



## Anybus Communicator - EtherNet/IP adapter - EtherCAT slave

The Anybus Communicator EtherNet/IP adapter – EtherCAT slave is an industrial protocol gateway that allows you to seamlessly transfer data between PLC control systems over EtherNet/IP and EtherCAT networks.

Anybus Communicators are designed to ensure reliable, secure, and high-speed data transfer between different industrial Ethernet and Fieldbus networks. Very easy to install and deploy, the stand-alone gateways enable transparent data exchange between PLCs allowing you to both bridge and integrate legacy equipment into modern high-performance networks with only minimal changes to the software.

Anybus Communicators are built using the award-winning and proven Anybus NP40 industrial network processor providing network conformance, high performance, and reliability. When connecting between PLCs on different networks, extremely fast data cycling is enabled with data transfer of up to 1500 bytes in each direction, meeting most current control application needs as well as supporting future demands.

Quick installation is ensured thanks to the intuitive configuration, easy-to-understand documentation, and smart hardware and housing design.



### Excellent performance

- Instant data transfer - The time required for data transfer between two PLCs is made up of the cycle time of the first network plus the cycle time of the second network. The internal data transfer in the communicator is negligible because it corresponds to the natural fluctuations of the network cycle times (jitter).
- Hardware-accelerated endian conversion (byte swap) - Communicators can change the data representation (endianness) using hardware-accelerated endian conversion to ensure that data is represented correctly in each PLC. You can even convert different parts of the data area in different ways to handle different types of data. This has no impact on performance, relieves the PLC of the data conversion task, and simplifies PLC programming.

### Easy startup

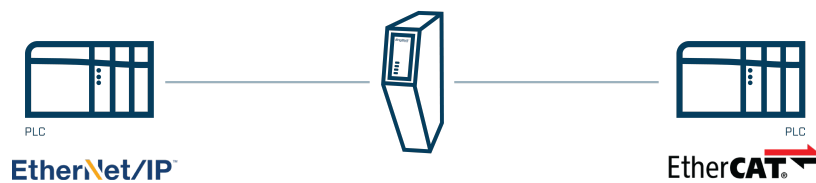
- Dedicated Ethernet configuration port - no special cables required.
- Intuitive web-based drag-and-drop configuration interface - no need to install additional software.
- Front-facing connectors make it easy to connect cables, and the slim form factor saves space on the DIN rail.
- Troubleshoot with powerful diagnostics, including live data monitor, status screen, and support package.

### Best security features

- Secure boot functionality to detect firmware tampering and protect against malware attacks and infections.
- Security switch that locks your configuration and prevents any unauthorized access.
- The ports used in production have been disabled to prevent malware from being loaded via the ports.

#### For industrial environments

- Robust, compact housing.
- Industrial components are CE and UL tested and certified.
- Wide temperature range, -25°C to 70°C.
- Top-hat rail mounting for installation close to the connected devices, reducing wiring effort.



#### ETHERNET/IP FEATURES

- EtherNet/IP adapter mode
- Transfer up to 1 448 bytes to and from EtherNet/IP (2896 bytes total)
- Class 1 and Class 3 connection for process data
- Device Level Ring (beacon mode)
- Quick Connect class B
- Dual RJ45 Ethernet ports with 10/100 Mbit full duplex
- Daisy chaining with integrated switch

#### EtherCAT FEATURES

- EtherCAT slave according to IEC 61158 Type 12 (ETG.1000)
- Transfer up to 1 486 bytes to and from EtherCAT
- Network cycle time down to 100  $\mu$ s
- Supports CANopen over EtherCAT
- Addressing modes: Logical, Node, and Position
- Commands: APRD, ARMW, APWR, BRD, BWR, FPRD, FPRW, FPWR, FRMW, LRD, LRW, LWR
- Synchronization modes: Free Run
- Dual RJ45 Ethernet ports with 10/100 Mbit full duplex
- Daisy chaining with integrated switch

## Communicator Web UI Intro



### GENERAL

<b>Dimensions (L x W x H) with serial and power connector</b>	98 x 27 x 144 mm 3.85 x 1.06 x 5,67 in
<b>Weight</b>	150 grams, 0.33 lb
<b>Buttons and switches</b>	Reset button and security switch
<b>LEDs</b>	Gateway, Network 1 & Network 2
<b>IP rating</b>	IP20
<b>Housing material</b>	PC ABS, UL 94 V0
<b>Mounting</b>	DIN rail (35 * 7,5/15)

