

ETG News

March 2024 | #012024



Years of Ether**CAT**[®] Technology Group

EtherCAT**[®]** 
Technology Group

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further information

www.ethercat.org

EDITORIAL

Dear Members,

20 years of EtherCAT Technology Group: We are taking this as an opportunity to revive the ETG newsletter! Twenty years ago, anyone who would have predicted that the ETG would soon grow to become the world's largest fieldbus association in terms of membership, with over 7500 members from 74 countries by 2024, and that EtherCAT would become the market leader, would have been laughed at. And I couldn't have imagined it either. And yet it happened. Why? There are many reasons: First and foremost, of course, the technology itself, which is simply convincing. EtherCAT is "the engineers choice". But also the worldwide ETG team, in which each and every individual has contributed to the EtherCAT ecosystem with commitment and passion, supporting the members and promoting the technology. The participants in the many technical working groups who have helped to further develop EtherCAT. The companies that support the exhibition booths as co-exhibitors and make our EtherCAT seminar series possible as sponsors. And of course you - you have embraced our technology and joined the ETG. You have explained EtherCAT and its benefits to customers and colleagues. Many of you have even campaigned within your organization to be allowed to implement and use EtherCAT - thank you all very much!

Since it has been a while since the last newsletter, this one covers a longer period than usual. We share with you the association and technology anniversary celebrations, the latest membership figures and introduce the ETG's newest board member. As always, we inform you about technology news, have a look at selected past events, such as the EtherCAT Plug Fests, and invite you to the upcoming meetings and highlights: Exhibitions and the EtherCAT seminar series are in full swing again, and maybe we will be visiting your part of the world soon! What's new is that we are introducing you to an ETG team member in more detail: Check out the last page.

What we can no longer do is list the new members: There are simply too many. On behalf of the ETG team, I hope you enjoy reading this issue!



Martin Rostan
Executive Director



20 years EtherCAT and EtherCAT Technology Group - let's celebrate!

In 2023 the EtherCAT Technology Group as well as EtherCAT technology itself marked their 20th anniversary. Of course, we used these milestones to celebrate together, but we also took the opportunity to take a walk down memory lane.

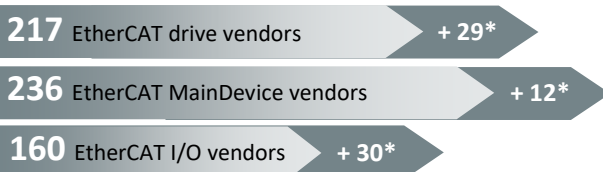
Believe it or not! We also started small once. From "Fast Lightbus" to EtherCAT, from the ETG start with 33 founding

members to the world's largest fieldbus user organization with more than 7500 member companies from 74 countries, and from zero to 60 million EtherCAT devices. Let's take a look together!

[Read more on page 2.](#)

EtherCAT adoption rate: vendors

EtherCAT is widespread in different markets as well as countries. Please have a look at the impressive figures:



*Indicated changes are compared to the last ETG news.

Playing with figures

We have more than **7500** members from **74** countries and **6** continents. EtherCAT is implemented on **36** different RTOS and over **1200** products have been entered in the official EtherCAT Product Guide. There are **57** different Safety over EtherCAT vendors and **66** sensor and actor manufacturers. Furthermore, EtherCAT offers connectivity to **39** other communication systems. About **400** new members have joined the EtherCAT Technology Group in the last **12** months. ETG has over **7500** followers at LinkedIn, **1900** subscribers at YouTube, and over **8500** WeChat fans.

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In November 2003, the EtherCAT Technology Group was launched with 33 founding members at the (then called) SPS/IPC/Drives exhibition in Nuremberg, Germany. From the very beginning, the aim of the association has been to disclose and promote EtherCAT technology worldwide: Everyone should be able to use and implement EtherCAT. After just 5 years, the 1000-member mark has already been surpassed, with members including companies, universities and organizations, but not individuals, which makes the membership growth even more impressive. The latter then accelerated even further: In 2014 there were 3000 members and by 2018 already 5000. At the moment the ETG has more than 7500 members from 74 countries and continues to grow rapidly with more than 400 new members every year.

