EtherCAT Technology Group
Members

EtherCAT
Technology Group

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2024 EtherCAT International Technology Week (ITW) AMER | online
February 12—16, 2024

January 2024

Dear Sir or Madam

We invite and encourage all developers of EtherCAT MainDevices*, SubDevices, Configurators, Codes, and Tools to participate in the 2024 **EtherCAT International Technology Week (ITW) world series.**

Already for its third time, the ITW world series has established itself as an independent and fixed entry in the yearly ETG event calendar. The overwhelming numbers of the 2023 ITW with more than 830 registrations from 470 companies around the world shows the immense interest for this event.

In various **webinars**, ETG experts share detailed development know-how and how-to information for EtherCAT-related topics that often arise during the implementation, certification, and release of EtherCAT devices. Plenty of time for webinar-related questions will be available at Q&A sessions following each webinar.

Join the **ITW AMER** — which takes place **February 12 to 16, 2024** for ETG members located in North, Central and South America. See the description of the individual sessions and the full session calendar below.

Please register via the following link for one or multiple webinars, if not all of them:

www.ethercat.org/itw-AMER

Participation is free of charge. Feel free to forward the invitation to your colleagues!

If you have any questions, please contact us.

Best regards,

Dr. Guido Beckmann
Chairman Technical Committee
EtherCAT Technology Group

*The term MainDevice will replace 'master' and SubDevice replaces 'slave'. The term FSoE MainInstance will replace 'FSoE Master' and FSoE SubInstance will replace 'FSoE Slave'. Please refer to https://www.ethercat.org/en/faq.html#18642.

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Webinars

The webinars focus on the implementation and use of the EtherCAT technology. Basic knowledge of the EtherCAT technology, e.g., functional principle, HW architecture, ESI file, FSoE principle is assumed to be available for the more advanced sessions.

Take advantage of both, new session topics as well as sessions topics which have been addressed last year. Even if you attended those already, since they may address updated features and other aspects this year, they may offer new insights, nevertheless.

Webinars via GoToWebinar™ are intended to be interactive, so please ask plenty of questions. You are welcome to join one or several webinars.

The following webinars are offered:

How to begin an EtherCAT development – some key points

As straight-forward the functional principle of EtherCAT is, the many implementation options, communication devices (ASICS, SoCs, and more), documentation, and developer events are available. This webinar shows key decisions and development steps, and in which order those may be tackled: It includes basic EtherCAT theory training, parameter selection to choose an EtherCAT SubDevice Controller, possible EtherCAT SubDevice software stacks, organizing the parameter and process data, in-house testing, available test tools, official testing at an EtherCAT Test Center, and more developer events.

EtherCAT analysis with Wireshark

As complement to the standard diagnostic features provided by EtherCAT both at hardware and software level, the Wireshark tool is frequently used to analyze the EtherCAT communication and troubleshoot complex issues at low level. Wireshark includes by default a packet dissector enabling to display and filter individual fields of EtherCAT datagrams. This webinar intends to show, through a series of practical examples, how different features of Wireshark can be used in order to approach different concrete scenarios in the analysis of EtherCAT communication.

Using Modules/Slots in ESI and online CoE object dictionary

The ESI elements Modules and Slots allow to generate a flexible EtherCAT SubDevice description, e.g., for modular servo drives and gateways. This webinar shows how to make correct use of the ESI elements and which online CoE objects are used for Modules/Slots functionality.

SSC tool How-To

1. Step-by-step from the Idea to the running application (based on the Beckhoff EL9800 hardware)
2. Working with the SSC command line tool
3. Create own SSC Tool configurations
   - For development service provider, ESC or development board vendor, to distribute own/custom code settings

Webinars

Implementation aspects for FSoE SubInstance/MainInstance devices and drives (DS402 + FSoE), diagnosis and conformance testing, I + II

In these two sessions the implementation of the FSoE protocol in vendor-specific SubInstance/MainInstance devices are discussed and shown. For an FSoE implementation, various aspects of the technology are discussed in more detail. The flexible device architecture of the hardware and software are the basis for the individual design of a device. Detailed information in the ESI enables generic FSoE configuration tools. The diagnosis of FSoE frames in the EtherCAT network e.g., with the help of Wireshark™ are discussed. The use of the FSoE Conformance Test Tool for the FSoE SubInstance/ MainInstance is highly recommended during development and is mandatory for the device release, and hence, will also be addressed during those sessions. Also, learn about the standards for safety drive technology. We are explaining the safety drive profile and FSoE connection for drives.

