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NEWS RELEASE

Power Integrations Introduces Software for Precise Control and Tuning of BridgeSwitch ICs in Single-Phase BLDC Motor Drives

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New Motor-Expert IEC6730 Class A-ready software tackles new energy efficiency regulations for appliances

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today released its Motor-Expert software, an embedded “C” code application, library and control GUI that enables designers using the company’s BridgeSwitch brushless DC (BLDC) motor driver ICs to precisely control and tune single-phase motors. BLDC motors are widely used in modern, high-efficiency appliances such as compressors, fans and water pumps in domestic appliances, and for ceiling fans and room air conditioning systems.

Power Integrations Introduces Software for Precise Control and Tuning of BridgeSwitch ICs in Single-Phase BLDC Motor Drives. New Motor-Expert IEC6730 Class A-ready software tackles new energy efficiency regulations for appliances. (Graphic: Business Wire)

BLDC motors frequently use three windings (phases) requiring six high-voltage IGBTs or MOSFETs to operate. Motor-Expert software supports the cost-effective single-phase motor architecture, slashing the number of high-voltage devices, associated costs, system complexity and inventory burden. It supports both sensor and sensorless operation, providing developers with additional system cost-reduction options and is transportable to many commonly embedded microcontrollers.

Cristian Ionescu-Catrina senior marketing manager said: “BLDC motors are experiencing exponential growth in home appliances and other markets due to new energy efficiency regulations. The BridgeSwitch Motor-Expert software reduces the cost and complexity of BLDC drives. The new software comes with ready-to-use application

examples for constant-speed and constant-torque operation, all of which are IEC6730 Class A-ready. Power Integrations created Motor-Expert with the design engineer in mind – it can radically streamline the design process and reduce time to market."

Motor tuning is performed through the Motor-Expert user interface with new control loop coefficients being updated in real time without having to recompile code. The interface also enables users to visualize system operation, displaying the status of data including current, speed, status, current error, and speed error. A diagnostics field within the software interface provides insight into inverter and motor operation.

The Motor-Expert software features accurate speed and current control loop functions. The modularity and flexibility of the API-based software architecture enables new use cases and functions to be added and allows users to port the software to their favorite microcontroller or combine with other code in a system CPU. The software meets static (MISRA) and dynamic performance profiling covering latency, jitter and execution time. It requires only 14 kB code memory and 5 kB SRAM, suiting it to microcontrollers with small memory capabilities. The BridgeSwitch motor drive IC can pair with 3 V and 5 V MCUs and removes the need for an external shunt resistor.

The BridgeSwitch integrated half-bridge IC family dramatically simplifies the development and production of high-voltage, inverter-driven single- or multi-phase PM and BLDC motor drives. The superior efficiency and distributed thermal footprint architecture of BridgeSwitch motor drives eliminates the need for a heatsink, reducing system cost and weight. Built-in hardware motor overcurrent protection enhances safety and reliability, and simplifies IEC 60335-01 and IEC 60730-01 certification, significantly reducing time-to-market.

The Motor-Expert GUI operation, software manual and hardware documentation for the BridgeSwitch BLDC motor-drive family of ICs is available from the Power Integrations website at: **https://www.power.com/bridgeswitch**.

About Power Integrations

Power Integrations, Inc. is a leading innovator in semiconductor technologies for high-voltage power conversion. The company's products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission and consumption of power in applications ranging from milliwatts to megawatts. For more information please visit **www.power.com**.

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