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USB-IF Announces Publication of New USB4® Specification to Enable USB 80Gbps Performance

Beaverton, OR, USA – October 18, 2022 – USB Implementers Forum (USB-IF), the support organization for the advancement and adoption of USB technology, today announced the publication of the USB4® Version 2.0 specification, a major update to enable USB 80Gbps performance over the USB Type-C® cable and connector. The updated USB4 specification doubles the maximum aggregate bandwidth of USB to the benefit of higher-performance displays, storage, and USB-based hubs and docks. The USB Type-C and USB Power Delivery (USB PD) specifications have also been updated to support this higher level of data performance.

The updated specifications are now available for product developers to download at www.usb.org.

“For engineers, USB4 is defined by its multi-protocol tunneling that architecturally differentiates it from its predecessors – USB 3.2 and USB 2.0,” said Brad Saunders, USB-IF Board Chair and CEO. “This updated technical specification extends USB4 speed and data protocol performance, enabling manufacturers to develop products that can deliver USB 80Gbps in addition to existing USB 40Gbps and USB 20Gbps to end users.”

Key characteristics of the updated USB 80Gbps solution include:

- Up to 80Gbps operation, utilizing a new physical layer architecture based on PAM3 signal encoding, over *existing* 40Gbps USB Type-C passive cables and newly defined 80Gbps USB Type-C active cables.
 - Optionally for certain applications, such as driving very-high performance USB4-based displays, the USB Type-C signal interface can be configured asymmetrically to deliver up to 120Gbps in one direction while retaining 40Gbps in the other direction.
- Updates to data and display protocols to better use the increase in available bandwidth
 - USB data architecture updates now enable Enhanced SuperSpeed USB data tunneling to exceed 20Gbps.
 - Aligns with DisplayPort™ Revision 2.1 and PCI Express® Revision 4.
- Backward compatibility with all previous versions of USB.

Guidelines for identifying certified USB 80Gbps solutions and cables will follow the new unified USB-IF branding and marketing program. As a reminder, USB specification names and technical terminology are not intended for use when describing USB capabilities to end consumers. USB-IF certified logo and branding details are available at www.usb.org/logo-license.

USB Developer Days 2022 will include detailed technical training covering the latest updates to the USB4, USB Type-C and USB PD specifications. Registration information for the following two scheduled events is available at www.usb.org.

- USB Developer Days – Seattle
November 1-2, 2022
Grand Hyatt Seattle, Seattle, Washington, USA
- USB Developer Days – Seoul
November 15-16, 2022
Grand Hyatt Seoul, Seoul, South Korea

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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