



Skyworks Unveils Next-Generation EV Gate Driver Platform to Improve Inverter Efficiency and Reduce System Cost

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Si829x with ProVCD™ technology enables scalable, high-performance inverter designs across SiC and IGBT architectures

NUREMBERG, Germany, June 09, 2026 (GLOBE NEWSWIRE) -- Skyworks Solutions, Inc. (Nasdaq: SWKS), an innovator of high-performance analog and mixed-signal semiconductors connecting people, places and things, today at PCIM 2026 unveiled its new [Si829x isolated safety gate driver](#) for electric vehicle (EV) traction inverters and other electrified systems, including eTrucking, industrial motor drives and emerging mobility platforms. Held annually in Nuremberg, Germany, PCIM Expo is the leading global event for power electronics and energy management technologies.

Advanced Safety for Automotive Applications

Developed according to **ISO 26262 functional safety standards**, the Si829x is suitable for use in functional safety systems rated up to ASIL D, delivering the robustness required for next-generation EV traction inverters. Its integrated protection features include:

- Extensive diagnostic fault coverage, notification and management
- Comprehensive safety mechanisms including power-up self-checks and safe state enforcement
- Globally certified isolation technology for enhanced safety and reliability

With applications in battery electric vehicles, hybrid electric vehicles and plug-in hybrids, eTrucking, eAgriculture and exciting new segments like robotaxis and electric vertical take-off and landing (eVTOL) aircraft, Si829x is a comprehensive choice among isolated gate drivers for advanced propulsion systems.

A New Approach to Gate Drive Control

Unlike conventional voltage-mode gate drivers, the Si829x uses ProVCD™, Skyworks' second-generation variable current drive, with high resolution gate waveform shaping and cycle-by-cycle control through a digital interface. This approach enables:

- Reduced switching losses up to 44% compared with voltage mode
- Improved thermal efficiency through multiple packaging options
- Mitigated electromagnetic interference (EMI) and filtering requirements
- Precise 15 Amp 3-phase turn-on and turn-off current waveform control
- A smaller PCB footprint and system-level cost savings

Together, these benefits allow manufacturers to increase inverter efficiency while simplifying system design and accelerating development cycles. "As EV platforms scale globally, automakers face increasing pressure to improve efficiency and integrate advanced features while also lowering system cost," said Mario Battello, vice president of product line management at Skyworks. "The Si829x introduces a new class of gate driver technology that can enable all of these. By allowing customers to standardize inverter designs across multiple platforms while optimizing performance through software, we believe this solution can help optimize EV drivetrains and improve system-level economics."

Platform Scalability and Design Flexibility

The Si829x is designed as a configurable platform, allowing engineers to adjust gate drive parameters through software rather than fixed hardware components. This supports:

- Design reuse across multiple vehicle platforms
- Faster development and validation cycles
- Greater flexibility to optimize performance, efficiency, or cost
- Vendor-agnostic compatibility across power semiconductor technologies

By supporting both SiC FETs and IGBTs within a single gate driver platform that integrates a VPOS regulator to provide bipolar gate drive voltages eliminating an external negative gate bias supply, the solution helps customers streamline design efforts and reduce time to production.

Skyworks at PCIM 2026 and Si829x availability

At [PCIM Expo 2026 Hall 4A, Stand 328](#), Skyworks will showcase the Si829x in interactive demonstrations highlighting real-time inverter optimization across EV driving and charging scenarios. These demonstrations illustrate how current-mode gate control can improve efficiency, reduce system complexity and enable flexible inverter design. Si829x production is planned for end July 2026. To learn more, visit skyworksinc.com/go/si829x.

About Skyworks

Skyworks Solutions, Inc. is empowering the wireless networking revolution. We are a leading developer, manufacturer and provider of analog and mixed-signal semiconductors and solutions for numerous applications, including aerospace, automotive, broadband, cellular infrastructure, connected home, defense, entertainment and gaming, industrial, medical, smartphone, tablet and wearables.

Skyworks is a global company with engineering, marketing, operations, sales and support facilities located throughout Asia, Europe and North America and is a member of the S&P 500® market index (Nasdaq: SWKS). For more information, please visit Skyworks' website: www.skyworksinc.com.

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