X-gateway™ Modbus-TCP

The Anybus X-gateway for Modbus-TCP makes it possible to connect Modbus-TCP devices to almost any other PLC system.

The X-gateway provides Modbus-TCP client (master) connectivity o all major fieldbus and indu trial Ethernet networks and is easily configu ed and installed. No programming required!

Availability

Downlink: Modbus-TCP Client
Uplink: See below

PartNo:	Network:
AB9000-B	EtherCAT Slave
AB9001-B	Profibus Sl ve
AB9002-B	DeviceNet Adapter
AB9003-B	ControlNet Adapter
AB9004-B	CANopen Slave
AB9005-B	Modbus RTU Slave
AB9006-B	EtherNet/IP Adapter
AB9007-B	Profin t-IO Device
AB9008-B	Modbus-TCP Server

Accessories:

021520-B	Wall Mount Option
021530-B	SD memory card Industrial grade

Typical usage

Modbus-TCP is used with industrial applications in industries such as:

- Factory Automatio
- Transportatio
- Infrastructure
- Energy distributio
- Oil and Gas
- Manufacturing

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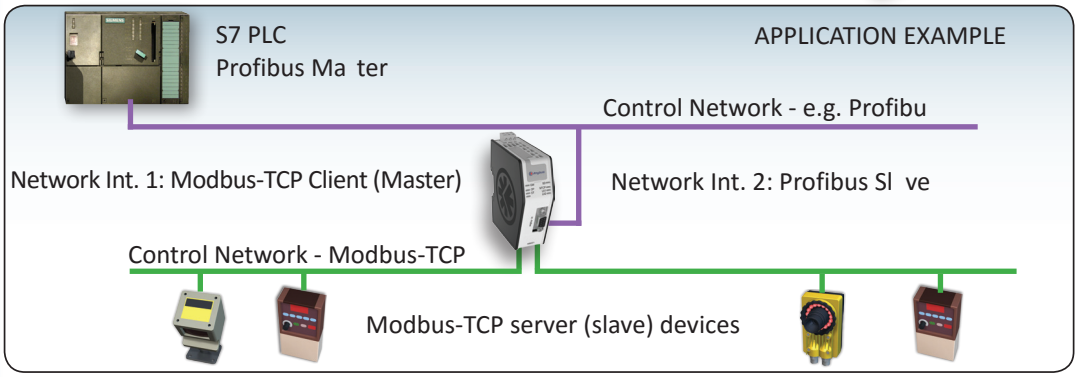


Anybus X-gateways with Modbus-TCP act as intelligent links between two industrial networks. On the Modbus-TCP side (downlink), they function as a clie t (master). On the other chosen fieldbus/ thernet network side (uplink), they operate as a slave/adapter.

Features and benefit

- Connects Modbus-TCP server devices to other fieldbu and Industrial Ethernet networks
- Provides Modbus-TCP client/master functionality o one side, and fieldbus/ thernet slave functionality on the other side
- Allows for fast transparent transfer of I/O data between two networks. High performance, short throughput delay, max 5 ms
- SD memory card for backup, configu ation and Easy Module Replacement
- Dual Port switched Ethernet allows daisy chaining on all Ethernet interfaces
- New robust design for optimi ed cabling, DIN-rail or wall mount options
- Enhanced environmental attribu es and certi ation
- Easy Web based configu ation ool. No programming or scripting equired
- Live-list which informs the uplink PLC about the status of connected Modbus-TCP server devices

Easy Configuratio

Configu ation is made via thernet and a built-in web page. The configu ation pa e is used to configu e Ethernet TCP/IP settings Modbus-TCP client configu ation and I/O data size transfer between Modbus-TCP and the chosen network.

The uplink fieldbus or thernet slave interface to the PLC is configu ed with a standard device description file (GSD/EDS) in th PLC engineering tool.

Easy Replacement

The X-gateway is equipped with an SD memory card for easy replacement, configu ation copy and backup. No need for a computer or help from a specialist if replacing a module in the field

Functionality overview

Anybus X-gateway Modbus-TCP supports a maximum data size of 256 byte input and 256 byte output, including Control and Status words. It is an intelligent gateway pla orm, which provides one side of the gateway with a Modbus-TCP Client (Master) interface and any one of 9 di erent fieldbus/ thernet Slave interfaces on the other side. It basically forwards I/O data from one network to the other and vice versa as shown below. On the uplink network side it appears as a standard I/O module.

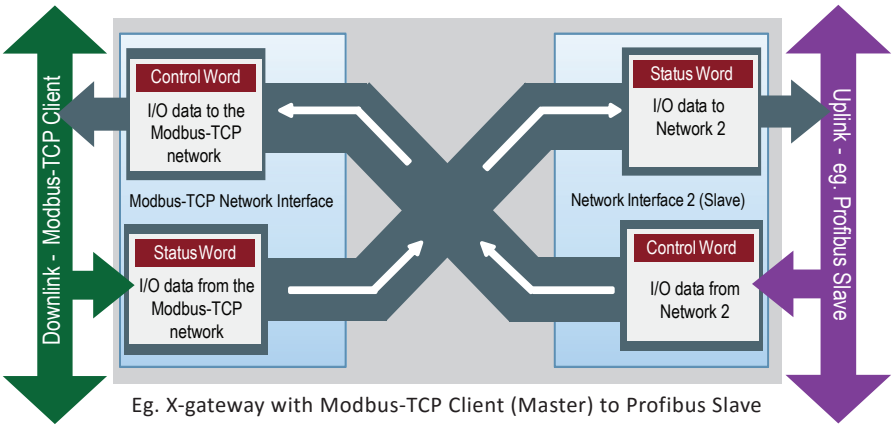
Modbus-TCP supported features

- Complete Modbus-TCP client (master) according to the open Modbus-TCP specifici tion 1.
- Max 64 Modbus-TCP servers (slaves) can be added to the configu atio
- Based on the standard Modbus protocol with Modbus-TCP running on to of TCP/IP
- Possibility to set TCP ports individually for each Modbus-TCP server
- All Modbus-TCP functions a e assigned to Modbus-TCP servers (slaves) using the built-in web interface

Data Exchange

Each of the two network interfaces exchanges data on its network through internal I/O bu ers. The gateway forwards the data between these bu ers as shown above.

On the Modbus-TCP client interface, the dedicated control word is used to start/stop the exchange of data, or to reset the gateway if needed. The master (PLC) on the other network (e.g. Profibus) can see the status of the Modbus-TCP network in the corresponding status word.



Eg. X-gateway with Modbus-TCP Client (Master) to Profibus Slave

MECHANICAL SPECIFICATIONS	
Width	110 x 35 x 101 mm (L x W x D)
Weight	150 g
Module Voltage	24 VDC + 10%
Current Consumptio	Typical 150 mA @ 24 V
Operating emp	-25 to +70 oC
Mountin	DIN-rail, Wall Mount option or increased stability and a lower mounting p ofile (42mm
Protection Clas	IP20
Certi atio	CE, RoHS, ATEX (Zone 2, Cat2), UL HazLoc (Class 1 Div 2), Marine IACS E10 DNV2.4 (Certi ations ending)
Conformance	Uses certi ed Anybus network interface technology

X-gateway External View

- A: Power Connector
- B: SD Card Slot
- C: USB Port
- D: Status LEDs
- E: DIN-rail Connector with PE
- F: Network Connectors