

# New 100W USB 3.0 Spec Can Charge Laptops

USB 3.0 Promoter Group, a consortium of companies including Intel, HP, Microsoft and ST-Ericsson, has announced the new [USB Power Delivery specification](#) which includes the ability to transfer up to 100 Watts (W) through the familiar socket.

The new standard will enable convenient charging of laptops and other power-hungry devices, such as external HDDs and printers, while also offering 5 Gbit/s data transfer rate. The Group hopes that the new cable will help eliminate device-specific chargers, and result in less e-waste.

## Raw power

The USB 3.0 Promoter Group was responsible for the development of the USB 3.0 specification that was released in November 2008. Since then, it has been working on improving the standard, thinking up features that would deliver a better user experience.



The USB 2.0 and 3.0 Promoter Groups have already handed the specification's management to the USB Implementers Forum, a non-profit corporation that has supported the format since its inception.

Under the new specs, the cable will be able to supply much more power than the 2.5W that is delivered by USB 2.0, and 4.5W previously delivered by USB 3.0.

The USB Power Delivery specification enables a switchable source of power without changing cable direction. It will feature six power profiles, and will be able to alter between them on the fly.

According to [semiaccurate.com](#), Profile 1 will feature 2 Amps, delivered at 5 Volts, while Profile 2 will offer 5V@ 2A or 12V@1.5A. Profile 3 can deliver 5V@2A or 12V@3A, and Profile 4 goes up to 20V@3A. Profile 5 reaches the full 100W, offering 12V or 20V at 5A.

The high power charging will require special, electronically detectable and very clever "USB Power Delivery" certified cables, which will be backwards compatible with all types of USB 2.0 and 3.0.

"USB Power Delivery enables a path to greatly reduce electronic waste by eliminating proprietary, platform-specific chargers," said Brad Saunders, USB 3.0 Promoter Group chairman. "We envision a significant move toward universal charging based on this specification, most notably for charging notebook PCs using standardized USB power bricks or when connected to USB hubs and desktop displays that integrate USB Power Delivery capabilities.

"We believe USB Power Delivery is the next big step in the USB evolution to provide high bandwidth data and intelligent power over a simple, single, ubiquitous cable," commented Robert

Hollingsworth, senior vice president and general manager of the USB Products Group at SMSC.

“USB has always combined data and power over a single cable, and this is widely believed to be a major contributor to the present ubiquity of USB. Power Delivery builds on that success and adds full bi-directional power that can be renegotiated as system power needs change with the end-user,” he added.

A question remains: will companies like Apple, who have used proprietary chargers and connectors for years despite the prevalence of the USB standard, adopt the new cable?

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