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Cypress USB-C Controller Speeds Up Power Delivery for Mobile Phone Chargers with Certification for Qualcomm® Quick Charge™ 4 Technology

Programmable EZ-PD™ CCG3PA Solution Enables Mobile Phone Chargers to Deliver an Improved Fast-Charging User Experience

SAN JOSE, Calif.--(BUSINESS WIRE)-- Cypress Semiconductor Corp. (NASDAQ:CY), the market leader in USB-C, today announced that its EZ-PD™ CCG3PA USB-C controller is one of the industry's first to achieve Qualcomm® Quick Charge™ 4 certification, enabling mobile phone chargers to deliver an improved fast charging user experience. Quick Charge 4 supports USB Power Delivery (PD) 3.0. USB PD features programmable power supply (PPS), which provides fast, efficient charging by allowing a smartphone to communicate with the charger to intelligently select the optimal voltage and current levels. Quick Charge 4 also adds various safety enhancements and is engineered to allow for charging without overheating.

This Smart News Release features multimedia. View the full release here:

<http://www.businesswire.com/news/home/20170911005124/en/>



Pictured is Cypress' EZ-PD CCG3PA USB-C controller. (Photo: Business Wire)

and easier than ever before," said Josh Warner, Product Manager, Qualcomm Technologies, Inc. "Quick Charge 4 is bringing the speed, reliability, safety and consistency of Quick Charge to a broader range of products, and having the Cypress EZ-PD CCG3PA controller certified marks another key step forward along that path."

The EZ-PD CCG3PA controller is a one-chip solution that minimizes bill-of-material costs for USB-C power source products by integrating several key components—error amplifiers for constant voltage, constant current and PPS applications, a 30 V regulator that allows direct operation from VBUS, VBUS short protection on configuration channel (CC) pins, gate drivers for high-voltage power FETs, a low side current sense amplifier, and dedicated hardware for legacy charger detection protocols plus system level electrostatic discharge (ESD) protection—that are essential in a USB-C power adaptor design.

Programmable overvoltage and overcurrent circuitry is included to protect systems against power overloads and other faulty

Cypress' programmable CCG3PA controller enables firmware upgradeability to keep up with evolving standards while ensuring interoperability. The controller's high level of integration minimizes bill-of-material costs and simplifies designs, replacing multiple discrete components with a single-chip solution. More information on the EZ-PD CCG3PA controller is available at <http://www.cypress.com/ccg3pa>.

"With certified Quick Charge 4 compliance, Cypress' EZ-PD CCG3PA controller offers mobile charger makers a highly-integrated solution to streamline the design of next-generation fast-charging products," said Ganesh Subramaniam, Senior Marketing Director for Cypress' Wired Connectivity Business Unit. "CCG3PA not only delivers the required support for Quick Charge 4, but also the ability to upgrade firmware to keep pace with future changes to that standard."

"Having an industry leader in USB-C and USB Power Delivery such as Cypress support Quick Charge 4 demonstrates its growing adoption and points to its strong end-user benefits to make charging faster

operating conditions. The controller also integrates an Arm[®] Cortex[®]-M0 and 64KB Flash to support firmware upgradeability. The product enables design of efficient USB-C power adapters for a wide range of applications including mobile phones, notebook PCs, tablets and consumer electronics.

The USB Type-C and Power Delivery standards are gaining rapid support with top-tier electronics manufacturers by enabling slim industrial designs, easy-to-use connectors and cables, and the ability to transmit multiple protocols and deliver up to 100 Watts of power. The USB Type-C standard's 2.4-mm-high connector plug is significantly smaller than the current 4.5-mm USB Standard-A connector. More info on Cypress' USB Type-C and Power Delivery solutions is available at www.cypress.com/Type-C.

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About Cypress

Cypress is the leader in advanced embedded system solutions for the world's most innovative automotive, industrial, home automation and appliances, consumer electronics and medical products. Cypress' programmable systems-on-chip, general-purpose microcontrollers, analog ICs, wireless and USB-based connectivity solutions and reliable, high-performance memories help engineers design differentiated products and get them to market first. Cypress is committed to providing customers with the best support and engineering resources on the planet enabling innovators and out-of-the-box thinkers to disrupt markets and create new product categories in record time. To learn more, go to www.cypress.com.

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