

The Wireless Power Consortium Releases the 0.95 Specification

Camille Tang, Co-Chair, Wireless Power Consortium

Wireless power interoperability marked an important milestone with the 31 July 2009 release of 0.95 specifications of Qi, the Wireless Power Consortium's "WPC" international standard in wireless power.

This interoperability means that all Qi power receivers can be powered and charged with all Qi transmitters. Such wireless power interoperability turbocharges a wireless power charging market from US\$ 6 billion to over US\$ 15 billion. Qi offers device manufacturers leverage to offer more features, product choices and opportunities for cost effectiveness in low power electronics of 5 watts and below.

Established 17 December 2008, the Wireless Power Consortium's mission is to create and promote wide market adoption of an international wireless power standard for interoperability across rechargeable electronic devices. Members include ConvenientPower, Duracell, Hosiden, Fulton Innovation, Leggett & Platt, Logitech, National Semiconductor, Olympus, Philips, Samsung, Sanyo, Shenzhen Sangfei Consumer Communications, and Texas Instruments

Key elements of the 0.95 specification

The 0.95 Qi technical specifications define key elements of the inductive wireless power transfer interface and describes in detail:

- The wireless power inductive system which is based on proximity inductive power transfer up to a few millimeters. The main application is battery charging in a wide range of mobile devices up to 5 watts such as mobile phones, digital cameras, MP4's, headsets, with other suitable loads supported also.
- A number of transmitter and receiver executions which offer the device manufacturers flexibility in design options; all executions will be interoperable. The WPC offers systems based on single coil chargers, either through magnet alignment or through a moving transmitter coil and a coil array charger system offering freedom of positioning where a device placed in any direction or position on the charging surface charges in the same time or faster than a wired charger.
- The communications and control between compatible transmitters and receivers ensuring that only Qi compatible receivers will be correctly and safely charged by Qi compliant transmitters. Through detection of a resonant circuit in the mobile device at a specific frequency and digital communications from the mobile device to the charger, the charger will verify that Qi compliant mobile devices are present and suitable to charge. Communications will be from mobile device to charger only. The

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mobile device will be in control with the charger adjusting the primary coil current.

What does the 0.95 specification mean for engineers designing low power products ?

“The 0.95 specifications allow WPC members early access and a competitive advantage leadtime of 5 months or more in the development of Qi prototypes and products”, says Camille Tang, President of ConvenientPower and Co-Chair, Wireless Power Consortium, Promotion Work Group. “The first interoperability test of prototypes takes place 15 and 16 September 2009.”

This early prototyping and testing triggers learning, brainstorming and sharing of expertise between members with considerable experience across the electronics value chain - something particularly valuable in an innovative technology such as wireless power. Wireless power charging adds functionality, brand enhancement, margins and market share capture in its evolving consumer and business applications across industries.

Learning and feedback from members’ prototyping and interoperability testing will then be considered when modifying and finalizing the Qi 1.0 specification according to time-to-market, cost, technical feasibility and other relevant factors.

The WPC welcomes new members. For more information, please visit www.wirelesspowerconsortium.com [1]

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