CTT – basic features and how to use it for EtherCAT SubDevice development

This webinar aims to present the basics around the EtherCAT Conformance Test Tool (CTT) and how to use it for EtherCAT SubDevice development. In this presentation we will cover the many helpful functionalities and plugins of the tool, EtherCAT protocol testing as well as long-term testing of different EtherCAT SubDevice configurations, error detection mechanisms, and analysis of the test results.

CTT – advanced features (remote control interface, configuration, and more)

This webinar shows advanced CTT configuration and testing of complex EtherCAT SubDevices. We will also explain how automated testing via the CTT remote control interface can be done. The scripting via PowerShell™ allows to start the CTT remotely, load different configurations, execute tests, and save results for internal test documentations.

Official EtherCAT Conformance Test - part I: Certificate benefits and organisational steps

The official EtherCAT Conformance Test at an EtherCAT Test Center (ETC) has many advantages and is highly recommended, even though it is optional. This webinar explains the importance of EtherCAT Conformance Tested certificates for machine builders and device vendors. It explains the process to obtain a certificate and gives very practical hints and tips.

Official EtherCAT Conformance Test - part II: Test record hands-on

The tests performed by each EtherCAT Test Center (ETC) worldwide are specified in detail in ETG. 7000.2 Test Record. The test instructions include the use of the CTT and also tests that are performed manually. This webinar will take you through many of the manual test instructions and show you how to perform these tests in the same way as they are performed by the ETC test engineers - to best prepare your EtherCAT SubDevice to pass the ETC test first time and to meet high quality standards.

Time Schedule

WEBINARS

We would like to start the International Technology Week (ITW) AMER together on Monday morning and wrap it up on Friday.
See proposed session table below. Subject to modifications.

CST	PST	MONDAY Feb 12, 2024	TUESDAY Feb 13, 2024	WEDNESDAY Feb 14, 2024	THURSDAY Feb 15, 2024	FRIDAY Feb 16, 2024
10:30 am	08:30 am	Kick-off				
11:00 am	09:00 am	How to begin an EtherCAT development — some key points	Using Modules/Slots in ESI and online CoE object dictionary	Implementation aspects for FSoE slave/master devices and drives (DS402 + FSoE), diagnosis and conformance testing — part I	CTT — basic features and how to use it for EtherCAT slave development	Official EtherCAT Conformance Test —part I: Certificate benefits and organisational steps
12:00 pm	10:00 am	Q&A	Q&A	Q&A	Q&A	Q&A
12:30 pm	10:30 am	EtherCAT analysis with Wireshark	SSC tool How-To	Implementation aspects for FSoE slave/master devices and drives (DS402 + FSoE), diagnosis and conformance testing — part II	CTT — advanced features, incl. remote control interface, configuration, and more	Official EtherCAT ConformanceTest —part II: Test record hands-on
01:30 pm	11:30 am	Q&A	Q&A	Q&A	Q&A	Q&A
02:00 pm	12:00 pm					Wrap-up

Registration & More

Registration deadline: February 12, 2024

ONLINE REGISTRATION

Register early for the full event via the link

www.ethercat.org/itw-AMER

and attend as many webinars and Q&A sessions as you want.

The registration deadline is **Monday, February 12, 2024.**

Feel free to forward the invitation to your interested colleagues!

Prerequiste for attending is a valid ETG membership. Click here to become a member.

LOGIN AND EVENT GUIDELINE

An event guideline and the link to the presentations will be provided upfront the start of the ITW AMER.

Once you receive the login information, please be aware that this is **personal** and must **not** be shared inside nor outside your organization.

GoToWebinar™ will be used as webinar software.