BECKHOFF

News

01'2026

Efficiency in operation:
The Next multi-touch panel generation

Compact and cost-effective:
The high-performance AM1000 servomotor

Unlock optimization potential even more easily with advanced AI functions

The ED series provides a smart I/O upgrade

Discover all our product developments, extensions and innovations at

▸ www.beckhoff.com/product-news

The IPC Company

The Industrial PC (IPC) is the hardware centerpiece of PC-based control technology. Beckhoff supplies Industrial PCs suitable for any application, which are based on open standards, enabling individual configuration to meet a wide range of control requirements.

Whether in the form of an Embedded PC with a compact form-factor for DIN rail mounting, a control cabinet PC, or as a Panel PC, in-house motherboard development enables Beckhoff to respond quickly to IT trends and customer-specific requirements.

▸ www.beckhoff.com/ipc

- large model variety of Industrial PCs and Embedded PCs
- high-performance PCs, featuring a wide range of processors, from Intel® Celeron® to top of the line Intel® Core™ i9 processors
- long-term availability of all Industrial PCs and Embedded PCs
- As the inventor of PC-based control technology, Beckhoff closely cooperates with global technology partners Intel and Microsoft.

Efficiency in operation: The Next multi-touch panel generation

The Next multi-touch panel series is advanced and cost-optimized, and further expands the diversity of Beckhoff's broad portfolio. As usual, this generation of control panels and panel PCs offers user-friendly operation thanks to advanced multi-touch technology, a high-quality design, and a wide choice of formats and options.

Advantages:

- economic solutions that meet the demand for modern visualization and control
- elegant design and high-quality workmanship
- industrial-grade displays with multi-finger touch function
- developed and manufactured in-house, entirely in Germany
- flexibly scalable performance thanks to various multi-core architectures
- diagonals from 7 to 23.8 inches

▶ **www.beckhoff.com/next-panel-generation**

Fanless 100 W power supply module for CX20xx Embedded PCs
The electrically isolated CX2100-0022 power supply unit extends the existing power supply module portfolio for Embedded PCs by a UPS-OCT-capable version with a maximum power output of 100 W. The CX2100-0022 is passively cooled and thus fanless and maintenance-free. EtherCAT or Bus Terminals can be connected on the right-hand side.

▶ **www.beckhoff.com/cx2100-0022**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

The Next panel portfolio
Multi-core panel PCs with Arm® processor

- CP46xx as a built-in device
- CP56xx in an IP65 version

Multi-core panel PCs with Intel Atom® x7

- CP47xx as a built-in device
- CP57xx in an IP65 version

Multi-touch control panels in a smart design

- CP49xx as a built-in device
- CP59xx in an IP65 version

▶ **www.beckhoff.com/cp46xx**
▶ **www.beckhoff.com/cp56xx**
▶ **www.beckhoff.com/cp47xx**
▶ **www.beckhoff.com/cp57xx**
▶ **www.beckhoff.com/cp49xx**
▶ **www.beckhoff.com/cp59xx**

Ultra-compact Industrial PCs with new Intel Atom® CPU

Same form factor, more computing power: with Intel Atom® x7, the C60xx fanless Industrial PCs are suitable for automation projects in a wide range of applications, whether their requirements be complex or simple, from sophisticated automation and virtualization to implementation as an edge device or HMI platform.

- processor: new Intel Atom® x7 generation with up to 4 cores and 3.0 GHz
- C601x: the most compact automation, virtualization, and IoT on 82 x 82 x 40 mm
- C6025: expansion to up to 8 processor cores, high-performance SSDs, and USB-C

▶ **www.beckhoff.com/c60xx**

The I/O Company

Beckhoff supplies a complete range of fieldbus components for all common I/O and bus systems. With Bus Terminals offering IP20 protection and Fieldbus Box modules in IP67, a comprehensive range of devices is available for a wide variety of signal types and fieldbus systems. In addition to components for conventional bus systems, Beckhoff offers an integrated product range optimized for EtherCAT. Invented by Beckhoff, this real-time Ethernet solution for industrial automation has global acceptance and is characterized by outstanding performance and simple handling. The result is high-precision machine and plant control and significantly increased production efficiency.

▸ www.beckhoff.com/io
▸ www.beckhoff.com/ethercat ▸ www.ethercat.org

- comprehensive, modular I/O system for all signal types and fieldbus systems
- universal product range optimized for EtherCAT
- high investment security: mature I/O technology based on more than 25 years of success in the field
- EtherCAT communication has been proven in practice for 20 years and is a worldwide standard.

