USB 3.0 Promoter Group Announces USB Type-C Connector Ready for Production

Next generation USB Type-C connector enables thinner and sleeker product designs

Beaverton, OR – August 12, 2014 – The USB 3.0 Promoter Group today announced the completion of the USB Type-C specification that defines the next generation USB connector. The USB Type-C specification establishes a new cable and connector scheme tailored to fit mobile device product designs, yet robust enough for laptops and tablets. With this release, the specification has been transferred to the USB Implementers Forum (USB-IF) for ongoing management and the establishment of a compliance and certification program. The specification is available for download from the USB-IF website www.usb.org.

“Interest in the USB Type-C connector has not only been global, but cross-industry as well,” said Brad Saunders, USB 3.0 Promoter Group Chairman. “Representatives from the PC, mobile, automotive and IoT industries have been knocking down our door anticipating this new standard. This specification is the culmination of an extensive, cooperative effort among industry leaders to standardize the next generation USB connector as a long-lasting, robust solution.”

The USB Type-C specification defines the physical USB Type-C cable and connector form factor along with the functional requirements for detecting and managing USB connections over an extensible wiring architecture. This new cable and connector supports USB performance at SuperSpeed USB 10 Gbps (USB 3.1) and USB Power Delivery up to 100W.

Key characteristics of the USB Type-C connector include:

- Entirely new design
  - Tailored for emerging product designs
  - Robust enough for laptops and tablets; slim enough for mobile phones
  - Similar to size of USB 2.0 Micro-B
- Usability enhancements
  - Reversible plug orientation and cable direction
- Supports scalable power charging
- Future scalability
  - Designed to support future USB performance needs
- Mechanical specs:
  - Receptacle opening: ~8.4mm x ~2.6mm
  - Durability: 10,000 cycles
  - Improved EMI- and RFI-mitigation features
  - Power delivery capacity: 3A for standard cables and 5A for connectors
The new USB Type-C plug and receptacle will not directly mate with existing USB plugs and receptacles (Type-A, Type-B, Micro-B, etc.); however, the USB Type-C specification defines passive new-to-existing cables and adapters to allow consumers to use the new connector with their existing products.

“USB has the luxury of consumer familiarity and trust, and as we adapt the technology for the future we are committed to ensuring the USB brand promise continues with this new USB Type-C connector and cable,” said Jeff Ravencraft, USB-IF President and COO. “The USB-IF is working to establish certification and compliance testing so that consumers can have the same confidence in the next generation of certified USB technology.”

**Delivering a Single-Cable Solution to the Industry**

The release of the USB Type-C specification is the final piece in developing a single-cable solution. The combination of SuperSpeed USB 10 Gbps and USB Power Delivery up to 100W with the slim, user-friendly USB Type-C connector provides endless possibilities. An ideal example use case is a docking solution that features a single USB Type-C cable connection to dock and power your PC, and a hub within the dock that can connect multiple screens streaming video with additional bandwidth available for many other functions. USB is an adaptable solution that is flexible enough to fit the varied needs of consumers.

Developers interested in implementing the new USB Type-C specification have the opportunity to learn technical details at upcoming developer conferences currently being planned. Details and conference registration instructions will be posted on [www.usb.org](http://www.usb.org).

**Supporting Quotes**

“In addition to the trend of smaller and more mobile devices driving reduced connector sizes, customers expect ease of use, excellent performance, and high reliability in connectivity solutions,” said Tom Bonola, HP Fellow and Chief Technologist for Business Personal Systems, HP. “HP is committed to the new USB Type-C connector as a way to deliver on all of these needs while supporting the full breadth of USB devices and providing a pathway for future innovations to create and deliver superior customer value and experience.”

“This next generation of USB technology opens the door for the invention of an entirely new, super thin class of devices that consumers haven’t even seen yet,” said Alex Peleg, vice president, Platform Engineering Group, Intel Corporation. “The USB Type-C connector, combined with high-performance data and power, is the ideal single-cable solution for all devices now and into the future.”

“Microsoft sees this new USB Type-C interface becoming the next generation industry standard for high speed wired local connectivity,” said Ilan Spillinger, corporate vice president for technology and silicon in Microsoft’s Devices Group. “It will offer more intuitive consumer experience by means of reversible plug orientation and cable direction designs. Further, this new USB Type-C allows for radically higher data speeds and power carrying capabilities compared to the existing methods. As one of the key industry players behind the new design, we at Microsoft believe this is an important milestone in consumer electronics ecosystem development.”

“Renesas congratulates the USB 3.0 Promoter Group and USB-IF for the completion of the new USB Type-C specification,” said Ichiro Tomioka, vice president, Chief of OA & ICT
Business Division, Renesas Electronics Corporation. "As a USB Promoter Group member for the last 20 years, Renesas believes that this new specification can further expand the capabilities of the USB interface into many vertical markets, including industrial and automobile applications."

"The USB Type-C connector is a major breakthrough that combines 10 Gbps high-speed communication with charging capability scalable up to 100W, while consolidating numerous cables into one robust, unique cable with reversible plug orientation and cable direction that significantly improves the user experience,” said Joel Huloux, director, Standardization & Industry Alliances, STMicroelectronics. "The USB Type-C cable addresses future needs and, on the road or in the office, opens the door to exciting new applications in the realm of DC power distribution into buildings, video transmission, accessory support and higher communication speed.”

"Numerous products will benefit from the increased performance and flexibility that the USB Type-C connector provides," said Roland Sperlich, TI Consumer and Computing Interface Product Line Manager. "The wave of USB Type-C products to come will not only offer expanded capabilities, but also simplify user experience."

**About the USB 3.0 Promoter Group**

The USB 3.0 Promoter Group, comprised of Hewlett-Packard Company, Intel Corporation, Microsoft Corporation, Renesas Electronics, STMicroelectronics and Texas Instruments, developed the USB 3.1 Specification that was released in July 2013. In addition to maintaining and enhancing this specification, the USB 3.0 Promoter Group develops specification addendums to extend or adapt its specifications to support more platform types or use cases where adopting USB 3.1 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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