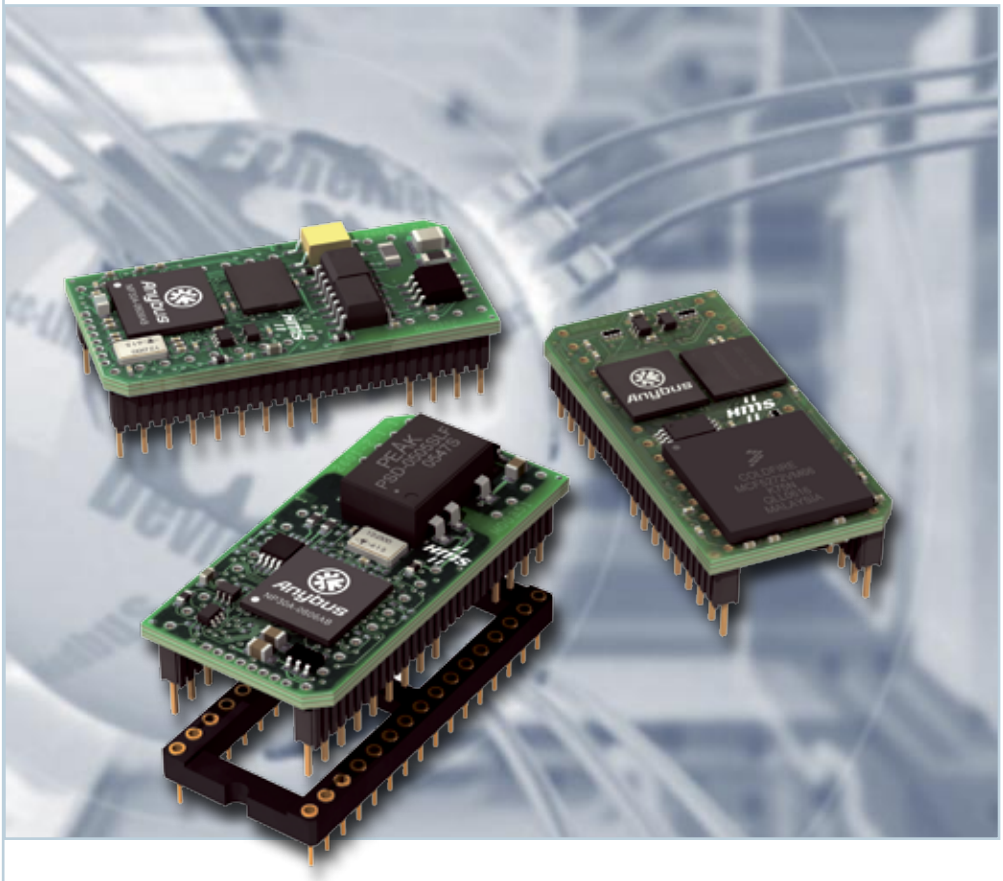


Anybus®

IC - Single Chip Solutions

Very small communication interfaces fitting into a standard DIL32 chip socket

- Profibus
- DeviceNet
- EtherNet/IP
- Modbus-TCP

Anybus-IC is a family of very small communication interfaces with the footprint of a DIL32 chip socket. Anybus-IC contains all electronic components and software required for an industrial fieldbus or Ethernet interface.

Anybus-IC is a family of complete single chip interfaces for industrial networks. It is optimized for field devices, where small size and multiple network connectivity is important. Anybus-IC is based on the new Anybus NP30 RISC communication micro controller from HMS. Anybus-IC contains all electronic components and software necessary to implement a full featured industrial communication interface. Everything is integrated into a single board solution that fits perfectly into a standard DIL32 chip socket consuming only 9 cm² in size.

Tiny, but powerful - When size restrictions are the main factor!

Anybus-IC is a small communication interface based on HMS' new NP30 network controller. It provides a very small connectivity solution designed for integration into small sized devices with limited space for the communication interface. Anybus-IC can be used with various network connectors such as M12 or screw terminals which makes it an elegant solution for devices that are used in harsh industrial environments. The Anybus-IC has a footprint of a standard 32-pin DIL chip socket.

Anybus-IC requires only one 5 Volt power supply and provides a full galvanically isolated network interface. A separate Anybus-IC version is available for each network. Standardization of the mechanical, electrical and software interfaces ensures that the different Anybus-IC's are interchangeable. The Anybus-IC contains all the digital and analog hardware as well as all necessary software to communicate with the selected network.. Anybus-IC is a proven solution that has been tested and approved for fieldbus/Ethernet conformity.

