



onsemi to Develop Next-Generation GaN Power Devices with GlobalFoundries

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Collaboration expands onsemi's power portfolio to include high-performance 650V lateral GaN solutions for AI data centers, automotive, aerospace, and other critical markets

Summary:

onsemi expands its leadership in intelligent power through a new collaboration agreement with GlobalFoundries (GF) to develop and manufacture next-generation gallium nitride (GaN) power devices, beginning with 650V. onsemi products will combine GF's 200mm eMode GaN-on-silicon process with onsemi's industry-leading silicon drivers, controllers, and thermally enhanced packaging to deliver smaller, more efficient systems optimized for AI data centers, automotive, industrial, and aerospace, defense, and security applications.

News Highlights:

- onsemi collaborates with GlobalFoundries to develop state-of-the-art 200mm eMode lateral GaN-on-Silicon process technology for critical markets, starting with 650V.
- onsemi's GaN portfolio is ideally suited for high-density systems where power demands continue to rise but physical size cannot, including AI data centers, electric vehicles, renewable energy, and aerospace, defense, and security systems.
- Applications include power supplies, DC-DC converters, onboard chargers, solar microinverters, energy storage systems, and motor drives across a range of high-growth markets.

SCOTTSDALE, Ariz., and MALTA, N.Y., Dec. 18, 2025 (GLOBE NEWSWIRE) -- onsemi (Nasdaq: ON) today announced it has signed a collaboration agreement with GlobalFoundries (Nasdaq: GFS) (GF) to develop and manufacture advanced gallium nitride (GaN) power products using GF's state-of-the-art 200mm eMode GaN-on-silicon process, starting with 650V. This collaboration accelerates onsemi's roadmap for high-performance GaN devices and integrated power stages, expanding its portfolio with high-voltage products to meet the growing power demands of AI data centers, electric vehicles, renewable energy, industrial systems, and aerospace, defense and security.

"This collaboration brings together onsemi's system and product expertise with GlobalFoundries' advanced GaN process to deliver new 650V power devices for high-growth markets. Paired with our silicon drivers and controllers, these GaN products will enable customers to innovate and build smaller, more efficient power systems for AI data centers, EVs, space applications, and beyond. We are on track to begin providing samples to customers in the first half of 2026, and scale rapidly to volume production." – Dinesh Ramanathan, Senior Vice President of Corporate Strategy, onsemi.

"By combining our 200mm GaN-on-Si platform and U.S.-based manufacturing with onsemi's deep system and product expertise, we're accelerating high-efficiency solutions and building resilient supply chains for data centers, automotive, industrial, aerospace and defense, and other critical markets. With onsemi as a key partner, we will continue to advance GaN semiconductors that meet the evolving demands of AI, electrification, and sustainable energy." – Mike Hogan, Chief Business Officer, GlobalFoundries.

onsemi will pair its industry-leading silicon drivers, controllers, and thermally enhanced packages with GF's 650V GaN technology platform to deliver optimized GaN devices with higher power density and efficiency. These include power supplies and DC-DC converters for AI data centers, onboard chargers and DC-DC converters for electric vehicles, solar microinverters and energy storage systems, motor drives and DC-DC converters, for industrial and aerospace, defense, and security applications.

This effort expands onsemi's leading power semiconductor portfolio, which now includes the full spectrum of GaN technologies – from low, medium and high voltage lateral GaN to ultra high-voltage vertical GaN – enabling system designers to build next-generation power architectures that deliver more power in smaller footprints. These GaN advantages include:

- **Higher Frequency Operation** – By operating at higher switching frequencies, GaN allows designers to reduce component count, system size, and cost while improving efficiency and thermal performance.
- **Bidirectional Capability** – Bidirectional GaN capabilities enable entirely new topologies that can replace up to four traditional unidirectional transistors, cutting costs and simplifying designs.
- **Integrated Functionality** – Combining GaN FETs with drivers, controllers, isolation, and protection in a single package allows for faster design cycles and lower electromagnetic interference. The thermally enhanced packages and optimized gate drivers push performance and reliability even at high switching speeds.

Timing and Availability

onsemi will begin sampling in the first half of 2026.

About onsemi

onsemi (Nasdaq: ON) is driving disruptive innovations to help build a better future. With a focus on automotive and industrial end-markets, the

company is accelerating change in megatrends such as vehicle electrification and safety, sustainable energy grids, industrial automation, and 5G and cloud infrastructure. **onsemi** offers a highly differentiated and innovative product portfolio, delivering intelligent power and sensing technologies that solve the world's most complex challenges and leads the way to creating a safer, cleaner and smarter world. **onsemi** is included in the Nasdaq-100 Index[®] and S&P 500[®] index. Learn more about **onsemi** at www.onsemi.com.

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About GF

GlobalFoundries (GF) is a leading manufacturer of essential semiconductors the world relies on to live, work and connect. We innovate and partner with customers to deliver more power-efficient, high-performance products for automotive, smart mobile devices, internet of things, communications infrastructure and other high-growth markets. With our global manufacturing footprint spanning the U.S., Europe and Asia, GF is a trusted and reliable source for customers around the world. Every day our talented, global team delivers results with an unwavering focus on security, longevity and sustainability. For more information, visit www.gf.com

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