

 Press Information

Corporate

TDK showcases technologies enabling the AI ecosystem at electronica 2026

- Discover how TDK technologies are enabling the AI ecosystem at electronica 2026
- Explore innovations that bring greater intelligence, efficiency, and sustainability to key industries
- Experience how the new TDK tagline “In Everything, Better” comes to life across AI Infrastructure & ICT Devices, Automotive, and Industrial & Renewable Energy

October 20, 2026

TDK Corporation (TSE:6762) will showcase its latest technologies enabling the AI ecosystem at electronica 2026 in Munich, Germany, from November 10 to 13. TDK will be in Hall B5, Stand 520. Guided by its new tagline “In Everything, Better,” TDK powers the next generation of artificial intelligence with its solutions in AI Infrastructure & ICT Devices, Automotive, and Industrial & Renewable Energy, leading to greater intelligence, higher efficiency, and better sustainability. In addition to TDK’s main booth, TDK-Lambda will showcase its latest power supply solutions in Hall A5, Stand 503, and ICsense will showcase its innovations in Hall C4, Stand 100. For more information, visit electronica.tdk.com.

“Artificial intelligence is entering a new phase,” notes Noboru Saito, President and CEO of TDK Corporation. “As AI becomes increasingly embedded across infrastructure, intelligent systems, and devices, the need for energy efficiency, sensing, computing, and connectivity continues to grow. Through our expertise across the AI ecosystem, we are enabling this transformation while creating new value for our customers and society.”

As artificial intelligence expands beyond digital environments into the physical world, it increasingly relies on seamless interactions among infrastructure, intelligent systems, and devices. Consequently, the demand for advanced sensing, connectivity, energy, and computing technologies will grow. TDK, a global leader in electronics solutions for the smart society, is helping build the foundation for this transformation through its broad portfolio of technologies. These technologies support applications ranging from renewable energy and AI infrastructure to industrial automation, automotive, and intelligent devices.

TDK technologies, products, and solutions support every stage of the AI value chain—from data centers and semiconductor manufacturing to edge devices, smart glasses, and intelligent industrial systems—thereby accelerating the adoption of AI across society.

Highlights on the booth

At the booth, visitors can experience how TDK solutions address some of the most important opportunities and challenges that are not unique to the AI era.

AI Infrastructure & ICT Devices

- **Solid-state transformer:** This technology is used to transform medium-voltage AC (10 kV to 35 kV) to lower AC or DC voltages. In the case of AI data centers, the preferred output is 800V (DC). Such a system consists of several nodes in series on the input side, connected in parallel at their output. Many different components are used in a modular and scalable solid-state transformer (SST). It features not only silicon carbide (SiC) devices and proprietary high-frequency modules, but also a lot of passive components, ensuring bidirectional power flow with higher efficiency and reduced grid strain in a compact form factor.
- **Data center cooling:** TDK supports reliable and efficient liquid-cooling systems for AI servers and data centers with a broad portfolio of technologies for coolant distribution units (CDUs), including temperature and pressure sensors for monitoring the liquid-cooling circuit, TMR sensors for precise angle detection in valve-control motors, EMC filters for effective electromagnetic interference suppression, and enhanced system reliability.
- **Optical transceiver:** This mock-up demonstrates TDK's ability to supply key components and sensors for optical transceivers used in AI and general server communications. It combines TDK's aluminum nitride (AlN) substrates, thin-film capacitors, power inductors, bondable and thin-film negative temperature coefficient (NTC) thermistors, and DC-DC converters in a single system.
- **Dexterous robotic hand:** Powered by TDK's advanced sensor technology and AI-driven smart perception, the Nibotics Dexterous Hand redefines precision in robotic manipulation. With human-like dexterity and the ability to sense pressure, force, slip, texture, shape, and temperature in real time, the hand can perform complex handling tasks with uncompromising control, performance, and sophistication. This sets a new standard for physical AI in industrial automation.
- **Meta-optic mirror for smart glasses:** TDK's award-winning meta-optic mirror uses a precisely engineered nanostructure to enable an ultra-thin optical system for stylish, lightweight smart glasses. Images are projected directly onto the retina through a mirror only 150 nm thick, embedded in an eyeglass lens, delivering a clear, focus-free augmented reality (AR) experience without visible rainbow artifacts. This mirror eliminates the need for a larger conventional curved mirror.
- **Tactile zoom for smart glasses:** Imagine adjusting the camera zoom of smart glasses and feeling the zoom levels through instant, crisp tactile cues rather than relying solely on vision. The Haptic Slider Zoom demo uses TDK's piezo technology to create crisp, highly responsive haptic feedback in a compact form factor. The result is a natural, interactive user experience and an example of how advanced haptics can make future smart glasses more intuitive and user-friendly.
- **Sensors in smart glasses:** TDK MEMS sensors and software are a critical bridge between physical AI and the real world. MEMS and TMR sensing technologies, together with advanced sensor fusion software, enable precise motion tracking and orientation sensing, as well as immersive user experiences in next-generation wearables.
- **MEMS microphones for wearables:** In wearable devices where audio is the main interface for artificial intelligence, such as AI pins or smart glasses, TDK MEMS microphones provide the high sound fidelity and noise suppression algorithms required to enable audio AI applications. They include an Acoustic Activity Detect feature that allows AI processors to operate at ultra-low power.
- **Haptic glove with augmented reality glasses:** Haptic feedback makes AR and virtual reality (VR) even more immersive, as it engages additional human senses. TDK's multilayer piezo ceramic PowerHap actuators can render surface textures precisely, as demonstrated impressively by WEART's TouchDIVER glove.

