



Enphase Energy and Infineon Announce World's First 900 V GaN Bidirectional Switch Devices for AI Data Center Solid-State Transformers

FREMONT, Calif., Oct. 26, 2026 (GLOBE NEWSWIRE) -- [Enphase Energy, Inc.](#) (NASDAQ: ENPH), a global energy technology company, and Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) today announced that Enphase will deploy the world's first 900 V gallium nitride (GaN) monolithic bidirectional switch (BDS) devices, designed to operate in Enphase solid-state transformer power modules. The devices extend GaN technology to 900 V while retaining the high-frequency switching capabilities that enable compact, efficient power conversion.

Enphase has pioneered the system-level development and demonstration, building on more than 10 years of in-house research into GaN power conversion, with device technology and engineering expertise from Infineon. Enphase is among the first to bring 650 V GaN BDS devices into volume production power electronics, and GaN HEMT technology is already operating in Enphase IQ9™ Microinverters deployed in the field. Extending that work with Infineon beyond 650 V, using Infineon's CoolGaN™ bidirectional switch portfolio, opens the door further to medium-voltage systems.

The 900 V GaN devices allow Enphase to continue using components rated below 1 kV, expanding the design options towards high-performance power conversion typically governed by silicon carbide (SiC). This supports a single-stage architecture with high-frequency switching, low electromagnetic interference (EMI), and fewer points of failure. Switching at such high frequency shrinks the transformers and other magnetics needed in the power stage, cutting size, weight, and cost.

Higher-voltage switches within that low-voltage envelope change the economics of power conversion. In a solid-state transformer, a medium-voltage input can be handled by fewer inverters connected in series while retaining the low switching losses and intrinsic bidirectionality of GaN BDS. Fewer building blocks means lower system-level losses at the same input current, fewer components in the power path, and a lower total switch count. On the DC side, higher-voltage unidirectional switch (UDS) devices allow power to be generated at a unipolar 800 volts rather than split +/-400 V buses, and support future 1,500 VDC bus architectures through split +/-750 V generation with fewer switches and lower bridge losses.

The technology is particularly relevant to the Enphase [IQ® Solid-State Transformer](#) (IQ SST), the company's solid-state transformer platform for AI data centers, where power density, efficiency, and uptime drive the economics of every megawatt deployed. The same devices are expected to benefit commercial solar inverters by enabling three-phase, line-to-line designs for 480 V applications in the United States and 400 V applications elsewhere, again with fewer switches, lower losses, and lower cost.

"Enphase asks more of our technology than almost anyone, and medium-voltage solid-state transformers are exactly where high-voltage GaN proves its value," said Johannes Schoiswohl, senior vice president and head of GaN Systems Business Line at Infineon. "Moving past 650 V lets system designers strip cost and loss out of the architecture rather than optimizing around it."

"GaN is not new to us. It has been running in Enphase IQ9 Microinverters in the field, and that field data is why we trust it in a megawatt-class system," said Hans van Antwerpen, senior vice president and chief technology officer at Enphase Energy. "Moving to 900 V gives us more voltage headroom without giving up high-frequency switching, and it allows us to stay with components rated below 1 kV while reducing the number of converters in the system. Fewer parts in the power path means higher efficiency and fewer things that can fail."

The 900 V GaN BDS devices have been successfully tested and are now being integrated into IQ SST development builds, with production qualification expected to follow. Learn more about the use of GaN in Enphase products in its [white paper](#).

About Enphase Energy, Inc.

Enphase Energy is a global energy technology company advancing intelligent power systems for homes, businesses, and next-generation AI data centers. The company designs semiconductor-based energy technologies spanning solar, batteries, EV charging, energy management, and virtual power plants, and is developing solid-state transformer technology to address the rapidly growing power demands of AI data centers. Based in Fremont, California, Enphase is the world's leading supplier of microinverter-based solar and battery systems. The company revolutionized the solar industry with its microinverter technology and has shipped approximately 89.4 million microinverters, with approximately 5.3 million Enphase-based systems deployed in more than 165 countries. Enphase products enable people to harness the sun to make, use, save, and sell their own power, all controlled through the Enphase App. For more information, visit <https://enphase.com/>.

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Forward-Looking Statements

This press release contains forward-looking statements, including statements regarding the expected capabilities and performance of Enphase Energy's IQ SST, including safety, quality, reliability, efficiency, scalability, and power conversion capabilities; the expected capabilities, performance, and benefits of 900 V GaN BDS devices, including operation in IQ SST power modules; the expected benefits of extending GaN technology beyond 650 V, including reduced losses, lower system cost, higher power density, fewer components, lower switch counts, and improved system efficiency; the expected benefits of Enphase's collaboration with Infineon Technologies AG; the integration, qualification, and deployment of 900 V GaN BDS devices in IQ SST and other Enphase products; the expected benefits of such devices for AI data center infrastructure, commercial solar inverters, and other power conversion applications; the anticipated use of 900 V GaN BDS devices in future power architectures, including medium-voltage systems and higher-voltage DC bus configurations; and the availability and timing of future product development and production qualification activities. These forward-looking statements are based on Enphase Energy's current expectations and inherently involve significant risks and uncertainties. Actual results and the timing of events could differ materially from those contemplated by these forward-looking statements as a result of such risks and uncertainties. Such risks include, but are not limited to, technological development and validation risks; market demand for AI data center infrastructure, commercial solar products, and related power conversion solutions; competitive developments; the ability to achieve anticipated performance, reliability, efficiency, scalability, and cost objectives; manufacturing and supply chain availability and costs; the successful integration, testing, qualification, and commercialization of new semiconductor technologies; and changes in regulatory or compliance requirements. Such risks and uncertainties are more fully described in Enphase Energy's filings with the Securities and Exchange Commission, including in the sections entitled "Risk Factors" and elsewhere in Enphase Energy's most recently filed Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as well as other documents that Enphase Energy files from time to time with the Securities and Exchange Commission. Enphase Energy undertakes no duty or obligation to update any forward-looking statements contained in this release as a result of new information, future events or changes in its expectations, except as required by law.

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