



NXP Introduces Highly Integrated Power Bank Solution with Built-in 15 Watt Qi Wireless Charger and Qualcomm Quick Charge for Ultimate Charging Speed and Flexibility

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NXP Semiconductors today announced a new highly integrated power bank solution, supporting the industry's latest mobile device charging methods with support for both 15 Watt wireless power and Qualcomm® Quick Charge™ 4+ power output. The NXP power bank is designed to deliver >50 Watts of power and enables fast and simultaneous multi-channel charging across power levels for smartphones, watches, tablets and notebooks – capable of delivering up to five hours of battery life for mobile devices after just five minutes of charging.

Using this solution, NXP customers can design power bank applications fast and with less effort. According to NXP customer and partner, Celxpert Energy Corporation, the new NXP power bank solution meets market demands, which require support for the latest power output technologies, including smartphones with wireless fast charging. Celxpert is also partnering with NXP to offer customization and manufacturing services to further reduce engineering costs and time to market for power bank suppliers.

Technical Features

The NXP power bank solution supports the Wireless Power Consortium (WPC) Qi standard for power delivery, communications and safety. Based on the Qi certified MP-A11 topology, the fixed-frequency design supports Qi wireless power devices up to 15 watts.

New power delivery (PD 3.0) technology combined with a programmable power supply (PPS) in a single design enables support for Quick Charge 4+ devices and provides backward compatibility with existing Quick Charge 3.0 and Quick Charge 2.0 technologies. The power bank system software integration includes wireless power and battery management, power delivery stacks and a programmable API for creation of a fully customizable application.

The new power bank solution from NXP includes: power bank controller (MPB461) that integrates battery management, wireless power transfer, Quick Charge and USB PD control; load switches (NX20P5090) operating from 2.5 V to 20 V with 5 A continuous current; an AC-DC programmable power supply (TEA1936, TEA1998, TEA19051B) that supports a USB-PD programmable AC-DC power supply; a Type-C/PD (PTN5110) PHY that enables USB-PD communications between the Power Bank and the AC-DC programmable power supply; and integrated power stages (PCA9440) supporting wireless power delivery.

Availability

NXP is currently working with lead customers and the solution is expected to be broadly available in the beginning of Q1 2019. For more product and certification information, please visit: www.nxp.com/wirelesspower

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Power Bank Quick Charge 4/4+ certification requires specific Qualcomm power management charging chips for power bank charging implementation.