Seamless EJ series connection with EtherCAT P

The EJ1321 connects the compact EJ modules with EtherCAT P devices and opens up new possibilities in the automation environment. Thanks to the P-coded M8 socket on the PCB, the IP67 devices from the field can easily be connected to the EJ series. The EJ1321 is the perfect addition to the IP67 EtherCAT P Box modules with ID switches and is ideal for use in the semiconductor industry.

▸ **www.beckhoff.com/ej1321**

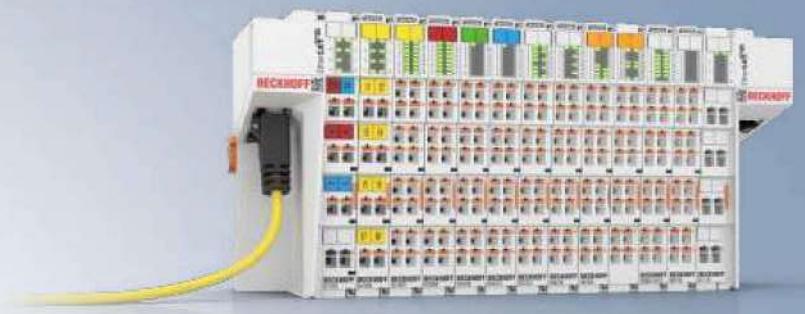
Efficient IO-Link integration for distributed systems

The EPP6224-0002 EtherCAT P Box enables simple and space-saving integration of up to four IO-Link devices for distributed machine concepts. The devices can be configured directly in TwinCAT or via the integrated IO-Link tool. EtherCAT P unites communication and supply in one cable, thus significantly reducing wiring work for compact, efficient system structures.

▸ **www.beckhoff.com/epp6224-0002**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

Seamlessly optimized EtherCAT Terminals: The ED series provides a smart I/O upgrade



Benefits:

- future-proof investment protection thanks to flexible integration options
- faster installation, commissioning, and maintenance thanks to simplified handling
- increased availability through simplified maintenance and minimized downtimes
- simple terminal traceability for quality assurance and spare parts management
- I/O system can be uniquely adapted to a wide range of machine concepts
- very user-friendly thanks to quick and easy wiring
- high productivity and quality with fast reactions to process events
- reduce system costs without compromising on performance

Continuous development of the I/O system for the control cabinet

Users have long appreciated Beckhoff's EtherCAT Terminals for their excellent performance, modular scalability, and user-friendliness. The entire portfolio has received a technological upgrade with the ED series: modernized design, tool-free assembly, and app-based diagnostics make signal acquisition more efficient than ever. Existing series remain fully compatible: the user-friendly ED series sets a standard for the future.

▶ **www.beckhoff.com/edxxxx**

Rethinking power measurement: Easy installation, deep insights

The SVL1xxx 3-phase measurement system with RJ45 connection enables all three primary conductor voltages to be recorded simultaneously. The 333 mV output signals allow easy connection of all measuring transducers via patch cable. Like the SCL6xxx, the SVL1xxx have an electronic nameplate. The current transformer ratios are thus automatically configured when they are mechanically plugged in. The configuration is read out by the EL3475 EtherCAT Terminal, which simplifies commissioning considerably.

The SVL1123 (110 V AC) and SVL1423 (690 V AC) variants will be added to the low-signal voltage converters in the future, which means that three options are now available, with the SVL1323 (400 V AC).

▶ **www.beckhoff.com/svl1xxx**
▶ **www.beckhoff.com/scl6xxx**
▶ **www.beckhoff.com/el3475**
▶ **www.beckhoff.com/power-measurement**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

The Motion Company

In combination with the motion control solutions offered by the company's TwinCAT automation software, Beckhoff Drive Technology provides an advanced, all-inclusive drive system. PC-based control technology from Beckhoff is ideally suited for single- and multi-axis positioning tasks with high dynamic requirements.

The servo drive series with high-performance EtherCAT communication offer the best-possible performance and dynamics. Servomotors with One Cable Technology (OCT), combining power and feedback systems into one standard motor cable, reduce material and commissioning costs.

▸ www.beckhoff.com/motion

- scalable product range of servo drive technology
- integrated safety technology in compliance with safety performance level PL e, integrated into compact drive technology up to safety performance level PL d
- As the pioneer of One Cable Technology and the eXtended Transport System, Beckhoff specializes in manufacturing efficient, space-saving motion solutions.

