Keysight Solutions Support Industry Adoption of the New USB4® Version 2.0 Specification

New test and measurement solutions accelerate the development, implementation, and deployment of new USB 80Gbps compatible devices

SANTA ROSA, Calif., October 19, 2022 – Keysight Technologies, Inc. (NYSE: KEYS), a leading technology company that delivers advanced design and validation solutions to help accelerate innovation to connect and secure the world, announced new simulation and test and measurement solutions that accelerate the development, implementation, and deployment of new USB 80Gbps compatible devices.

USB4® Version 2.0 specification enables a plug-and-play interface for inter-digital communication, offering significant advantages in bandwidth and data delivery. Keysight's industry collaborations, coupled with extensive research and development efforts, have enabled the company to deliver solutions specifically for design characterization and validation for USB 80Gbps. As a result, an ecosystem built around reversible and backward compatible USB Type-C® connectors, consisting of silicon vendors and system integrators, can effectively address a growing digital device market with applications including high-resolution displays and higher-fidelity virtual reality devices.

Specific to USB4 Version 2.0, Keysight is introducing the D9050USBC Transmitter test application, which automates the testing of measurements required for transmitter compliance and return loss testing for USB 80Gbps. In addition, the N5991U42A Receiver test application automates the complex calibration and receiver testing of USB 80Gbps products. Keysight's 7019A USB Type-C® Active Link Fixture provides access to all USB Type-C signals in a USB 80Gbps live link.

"Visions like the metaverse are part of the next chapter of the world's digital transformation. A wide range of products, including smartphones, AR/VR devices, computers, tablets, and digital cameras, will rely on this next-generation high-speed digital standard," says Joachim Peerlings, Vice President of Network and Data Center Solutions at Keysight. "Our commitment to supporting the USB Implementers Forum (USB-IF) and an ecosystem based on the USB4 specification will help drive the adoption of the ubiquitous USB digital connectivity standard."

In conjunction with the D9010USBP USB Protocol Trigger and Decode, customers can configure protocol-level searches and triggers to debug and decode USB 80Gbps sideband and high-speed traffic. Keysight's network analyzer application software, such as S96011B Enhanced time-domain analysis with TDR and S94USBCB USB Type-C interconnects compliance test application, simplifies and automates the complex test and characterization process of USB Type-C interconnects compliance testing to support the USB4 / USB Type-C test ecosystem.

To enable early design stage simulations as well as extensive system level post-layout analysis, Keysight's PathWave Advanced Design System, Pathwave ADS, now offers a USB4 Version 2.0 IBIS-AMI model maker which facilitates the development of such models for USB 80Gbps devices. The IBIS-AMI models generated using the W3081E are then used in ChannelSimulation to predict and simulate the BER, eye metrics, and other design parameters.

"USB-IF is committed to working closely with the industry and its members, such as Keysight, who support the delivery of high-performance USB solutions while ensuring reliability, ease-of-use and quality," said Jeff Ravencraft, President and COO of USB-IF. "Keysight's early solutions helped facilitate

the roll-out of the USB4 specification to accelerate the market introduction of certified USB 80Gbps products."

Keysight offers a comprehensive portfolio of high-speed digital instrumentations.

- **Keysight's Infinium UXR-Series Oscilloscopes** deliver accuracy in waveform representation across a wide frequency range.
- Keysight's Vector Network Analyzers measure both the amplitude and phase responses caused by the device. The resulting transmission and reflection measurements, impedance, and s-parameters are then used for compliance tests and characterization.
- Keysight's highly integrated **Bit Error Ratio Testers (BERTs**) identify errors introduced into the system when data is received. This is a critical capability in physical layer characterization, validation, and compliance testing.

USB4®, USB Type-C® and USB-C® are registered trademarks of the USB Implementers Forum (USB-IF).

About Keysight Technologies

Keysight delivers advanced design and validation solutions that help accelerate innovation to connect and secure the world. Keysight's dedication to speed and precision extends to software-driven insights and analytics that bring tomorrow's technology products to market faster across the development lifecycle, in design simulation, prototype validation, automated software testing, manufacturing analysis, and network performance optimization and visibility in enterprise, service provider and cloud environments. Our customers span the worldwide communications and industrial ecosystems, aerospace and defense, automotive, energy, semiconductor and general electronics markets. Keysight generated revenues of $4.9B in fiscal year 2021. For more information about Keysight Technologies (NYSE: KEYS), visit us at www.keysight.com.

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