



## Anybus Communicator - Common Ethernet

**Order Code: ABC3090**

**Modbus RTU Master - Industrial Ethernet**

Integrate your serial RS-232/485 based industrial devices and equipment to EtherNet/IP, Modbus TCP or PROFINET control systems without any changes to the device. Just connect, configure and you're done.

The Anybus Communicator can transfer large amounts of data, is fast to configure thanks to its' drag and drop web interface and is built on trusted Anybus technology.

### CONVERT ALMOST ANY TYPE OF SERIAL PROTOCOL

The Communicator can convert both standard serial protocols such as Modbus RTU and proprietary serial request/response or produce/consume based protocols.

### TYPICAL SERIAL APPLICATIONS

Typical serial applications include variable frequency drives, sensors, actuators, human machine interfaces, barcode readers, RFID readers and industrial scales among others.

### FEATURES & BENEFITS

- Transfer up to 1 500 bytes of data in both directions
- Selectable industrial ethernet network (EtherNet/IP, Modbus TCP or PROFINET)
- Web-based drag and drop configuration interface
- -25 to +70 °C industrial temperature range
- Powered by award winning NP40 network processor
- Security chip, security switch and secure boot

### Transfer up to 1 500 bytes of data

Demand for more data is constantly growing and the Communicator has been equipped to handle the challenge. It can transfer up to 1 500 bytes from the PLC to the Gateway and 1 500 bytes from



the gateway to the PLC, 3 000 bytes in total (network dependent). Support for up to 150 Modbus commands means even complex configurations with multiple nodes can be handled with ease.

#### **Drag and drop web interface**

To make sure you spend as little time as possible to configure the Communicator, we have built a graphical and responsive web-based user interface. No software need to be install, just open your favorite web browser and get started.

#### **Industrial temperature range**

An industrial operating temperature range of -25 to +70 °C ensure the Communicator can excel under harsh conditions.

#### **Powered by proven NP40 technology**

The Communicator is built on the award-winning and proven Anybus NP40 network processor. With hundreds of thousands NP40:s used in Embedded applications across the world, it is the industry benchmark for reliable industrial communication.

#### **Security switch**

Even with sophisticated security measures, human error is still the main cause of security breaches. To simplify security, we added a physical security switch on the Communicator. It locks your configuration and prevent any access to the web-based configuration interface. Just flip it when your configuration is done and watch the padlock LED on the product light up.

#### **Security chip and secure boot**

To meet current and future security challenges, the Communicator is equipped with the latest Anybus security chip. Secure boot ensures the firmware has not been tampered with.

#### **Ethernet configuration port**

With a dedicated Ethernet configuration port you don't need any special configuration cable. In addition, it is easy to connect to the gateway to monitor network traffic.

#### **Optimized for DIN-rail mounting**

The slim form factor, front facing network connectors, screw in serial cable connector and the neat cable tie ensure it is fast and simple to install and connect the Communicator.

#### **Diagnostics**

When open the Communicator web interface you immediately see the status of the PROFINET connection and serial connection. You can even see the status of individual serial nodes. It's also equipped with a serial log and an event log for further analysis.

#### **Support**

Sometimes you run into a problem where you need help. That's why we have included a support page in the user interface with contact information. There is even a button to generate a support package to simplify troubleshooting.

### **SERIAL FEATURES**

- Selectable RS-232/485 interface
- 3 ms serial update rate (selectable)
- Visual I/O data map to map serial data to industrial network
- Drag and drop frame builder for custom protocols, no programming required
- Trigger serial transactions from control system with triggers
- Transfer data between serial nodes with general data area
- Monitor and control serial nodes from control system with live list and data exchange control

## COMMON ETHERNET FEATURES

- Cover multiple protocols with a single gateway and reduce storage costs
- Supports EtherNet/IP, Modbus TCP or PROFINET (Modbus TCP pre-loaded)
- Transfer 1 448 bytes with EtherNet/IP, 1 500 bytes with Modbus TCP and 1 024 bytes with PROFINET to and from the gateway
- Download your protocol firmware from the product support page (free)
- Load your protocol firmware via the gateway web-configuration interface
- Dual RJ45 Ethernet ports with 10/100 Mbit full duplex
- Daisy chaining with integrated switch

## TECHNICAL SPECIFICATIONS

### 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, PROFINET and Serial status
<b>IP rating</b>	IP20
<b>Housing material</b>	PC ABS, UL 94 VO
<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-pole Phoenix plug
<b>Protection</b>	Reverse voltage protection and short circuit protection

**SERIAL RS232/485 PORT**

<b>Ports</b>	1 x RS232/RS485
<b>Baud rate</b>	1200 bps to 128 kbps
<b>Max stations</b>	31
<b>Isolation</b>	Galvanic isolation
<b>Connector</b>	7-pole Phoenix connector
<b>Max nodes</b>	31

**MODBUS RTU**

<b>Modes</b>	Master
<b>Functions supported</b>	1, 2, 3, 4, 5, 6, 15, 16, 22, 23
<b>Max number of commands</b>	150
<b>Input data size</b>	1 024 bytes
<b>Output data size.</b>	1 024 bytes

**ETHERNET PORTS**

<b>Ports</b>	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>	ODVA conformant

**MODBUS TCP**

<b>Mode</b>	Server
<b>Max number of connections</b>	4
<b>Input data size</b>	1 500 bytes
<b>Output data size</b>	1 500 bytes

**PROFINET**

<b>Mode</b>	PROFINET IO-Device (slave)
<b>Class</b>	A, B
<b>Communication channels</b>	Real Time Channel (RT)
<b>Input data size</b>	1 024 bytes
<b>Output data size</b>	1 024 bytes
<b>Minimum cycle time</b>	1 ms
<b>Max number of connections</b>	1 IO Controller Application Relationship + 2 Device Access Application Relationships
<b>Netload class</b>	Class III
<b>I&amp;M records</b>	Manufacturer data (I&M0), Tag information (I&M1), Date/Time (I&M2), Description (I&M3)
<b>SNMP</b>	Available
<b>Certification</b>	Pending

**CERTIFICATIONS AND STANDARDS**

<b>UL</b>	UL file number E214107
<b>CE</b>	2014/30/EU
<b>KC</b>	R-R-ABJ-Communicator
<b>EMC</b>	EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-6-4 EN 55032
<b>Environment</b>	IEC 60068-2-1 Ab

	IEC 60068-2-2 Bb IEC 60068-2-1 Ab IEC 60068-2-2 Bb IEC 60068-2-14 Nb IEC 60068-2-30 Db IEC 60068-2-78 Cab IEC 60068-2-78 Cab
<b>Vibration and shock</b>	IEC 60068-2-27 IEC 60068-2-6
<b>Waste certification</b>	WEE

**CONFIGURATION**

<b>GSDML file</b>	Available
<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, serial connector, start-up guide, compliance information sheet
<b>Box material</b>	Cardboard

**MEAN TIME BETWEEN FAILURE**

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

Order Code	ABC3090
Included components	Anybus Communicator - Common Ethernet

3 year guarantee. For purchasing instructions and terms and conditions, see: [How to buy](#).

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