[Read full press release](#)

EtherCAT itself was introduced even a bit earlier than the ETG. At the Hannover Messe 2003, Beckhoff Automation brought EtherCAT to the stage. Initially having started off as „Fast Lightbus“ in the late 90s, EtherCAT has established itself as an open, global standard for real-time communication ever since

and is recognized as the best fieldbus technology available. And it's future-proof: Today, EtherCAT offers sufficient performance and innovation potential to handle the next 20 years of high-performance automation.

[Read full press release on www.beckhoff.com](http://www.beckhoff.com)



Anniversary figures

In the last **20** years we showed and explained EtherCAT at more than **215** trade fair booths and conducted over **180** seminars in more than **50** countries. Our experts were at over **60** EtherCAT Plug Fests and countless EtherCAT Working Group and standardization meetings. We went from **0** to **60** million EtherCAT devices within the last two decades.

Update: ETG multimedia content

Since the last newsletter we've entered the world of podcast.

In the podcast "5 Minuten Automatisierung" of the German media outlet SPS Magazin our Executive Director, Martin Rostan, spoke with editor-in-chief Kai Binder about 20 years EtherCAT and 10 things you should definitely know about it.



[Listen to podcast](#)

We're on Instagram!

We've recently added another social media channel to our portfolio and now have our own Instagram account: [@ethercat_technology_group](#).



In addition to events and news, we will also be publishing ETG insights, such as introductions to team members here in the future.

[Follow us!](#)



New Board of Directors member at the ETG

Dr. Gerhard Grunwald succeeds Prof. Dr. Heidrich

6819 days in office: After almost 19 years, Prof. Dr. Peter Heidrich did not stand for re-election at the ETG Membership Assembly in 2022. The members and the board of the ETG thanked Heidrich for his many years of commitment and elected him an honorary member of the association.

The new board was also elected without dissenting votes: Dr. Gerhard Grunwald. However, the „new guy“ is anything but new. In November 2003, Grunwald was the very first to sign the membership application for the newly founded EtherCAT Technology Group, thus making the Institute of Robotics and Mechatronics of the German Aerospace Center (DLR) member number 1!

[Read full press release](#)



EtherCAT: Almost 60 million nodes and exponential growth

For the first time since EtherCAT was introduced 20 years ago, the EtherCAT Technology Group (ETG) has published node figures.

Excluding modular I/O devices, ETG counts 59.1 million nodes, with recent growth being particularly impressive. Since 2014 growth has been exponential, with 18.4 million nodes added in 2022 alone.

"The chip numbers are accurate figures, but there is a certain time lag: Not every chip becomes an installed EtherCAT device in the same calendar year", comments Martin Rostan on the counting method.

[Read full press release](#)

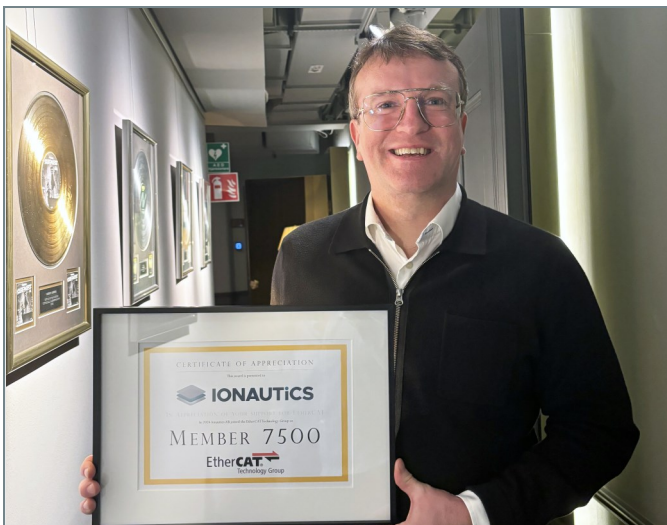
EtherCAT Technology Group surpasses 3000 members in Asia and 1000 in America

The continuous growth of the EtherCAT Technology Group is showing no signs of slowing down. Currently, the organization has over 3000 members in Asia and over 1000 in America, and has achieved significant new milestones.

