Allegro MicroSystems Unveils Innovative Power Products for a More Energy Efficient Future

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Allegro's New Solutions Deliver Design Simplicity With Cost Savings

MANCHESTER, N.H., Nov. 04, 2024 (GLOBE NEWSWIRE) -- Allegro MicroSystems, Inc. ("Allegro") (Nasdaq: ALGM), a global leader in power and sensing solutions, today announced a groundbreaking series of Power products poised to redefine performance and efficiency across automotive, industrial and data center applications. Allegro's innovative products, debuting at Electronica 2024, empower customers to achieve unparalleled performance while simplifying design and reducing costs. The new product lineup not only addresses the escalating demands for higher voltage and power, but also delivers industry-leading efficiency and reliability, marking a significant advance in power electronics technology.

Allegro's comprehensive suite of products encompasses cutting-edge true 48V motor drivers like the A89212, A89224 and A89333 designed to address the thermal management needs of hybrid electric vehicles and AI Servers. Complementing these drivers is the APM81815, a 48V buck regulator designed for superior EMI performance in dual-voltage hybrid electric vehicles. Rounding out the list of new products is the AHV85311, a high-power isolated gate driver designed to accelerate the development of Silicon Carbide (SiC)-based power electronics. From optimizing efficiency in automotive applications to simplifying industrial designs as well as enhancing reliability in data centers, Allegro's new power IC innovations enable engineers to design smarter, more efficient systems.

"The new power IC solutions from Allegro represent a significant leap forward in power electronics design," says Ram Sathappan, Sr. Director of Global Marketing & Applications at Allegro MicroSystems. "We're not just meeting the evolving demands of higher voltage and power; we're redefining what's possible. Our customers demand solutions that simplify design, enhance efficiency and lower costs, all of which our new products deliver. We're excited to partner with our customers to shape the future of power electronics and look forward to showcasing our innovative solutions at Electronica."

Key Allegro solutions launching at Electronica include:

- **A89212: Longer Battery Life and Lower System Costs**
  This 48V SoC delivers high efficiency and torque at low speeds for power tools, eBikes and other industrial systems. In addition to extending battery life, this sensorless solution improves motor control precision and reduces cost by eliminating external hall sensors. With up to 256K of flash memory and 90V support, it is the first of its kind.

- **A89224: Optimized Efficiency for 48V Automotive Systems**
  This SoC empowers the next generation of 48V automotive systems, optimizing fan and pump performance. Advanced motor control libraries maximize efficiency and torque at zero speed for pumps while minimizing noise for fans. This translates to reduced power losses, lighter wire harnesses and increased vehicle mileage for OEMs and ODMs. With 256K of flash memory, it offers robust processing power for complex tasks.

- **A89333: Increased AI Server Reliability with Code-Free 48V Fan Driver**
  This motor driver offers code-free integration, reduced power loss and improved thermal management for 48V fans in AI servers. The integrated buck converter is designed to maximize efficiency, extending component life and boosting server reliability.

- **APM81815: Easy 48V Power Supply Design with Fewer Components**
  This synchronous buck regulator simplifies 48V power regulation, offering a cost-effective solution with minimal design effort and a tiny footprint. Integrated capacitors and 2.2MHz switching frequency achieve industry-leading power density and superior EMI performance, making it ideal for electric power steering, braking, EV powertrains, thermal management, EV charging and robotics.

- **AHV85311: Smaller Simpler Design with Higher Efficiency**
  Supporting multiple SiC MOSFET vendors, this universal gate driver utilizing Power-Thru technology offers a compact, efficient solution that simplifies development and enhances overall system performance. By eliminating the need for an external transformer or isolated bias supply, it reduces size, noise and design complexity while boosting efficiency. Ideal for a range of applications, including onboard chargers (OBC), DC-DC converters, data center power supplies, solar inverters and industrial motors, it accelerates time to market with superior isolation characteristics and seamless integration for SiC power systems design.

Allegro's new power and motor control solutions represent a significant step forward in addressing many of the challenges faced in today's rapidly evolving automotive and industrial landscapes. Attendees at Electronica are invited to visit the Allegro MicroSystems booth # C5.479 to meet with members of the Allegro executive team, view live demos and discover how its 48V solutions continue to drive innovation that enables customers to optimize performance, efficiency and cost.

About Allegro MicroSystems
Allegro MicroSystems, Inc. is leveraging more than three decades of expertise in magnetic sensing and power ICs, to propel automotive, clean energy and industrial automation forward with solutions that enhance efficiency, performance and sustainability. Allegro's commitment to quality drives transformation across industries, reinforcing our status as a pioneer in "automotive grade" technology and a partner in our customers' success. For additional information, please visit https://www.allegromicro.com/en/.

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