

# comX

## Communication Module for Real-Time-Ethernet

CONNECTED BY  
**netX**

### Description

netX based comX-Modules gets it's identity by loading an appropriate firmware file. The following real-time Ethernet protocols are supported:

Ether**CAT**  
Technology Group

EtherNet/IP™

ETHERNET  
**POWERLINK**



**PROFI**  
INDUSTRIAL ETHERNET  
**NET**

**SERCOS**  
interface

All stacks are implemented as slave protocols and are executed on the comX-Module. Data exchange with the host application is carried out via a Dual-Port-Memory interface. The process data images are available directly via memory read and write functions. The comX-Module features two RJ45 connectors for Ethernet.

### Highlights

- All Real-Time Ethernet System use netX Network Controller
- Two Ethernet Ports with Switch and Hub for Line Topology
- System/Status/Link/Activity LEDs
- 8 or 16-Bit Host Application Interface
- USB & UART Diagnostic Interface
- Direct Process Data Access
- Same Dimensions and Pin Compatible like our well-known COM-C Module
- SYCON.net as configurator based on FDT/DTM
- Short 'Time-To-Market'



Scale 1:1

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COMPETENCE IN  
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## Protocol

EtherCAT	Slave
Cyclic Data	max. 400 Bytes
Acyclic Data	SDO Master/Slave SDO Slave/Slave
Functions	COE (CANopen over EtherCAT) Emergency Complex Slave 3 FMMUs and 4 SYNC-Manager

EtherNet/IP	Adapter/Slave
Cyclic Data	max. 1008 Bytes
Unscheduled Data	max. 1400 Bytes per Telegram
Functions	max. 8 Connections one E/A Connection Cyclic Connection UCMM supported DHCP, BOOTP
Server Services	Get_Attribute_All/Single Set_Attribute_All/Single

PROFINET	IO Device
Cyclic Data	max. 2048 Bytes (IOCR)
Acyclic Data	Read/Write Record, max 1024 Bytes/Telegramm
Functions	Process- and Diagnostic Alarm DCP VLAN- and Priority-Tagging Context Management over CLRPC Diagnostic, max 200 Bytes/Telegramm target-actual comparison configuration max. 244 modules 1 Submodule

Modbus TCP/IP	Server
Function Codes	1, 2, 3, 4, 5, 6, 15, 16
Register (16-Bit)	max. 120 or 125 Register per Telegram
Coil (1-Bit)	max. 1968 or. 2000 Coils per Telegram
Message Mode	Server In/Out-Data Image not used
E/A-Modbus Server	max. 11520 Byte E/A Data

SERCOS III	Slave
Realtime Data	max. 2800 Bytes
Acyclic Data	Service Channel Read/Write/Standard Commands
Functions	Phase Run Up Synchronization Ring and Line Topology Max. 8 Subdevices
Version	V1.1

EtherCAT	Master
Cyclic Data	max. 11520 Bytes
Acyclic Data	CoE (CANopen over EtherCAT) Up/Download Functions Get OD List Emergency Topology: Linie

EtherNet/IP	Scanner/Master
Cyclic Data	max. 11520 Bytes
Unscheduled Data	max. 504 Bytes per Telegram
Functions	max. 64 Connections Cyclic Connection UCMM supported DHCP, BOOTP

PROFINET IO	Controller
Cyclic Data	max. 6144 Bytes
Acyclic Data	Read/Write Record, max. 4096 Bytes/Request
Functions	max. 32 Devices minimum cycle time 1 ms Alarm treatment DCP Context Management over CLRPC Per Device one Buffer available for Diagnostic Data

PowerLink Controlled Node/Slave	
Cyclic Data	max. 2980 Bytes
Acyclic Data	SDO Up-/Download
Functions	SDO over ASND and UDP
Poll Request/Response	Response time 1µs
Version	V2

Note: The protocols are delivered as loadable Firmware on the provided CD.

Parameter	Daten
Diagnostic Port	USB/UART
Interface	Dual-Port-Memory
Operating Voltage	3,3 V / max. 750 mA
Operating Temperature	0..60°C
Dimensions (L x W x H)	70 x 30 x 21,5 mm

## Product Overview

Article description	Article number	Article
COMX-CA-RE	1521.100	Communication Modul netX for Real-Time-Ethernet, without loaded Firmware
/ECM	1521.100/ECM	COMX-CA-RE with EtherCAT Master Firmware, incl. Masterlicense
/ECS	1521.100/ECS	COMX-CA-RE with EtherCAT Slave Firmware
/EIM	1521.100/EIM	COMX-CA-RE with EtherNet/IP Scanner/Master Firmware, incl. Masterlicense
/EIS	1521.100/EIS	COMX-CA-RE with EtherNet/IP Adapter/Slave Firmware
/OMB	1521.100/OMB	COMX-CA-RE with Open Modbus/TCP Firmware, projected
/PNM	1521.100/PNM	COMX-CA-RE with PROFINET IO RT Controller, incl. Masterlicense
/PLS	1521.100/PLS	COMX-CA-RE with PowerLINK Slave Firmware, projected
/S3S	1521.100/S3S	COMX-CA-RE with SERCOS III Slave Firmware

Note: All technical data are preliminary and can be altered without notice.

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