

# Power Integrations and Weltrend Semiconductor Announce 18 W USB PD Rapid-Charger Reference Design for Smart Mobile Devices

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Combination delivers high efficiency and a compact footprint

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, in association with Weltrend Semiconductor Inc. (TWSE: 2436), the leader in USB Type-C™ Power Delivery (PD) controllers, today announced a joint reference design describing an 18 W, USB PD compliant, AC-DC power converter targeted at chargers for smart mobile devices. The design, titled **DER-567**, pairs the WT6630P USB Type-C PD controller from Weltrend with Power Integrations' **InnoSwitch™-CP** off-line CV/CC flyback switcher IC, enabling designers to produce a compact and highly energy-efficient standards-compliant power adapter.

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

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Comments Shyam Dujari, director of marketing for Power Integrations: "USB PD adds

significant intelligence to adapters and allows more power to be delivered flexibly and safely. Users can expect faster charge times for the larger batteries required to power next-generation mobile devices."

Adds Tony Lin, executive assistant to the CEO and acting VP of marketing at Weltrend: "USB PD adoption started first in notebook PCs and is now rapidly becoming the preferred choice of smartphone OEMs for safe and rapid charging."

Weltrend's WT6630P USB PD controller is certified by USB Implementers Forum (USB-IF) for USB Type-C and is compatible with the USB PD 2.0 baseband communication protocol. The Weltrend device reduces the BOM by combining Type-C cable detection circuits, USB PD physical layer (PHY), and components related to system-level protections such as over-voltage protection (OVP), over-current protection (OCP), and over-temperature protection (OTP).

By providing a constant power output, Power Integrations' InnoSwitch-CP switcher IC allows battery-operated devices to draw maximum power from the charger at any selected output voltage, optimizing charge time and cost. InnoSwitch-CP ICs use the company's innovative **FluxLink™** technology, eliminating the need for an optocoupler and enabling secondary-side control that delivers fast transient performance, exceptional CV/CC regulation and very low no-load power consumption. FluxLink technology also enables easy implementation of safe synchronous rectification, resulting in an extremely efficient power supply.

Commented Dujari: "With Type-C cable and USB PD protocol support, an 18 W adapter is the logical next level for rapid charging and we are pleased to work with Weltrend on this joint reference design. The WT6630P controller delivers a highly cost-effective implementation of the USB 2.0 specification, helping leading suppliers in bringing a USB PD compliant adapter to the market. The design is already in mass production by a leading smartphone OEM."

Added Lin: "Power Integrations' InnoSwitch AC-DC converter ICs offer the high efficiency, reliability and compact footprint required by developers of rapid charging adapters for the smart mobile industry. We are pleased to work with Power Integrations in delivering this reference design to support the fast growing adoption of USB PD in smart mobile devices."

Reference Design, DER-567, implements USB PD standard 2.0 and is capable of 5 V/3 A and 9 V/2 A of power delivery over a standard non-E-marked USB Type-C cable. More information on the Weltrend controller is available at [www.weltrend.com/en-global/product/detail/67/112/395](http://www.weltrend.com/en-global/product/detail/67/112/395). The design may be downloaded at <http://www.power.com/der-567>.

## 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](http://www.power.com).

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Media Contact

Power Integrations, Inc.

Peter Rogerson, 408-414-8573

**[peter.rogerson@power.com](mailto:peter.rogerson@power.com)**

or

Press Agency Contact

BWW Communications

Nick Foot, 44-1491-636 393

**[nick.foot@bwwcomms.com](mailto:nick.foot@bwwcomms.com)**