

**Exhibited at CES 2025 held in Las Vegas, USA
Demonstrating technologies that make thermal
management possible in a smart society**

Sanden Corporation exhibited at "CES 2025" held in Las Vegas, USA from January 7 to 10, 2025, in collaboration with the Hisense Group based in Qingdao, Shandong Province, China. This year, CES, where we exhibited for the second year in a row, is one of the largest consumer electronics and IT trade shows in the world, with 4,500 exhibiting companies and over 140,000 visitors, marking the largest scale in its history. We would like to express our sincere appreciation to all those who visited our booth.



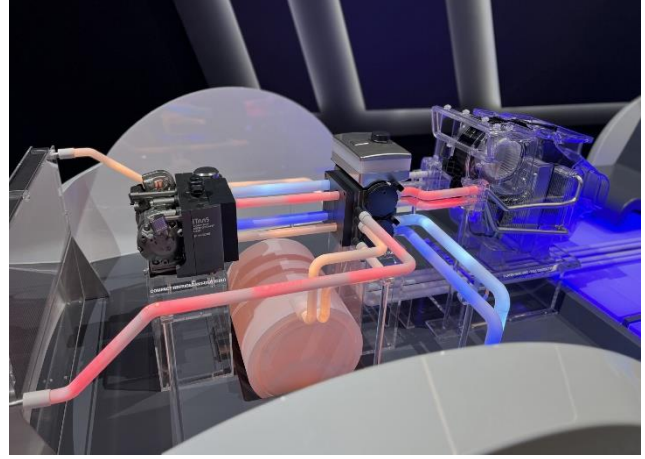
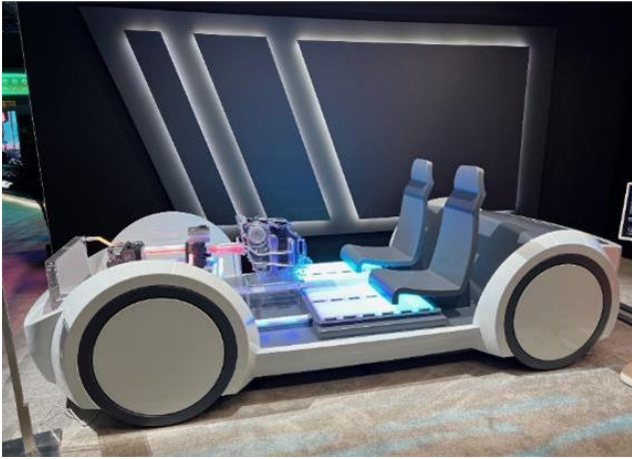
◆ Our Exhibition Booth Overview

We exhibited under the theme "AI Your Life" in collaboration with the Hisense Group. In our exhibition booth, we introduced the application and innovative use of AI technology across industries. In particular, we proposed solutions to the challenges facing electric vehicles and introduced the useful technologies that car electronics will bring in a smart society.



◆ **Contents of Our Exhibition Booth**

The main display was a mockup of our core technology, "Integrated Thermal Management System (ITMS) 3.0," which was unveiled for the first time at CES. The ITMS was installed on a platform in the shape of an actual car-sized vehicle, and some parts, such as the HVAC, were made transparent in order to visualize the system's operation. By showing changes in the temperature of the motor and battery with a change in the color of the electric lights, our display provided an intuitive understanding of the heat recovery process inside the vehicle and the generation mechanism of warm and cold air.



ITMS3.0 is a technology to manage limited thermal energy in an integrated manner and make effective use of it in electric vehicles where engine waste heat cannot be used. By integrally managing heat from the motor, battery, and air conditioning, ITMS3.0 contributes to reduced cruising range and enhancing passenger comfort. Furthermore, the indirect system that exchanges heat with water and the refrigerant unit minimizes the amount of refrigerant used and also enhances safety.

◆ **Potential of ITMS in a Smart Society (what can be achieved with ITMS)**

With the thermal management technology that ITMS has and the upcoming AI technology, there is a possibility to expand value in future living scenes, and we are advancing our research and development.

< **Examples of value provided by ITMS** >

- Predicts when to stop by catching information from traffic signals, and automatically reduces battery cooling to extend driving range.
- Heating and cooling are performed simultaneously to provide individual air-conditioning for each seat.
- Predicts based on wake-up time and automatically prepares for departure.
- In case of disasters, for example, hot water can be drawn outside the vehicle for a foot bath or to warm drinks.

Our booth attracted visitors from a wide range of industries, including automotive manufactures and automotive parts manufacturers, major consumer electronics manufacturers, consulting firms, and venture companies interested in thermal management, who were able to experience the wide range of possibilities of our technology.



 Inquiry about this
 Sanden corporation
 Global Administration Section (PR)
 sdhd.pcsr.jp@g-sanden.com