Profibus, DeviceNet & Industrial Ethernet
Anybus-IC is available as Profibus-DP slave, DeviceNet adapter and a combined EtherNet/IP adapter/Modbus-TCP slave. The Ethernet version of Anybus-IC includes embedded Internet features. The embedded dynamic webserver offers a lot of free disk space to download any kind of application specific web pages. Web pages can be created to visualize information and control functions in a user friendly way by utilizing Java or SSI scripts. Anybus-IC provides a complete e-mail client on-board which can be configured to send out email alerts on specific events. The FTP-based file system supports multi level access protection.

An example of the Anybus-IC DeviceNet in a Valve block. Just simply add power and network connectors for instant DeviceNet connectivity.

Communication with or without a micro controller

Flexible data exchange interfaces
Apart from the network interface, the module features two additional data exchange interfaces (SCI and SSC). These interfaces operate fully independently of each other and can be used simultaneously.

Serial Communication Interface (SCI)
Intelligent devices such as incremental encoders, sensors/actuators, operating terminals and motor control units normally have their own micro controller. Via the serial 2-wire TTL interface (SCI), the Anybus-IC connects to the micro controller of an intelligent automation device.

This provides access to cyclic I/O data and acyclic parameters of the network. The communication between the Anybus-IC and the micro controller of the automation device is based on the proven Modbus-RTU protocol. Via the SCI interface, the Anybus-IC supports up to 128 bytes input and 128 bytes output data.

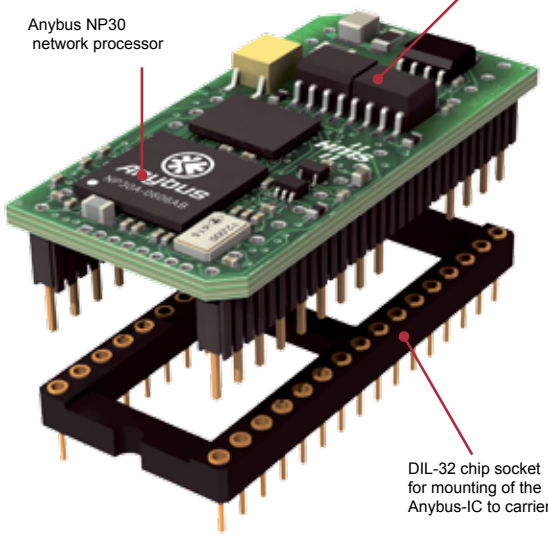
Synchronous Serial Channel (SSC)
For non-intelligent devices, like valve terminals and modular I/O devices, Anybus-IC features a clocked shift register interface (SSC) that provides direct access to cyclic I/O network data without the need for an additional microprocessor. With additional A/D or D/A converts, even analog input or output signals can be easily integrated into fieldbus or industrial Ethernet networks.

WHY USE ANYBUS-IC MODULES?

- Connectivity to several networks in one development
- Very small single board solution, ideal where size restriction matters
- Same hardware and software interface from the view of the host device
- Capability to use specific network connectors for IP65 protected devices
- Up to 70% savings in development costs compared with own implementation
- Continuous technology maintenance by HMS
- Fast time to market, typically only 1-3 months for several networks

