

EtherCAT Workbench

EtherCAT® Network Configuration and Diagnostic Tool



EtherCAT®

The EtherCAT Workbench is a comprehensive EtherCAT configuration and diagnostic tool to create network configuration files, initialize and monitor an EtherCAT network. The application supports an offline as well as an online mode.

Key features

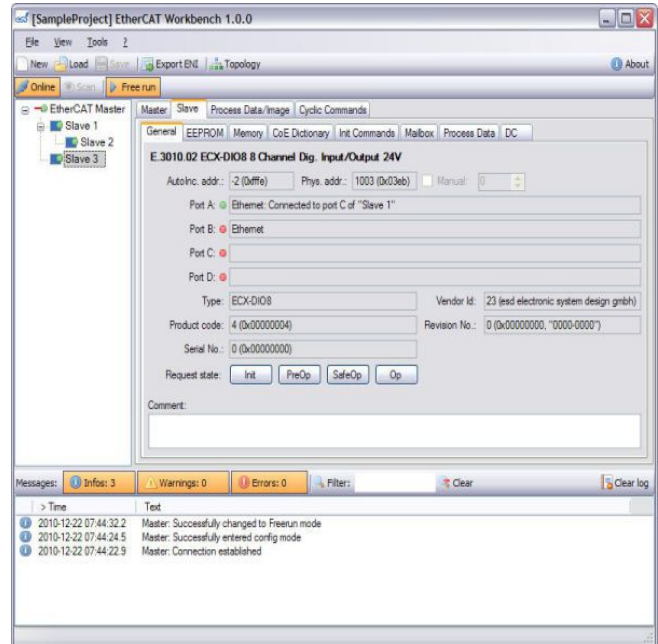
- Built-in EtherCAT master to support an online topology scan as well as initialization and monitoring of an EtherCAT network.
- Export of configuration files compliant to the EtherCAT Network Information (ENI) format which are accepted by EtherCAT masters of different vendors.
- Configuration based on a user extendable repository of standard EtherCAT Slave Information (ESI) files which are supplied by the device vendor. Configuration of devices without ESI files possible using the online information stored in the devices ESI EEPROM.

Network configuration

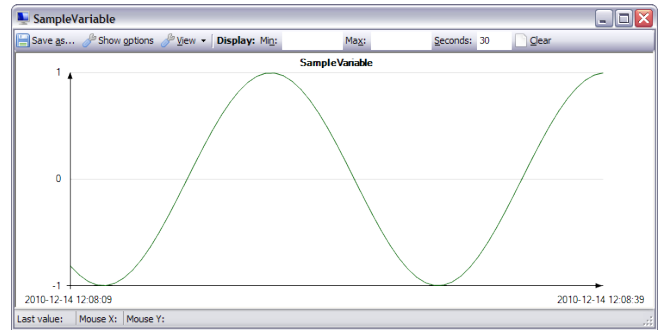
- Offline configuration using intuitive drag'n'drop interface.
- Online configuration based on network topology scan.
- Instantly usable configuration which covers all EtherCAT configuration aspects (SM / FMMU / DC setup, PDO mapping, etc.) without detailed knowledge about the EtherCAT technology.
- Enhanced editor to create/read/write/modify ESI EEPROM data.

Network diagnostic

- Free run mode initializing and monitoring the EtherCAT network controlling the EtherCAT state machine of individual slaves.
- Sophisticated graphical network topology viewer.
- Online read and write access to EtherCAT slave device register, memory and object dictionary using dialogs with advanced filter capabilities.
- Read/write access to process data with charting support.
- Access to statistical Ethernet and EtherCAT data.
- Logging capability for EtherCAT slave CoE emergency messages, EtherCAT master and Workbench events.



Main application window



Process data monitor window
Monitor/log process variables

| Description | Raw value | Value |
|--|-----------|---------------------------|
| EEPROM Size | 0x001f | 4096 byte (32 kBit) |
| Version | 0x0001 | 1 |
| PDI Control | 0x08 | 16 Bit async µC interface |
| ESC Config | 0x00 | |
| ESC Config - Device Emulation | 0 | |
| ESC Config - Enh. link detection all ports | 0 | |
| ESC Config - DC SYNC Out Unit | 0 | |
| ESC Config - DC Latch In Unit | 0 | |
| ESC Config - Enh. link detection port 0 | 0 | |
| ESC Config - Enh. link detection port 1 | 0 | |
| ESC Config - Enh. link detection port 2 | 0 | |
| ESC Config - Enh. link detection port 3 | 0 | |
| PDI Config | 0x0008 | |
| Extended PDI Config | 0x0000 | |
| SYNC Pulse Len | 0x0000 | 0 ps |
| Station Alias | 0x0000 | 0 |

EtherCAT Slave ESI EEPROM data
Comfortable editing of decoded data

| Index | Name | Type | Current value | Value read at | Flags |
|-------------|---------------------|--------|------------------------|---------------------|-------|
| 0x1000 | Device type | UDINT | 5001 (0x00001389) | 2010-12-22 10:00:53 | R |
| 0x1001 | Error register | USINT | 0 (0x00) | 2010-12-22 10:00:53 | R |
| 0x1008 | Device name | STRING | "MEESC" | 2010-12-22 10:00:53 | R |
| 0x1009 | Hardware version | STRING | "1.2" | 2010-12-22 10:00:53 | R |
| 0x100a | Software version | STRING | "V1.00" | 2010-12-22 10:00:53 | R |
| 0x1018 | Identity | RECORD | | | |
| [0x1018.00] | [Max SubIndex] | USINT | 4 (0x04) | 2010-12-22 10:00:53 | R |
| [0x1018.01] | Vendor ID | UDINT | 23 (0x00000017) | 2010-12-22 10:00:53 | R |
| [0x1018.02] | Product code | UDINT | 642265170 (0x26483...) | 2010-12-22 10:00:53 | R |
| [0x1018.03] | Revision | UDINT | 256 (0x00000100) | 2010-12-22 10:00:53 | R |
| [0x1018.04] | Serial number | UDINT | 0 (0x00000000) | 2010-12-22 10:00:53 | R |
| 0x101f | Error Settings | RECORD | | | |
| [0x101f.00] | [Max SubIndex] | USINT | 2 (0x02) | 2010-12-22 10:00:53 | R |
| [0x101f.01] | Local Error Reac... | UDINT | 0 (0x00000000) | 2010-12-22 10:00:53 | R |
| [0x101f.02] | Sync Error Count... | UDINT | 0 (0x00000000) | 2010-12-22 10:00:53 | R |
| 0x1600 | CAN RxPDO-Map | RECORD | | | |
| [0x1600.00] | [Max SubIndex] | USINT | 19 (0x13) | 2010-12-22 10:00:53 | R |
| [0x1600.01] | PDO_MAP... | UDINT | 0x7000.01.16 | 2010-12-22 10:00:53 | R |
| [0x1600.02] | PDO_MAP... | UDINT | 0x7000.02.16 | 2010-12-22 10:00:53 | R |

EtherCAT Slave CoE Data
Detailed overview of object dictionary data

Technical Specifications:

Requirements:

Software: Microsoft® Windows® XP or higher, .NET Framework 2 SP2

Hardware: Network interface card, Screen resolution at least 1024x768

Order information:

| Designation | Order no. |
|-------------------------------------|-----------|
| EtherCAT Workbench, single license | P.4510.01 |
| EtherCAT Workbench, project license | P.4511.01 |
| EtherCAT Workbench, demo version | P.4512.01 |

All data are subject to change without prior notice.
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