Economy variable frequency drive for the entry-level range

In the power range from 370 W to 5.5 kW, the new AF1000 series variable frequency drive complements the portfolio with particularly cost-efficient drive amplifiers. The compact, highly integrated devices are suitable for implementing drive axes with synchronous, asynchronous, and reluctance motors without feedback system. The AF1000 is available in two different versions: with a single-phase supply of 1 x 110 V AC...240 V AC in the power range from 370 W to 1.5 kW and a three-phase supply of 3 x 208 V AC...480 V AC in the power range from 750 W to 5.5 kW. Both versions are available as single-axis and dual-axis versions. Despite the compact design, power supply, DC link capacitors, and braking circuit are integrated. In addition, the variable frequency drive generates its 24 V control voltage independently from the DC link, eliminating the need for a power supply.

The AF1000 is fully integrated into TwinCAT via EtherCAT and offers convenient design, commissioning, and diagnostics. As with all Beckhoff servo drives, TwinCAT 3 Drive Manager 2 serves as the commissioning tool.

▸ **www.beckhoff.com/af1000**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

Economy servo drive for small to medium power ratings

With the AX1000, Beckhoff is expanding its servo drive portfolio with a particularly cost-efficient series in the rated current range from 1.65 to 12 A. The AX1000 is available in two different versions: in the low power range with a single-phase supply of 1 x 110 V AC...240 V AC from 1.65 to 6.9 A and in the higher power range with a three-phase supply of 3 x 208 V AC...480 V AC from 3.4 to 12 A. Both versions are available as single-axis and dual-axis versions. The devices support AM1000 and AM8000 series synchronous servomotors with One Cable Technology (OCT), as well as asynchronous and reluctance motors. Despite the compact design, power supply, DC link capacitors, and braking circuit are integrated. In addition, the servo drive generates its 24 V control voltage independently from the DC link, eliminating the need for a power supply.

The AX1000 is fully integrated into TwinCAT via EtherCAT and offers convenient design, commissioning, and diagnostics. Various feedback options enable high precision in demanding applications. All common tools available (Drive Manager 2, Autotuning, Bode Plot, or Cogging Compensation) can be used.

▶ **www.beckhoff.com/ax1000**

Compact and cost-effective: The high-performance AM1000 servomotor

With the AM1000, Beckhoff is adding a robust servomotor for dynamic positioning tasks to the economy drive system.

The servomotor is designed for use with the AX1000 economy servo drive and meets the highest technological demands with an optimized price/performance ratio.

In combination with the AX1000 and One Cable Technology (OCT), users benefit from a perfectly coordinated servo drive system with simple plug-and-play commissioning.

The economy servo drive system (AX1000 and AM1000) is available in various power levels from 50 to 1,000 watts, simplifying selection and configuration.

The servomotor is available in common international flange dimensions of 40, 60, and 80 mm and enables space-saving machine integration thanks to its extremely compact design.

▶ **www.beckhoff.com/am1000**

Everything from a single source: Braking resistors and mains filters for complete drive solutions

As a full-range supplier of system components, Beckhoff supplies suitable external braking resistors and mains filters for the new economy drive system. The AX2090-BW10-xxxx external braking resistors are available in different variants for devices with 1-phase and 3-phase supply and different power ratings. This ensures that the braking resistors are optimally adapted to the application. In addition, the high-quality AX2090-NF10-xxxx mains filters ensure outstanding interference suppression for the devices in the economy drive system. When the components are combined, they meet industry standards up to category C2 in accordance with EN 61800-3.

▶ **www.beckhoff.com/ax2090-bw10**
▶ **www.beckhoff.com/ax2090-nf10**

Compact, integrated stepper motor drive for control cabinet-free machines

An additional size with four different lengths is being added to the range of ASI8100 integrated stepper motor drives. The new size enables holding torques of 0.75 to 2.5 Nm in an IP54 housing and thus extends the application options for the ASI8100 in a power range up to 250 watts. As an EtherCAT slave, the ASI8100 can be placed directly on the machine completely control cabinet-free and without an upstream I/O level, thanks to the integrated stepper motor output stage and fieldbus connection. It is ideal for compact and space-saving machine designs.

▶ **www.beckhoff.com/asi8100**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

The Automation Company

Beckhoff offers comprehensive system solutions in numerous performance classes for all areas of automation. The control technology is exceptionally scalable – from high-performance Industrial PCs to mini-PLCs – and can be adapted precisely to application-specific requirements. TwinCAT automation software integrates real-time control with PLC, NC and CNC functions in a single feature-filled package.

▸ www.beckhoff.com/automation

- efficient, universal engineering
- programming in different languages
- Open, hardware-independent control system gives freedom of choice in terms of automation and control components.
- scalable control platform from single- to multi-core CPUs
- all control functions on a single, centralized platform: PLC, motion control, robotics, measurement technology, a.o.