A substantial 42% of the total membership comes from Asia, which is nearly on par with the number from Europe. With figures like these, it is clear that the Asian members are playing a major role in driving the overall growth of the ETG.

This growth and regional distribution in membership reflects the acceptance of EtherCAT in the market.

[Read full press release](#)



Ionautics is ETG member 7500

With member number 7500 joining its ranks, the EtherCAT Technology Group (ETG) has reached a new milestone in its membership development. Ionautics has pioneered innovative processes and products in the field of thin film technology, and by joining ETG, the company plans to develop future breakthroughs using EtherCAT.

For over 10 years, more than 400 new companies and institutions have joined the ETG every year.

One such company is Ionautics from Sweden, which specializes in the use and further development of modern processes in thin-film technology.

[Read full press release](#)



Confirmed by TÜV: Safety over EtherCAT meets extended requirements of IEC 61784-3:2021

After the fourth edition of IEC 61784-3 was published earlier, TÜV SÜD Rail GmbH has officially confirmed that the EtherCAT protocol for functional safety, Safety over EtherCAT (FSoE), meets all of the extended requirements of the IEC standard without any changes.

Safety over EtherCAT was already internationally standardized within IEC 61748-3-12:2010 in 2010 as FSCP 12 (Functional Safety Communication Protocol) and is still valid today in the original edition 1.0. The review by TÜV SÜD now confirms that the FSoE protocol also meets the new normative requirements of IEC 61784-3:2021 Ed. 4.0 without any changes and is therefore still suitable for use in applications up to a Safety Integrity Level (SIL) 3.

Full compatibility with devices from 2010 onwards is thus still ensured. The TÜV SÜD Rail has approved the updates.

Both, the FSoE Test Record and the FSoE Test Files, became mandatory to be used for in-house testing and for the official FSoE Conformance Test.

[Read full press release](#)

ETG hosts Safety over EtherCAT Plug Fest at CODESYS in Germany

In December 2023, the EtherCAT Technology Group (ETG) invited all members to its second Plug Fest, which was geared towards developers and manufacturers of devices with Safety over EtherCAT (FSoE) functionality.

This time, ETG member company CODESYS GmbH hosted the interoperability meeting with no charge for participants at the company's location in Kempten, Germany.

[Read full press release](#)



EtherCAT Semiconductor Technical Working Group publishes further standards

The aim of this specific ETG Technical Working Group, which was founded in 2011, is to develop EtherCAT standards for the semiconductor industry.

At the 24th meeting of the TWG Semi four further profile specifications were approved, successfully concluding the work of the corresponding task groups: A variety of profiles for liquid flow controllers, temperature sensors for wafer processing chambers, sensors for voltage and current frequency analysis and for special process control valves.

A further task group with the aim of developing the device profile for optical emission spectroscopy (OES) was also launched at this meeting. This profile will really benefit from the EtherCAT protocol's efficient utilization of bandwidth: Up to 500 bytes of cyclical raw data must be transmitted to the controller per communication cycle. The series of special EtherCAT device profiles for the semiconductor industry has thus grown to a total of 24 specifications.

[View all device profiles](#)

EtherCAT Compendium: new chapters online

The EtherCAT Compendium provides a comprehensive, coherent description of EtherCAT with its technical details, system, implementation, and user aspects. It supplements the formal specifications with easily readable, applicable and application-specific know-how. The compendium is work in progress, in December the latest chapters have been added.

