

SCAPE TO MARKET

Welcome to the fourth edition of *SCAPE to Market* – a quarterly update on the latest developments in the EV power electronics industry. In this report, we study various trends such as new partnerships between OEMs and semiconductor manufacturers, new laboratories for chip-on-cell solutions, a new power platform utilising bandgap semiconductors and finally, research on GaN and RF GaN patents. Additionally, we will delve into the latest policy developments on a new standard for wireless EV charging.

Stay alert and make sure your research and innovation matters!

MARKET

- **Nexperia and Mitsubishi** announced a **strategic partnership on SiC MOSFETs development**. In this way, they aim to address the growing demand for high-efficiency discrete power semiconductors and to boost the energy efficiency and performance of SiC wide bandgap semiconductors. → [READ MORE](#)
- **Dukosi and Suzhou Hengmei Electron Technology** have declared the creation of a **Joint Development Laboratory** at Hengmei's Suzhou facility in China. This collaborative space aims to accelerate the advancement and integration of chip-on-cell solutions, contributing to the development of more sustainable battery systems that will drive the future of electric power. → [READ MORE](#)
- A new report from KnowMade analyses the **GaN and RF GaN patent landscapes** to describe the global IP competition across the whole supply chain and the local ecosystems emerging to support the industrialisation of GaN technologies. Conclusions from this report include the common IP strategy for both RF and power markets from multiple companies and that **Japanese and Chinese players** have produced **more than 70%** of all power GaN inventions together. → [READ MORE](#)
- **Allegro MicroSystems** has revealed that it is now the exclusive supplier of Current Sensor integrated circuits for **BMW Group's traction inverter systems** across its entire fleet of Battery Electric Vehicles. Allegro's precise Current Sensor integrated circuits ("ICs") contribute to exact motor control, elevating the driving experience and extending the driving range through the minimization of power losses. → [READ MORE](#)
- **Navitas Semiconductor has unveiled GaNSafe**, a new power platform utilizing wide bandgap semiconductors. Leveraging its fourth-generation gallium nitride (GaN) technology, Navitas has tailored GaNSafe for high-power applications in key sectors such as data centers, solar/energy storage, and electric vehicles (EVs), prioritizing efficiency, power density, and reliable operation. → [READ MORE](#)



POLICY

- **A new standard for wireless EV charging** was developed by a task force consisting of OEMs, Tier 1s and wireless charging suppliers. It aligns fully automatic, all-weather, wireless interoperable charging solutions for electric vehicles and promises highly efficient charging (up to 93%) of electric and plug-in-hybrid vehicles. → [READ MORE](#)



SCAPE to Market Overview

| | Power Electronics | Vertical Integration | Modular Platforms | Innovation | Policy | Public Investment | Studies |
|-------------|--|--|--|---|---|--|---|
| 2022 | <p>Power Electronics Market (1st edition)</p> <p>EVBox Expands its DC Charging Portfolio with EVBox Troniq Modular Compact (2nd edition)</p> | | <p>Infineon partners with REE automotive to foster sustainable mobility (2nd edition)</p> <p>Volkswagen Pivots To MEB+ Platform – 700 Km Range, 200 kW Charging (3rd edition)</p> | <p>CES 2023: Power Electronics Companies Showcase New Products (1st edition)</p> | <p>Chips Act: Council adopts position (1st edition)</p> <p>Electric Vehicle Onboard Equipment and Charging Infrastructure Standards (2nd edition)</p> | <p>EU-US Joint Statement of the Trade and Technology Council (2nd edition)</p> | <p>The All-Electric Society - Enabled by Power Electronics (1st edition)</p> <p>Best practices and assessment of regulatory measures for cost-efficient integration of EV into the electricity grid (2nd edition)</p> |
| 2023 | <p>Global Electric Vehicle Semiconductors Market 2023-2030 (1st edition)</p> | <p>Volkswagen Group Technology develops complete drive system for electric cars (2nd edition)</p> <p>New Nissan EV development plan to cut costs by 30% (3rd edition)</p> <p>Volkswagen among consortium trialling bidirectional EV charging (3rd edition)</p> <p>Allegro MicroSystems and BMW Group join forces (4th edition)</p> <p>Nexperia and Mitsubishi announced a strategic partnership on SiC MOSFETs development (4th edition)</p> | <p>Wolfspeed Silicon Carbide Devices Power Future Mercedes-Benz Electric Vehicle Platforms (2nd edition)</p> <p>Navitas Semiconductor unveils new power platform utilizing wide bandgap semiconductors (4th edition)</p> | <p>Infineon provides an innovative solution for second life of EV batteries (3rd edition)</p> <p>Silicon carbide (SiC) inverter extends EV range by over 7% (3rd edition)</p> <p>New Chinese Joint Development Laboratory focused on chip-on-cell solutions (4th edition)</p> | <p>California Ponders V2G Mandate (3rd edition)</p> <p>A new standard for wireless EV charging (4th edition)</p> | <p>UK: New plan for smart electric vehicle (EV) charging could save consumers up to £1000 a year (3rd edition)</p> | <p>The Pulse of the Semiconductor Industry (1st edition)</p> <p>Deep dive into the power GaN and RF GaN electronics patents worldwide (4th edition)</p> |

