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Reduce Switching Losses up to 50% While Accelerating Time to Market with the First Fully Configurable Digital Gate Driver for Silicon Carbide MOSFETs – Now Production Ready

New technology enables electric buses and other e-transportation power systems to meet and exceed stringent environmental conditions while maximizing efficiency

CHANDLER, Ariz., Sept. 20, 2021 (GLOBE NEWSWIRE) -- As demand for electric buses and other electrified heavy transport vehicles increases to meet lower emission targets, silicon carbide-based power management solutions are providing greater efficiencies in these transportation systems. To complement its broad portfolio of silicon carbide MOSFET discrete and module products, Microchip Technology Inc. **(NASDAQ: MCHP)** today announced a new 1200V production-ready digital gate driver, providing system developers with multiple levels of control and protection for safe, reliable operation and qualified to stringent transportation requirements.

For designers of silicon carbide-based power conversion equipment, Microchip's AgileSwitch® **2ASC-12A2HP** 1200V dual-channel digital gate driver with its Augmented Switching™ technology is production qualified and fully configurable. To ensure reliable, safe operation, the 2ASC-12A2HP gate driver provides multiple levels of control and a higher level of protection for silicon carbide MOSFET-based power systems. When compared to conventional gate drivers, key performance attributes of the AgileSwitch gate driver products include the ability to dampen drain-source voltage (Vds) overshoots by up to 80% and slash switching losses by as much as 50%. The 2ASC-12A2HP digital gate driver can source/sink up to 10A of peak current and includes an isolated DC/DC converter with low capacitance isolation barrier for pulse width modulation signals and fault feedback.

Microchip's 2ASC-12A2HP gate driver is compatible with the company's latest release of the Intelligent Configuration Tool (ICT). This interface allows users to configure gate driver parameters including the gate switching profiles, system critical monitors and controller interface settings. The result is a gate driver that is tailored to their applications without having to change hardware, helping to speed development time from evaluation through production and enabling designers to change control parameters during the design process. The ICT, which is a free-of-charge download, can save designers approximately three to six months of development time on new designs.

"The societal trend toward electrification of all vehicles including buses, trains, trams and agriculture transportation hinges on innovative power electronic solutions to get more

productivity from less energy," said Leon Gross, vice president of Microchip's discrete product business unit. "When combined with our silicon carbide power devices, this gate driver technology enables engineers to achieve new levels of power density in transportation systems and industrial applications."

In addition to commercial vehicles, other applications include charging infrastructure, energy storage systems, solar inverters and aircraft flight actuators.

Microchip's 2ASC-12A2HP gate driver is compatible with the company's broad portfolio of silicon carbide power devices and modules and is interoperable with other manufacturers' silicon carbide products. The company's combination of silicon carbide power modules and digital gate drivers enables designers to influence dynamic issues including voltage overshoot, switching losses and electromagnetic interference. Microchip provides silicon carbide MOSFET avalanche and short-circuit ruggedness alongside total system solutions designed to streamline development from benchtop to production.

Microchip's silicon carbide portfolio is complemented by its broad range of microcontrollers (MCUs) and analog solutions that provide total system solutions for high-power applications.

Development Tools
The AgileSwitch 2ASC-12A2HP digital gate driver is supported by the ICT including starter settings for many commercially-available silicon carbide switches. The gate driver also is supported by a family of module adapter boards to help designers connect to several different footprints, as well as the company's Augmented Switching Accelerated Development Kits (ASDAK) that include gate drivers, module adapter boards, a programming kit and the ICT software for silicon carbide MOSFET modules.

Availability
The AgileSwitch 2ASC-12A2HP digital gate driver is available now for volume production. To purchase the product mentioned here, visit our **purchasing portal** or contact a Microchip authorized distributor. For additional information, contact a Microchip sales representative, authorized worldwide distributor, or visit Microchip's **website**.

Resources
High-res image available through Flickr or editorial contact (feel free to publish):

- Application image: **www.flickr.com/photos/microchiptechnology/51403770657/sizes/l/**
- Product image: **www.flickr.com/photos/microchiptechnology/51405446109/sizes/l/**

About Microchip Technology
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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