

Corporate

TDK wins Innovation Award in CEATEC 2024

October 10, 2024

TDK Corporation (TSE:6762) announces that TDK's neuromorphic devices equipped with a spin-memristor won the Innovation Award in CEATEC 2024.

The CEATEC AWARD marks its 14th anniversary this year. The CEATEC AWARD 2024 judging committee examines and evaluates the technologies, products, and services exhibited at CEATEC 2024. Those entered by the exhibitors beforehand are assessed for their academic and technological attributes, marketability, potential and innovativeness, and recognized as particularly excellent compared to others in the category.

TDK's spin-memristor, which is a neuromorphic element the company developed, has very low power consumption. By mimicking the energy-efficient operation of the human brain, this element could cut the power consumption of AI applications down to 1/100th of traditional devices. Collaborating with the French research organization CEA (Alternative Energies and Atomic Energy Commission), TDK has proven that its spin-memristor can serve as the basic element of a neuromorphic device. Going forward, TDK will collaborate with the Center for Innovative Integrated Electronic Systems at Tohoku University on the practical development of the technology.

The committee granted the award to TDK's spin-memristor based on its evaluation of expected future technological progress and market pioneering potential, including energy efficiency improvement through low power consumption, high-speed operation, and the expansion of AI applications in edge environments such as learning.

TDK's long-term vision, "TDK Transformation," aims to contribute to the transformation of society. Going forward, through international collaboration with CEA and Tohoku University, TDK will promote the development of neuromorphic devices that can reduce the power consumption of AI computations down 1/100, thereby accelerating technological evolution and social transformation and contributing to the realization of a sustainable future.

Theme and Award

- Theme: 4th passive components using Spintronics technology able to reduce power consumption of AI down to 1/100
- Award : Innovation Award



About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution and deliberately “Attracting Tomorrow.” It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK’s comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2024, TDK posted total sales of USD 14.6 billion and employed about 101,000 people worldwide.

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