

# Power Integrations Delivers Industry's First Charger Interface IC Compatible With Qualcomm's Quick Charge 3.0 Technology

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New CHY103D IC optimizes efficiency to prevent handset overheating during high-speed charging

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced its newest member of the ChiPhy™ charger-interface IC family CHY103D, the first IC for off-line AC-DC chargers compatible with the Quick Charge (QC) 3.0 protocol from Qualcomm Technologies, Inc. (Nasdaq: **QCOM**), a subsidiary of Qualcomm Inc.

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Used alongside Power Integrations' **InnoSwitch™** AC-DC switcher ICs, the **CHY103D** device incorporates all of the functions needed to support QC 3.0. The QC 3.0 protocol implemented in the CHY103D device substantially reduces losses in the smart mobile device handset during rapid charging. This permits system designers to choose to charge handsets faster or reduce phone touch-temperature during charging, and enhances the efficiency of the charging process.

The IC improves charging efficiency and reduces heat dissipation by enabling voltage changes in 200 mV increments instead of the larger steps (e.g., from 5 volts to 9 or 12 volts) employed in many current rapid-charging designs. This technique allows the mobile device to optimize the supply voltage from the offline charger, minimizing losses in the phone's internal charge-management system.

**CHY103D** includes a wealth of protection features including Adaptive Output Overvoltage Protection (AOVP), which

prevents the output from exceeding 120% of the set output voltage, Output Soft Short-circuit Protection (OSSP), which detects partial shorts and stops power delivery to prevent overheating of cable and connector, and a Remote Shutdown Protection (RESP) feature which enables the powered device to shut the adapter off remotely if a fault is detected.

The **CHY103D** device itself consumes less than 1 mW at 5 V output; in combination with highly efficient InnoSwitch devices, this low power consumption aids designers in complying with stringent efficiency requirements for chargers, such as the upcoming revision to U.S. federal standards for external power supplies.

Adds Shyam Dujari, director of marketing at Power Integrations: "Fast charging of mobile devices requires more power than traditional charging, so the question of how to avoid overheating is a critical issue. **CHY103D** helps solve this challenge by improving charging efficiency. We are excited to be working alongside Qualcomm Technologies in their efforts to enhance the utility of mobile devices with Quick Charge 3.0 technology."

**CHY103D** devices are suitable for battery chargers for mobile devices such as tablets, smartphones, Bluetooth® accessories and various USB power output ports. It is also compatible with Quick Charge 2.0 products. Visit <http://www.power.com/chy103/> for more information.

## 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 <http://www.power.com>.

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## Media Contact

Power Integrations, Inc.

Peter Rogerson, 408-414-8573

**progerson@power.com**

or

## Press Agency Contact

BWW Communications

Nick Foot, 44 (0) 1491-636 393

**nick.foot@bwwcomms.com**