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Press Release

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electronica 2024 showcases smart energy solutions for the future

- **Modern semiconductor technologies like SiC and GaN enable significant energy savings**
- **Global market for smart energy set to grow to 283 billion US dollars by 2027**
- **Experts discussing current trends and developments at electronica**

Electronics is a key factor in the energy transition and development of smart energy solutions. That is why smart energy will be a key topic at electronica 2024, as it plays a decisive role in shaping a sustainable energy future with its facets ranging from smart grids and smart meters to power electronics. From November 12 to 15 in Munich, the world's leading trade fair and conference for electronics will show how these technologies contribute to the efficient production, distribution and use of electricity, hence transforming the entire value chain in the energy industry.

Electronics is at the heart of the energy transition, as it forms the basis for smart systems that are essential in the areas of smart grids, smart meters, and power electronics. Current studies underscore the importance of smart energy solutions. According to a report by MarketsandMarkets, the global market for smart energy is expected to grow from 170 billion US dollars in 2022 to 283 billion US dollars by 2027, which is equivalent to a compound annual growth rate (CAGR) of 10.6%. The main driver of this growth is the increasing demand for intelligent power grids, known as smart grids. "Against this backdrop, electronica offers technology companies and industry experts an international platform to present their innovations, to network, and to discuss the latest developments and trends," says Katja Stolle, Exhibition Director of electronica.

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Smart grid: the intelligent power grid of the future

Smart grids are an integral part of the energy transition. They allow electricity generated decentrally from renewable energy sources such as solar and wind power plants to be integrated efficiently and flexibly. These smart grids coordinate power generation, distribution and storage by continuously collecting and analyzing data from IoT-enabled sensors and devices. The electricity grids can thus be optimally controlled and utilized, which contributes to a stable and efficient energy supply. According to a study by the Fraunhofer Institute for Systems and Innovation Research (ISI), the widespread use of smart grids could save up to 30 percent of grid stabilization costs by 2030. These savings result from better grid utilization and reduced bottlenecks through real-time data management.

Smart meters for consumers and prosumers

Smart meters play a decisive role on the consumer side. These intelligent electricity meters measure energy consumption in real time and allow it to be monitored and optimized. They are also of great importance for prosumers – consumers who generate their own energy, for example, through their own solar systems. Smart meter gateways (SMGW) collect and process measurement data and make it available to internal and external market participants. By 2032, all electricity consumers in Germany must be equipped with digital meters, which will lay the foundation for implementing smart grids nationwide. A European Commission report predicts that the use of smart meters can lead to annual energy consumption savings of up to 10 percent, benefiting both consumers and the environment.

Power electronics: boosting efficiency through modern semiconductor technology

Power electronics is a key technology for the energy transition. It enables the efficient conversion and control of electrical energy. Modern semiconductors such as silicon carbide (SiC) and gallium nitride (GaN) offer significant advantages over conventional silicon. They boast higher switching capacities and lower losses, leading to higher efficiency levels and considerable energy

savings. According to a study by Yole Développement, the market for SiC semiconductors will grow to 6.3 billion US dollars by 2027, which underscores the growing importance of this technology.

Smart energy at electronica 2024

At electronica 2024, which is all about the all-electric society, the topic of smart energy will play a correspondingly important role, whether at the trade fair stands or in the conference and forum program. The Power Electronics Forum in Hall A5, for example, will look at the entire spectrum of power electronics. Here, experts will discuss current trends and developments that are of crucial importance for the energy transition and for implementing the all-electric society. Hall A4 will be all about innovations in transformers, power supplies, power supply units and batteries. In Halls B4, B5, C3, C4 and C5, numerous exhibitors will be presenting their latest products and solutions relating to semiconductors, while embedded systems can be found in Hall B4.

You can find this press release for download including press pictures at the electronica newsroom.

About electronica

electronica is the most important international meeting place for the electronics industry. As the world's leading trade fair, it presents the entire spectrum of technologies, products and solutions in electronics and brings together experts and users from all over the world. The extensive supporting program with top-class conferences and practice-oriented forums provides deep insights into the latest trends from research to application and addresses current social issues. The next electronica will take place from November 12 to 15, 2024 at the Messe München Exhibition Center.

electronica worldwide

In addition to electronica, Messe München organizes electronica China, electronica South China, electronica India, the SmartCards Expo and electronicAsia. The network of electronics trade fairs also includes productronica in Munich, productronica China, productronica South China, productronica India and LOPEC.

Messe München

As one of the world's leading trade fair organizers, Messe München presents the world of tomorrow at about 90 trade fairs worldwide. These include eleven of the world's leading trade fairs such as bauma, BAU, IFAT, electronica, and ISPO. Messe München's portfolio comprises trade fairs for capital and consumer goods, as well as for new technologies. Together with its subsidiaries, it organizes trade fairs in China, India, Brazil, South Africa, Turkey, Singapore, Vietnam, Hong Kong, Thailand, and the U.S. With a network of more than 15 affiliated companies and almost 70 representations worldwide, Messe München is active in more than 130 countries.

The more than 150 events held annually attract around 50,000 exhibitors and around three million visitors in Germany and abroad.