

DEVELOPER UPDATE

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USB Promoter Group Announces USB Power Delivery Specification Revision 3.1 *Specification defines delivering up to 240W of power over USB Type-C®*

Beaverton, OR, USA – May 26, 2021 – The USB Promoter Group today announced the release of the USB Power Delivery (USB PD) Revision 3.1 specification, a major update to enable delivering up to 240W of power over the USB Type-C® cable and connector. Prior to this update, USB PD was limited to 100W via a solution based on 20V using USB Type-C cables rated at 5A. The USB Type-C specification has also been updated with Release 2.1 to define 240W cable requirements, and with the updated USB PD protocol and power supply definition, this extends the applicability of USB PD to a large number of applications where 100W wasn't adequate.

The new USB PD architecture defines a much more stringent power negotiation protocol that helps to ensure that access to and use of this higher power capability can be done safely. It should be noted that safety requirements for products that use power in the range of 100 – 240W are also more stringent than lower power products and are defined by the applicable safety specifications dictated by the regulations for each country where the products will be sold.

“With the new capabilities of USB Power Delivery 3.1, we now enable higher power products such as larger notebook PCs to shift from traditional power connectors to USB Type-C,” said Brad Saunders, USB Promoter Group Chairman. “We also anticipate a wider range of product application developers outside of the traditional USB ecosystem to now consider standardizing on USB Type-C with USB PD power their power needs.”

Key characteristics of the USB PD 3.1 specification include:

- A choice of three new fixed voltages: 28V (above 100W), 36V (above 140W) and 48V (above 180W) joining previously defined 5V, 9V, 15V and 20V fixed voltages.
- A new adjustable voltage mode enabling a range from 15V to one of three maximum voltages (28V, 36V, or 48V) depending on the available power allowing the device being powered to request specific voltages to a 100 mV resolution.

USB Developer Days 2021, in the second half of this year, will include detailed technical training covering the updated USB PD and USB Type-C specifications.

This update is part of the USB performance roadmap and is specifically targeted to developers at this time. Branding and marketing guidelines are being established and will include a new cable labeling solution to inform users of the power capability supported by Certified USB Type-C cables.

“Always responsive to the market’s need for a higher-power, truly universal bus connector, the USB Promoter Group has again been quick to recognize and adapt its specifications for charging capability to anticipate customer requirements, potentially creating new markets for USB Power Delivery. ST, as an active member of the USB Promoter Group, with its strong company legacy of cooperation, technical expertise, and product reliability, will continue to provide high-quality, optimized semiconductor solutions,” said Matteo Lo-Presti, Executive Vice President, Analog, Sub-Group General Manager, Analog MEMS, and Sensors Group, STMicroelectronics.

“The 3.1 revision to the USB Power Delivery specification, which includes the capability to provide up to 48 V and 240 W of power, will help enable additional design opportunities for current and new users of USB Type-C technology,” said Deric Waters, senior member of technical staff at Texas Instruments.

About the USB Promoter Group

The USB Promoter Group, comprised of Apple Inc., Hewlett-Packard Inc., Intel Corporation, Microsoft Corporation, Renesas Electronics Corporation, STMicroelectronics, and Texas Instruments, continues to develop the USB family of specifications to meet the market needs for increased functionality and performance of USB solutions. Additionally, the USB Promoter Group develops specification addendums (USB Power Delivery, USB Type-C®, and others) to extend or adapt its specifications to support more platform types or use cases where adopting USB technology will be beneficial in delivering a more ubiquitous, richer user experience.

About the USB-IF

The non-profit USB Implementers Forum, Inc. was formed to provide a support organization and forum for the advancement and adoption of USB technology as defined in the USB specifications. The USB-IF facilitates the development of high-quality compatible USB devices through its logo and compliance program, and promotes the benefits of USB and the quality of products that have passed compliance testing. Further information, including postings of the most recent product and technology announcements, is available by visiting the USB-IF website at www.usb.org.

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