



For immediate release

USB PD Controller from Diodes Incorporated Supports Standard and Proprietary Protocols for Power Delivery in a Small Outline Package

Plano, TX – May 14, 2019 – Diodes Incorporated (Nasdaq: DIOD) today announced the introduction of the AP43770 USB Type-C™ power delivery (PD) controller, a highly integrated solution for implementing PD over USB in fixed and portable devices, and offline power adapters. The AP43770 is well-suited to a range of applications where USB PD is implemented, including AC adapters, power hubs, battery banks, and USB PD converters. It features an embedded microcontroller running firmware compliant with the latest USB Type-C specification and USB PD Revision 3.0 V1.1. Support for Qualcomm® Quick Charge™ (QC) 4/4+ is built into the device. Additionally, the inclusion of QC3.0, QC2.0, and Battery Charging (BC) revision 1.2 and other legacy protocols with auto-detection means that backwards compatibility can be maintained with existing equipment.

The programmable power supply (PPS) feature, introduced with the latest version of the USB PD specification, is also supported by the AP43770. The PPS feature allows the output voltage to vary based on the load requirements; this is communicated using a relevant augmented power data object (APDO). Support for PPS with APDO is implemented in the AP43770 through a constant current and constant voltage (CC/CV) output driver that is adjustable in 50mA steps up to 6A, and 20mV steps between 3V and 20V, respectively.

As USB PD has the potential to deliver high levels of power, the USB eMarker feature is increasingly applied to active cables. The AP43770 includes the necessary support for eMarker technology, in order to detect and identify cables before power is delivered. Cable compensation is also supported.

When coupled with a suitable PWM controller, such as Diodes' AP3108L, the AP43770 provides a total PD solution. It also features up to 8kb of OTP (for main firmware code) or MTP (for user configurable parameters). MTP memory can be used to set up power specification and protocol options to the manufacturer's requirements.

The AP43770 is available in the space-saving TSSOP-16 package. Further information is available at www.diodes.com.

Qualcomm is a trademark of Qualcomm Incorporated, registered in the United States and other countries. Quick Charge is a trademark of Qualcomm Incorporated.

Qualcomm Quick Charge is a product of Qualcomm Technologies, Inc.

USB Type-C is a trademark of USB Implementers Forum.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog and mixed-signal semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors, power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes also has timing, connectivity, switching, and signal integrity solutions for high-speed signals. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas and Milpitas, California. Design, marketing, and engineering centers are located in Plano; Milpitas; Taipei, Taiwan; Taoyuan City, Taiwan; Zhubei City, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Manchester and Greenock, UK, and Shanghai, China. Diodes has assembly and test facilities located in Shanghai, Jinan, Chengdu, and Yangzhou, China, as well as in Hong Kong, Neuhaus and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; and Munich, Germany, with support offices throughout the world.

Recent news releases, annual reports and SEC filings are available at the Company's website: <http://www.diodes.com>. Written requests may be sent directly to the Company, or they may be e-mailed to: diodes-fin@diodes.com.

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