Automotive

- **Traction inverter demonstrator:** This demonstrator unites key TDK technologies to create efficient, high-performance electric drive systems. One highlight is the new AC-phase current sensor CUR 3020. It provides highly accurate current measurements, supporting efficient inverter operation and helping to extend vehicle range. The demonstrator also integrates high-capacitance-density DC-link capacitors, which ensure stable current flow and a compact design. EMC filters achieve electromagnetic compatibility, and magnetic rotor position sensors provide precise motor commutation.
- **Building the backbone of the software-defined vehicle:** Common-mode chokes and power-over-coax inductors from TDK enable reliable high-speed connectivity, signal integrity, and efficient power delivery for the growing number of cameras and sensors in Zonal ECU architectures.
- **High-brightness RGB laser beam scanning projector:** TDK showcases a compact, MEMS-based laser beam scanning technology that enables bright, high-contrast, full-color projections. Designed for high optical performance, a small footprint, and low power consumption, this technology opens new ways to present information to drivers and passengers through intuitive human-machine interfaces in software-defined vehicles.

Industrial & Renewable Energy

- **Predictive maintenance by AI-driven analytics:** With edgeRX and edgeRX Vision, TDK showcases a solution that makes predictive maintenance possible by using AI-driven analytics to identify potential equipment issues before they result in failures or unplanned downtime. edgeRX delivers actionable insights that empower teams to move from reactive maintenance to a proactive, data-driven approach. This approach can help reduce maintenance costs and improve resource efficiency, while also extending equipment life and increasing reliability through early detection of wear, degradation, and performance anomalies.
- **Advanced vibration monitoring for rotating equipment:** VIBO from TDK is an industrial IoT edge vibration sensor combining a 20 kHz bandwidth, a digital architecture, a Modbus interface, and embedded intelligence for advanced condition-based monitoring. Thanks to these features, the sensor system can identify subtle, early-stage mechanical defects, including bearing, gearbox, and cavitation issues, before they affect system performance. Designed for demanding industrial environments and manufacturing processes, VIBO provides predictive maintenance insights that maximize uptime and minimize maintenance costs for motors, compressors, vacuum systems, pumps, and industrial robots.
- **Programmable power sources:** Suitable for 19-inch rack mounting, the GENESYS AC programmable power sources from TDK offer 2 kVA and 3 kVA in the 1U format and 6 kVA and 9 kVA in the 3U format. Units can be paralleled to increase output power. The series provides 1-phase and 3-phase outputs, with adjustable AC voltages from 0 V to 350 V at frequencies from 16 Hz to 1.2 kHz (up to 5 kHz for the PRO series) and ± 500 V (DC). Avionics and IEC test libraries are available.
- **EMC Services:** In early 2027, TDK will officially open a completely new accredited EMC lab in Regensburg, Germany. At electronica, visitors can learn more about this new lab and TDK's worldwide EMC services. Besides this new European facility, TDK operates several accredited EMC labs in all major regions, including Japan, China, and the United States.

Porsche Formula E Partnership

Through its partnership with the Porsche Formula E Team and Porsche Coanda Esports Racing Team, TDK brings the world of electric racing to electronica 2026. Visitors can experience the Porsche Coanda Esports racing simulator firsthand and learn more about the technologies shaping the next generation of electric mobility.

Careers at TDK: TDK's HR team will be at the booth to talk with anyone interested in working for TDK.

About TDK Corporation

TDK Corporation (TSE:6762) is a global technology company and innovation leader in the electronics industry, based in Tokyo, Japan. With the tagline “In Everything, Better” TDK aims to realize a better future across all aspects of life, industry, and society. For over 90 years, TDK has shaped the world from within; from the pioneering ferrite cores to cassette tapes that defined an era, to powering the digital age with advanced components, sensors, and batteries, leading the way towards a more sustainable future. United by TDK Venture Spirit, a start-up mentality built on visions, courage and mutual trust, TDK’s passionate team members around the globe pursue better—for ourselves, customers, partners, and the world. Today, the state-of-the-art technologies of TDK are in everything, from industrial applications, energy systems, electric vehicles, to smartphones and gaming, at the core of modern life. TDK’s comprehensive, innovative-driven portfolio includes cutting-edge passive components, sensors and sensor systems, power supplies, lithium-ion and solid-state batteries, magnetic heads, AI and enterprise software solutions, and more—featuring numerous market-leading products. These are marketed under the product brands TDK, InvenSense, Micronas, Tronics, TDK-Lambda, TDK SenseEI, and ATL. Positioning the AI ecosystem as a key strategic area, TDK leverages its global network across the automotive, information and communication technology, and industrial equipment sectors to expand its business in a wide range of fields. In fiscal 2026, TDK posted total sales of USD 16.6 billion and employed about 107,000 people worldwide.

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Contacts for regional media

Region	Contact	Phone	Mail
Europe	Mr. Frank TRAMPNAU TDK Management Services GmbH Duesseldorf, Germany	+49 211 9077 127	frank.trampnau@tdk.com