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Ellisys Updates Analyzer Support for USB4™ and DisplayPort™ 2.0

Multi-Protocol Type-C Tracker™ Ready for Next-Gen Technologies

Geneva, Switzerland — September 11, 2019 — Ellisys, a leading worldwide provider of test and analysis solutions for Bluetooth®, Wi-Fi®, Universal Serial Bus (USB), DisplayPort, and other wired and wireless communications technologies, today announced it has added relevant sideband, Power Delivery, USB4 modal operations, and alternate mode support for DisplayPort 2.0 to its widely deployed Type-C Tracker analyzer. The Type-C Tracker is a multi-technology protocol analyzer supporting USB and Power Delivery protocols, and a variety of communications technologies that use the ubiquitous USB Type-C® cable and connector standards via standardized alternate mode approaches.

“Changes to USB Type-C communications are coming from within the USB ecosystem, such as USB4, and from non-USB technologies that use the Type-C cable and connector standards, such as DisplayPort” said Mario Pasquali, Ellisys president and CEO. “Such changes present a range of development and integration complexities that are ideally met with extensible analytical and debug tools. The comprehensive nature of our Type-C Tracker makes it a natural fit in just about any lab where development involving technologies using Type-C is being done.”

USB-IF Doubles Bandwidth with USB4

The USB4 specification was published by the USB Implementers Forum (www.usb.org) earlier this month. USB4 doubles the bandwidth from the prior USB standard, up to 40Gbps, using a two-lane approach. USB4 is based on Intel’s Thunderbolt™ specification, which was contributed to the USB Promoter Group. USB4 will use only the Type-C connector. Updates to the Tracker support USB4 changes that affect USB Power Delivery alternate mode protocol and sideband control signaling on the Type-C connector.

“The USB Type-C interconnect standard brings about a convergence of various high-speed communications technologies, complex approaches to power delivery, and various sideband control protocols, and while this flexibility brings about a particular convenience for end users, it presents significant challenges to product design and test,” said Rod Whitby, CTO at [ASTC](http://ASTC.com), a global leader in the implementation of USB Power Delivery specifications as well as architecture and delivery of turnkey USB-C® and PD applications. “The Type-C Tracker from Ellisys provides our team versatility with its multi-protocol capture capabilities and synchronized electrical analyses, but it also declutters valuable benchtop workspace as it consolidates many tools into one very compact package.”

VESA® Triples Bandwidth to Drive Future Development and Enhance Existing Technology

The Video Electronics Standards Association (www.vesa.org) published the DisplayPort 2.0 specification in June of this year. DisplayPort 2.0 defines a 3x bandwidth increase (to 77.4 Gbps) over the prior version of the specification and is intended to support what VESA refers to as “beyond 8K” resolutions, as well augmented and virtual reality



(AR/VR) enhancements, higher refresh rates and higher dynamic range (HDR) for 4K. DisplayPort 2.0 allows for use of the native DP connector or Type-C. Updates to the Tracker support DisplayPort 2.0 changes that affect DisplayPort Auxiliary (AUX) channel sideband protocol.

“The advances defined in the DisplayPort 2.0 specification necessitate that the tools ecosystem includes these changes to help ensure new products conform and interoperate,” said Jim Choate, compliance program manager for VESA. “The Ellisys Type-C Tracker with its support for the latest DisplayPort alternate mode protocol and AUX channel traffic will be a welcome addition at DisplayPort test events and in the labs of our member companies.”

Comprehensive Support for Protocols and Standards

The pocket-sized and bus-powered Tracker supports an unparalleled collection of communications standards that operate over Type-C, including USB Power Delivery 2.0 and 3.0, USB 2.0, DisplayPort 2.0 Auxiliary (AUX) signaling, Thunderbolt™ 3 and USB4 sideband control traffic, I2C (including vendor protocols and the USB Type-C Port Controller Interface), Serial Peripheral Interface (SPI), Serial Wire Debug (SWD), UART, and various alternate mode protocols. Tracker conveniently supports synchronized capture of external GPIO/logic signals and synchronized voltage tracking features for USB Type-C power and signaling.

Availability, Product Photos, and Information

The Type-C Tracker is available for immediate purchase. Updates for existing users are provided at no cost with a software update available within the Tracker application. For more information, including software downloads, please contact sales@ellisys.com or visit www.ellisys.com/ctracker.

A high-resolution picture of the product is available at: http://www.ellisys.com/products/ctr1/images/ctr1_unit.png

Major Features

The Type-C Tracker supports one-click concurrent, synchronous capture of the protocols and electrical parameters listed below.

- USB Power Delivery 2.0 and 3.0
- USB 2.0
- DisplayPort 2.0 Alternate Mode over USB-C
- DisplayPort 2.0 Auxiliary (AUX) over the USB Type-C Side-Band Use lines (SBU)
- USB4 / Thunderbolt 3 Control over the USB Type-C Side-Band Use lines (SBU)
- USB Type-C Port Controller Interface (TCPCI) over I2C
- I2C
- Serial Wire Debug (SWD)
- Serial Peripheral Interface (SPI)
- UART
- HDMI Alternate Mode
- Logic / GPIO Signals
- Voltage Tracking for USB Type-C Communications Channel (CC and Vconn), both SBU lines, and Vbus

About Ellisys

Ellisys is a leading worldwide supplier of advanced protocol test solutions for Bluetooth, Wi-Fi, USB 2.0, SuperSpeed



USB, USB Power Delivery, USB Type-C, DisplayPort, and Thunderbolt. More information is available on www.ellisys.com.

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