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Ellisys Introduces Comprehensive USB Type-C™ Analyzer with Support for DisplayPort™, Thunderbolt™, and More

Multi-Protocol Tool Delivers Broad Coverage for USB Type-C Protocols and Alternate Modes

Geneva, Switzerland — May 11, 2017 — Ellisys, a leading worldwide provider of Universal Serial Bus (USB), Bluetooth® and Wi-Fi® protocol test and analysis solutions today introduced its latest USB Type-C™ analyzer solution, the Type-C Tracker™. The pocket-sized, bus-powered Tracker is designed to support concurrent, precisely synchronized capture and analysis of an unprecedented array of protocols and electrical communications operating over the versatile USB Type-C specification, an industry standard defined by USB Implementers Forum (www.usb.org). The USB Type-C specification defines optional support for Alternate Modes (Alt Modes) in addition to USB protocols. USB Type-C Alt Modes are defined by various standards organizations or proprietary companies, including Video Electronics Standards Association (VESA®) and several others, playing across a wide swath of applications and markets. The Tracker is accompanied by the popular Ellisys software suite, used in the labs of nearly every major developer of USB and USB Type-C products.

Supported Protocols and Standards

The Tracker supports USB Power Delivery 2.0 and 3.0, USB 2.0, DisplayPort™ Auxiliary (AUX), UART (including the USB Type-C sideband use approach used by Thunderbolt™ 3), I2C (including vendor protocols and the USB Type-C Port Controller Interface), Serial Peripheral Interface (SPI), Serial Wire Debug (SWD), and various Alt Mode protocols operating over USB Type-C and USB Power Delivery protocol, including DisplayPort, Thunderbolt, and HDMI. In addition, the Tracker conveniently supports synchronized capture of external GPIO/logic signals and synchronized voltage tracking features for USB Type-C power and signaling.

"Since 2000, Ellisys has enjoyed a rich history with the progression of USB technologies and with thousands of USB developers worldwide. USB is ingrained in our company DNA," said Mario Pasquali, Ellisys president and CEO. "With USB Type-C, protocol analysis and debug approaches become more complex as the USB Type-C standard is serving to enable alternate connectivity for many protocols from a variety of standards bodies, in addition to several USB protocols. Adding to this, USB Type-C, combined with USB Power Delivery, provides for complex features. These complexities call for development tools that can scale and cover the broad requirements of developers working with USB Type-C. The Type-C Tracker answers that call."

"The ability to capture and characterize DisplayPort Alternate Mode protocol and DisplayPort AUX channel traffic relative to USB Power Delivery and USB Type-C voltage states is very useful to DisplayPort engineers looking to validate their designs and ensure proper compliance to DisplayPort specifications," said Jim Choate, compliance program manager for VESA. "The Type-C Tracker from Ellisys will be a valuable addition to the testing regimen at VESA test events and in the labs of our member companies."

"USB-IF compliance and certification is a key differentiator for USB products entering the market," said Jeff Ravencraft, USB-IF President and COO. "Ellisys is a long-time contributor in the development of USB specifications and related certification processes and documentation. Ellisys test and analysis tools play an important role in the overall industry effort to deliver reliable and interoperable USB solutions."

"I was involved in the effort associated with the original USB compliance program and have seen USB grow to become what many people believe to be the most successful communications standard ever," said Kosta Koeman, senior software engineer at CK Software Consulting. "We've seen a lot of changes and growth with USB over the years, but the USB Type-C specification changes the game immensely as it draws in other technologies previously unrelated to USB. This ubiquity creates challenges in testing and validation. The Ellisys Type-C Tracker clearly meets these challenges with a unique, smartly designed approach and will be a key asset for any developer working on Type-C."

Intended Markets

The Tracker will meet the needs of developers making cables, silicon, and devices across a broad range of end markets, including mobile, tablets, communications, consumer electronics, and others. The Tracker is sold in two editions to meet the budgets and technical requirements of nearly any developer working with USB Type-C and will be in the labs of a variety of users ranging from hobbyists to the world's largest tech manufacturers.

Major Features

The USB Type-C Tracker uniquely 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™ Alternate Mode over USB-C™
- DisplayPort™ Auxiliary (AUX) over the USB Type-C Side-Band Use lines (SBU)
- 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

For more information on features and configurations, visit: http://www.ellisys.com/products/ctr1/purchase.php

USB Type-C Background

The USB Type-C Cable and Connector Specification was released by the USB Implementers Forum (USB-IF) in 2014 as a future-proof standard designed to provide slimmer connections, user-friendly reversibility for plugs and cable direction, and to support scalable power and increased performance for USB technologies, as well as Alternate

Modes, including DisplayPort, Thunderbolt 3, HDMI, and others. This specification was preceded by the release of the USB 3.1 Specification in 2013 and the USB Power Delivery Specification in 2012.

Ellisys USB Products and Background

Ellisys introduced its first USB analyzer in 2000 and has progressively introduced innovative protocol analyzers, traffic generators, and industry-approved compliance test solutions for multiple USB specifications, including USB 2.0, USB 3.0, USB 3.1, Wireless USB, USB Type-C, and USB Power Delivery. Ellisys engineers operate within the USB-IF Device Working Groups, including several compliance and specification committees, to advance the development of USB technologies and support our customers with accurate and timely product updates and evolutions.

Availability, Product Photos, and Information

The USB Type-C Tracker is available for immediate purchase with shipments 2-4 weeks from order placement. Two configurations are provided to meet a variety of customer price and feature requirements. These configurations include the *Standard* and *Professional* editions. 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

About Ellisys

Ellisys is a leading worldwide supplier of advanced protocol test solutions for Bluetooth®, Wi-Fi®, USB 2.0, SuperSpeed USB 3.1, USB Power Delivery, USB Type-C™, DisplayPort™, and Thunderbolt™ technologies. More information is available on www.ellisys.com.

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