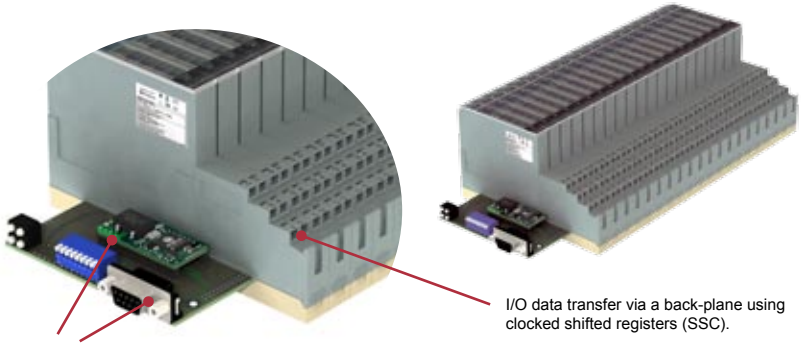
Anybus®
IC - CHIP

Available for:
Profibus
DeviceNet
EtherNet/IP
Modbus-TCP

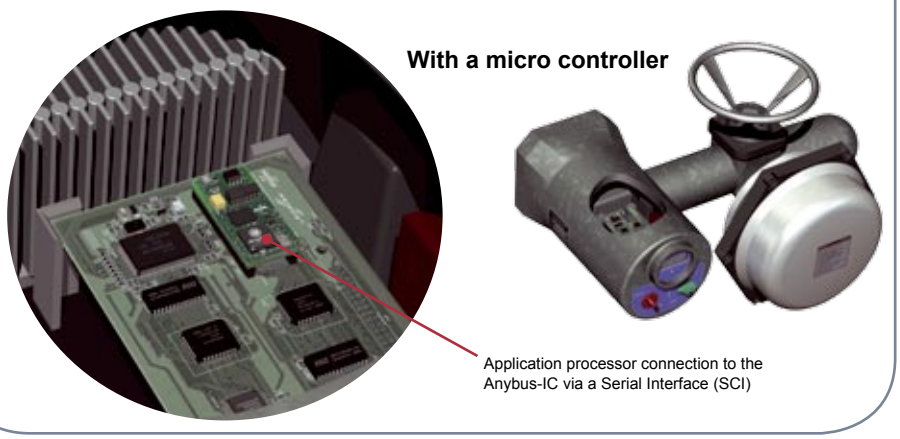


Interface options - Anybus-IC

Without micro-controller



With a micro controller



KEY FEATURES

- Very small size - ideal for small to medium-sized industrial applications
- Works as a stand-alone controller or together with another micro controller
- Contains all analog and digital components for full network connectivity
- DC/DC converter and optocouplers on-board
- Powered by the new Anybus NP30 network controller
- Max Data on SCI serial interface: each 128 byte I/O data from Q1/07 each 32 byte I/O data until Q4/06
- SSC Shift register interface for data exchange of max 16 bytes Input and 16 bytes Output data
- Configuration and monitoring via a PC configuration port
- 32 pin DIL connector
- Flash upgradable

TECHNICAL SPECIFICATION

- Size: 42 x 21 x 15 mm (L x W x H)
  2.13 x 0.83 x 0.59” (L x W x H)
- Power supply: +5 Volt
- Operating temperature
  -10 °C to + 70 °C
  14 °F to + 158 °F
- Humidity: 5 to 95% non-condensing
- Emission: EN 50081-2: 1993
  Immunity: EN 61000-6-2: 1999
  UL and cUL Compliance: Pending
  CE-mark: CE-marked (all versions)
- Application connector: 32 pin DIL
- Tested and verified for fieldbus and network conformance
- RoHS compliance

Network specific supported features - Anybus-IC

Profibus-DP AB6000

- Complete Profibus-DP Slave functionality according to IEC 61158
- Max. data size on SCI interface: from Q1/07 on each max. 128 byte until Q4/06: each max. 32 byte
- 16 bytes input / 16 bytes output on the SSC Interface
- Automatic baudrate detection (9600 bit/s - 12 Mbit/s)
- RS-485 optically isolated Profibus interface with on-board DC/DC converter
- Up to 237 bytes of user parameter data
- Up to 200 bytes of extended diagnostic data

DeviceNet AB6001

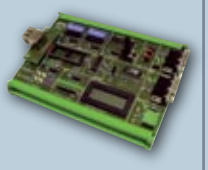
- Complete DeviceNet 2.0 adapter (Group 2 Server)
- Max. data size on SCI interface: from Q1/07 on each max. 128 byte until Q4/06: each max. 32 byte
- 16 bytes input / 16 bytes output on the SSC Interface
- DeviceNet baud rate: 125-500 kbit/s
- Optically isolated DeviceNet interface
- I/O Slave messaging: Bit strobe, Polling, Cyclic & Change of State (COS) and Explicit messaging
- Acyclic data and parameter data mapping

EtherNet/IP / Modbus/TCP AB6003

- Complete EtherNet/IP adapter class with I/O server, Message client, and CIP message routing
- Support also for Modbus-TCP V1.0 Server
- Ethernet Baudrate 10/100 Mbit/s
- Supports UDP/IP and TCP/IP via a transparent socket interface
- Integrated FTP server provides easy file management using standard FTP clients
- Dynamic Web server with SSI script capability and support for Java applets and scripts
- E-mail client capability with SSI script support

Evaluation Board ABIC-EVB

With the Anybus-IC Evaluation board it is possible to initialise the Anybus-IC and monitor the data exchange directly from a terminal program on a PC. The EVB is complete with all hardware to be able to set address, baudrate and monitor the fieldbus status LEDs. It is also possible to read out (2 bytes) and set data (2 bytes) to the fieldbus master directly on the board.



The SCI channel can be connected via the RS232 interface, for direct access from a PC. Serial cabling is included in the kit for the SCI channel and the monitoring channel. Also included in the Anybus-IC EVB: Manuals for the modules and an easy startup guide, manual for the EVB, example software and schematics of a carrier board to the Anybus-IC

Key Features:

- Serial port with RS-232 line drivers for SCI communication
- Serial port with RS-232 line drivers for the monitor interface
- Switches and LEDs for easy monitoring and setting of fieldbus data

- Baud rate and station number configuration via switches or monitor interface
- Possibility to easily exchange between different Anybus-IC versions

Customized versions for specific requirements available on request - Contact your nearest HMS office

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