

FOR IMMEDIATE RELEASE

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Ellisys Introduces New Capture Approach to Bluetooth® Analysis

Capture Diversity Feature Added to Next-Generation Bluetooth Vanguard™ System

Geneva, Switzerland — September 18, 2018 — Ellisys, a leading provider of test, certification, and analysis solutions for Bluetooth®, Universal Serial Bus (USB), Wi-Fi®, and other technologies, today introduced a major innovation to its industry-leading line of Bluetooth analysis solutions. Available on the recently released Bluetooth Vanguard™, the Bluetooth Capture Diversity™ feature utilizes two concurrent Bluetooth capture engines and sophisticated software algorithms to optimize capture quality and provide for increased flexibility in the placement of the analyzer and antennas relative to devices under test. Bluetooth Vanguard and the Capture Diversity feature will be on display and demonstrated in Booth 226 at Bluetooth World, taking place today and tomorrow, September 18-19, at the Santa Clara Convention Center, Santa Clara California, USA.

"Our Bluetooth analyzer products offer a wide variety of features to characterize and debug just about any issue, from coexistence problems to complex stack entanglements, and everything in between, but Bluetooth is designed such that missing just one critical packet can cascade into serious difficulties in understanding and completing just about any such task," stated Mario Pasquali, Ellisys president and CEO. "We designed Bluetooth Vanguard with this concern in mind, and we're pleased to make this optimization available to our existing customers and to add one more Ellisys innovation to a long list of ideas that have helped ease the complexities and improve efficiencies in the projects and daily design and validation tasks of our customers. We designed the Bluetooth Capture Diversity feature for many reasons, including the growing presence of Bluetooth in IoT applications, such as Bluetooth Mesh Networking and Smart Home applications, where coexistence issues are common and create a more difficult environment to cleanly capture Bluetooth transactions."

How Does Capture Diversity Work?

Bluetooth Vanguard employs three reception antennas. Two antennas are used for Bluetooth and one for WPAN (IEEE 802.15.4), with Wi-Fi (3x3 11ac) sharing all three. Each capture engine provides identical wideband capture capabilities, where all packets on all channels, from all nearby devices are captured. The two Bluetooth antennas may be angularly displaced to better optimize reception, or externally cabled to be positioned nearer the desired device or topology under test. In all past Bluetooth capture methodologies, from any vendor, the analyzer had to be placed at an optimum location to minimize the analyzer's reception of packet errors. This approach often requires some experimentation and can be time-consuming. Missed critical packets can lead to confusion and lost time. A further improvement involves the use of software algorithms to make a good packet from a bad packet, as one antenna may receive a given packet correctly, and one may receive the same packet incorrectly, for a variety of reasons, including interferences. In addition, in some cases the packet can be received incorrectly on both antennas and one good packet can be factored from the two bad packets.



Bluetooth Vanguard Major Features

Bluetooth Vanguard is an all-in-one, fully integrated system supporting wideband (all channels) capture and analysis of Bluetooth Classic (BR/EDR), Bluetooth Low Energy (LE), plus concurrent Wi-Fi 3x3 11ac, all 16 WPAN (IEEE 802.15.4) 2.4 GHz channels, raw ISM spectrum capture, Bluetooth host controller interface (HCI) protocols (USB, UART, and SPI), Audio I2S, WCI-2, and generic protocols including UART, SPI, I2C and SWD, all visualized over the widely adopted Ellisys software suite.

Bluetooth Vanguard supports one-click concurrent, synchronous capture of the wired and wireless communications technologies listed below. Vanguard is sold in several field-upgradable configurations to meet customer requirements and budgets.

Wireless Capture

- 2x(*) Bluetooth Low Energy (125kbps, 500kbps, 1Mbps, 2Mbps, all 40 channels concurrently)
- 2x(*) Bluetooth Classic (BR, EDR2, EDR3, all 79 channels concurrently)
- Wi-Fi IEEE 802.11a/b/g/n/ac (3x3, 20 / 40 / 80 MHz)
- WPAN IEEE 802.15.4 (all 16 2.4GHz channels concurrently)
- 2.4 GHz Raw Spectrum Energy

Wired Capture

- Bluetooth Host Controller Interface Communications (UART, USB, SPI)
- General Purpose Logic Signals
- Audio I2S
- Wireless Coexistence Interface 2 (WCI-2)
- Generic Communications (UART, SPI, I2C, SWD)

Connectivity (Power and Control)

- USB Power Delivery (30W)
- SuperSpeed USB 3.1 (5Gbps)
- Ethernet 1GbE
- Power Over Ethernet+ (30W)

For more information on features in each configuration, visit: http://www.ellisys.com/bv1/purchase.php

^{*} Bluetooth Capture Diversity



Availability, Product Photos, and Information

Bluetooth Vanguard is available for immediate purchase with shipments 2-4 weeks from order placement. Various configurations are provided to meet a variety of customer price and feature requirements. These configurations are provided in a series of editions, including *Standard*, *Professional*, and *Enterprise*. For more information, including software downloads, please contact sales@ellisys.com or visit http://www.ellisys.com/bv1

A high-resolution picture of the product is available at the following link:

http://www.ellisys.com/bv1/images/bv1_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^{TM} , DisplayPortTM, and ThunderboltTM technologies. More information is available on www.ellisys.com.

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World Class Protocol Test Solutions for Bluetooth, USB, and Wi-Fi

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