### ENVIRONMENT

<b>Operating temperature</b>	-25 to 70° C, -13 to 158° F
<b>Storage temperature</b>	-40 to 85° C, -40 to 185° F
<b>Relative humidity</b>	0-95% non condensing
<b>Installation altitude</b>	Up to 2 000 m

**POWER**

<b>Input voltage</b>	12 - 30 VDC
<b>Current consumption</b>	Typical: 160 mA @ 24V Max: 400 mA @ 12V
<b>Power connector</b>	3-pin plug with screw terminal
<b>Protection</b>	Reverse voltage protection and short circuit protection

**ETHERNET PORTS**

<b>Ports</b>	2+2 x Ethernet
<b>Isolation</b>	Galvanic isolation
<b>Bitrate</b>	10/100 Mbit full duplex
<b>Connector</b>	RJ45
<b>Switch.</b>	Dual port cut-through switch

**ETHERNET/IP**

<b>Mode</b>	Adapter (slave)
<b>Messages</b>	Implicit and explicit
<b>Max no of scanner connections</b>	1 input/output (exclusive owner) 3 listen only or input only
<b>Input data size</b>	1 448 bytes (with large forward open)
<b>Output data size</b>	1 448 bytes (with large forward open)
<b>Network redundancy</b>	Device Level Ring (DLR), beacon-based
<b>Quick connect</b>	Class B
<b>Certification</b>	Pending
<b>Minimum cycle time</b>	1 ms for class 1 connections, 100 ms for class 3 connections
<b>EDS File</b>	Available

**ETHERCAT**

<b>Mode</b>	EtherCAT slave according to IEC 61158 Type 12 (ETG.1000)
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<b>Addressing modes</b>	Logical, node, and position
<b>Synchronization modes</b>	Free run
<b>Input data size</b>	1 486 bytes
<b>Output data size</b>	1 486 bytes
<b>Network redundancy</b>	Device Level Ring (DLR), beacon-based
<b>Minimum cycle time</b>	100 µs
<b>Features</b>	Supports CANopen over EtherCAT (CoE)
<b>ESI File</b>	Available

#### CERTIFICATIONS AND STANDARDS

<b>UL</b>	cULUSfile number E214107
<b>CE</b>	2014/30/EU
<b>KC</b>	R-R-ABJ-Communicator
<b>EMC</b>	<p>EN <a href="#">61000-6-2</a></p> <p>EN <a href="#">61000-4-2</a></p> <p>EN <a href="#">61000-4-3</a></p> <p>EN <a href="#">61000-4-4</a></p> <p>EN <a href="#">61000-4-5</a></p> <p>EN <a href="#">61000-4-6</a></p> <p>EN <a href="#">61000-6-4</a></p> <p>EN 55032</p>
<b>Environment</b>	<p>IEC <a href="#">60068-2-1</a> Ab</p> <p>IEC <a href="#">60068-2-2</a> Bb</p> <p>IEC <a href="#">60068-2-1</a> Ab</p> <p>IEC <a href="#">60068-2-2</a> Bb</p> <p>IEC <a href="#">60068-2-14</a> Nb</p> <p>IEC <a href="#">60068-2-30</a> Db</p> <p>IEC <a href="#">60068-2-78</a> Cab</p> <p>IEC <a href="#">60068-2-78</a> Cab</p>
<b>Vibration and shock</b>	<p>IEC <a href="#">60068-2-27</a></p> <p>IEC <a href="#">60068-2-6</a></p>
<b>Waste certification</b>	WEE

#### CONFIGURATION

<b>Configuration software</b>	Web based configuration
<b>Configuration ports</b>	Dedicated 10/100 Mbit RJ45 Ethernet configuration port and Ethernet ports

#### SECURITY

<b>Secure boot</b>	Ensures software authenticity
<b>Security switch</b>	Physical switch that enable/disable access to the web based configuration interface

**PRODUCT PACKAGING**

<b>Content</b>	Gateway, power connector, start-up guide, compliance information sheet
<b>Box material</b>	Cardboard

**MEAN TIME BETWEEN FAILURE**

<b>MTBF</b>	> <u>1500000</u> h, Telcordia Method I Case 3 at 30° C
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File

Version

Size

Read online

## Ordering Information

**ORDER CODE: ABC4012****WARRANTY:** 3 yearsFor purchasing instructions and terms and conditions, see: [How to buy](#).

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