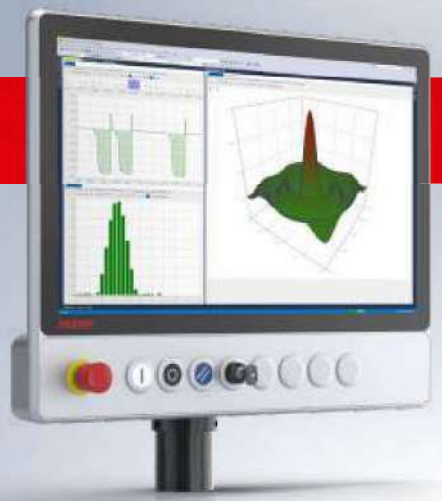
Intuitive CNC HMIs with simulation functionality

With CNC HMI Base (TF5310) and CNC HMI Simulation Server (TF5320), the TwinCAT 3 automation software offers two new function libraries for CNC-specific user interfaces. These are used to create an advanced, intuitive HMI application specifically for CNC purposes and to simulate part machining using real-time data.

TwinCAT 3 CNC HMI Base is based on the TwinCAT 3 HMI Server and offers numerous CNC-specific control elements as well as a G-code editor for cycle-based programming. The real-time data is aggregated from TwinCAT PLC and CNC, which enables flexible, customer-specific user interfaces. Templates make engineering easier.

The CNC HMI Simulation Server integrates the 3D simulation control element, which is included in the TwinCAT 3 CNC HMI Base package, into the real-time data from TwinCAT CNC. The current tool's data and the blank definition stored in the NC program are accessed. The simulation runs either in sync with the actual machining (real-time simulation) or in fast forward (without actual axis movement). This allows 3 and 5-axis milling processes to be checked visually in advance.

▸ **www.beckhoff.com/tf5310**
▸ **www.beckhoff.com/tf5320**



TwinCAT Scope 3D Chart for control data waterfall charts

The new Array Time Chart in TwinCAT Scope visualizes PLC data in three dimensions directly from the controller with precise timestamps and high performance. Time series, frequencies, or harmonics in arrays can be displayed as a waterfall chart or mesh with customizable grid and color gradient. Camera views can be saved and switched using smooth camera movements in order to analyze data from identical angles.

This is ideal for frequency and order analyses, FFT evaluations, vibration diagnostics, test bench data acquisition, plus condition and power monitoring – for quick detection and interpretation of patterns, peak values, and faults.

The chart will be included in TwinCAT Scope Base and in TE1300 Scope View Professional.

▸ **www.beckhoff.com/te1300**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

TwinCAT CoAgent: Expanded AI functions for the entire automation process

TwinCAT CoAgent simplifies software engineering – and in future will also simplify machine operation – through the use of artificial intelligence and automated assistance functions.

TwinCAT 3 CoAgent for Engineering (TE1700) supports control programmers by working as a personal assistant to provide precise code suggestions, smart optimizations, and automatic documentation. Checked content can be transferred directly to projects. The CoAgent enables quick access to Beckhoff documentation, provides support with the development of user-friendly HMI controls, and simplifies I/O configuration via chat or natural language. This saves time on routine tasks and creates more freedom for sophisticated automation tasks.

The new TwinCAT 3 CoAgent for Operations (TF1700) module brings agent technology into machine operation: The CoAgent monitors process values, detects deviations, and supports service technicians in diagnosing faults. Through intelligent alarm evaluation, the CoAgent reduces false alarms, prioritizes faults, and shortens the time it takes to rectify them. The CoAgent also supports the creation of automated evaluations and reports – for greater transparency and quality in operations.

In summary, Beckhoff TwinCAT CoAgent proves to be a powerful AI assistant over the entire automation lifecycle.

- ▶ **www.beckhoff.com/twincat-coagent**
- ▶ **www.beckhoff.com/te1700**
- ▶ **www.beckhoff.com/tf1700**

Machine Learning Creator: New feature enables further optimization

TwinCAT 3 Machine Learning Creator (MLC) extends the engineering workflow in TwinCAT 3, adding the automated creation of AI models, and is aimed at automation and process experts, including those without prior knowledge of data science.

The AI model that has been trained with TwinCAT MLC can be exported in the ONNX open standard format and is optimally adapted to the real-time requirements of industrial control systems in terms of latency and accuracy. Until now, the focus has been on AI-supported image processing (TwinCAT 3 MLC Computer Vision). The new TwinCAT 3 MLC Signals and Time Series module extends the range of functions to include the analysis of time-based process signals. This is a key technology for industrial applications, as current, temperature, and vibration curves provide valuable information about the state of processes, components, and tools.

