Anybus EtherNet/IP to .NET Bridge

The Anybus .NET Bridge acts as a bridge between a function block in a PLC and a .NET solution in a PC.

HOW IT WORKS

The information exchange between the Operational Technology (OT) side and the Information Technology (IT) side is made with messages defined in a spreadsheet template (Excel).

Up to 65535 different message types, with each message a max size of 251 bytes, may be defined. Each message type is identified with a unique ID number.
The messages are sent in sequence over the same IO-data, which provides a very large total of data communication.

These message types are defined in a spreadsheet template (Microsoft Excel).
The template is included in the configuration software together with the function blocks and product definition files (GSD, GSDML, EDS, ESI).

Using the spreadsheet, the Anybus .NET Bridge Code Generator creates C# files for the .NET programmer and PLC files for the PLC programmer.

The configuration software also includes two simulators — a PLC simulator for the .NET programmer and a .NET simulator for the PLC programmer.

A function block (provided by HMS) manages the handshake on the PLC side and provides an easy-to-use interface for the PLC programmer.

For applications where minimum delay and maximum performance is required, the .NET Bridge can be used in streamer mode where data streams are exchanged directly without any handshake (PROFIBUS, PROFINET and EtherNet/IP). In this mode, data need to be mapped manually in the PLC and in the .NET application.

FEATURES & BENEFITS

- Creates a bridge between the logic in a PLC and a .NET solution in a PC
- Two-way communication
- Easy to configure and set-up
- Message size up to 251 bytes
- Possible to send messages in sequence up to transfer large amounts of data (up to 251 bytes x 65 535)
- PLC simulator to make it easy for the .NET programmer during development and commissioning
- .NET simulator available to make it easy for the PLC programmer during development and commissioning
- DIN-rail or wall mount options
- Streamer mode for high performance applications for PROFIBUS, PROFINET and EtherNet/IP

ETHERNET/IP NETWORK FEATURES

The parameters of the EtherNet/IP adapter are defined in the spreadsheet configuration. An EDS file is provided by the configuration generator together with function blocks.

- EtherNet/IP ODVA CT14 conformance certified
- Allocates up to 256 bytes of I/O data
- 100Mbit/s
- Ethernet/IP uplink configuration via .EDS file
- Provided functional blocks for Studio 5000
- Connectivity via 2x RJ45 connectors

FOR THE AUTOMATION SPECIALIST - PLC PROGRAMMER

FUNCTION BLOCK SIMPLIFIES PLC INTEGRATION!

- .NET Framework knowledge is not required - The logic interface is a function block in the PLC
- Function blocks to Studio 5000 are provided with the generated configuration (message mode)
- The system provides a conform EDS file
- .NET Simulator for testing/developing PLC solutions without .NET
- If a bridge needs to be replaced, the .NET application will automatically setup the configuration

FOR THE IT SPECIALIST - .NET PROGRAMMER

SIGNIFICANTLY REDUCED INTEGRATION COMPLEXITY!

- No need to understand industrial networks – Data from factory floor sent in an intelligible format
- IT style interface: customize names, receive events and post structured data via C# / .NET interface
- Automated configuration – system generates fully customized C# API (message mode)
- Names and data types according to parameter list agreed with PLC programmer
  Configuration is stored in C# program (message mode)
- PLC Simulator for testing/developing .NET solutions without PLC
- No configuration need to be done inside the Bridge

Technical specifications

Dimensions (L•W•H)	110 x 35 x 101 mm or 4,33 x 1,38 x 3,98"	
Weight	160g or 0,35 lbs	
Operating temperature	-25 to +70 °C or -13 to +158 °F	

Storage temperature	-40 to +85 °C or -40 to +185 °F	
Power supply	24 VDC	
Current consumption	Typical 150mA	
USB port	For firmware upgrades	
SD memory card slot	Not used	
PC TCP/IP connector	2xRJ45	
Industrial network connector	(See the secondary network interface details above)	
Galvanic isolation	On both BUS/Ethernet side	
Mechanical rating	IP20, NEMA rating 1	
Mounting	DIN-rail (EN 50022 standard) or Wall Mount (optional)	
Certifications	CE, cULus, RoHS	

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Ordering information

Order Code	AB9078
Included components	Anybus EtherNet/IP to .NET bridge (Power supply not included)

3 year guarantee. For purchasing instructions and terms and conditions, see: How to buy