Section II: Technology Details

- ⇒ SubDevice Information Interface (SII)
- ⇒ Distributed Clocks
- ⇒ Interrupts

www.ethercat.org/compendium



EtherCAT Knowledge Base

The EtherCAT Knowledge Base combines information about detailed technical descriptions, FAQs, a glossary around the EtherCAT technology, and hands-on how-to descriptions. Due to its continuously extension, you can find more than 100 different entries.

The descriptions are intended for the use of trained specialists in control and automation engineering who are familiar with the applicable standards.

Content is available in English and Japanese language.

Since the last newsletter release the Knowledge Base has been updated and enhanced.

Please visit the EtherCAT Knowledge Base via the following shortlink:

www.ethercat.org/kb

Conformance Test Tool (CTT) V2.5 (Release) available

The **Conformance Test Tool (CTT) V2.5** has been released by the TWG Conformance in cooperation with the Technical Advisory Board (TAB). Together with updated test files, again new features are included supporting the everyday EtherCAT development efforts:

- ⇒ Test File Update
- ⇒ Navigate by keyboard
- ⇒ Export Results Overview
- ⇒ FSoE MainInstance tests – draft status

For more details please see:

www.ethercat.org/en/ctt/whatsnew.html

www.ethercat.org/memberarea/en/ct_version.htm

Our Team: Oliver Fels

Within this section of our newsletter we introduce you to our team members at the EtherCAT Technology Group.

Name: Oliver Fels

Hobbies: running, sauna, traveling

With the team since: 2007

Tasks at ETG: Everything in marketing from events and seminars to exhibitions (planning, organizing, conducting), website, social media, ETG CI, administration and vendor ID, speaker responsibilities

Why ETG: I am very grateful and at the same time proud for the opportunity to be actively involved in the dissemination of EtherCAT. I work in a creative, motivated team in which many colleagues have also become good friends over time.

Why EtherCAT: Why go for something slower, just because it is more expensive?



EtherCAT Seminars

Malaysia | Mar 05 - 07, 2024

Johor Bahru, Kuala Lumpur, Penang

China | Apr 22 - 26, 2024

Hefei, Yangzhou, Changzhou

Mexico | Jun 11 - 13, 2024

Mexico City, Guadalajara, Monterrey

Columbia | Jun 18 - 19, 2024

Bogotá, Cali

Tradeshows & Exhibitions

MODEX 2024: ETG Booth

Mar 11 - 14 | Atlanta (GA), USA

productronica China 2024: ETG Booth

Mar 20 - 22 | Shanghai, China

embedded world 2024: ETG Booth

Apr 09 - 11 | Nuremberg, Germany

HANNOVER MESSE 2024: ETG Joint Booth

Apr 22 - 26 | Hannover, Germany

SPS Italia 2024: ETG Booth

May 28 - 30 | Parma, Italy

IAMD Shenzhen 2024: ETG Booth

Jun 19 - 21 | Shenzhen, China

Technical Working Group Meetings

TWG Safety

Mar 08, 2024 | Online

Semiconductor TWG

May 29 - 30, 2024 | Santa Clara (CA), USA

What else?

EtherCAT International Technology Week (ITW) Korea

Mar 11 - 15, 2024 | Online

ETG Safety over EtherCAT Seminar

Mar 18, 2024 | Online

ETG Technical Committee Meeting

Mar 19, 2024 | Online

ETG Marketing Committee Meeting

Mar 20, 2024 | Nuremberg, Germany + Online

EtherCAT Development Support Seminar

Apr 11, 2024 | Nagoya, Japan

EtherCAT Introductory Seminar

Jun 07, 2024 | Tokyo, Japan

2024 European EtherCAT Plug Fest

Jun 18 - 19, 2024 | Hattersheim, Germany

Further details about the single events plus all other ETG events can be found here: www.ethercat.org/events

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