The models created with MLC Signals and Time Series detect patterns and deviations in real time, enabling predictive maintenance, process optimization, and anomaly detection directly in the control environment.

TwinCAT 3 Machine Learning Creator is a pure web application. As the engineering takes place entirely in the browser, no local computing power is required. AI model creation is made easier and more accessible.

- ▶ **www.beckhoff.com/machine-learning**
- ▶ **www.beckhoff.com/te3850**
- ▶ **www.beckhoff.com/te3851**
- ▶ **www.beckhoff.com/te3852**
- ▶ **www.beckhoff.com/te3860**

Sophisticated CNC machining on the move with TwinCAT 3 CNC Conveyor Tracking

TwinCAT 3 CNC Conveyor Tracking enables the machining process to be synchronized with a conveyor belt. This means that moving workpieces that are larger than the actual working area of the machine can also be processed. Potential areas of application include laser processing and handling workpieces, e.g. as with pick-and-place.

The working area of a machine can be made smaller, even if the workpieces remain the same size, and the part throughput can be increased. In addition, the material is better utilized in continuous processing on the move. This reduces waste compared to conventional machining on stationary workpieces.

- ▶ **www.beckhoff.com/tf5264**

Product announcement For availability status of the new products see Beckhoff website at: www.beckhoff.com

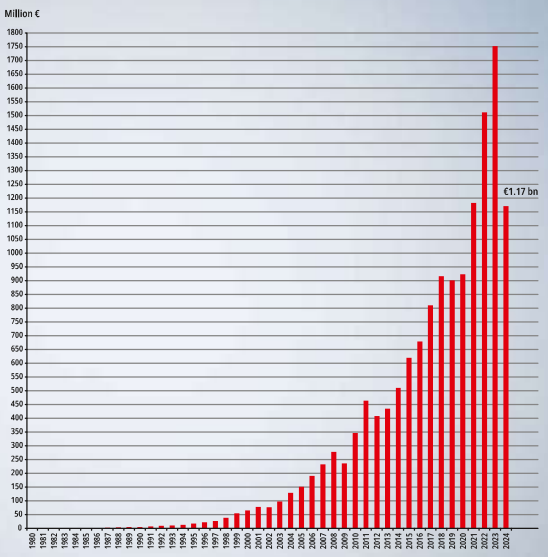
Beckhoff implements open automation systems using proven PC-based control technology. The main areas that the product range covers are industrial PCs, I/O and fieldbus components, drive technology, automation software, control cabinet-free automation, and hardware for machine vision. Product ranges that can be used as separate components or integrated into a complete and mutually compatible control system are available for all sectors. Our New Automation Technology stands for universal and industry-independent control and automation solutions that are used worldwide in a large variety of different applications, ranging from CNC-controlled machine tools to intelligent building control.

Since Beckhoff's foundation in 1980, the development of innovative products and solutions on the basis of PC-based control technology has been the foundation of the company's continued success. We recognized many standards in automation technology that are taken for granted today at an early stage and successfully introduced to the market as innovations. Beckhoff's philosophy of PC-based control as well as the invention of the Lightbus system and TwinCAT automation software are milestones in automation technology and have proven themselves as powerful alternatives to traditional control technology. EtherCAT, the real-time Ethernet solution, provides a powerful and future-oriented technology for a new generation of control concepts.

Beckhoff Automation at a glance

- 2024 global sales: €1.17 billion
- Headquarters: Verl, Germany
- Managing owner: Hans Beckhoff
- Employees worldwide: 5,300 (March 2025)
- Engineers: 2,000
- Subsidiaries/representative offices worldwide: 41
- Sales offices in Germany: 23
- Representatives worldwide: > 75

Beckhoff Automation



Sales from 1980 through 2024.
Status: March 2025

Worldwide presence on all continents
The corporate headquarters of Beckhoff Automation GmbH & Co. KG in Verl, Germany, is the site of the central departments such as development, production, administration, sales, marketing, support and service. Beckhoff's presence in the international market is guaranteed by its subsidiaries. Beckhoff is represented in more than 75 countries by worldwide cooperation partners.

DK1312-1125

More about Beckhoff

Company

Global presence

Events & dates

Jobs

Products

Industries

Support

Beckhoff Automation GmbH & Co. KG
Hülshorstweg 20
33415 Verl
Germany
Phone: + 49 5246 963-0
info@beckhoff.com
www.beckhoff.com