



Transphorm's GaN Powers World's First Integrated Microinverter PV Systems by DAH Solar Co., Ltd.

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Groundbreaking Solar Panel Systems Deliver Higher Performance and Efficiency in Smaller, Lighter Form Factors Via Use of Transphorm's Fundamentally Advanced GaN Devices

GOLETA, Calif.--(BUSINESS WIRE)--Aug. 24, 2023-- [Transphorm, Inc.](#) (Nasdaq: TGAN), a global leader in robust GaN power semiconductors, the future of next generation power systems, today announced that its GaN platform powers the world's first integrated photovoltaic (PV) systems from DAH Solar Co., Ltd. (Anhui Daheng New Energy Technology Co., LTD/subsidiary of DAH Solar). The PV systems are used in DAH Solar's new [SolarUnit product line](#). DAH Solar credits Transphorm's GaN FETs with enabling it to produce smaller, lighter, and more reliable solar panel systems that also offer higher overall power generation with lower energy consumption. The design achievements continue to demonstrate Transphorm's *One Core GaN Platform, Crossing the Power Spectrum* leadership position by solidifying its value proposition in the renewables market, which currently represent a GaN TAM of more than \$500M.

DAH Solar uses Transphorm's 150 mΩ and 70 mΩ GaN FETs in the SolarUnits' design architecture (both DC-to-DC and DC-to-AC power stages). The SolarUnits are available in three models with power outputs of 800 W, 920 W, or 1500 W and peak efficiencies of 97.16%, 97.2%, and 97.55% respectively. The GaN devices deliver higher switching frequencies and power density versus incumbent silicon solutions. Notably, the two FETs are available in PQFN88 performance packages that pair with commonly-used gate drivers—features that helped DAH Solar quicken its design time.

"We have a strong legacy of producing innovative PV products. As such, we consistently look for ways to advance our products with state-of-the-art technologies to create a better, more efficient end user experience," said Yong Gu, GM, DAH Solar. "We view Transphorm as an authority in the field of GaN production and found their advanced GaN FETs to be the optimal devices for our new SolarUnit line. The devices are easy to design in and offer performance advantages that enable us to continue building on our legacy."

Another GaN Industry First

Transphorm today supports the largest range of power conversion requirements (45 W to 10+ kW) across the widest range of power applications. The company's FET portfolio includes 650 V and 900 V devices with 1200 V devices in development. These FETs are JEDEC and AEC-Q101 qualified, making them optimal solutions for power adapters and computer PSUs through to broad industrial UPSs and electric vehicle mobility systems.

The company's technology innovations continue to set new benchmarks across the GaN power semiconductor industry. In parallel, they help customers bring to market new, disruptive applications in their own markets—such as DAH Solar's PV systems. These achievements are due to Transphorm's normally-off SuperGaN® platform, which uses the cascode d-mode configuration to harness GaN's intrinsic advantages. The superior physics of this high performance GaN platform design delivers competitively unmatched benefits such as easier drivability, easier designability, higher reliability, and greater manufacturability.

"The value Transphorm's GaN platform brings to a variety of applications continues to be demonstrated by market leaders like DAH Solar," Kenny Yim, Vice President of Asia Sales, Transphorm. "Solar inverters as well as other high-power applications require highly reliable, high performing power semiconductors that can withstand decades of operation in harsh environments. Using Transphorm's SuperGaN technology helps reduce power loss thereby minimizing thermal stress on other designed-in components. That's a phenomenal achievement over alternative GaN and Silicon solutions underscoring the benefits our GaN brings to next generation power systems."

Device and Product Information

For more information on Transphorm's market leading GaN device portfolio, visit: <https://www.transphormusa.com/en/products/>

For more information on DAH Solar's groundbreaking integrated PV systems, visit: <https://www.dahsolarpv.com/#parentHorizontalTab022>

About Transphorm

Transphorm, Inc., a global leader in the GaN revolution, designs and manufactures high performance and high reliability GaN semiconductors for high voltage power conversion applications. Having one of the largest Power GaN IP portfolios of more than 1,000 owned or licensed patents, Transphorm produces the industry's first JEDEC and AEC-Q101 qualified high voltage GaN semiconductor devices. The Company's vertically integrated device business model allows for innovation at every development stage: design, fabrication, device, and application support. Transphorm's innovations move power electronics beyond the limitations of silicon to achieve over 99% efficiency, 50% more power density and 20% lower system cost. Transphorm is headquartered in Goleta, California, and has manufacturing operations in Goleta and Aizu, Japan. For more information, please visit www.transphormusa.com. Follow us on Twitter @transphormusa and WeChat @ Transphorm_GaN.

About DAH Solar Co., Ltd.

DAH Solar Co., Ltd. is an innovation-driven and technology-leading company in PV product manufacturing. DAH Solar contributes to providing high-efficiency PV modules, high-quality solar cells, high-tech intergrative solar systems, and high-value energy storage for our valued customers. DAH Solar has 4 high-end technology factories to help achieve 2023 semiyearly production of 2 GW capacity for solar cells, 5 GW PV modules (2.5 GW TOPCon PV modules), and 3.5 GW TOPCon solar cells. DAH Solar's innovative product, the Full-Screen PV Module holds a global patent in 18 countries and regions. For more information, visit: <https://www.dahsolarpv.com>.

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