# Nexperia launches e-mode GAN FETs for low and high-voltage applications

*Industry's only supplier to offer both cascode and e-mode GaN FETs*

**Nijmegen, May XX, 2023:** Nexperia, the expert in essential semiconductors, today released its first Power GaN FETs in e-mode (enhancement mode) configuration for low (100/150 V) and high (650 V) voltage applications. By augmenting its cascode offering with seven new e-mode devices, Nexperia now provides designers with the optimum choice of GaN FETs from a single supplier alongside its substantial portfolio of silicon-based power electronics components.

Nexperia's new portfolio includes five 650 V rated e-mode GaN FETs (with $R_{DS(on)}$ values between 80 mΩ and 190 mΩ) in a choice of DFN 5x6 mm and DFN 8x8 mm packages. They improve power conversion efficiency in high-voltage, low-power (<650 V) datacom/telecom, consumer charging, solar and industrial applications. They can also be used to design brushless DC motors and micro server drives for precision with higher torque and more power.

Nexperia now also offers a 100 V (3.2 mΩ) GaN FET in a WLCSP8 package and a 150 V (7 mΩ) device in a FCLGA package. These devices are suitable for various low-voltage (<150 V), high-power applications to deliver, for example, more efficient DC-DC converters in data centers, faster charging (e-mobility and USB-C), smaller LiDAR transceivers, lower noise class D audio amplifiers and more power dense consumer devices like mobile phones, laptops, and games consoles.

GaN FETs offer the highest power efficiency with the most compact solution size in many power conversion applications, features which substantially reduce the bill of materials (BOM). As a result, GaN devices are increasingly entering mainstream power electronics markets, including server computing, industrial automation, consumer, and telecom infrastructure. GaN-based devices offer the fastest transition / switching capability (highest dv/dt and di/dt) and deliver superior efficiency in low- and high-power conversion applications. The outstanding switching performance of Nexperia's e-mode GaN FETs is attributable to very low $Q_g$ and $Q_{OSS}$ values, while their low $R_{DS(on)}$ enables more power-efficient designs.

With this release Nexperia now supply a broad offering of GaN FET products to suit the wide range of power applications best suited to the technology, including cascode devices for high-voltage, high-power applications, 650 V e-mode devices for high-voltage, low-power applications and 100/150 V e-mode devices for low-voltage, high-power applications. Furthermore, Nexperia e-mode GaN FETs are fabricated on an 8" wafer-line for increased capacity. The expansion of its GaN device offering is a testament to Nexperia's commitment to quality silicon and wide-bandgap technologies.

To learn more about Nexperia's new 100 V, 150 V and 650 V e-mode GaN FETS , visit:
nexperia.com/e-mode-gan-fets

**About Nexperia**

Nexperia is a leading expert in the high-volume production of essential semiconductors, components required by every electronic design in the world. The company's extensive portfolio includes diodes, bipolar transistors, ESD protection devices, MOSFETs, GaN FETs and analog & logic ICs. Headquartered in Nijmegen, the Netherlands, Nexperia annually ships more than 100 billion products, meeting the stringent standards set by the automotive industry. These products are recognized as benchmarks in efficiency – in process, size, power and performance — with industry-leading small packages that save valuable energy and space.

With decades of experience in supplying to the world's leading companies, Nexperia has over 14,000 employees across Asia, Europe and the US. Nexperia, a subsidiary of Wingtech Technology Co., Ltd. (600745.SS), has an extensive IP portfolio and is certified to IATF 16949, ISO 9001, ISO 14001 and ISO 45001.

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