PRESS RELEASE

Mitsubishi Electric Presents Solutions for the Future of Urban Mobility at InnoTrans 2026

New technologies for greater energy efficiency, resource conservation, and safety in rail transportation are the focus of the company's trade show presentation

RATINGEN, 14 September 2026 – Mitsubishi Electric will present technologies and solutions for smarter, safer, and more sustainable rail transportation at InnoTrans 2026, the international trade fair for transportation technology, taking place September 22–25 in Berlin. Under the theme “Urban Mobility for the Future – Together,” the company will showcase its extensive expertise in modern rail systems at Hall 9, Booth 440.

The focus is on three technological developments: the Mitsubishi High Power Battery (MHPB) energy storage module, the energy- and resource-saving SynTRACS drive system, and a long-range LiDAR developed specifically for rail applications. These address key challenges in modern rail transportation, ranging from the efficient use of braking energy and resource-efficient vehicle propulsion to the detection of people and obstacles over long distances.

Efficiently Storing and Utilizing Braking Energy

With the Mitsubishi High Power Battery, Mitsubishi Electric is collaborating with Musashi Energy Solutions to develop an energy storage module for rail transportation. Musashi Energy Solutions is a Japanese manufacturer of energy storage solutions and a pioneer in the mass production of hybrid supercapacitors.

The jointly developed module stores braking energy and makes it available for later use. When a train brakes, the traction motor can function as a generator and convert kinetic energy into electrical energy. If this energy cannot be used immediately by another train, it can be temporarily stored in the MHPB.

The MHPB combines hybrid supercapacitors from Musashi Energy Solutions with power electronics and control technology from Mitsubishi Electric. The storage technology combines high power density with fast charging and discharging, as well as a long service life. Mitsubishi Electric integrates it with, among other things, low-loss charging and discharging circuits and a precise control system that determines the state of charge.

This makes the MHPB versatile for use in rail transport: It can power diesel and fuel cell trains in hybrid mode, stabilize the power supply in substations, or enable the operation of streetcars without continuous overhead lines. Its compact and lightweight design also facilitates integration into existing rail vehicles.

Mitsubishi High Power Battery (MHPB), an energy storage module for storing and utilizing renewable energy in rail transportation

SynTRACS saves energy and requires no rare earth elements in the rotor

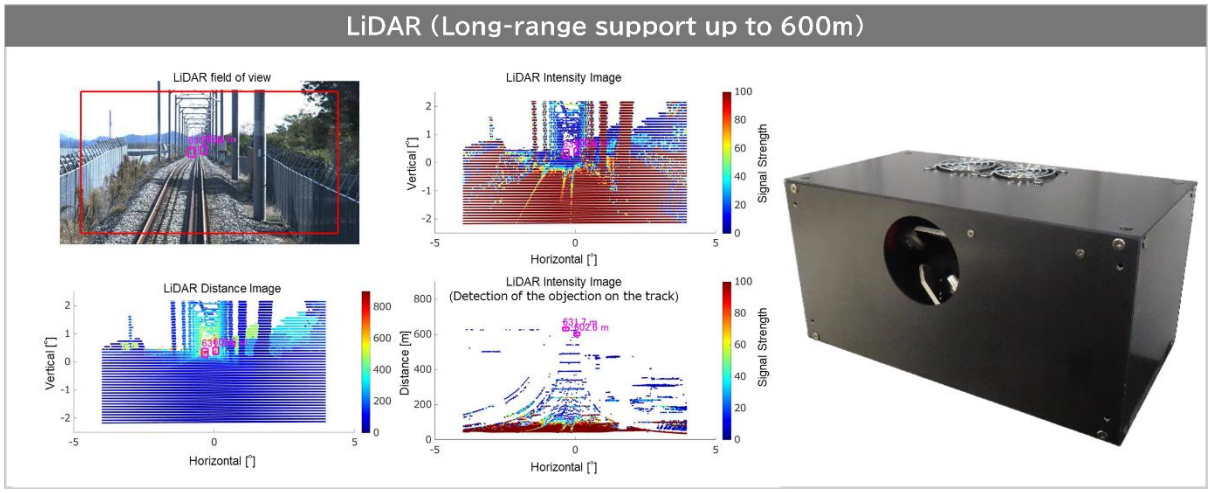
With SynTRACS, Mitsubishi Electric presents a drive system consisting of a synchronous reluctance motor (SynRM) and an inverter. The motor requires neither permanent magnets nor rare earth elements in the rotor. As a result, the system combines energy efficiency with reduced resource consumption.

An inverter control system developed by Mitsubishi Electric enables a maximum output of 450 kW. The system is designed for the wide speed range of rail vehicles. Compared to conventional high-efficiency asynchronous motors, SynTRACS reduces power losses by 50 percent. Tests in actual rail vehicles also showed an 18 percent reduction in energy consumption compared to drive systems using high-efficiency asynchronous motors. SynTRACS entered commercial series production in fiscal year 2024/2025.

Long-Range LiDAR Detects Objects Up to 600 Meters Ahead

Another highlight at InnoTrans is a long-range LiDAR system developed by Mitsubishi Electric for rail applications. The system can detect people and objects from a moving high-speed train up to 600 meters ahead. The technology is designed to support further automated train operation and enhance safety along rail lines.

The technology uses a laser emission method with a galvanometer scanner developed by Mitsubishi Electric. This allows the system to increase the density of the captured point cloud and enables highly precise detection over long distances under real-world rail operating conditions.



Mitsubishi Electric's long-range LiDAR for rail applications, which can detect people and objects up to 600 meters ahead.

Working Together to Advance Urban Mobility

The three exhibits demonstrate how Mitsubishi Electric is contributing to the advancement of rail transportation through technologies for energy efficiency, resource conservation, automation, and safety. The company covers a broad spectrum, ranging from train control and management systems and automated safety technologies to drive and power electronics, as well as air conditioning and onboard systems.

Under the guiding principle “Urban Mobility for the Future – Together,” Mitsubishi Electric also views InnoTrans as a platform for dialogue with operators, vehicle manufacturers, and other partners. The focus is on how digitalization, automation, and new technologies can help make urban transportation systems more efficient, resource-efficient, and safer.

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About Mitsubishi Electric

Guided by its corporate philosophy, Mitsubishi Electric Corporation (TOKYO: 6503) places sustainability at the core of its operations and values stakeholder trust—encompassing society, customers, shareholders and employees. In pursuing profitability, capital efficiency and growth, Mitsubishi Electric works closely alongside customers to develop value-added solutions that address today’s complex challenges while enhancing the company’s sustainable corporate value. With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment.

The company recorded a revenue of 36.8 billion US dollars* in the fiscal year ended March 31, 2026. Sales offices, research companies, development centers and production facilities can be found in over 30 countries. Mitsubishi Electric has been represented in Germany since 1978 as a branch of Mitsubishi Electric Europe. Mitsubishi Electric Europe is a wholly owned subsidiary of Mitsubishi Electric Corporation in Tokyo.

*U.S. dollar amounts are translated from yen at the rate of ¥150=U.S.$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2026

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