



electronica 2024
Munich, Germany
12th – 15th November
Booth C3.119

Toshiba showcases innovative technologies for a sustainable future at electronica 2024

Join Toshiba at stand C3.119 from November 12th to 15th, 2024, to explore cutting-edge technologies for e-mobility, energy & infrastructure, and industrial applications.

Düsseldorf, Germany, 6th November 2024 – Toshiba Electronics Europe GmbH (“Toshiba”) will be showcasing the synergies of its semiconductor, battery, data storage, and ceramic substrate products at electronica 2024. Either as individual components or working together as part of a system, engineers can improve the performance and sustainability of their designs across multiple sectors. This year's key focus is on e-mobility, energy & infrastructure, and industrial applications, which form the backbone of the future all-electric society.

Elevating e-mobility

Toshiba's power semiconductors, materials, and battery solutions are designed to offer unmatched flexibility and efficiency in e-mobility. The company's semiconductor solutions reduce energy loss and deliver exceptional performance, while high-power SCiB™ batteries power transportation, such as trucks, busses and trains. In addition, Toshiba's ceramic substrates efficiently insulate heat dissipation for power control units in electric and hybrid cars. Silicon Carbide (SiC) solutions are integral to e-mobility traction systems in cars, high robustness applications like trains and buses. Their high power density, temperature resilience and energy efficiency, make them suitable enhancing the overall performance.

One of the highlights during the show will be the highly integrated SmartMCD™, a motor control driver IC enhanced with a built-in microcontroller and gate driver. The first product in the series, the TB9M003FG, is suitable for sensorless control of three-phase brushless DC (BLDC) motors used in automotive applications, including water and oil pumps, fans and blowers.

Additionally, Volker Schumann, Vice President of Toshiba's Battery Division, will share insights on the **Benefits of LTO Technology for Heavy Duty Applications** at the **Battery Forum**. This session will explore the evolving role of battery technology in heavy-duty

applications, such as ferries, buses, trains, and mining trucks. It will take place at the Battery Forum, electronica stage, Hall 4A, on November 12th from 13:30 to 14:00.

Empowering energy & infrastructure

Toshiba's semiconductor technologies enhance energy efficiency across a variety of infrastructure power applications.

The company's high-energy SCiB™ batteries are designed for high-capacity applications such as stationary storage systems for stabilizing the electricity supply of power grids. Toshiba also offers the SCiB™ batteries with combination type cells for applications requiring both high-current charging and discharging for facilities relying on intermittent green energy generated from solar or wind sources. Toshiba's high-capacity Enterprise HDDs form the backbone of a data-driven society, supporting renewable energy infrastructures and contributing to a cleaner environment.

Significant strides have been made in the development of high-power injection-enhanced gate transistors (IEGTs) for high-voltage DC (HVDC) transmission applications. They are designed to enhance the efficiency and reliability of long-distance power transportation systems, such as taking wind-generated power to areas of demand by converting the generated AC power to DC power. IEGTs are also suitable for large-capacity inverter equipment in substations, taking advantage of their series connection and double-sided cooling features.

Visitors to the stand will discover how Toshiba is helping engineers address the challenges of designing compact high-power chargers. Its SiC Cube is a modular reference design developed at the High Voltage Lab in Düsseldorf. It leverages Toshiba's third-generation SiC MOSFETs, Schottky barrier diodes, and smart gate drivers to deliver a fully optimised PFC reference design platform. With a compact form factor and a 3-level configuration it significantly minimises power losses.

Advancing Industrial Applications

Power supply, heat pump, and motor inverter application reference designs not only show the ability to reduce losses through high-performance MOSFETs in various power classes, ranging from high-power IEGT to SiC, Gallium Nitride (GaN), and low-voltage products, but also highlight various combinations of the entire motor control and isolation portfolio.

At the booth, an additional example of the synergy of Toshiba's power semiconductors, such as MOSFETs and modules, motor control ASSPs and battery solutions, are on display in an industrial automated guided vehicle (AGV) demonstration.

To learn more and schedule a meeting with a specialist at electronica 2024, follow the link to the Toshiba tradeshow [landing page](#).

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) offers European consumers and businesses a wide variety of hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer, and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application specific standard products (ASSPs) amongst others.

In addition, TEE also offers Toshiba's SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications and Silicon Nitride (SiN) ceramic substrates used in power semiconductor modules, inverters, and converters for their heat dissipation characteristics and strength.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.

Visit Toshiba's websites at www.toshiba.semicon-storage.com, www.scib.jp/en and www.toshiba-tmat.co.jp/en/ for further company and product information.

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