

ETHERNET ALLIANCE SUCCESSFULLY VALIDATES MULTIVENDOR INTEROPERABILITY FROM 10GBE TO 400GBE

In advance of OFC 2020, Ethernet Alliance stages multivendor integration involving solutions from 17 member companies

BEAVERTON, OR, MARCH 10, 2020 – The [Ethernet Alliance](#), a global consortium dedicated to the continued success and advancement of Ethernet technologies, today announced a successful validation of multivendor interoperability across 10 Gigabit Ethernet (10GbE), 25GbE, 50GbE, 100GbE, 200GbE and 400GbE technologies and solutions from 17 Ethernet Alliance member companies. Providers of interconnects, switches and routers, and test and measurement equipment participated in the multivendor integration staged at Teledyne LeCroy, Inc., in preparation for the Ethernet Alliance’s annual interactive multivendor demo at [OFC 2020](#), scheduled for March 10-12, 2020, at the [San Diego Convention Center](#), San Diego, California.

In light of the rapidly changing situation with COVID-19, the Ethernet Alliance is not participating in OFC 2020.

The Ethernet Alliance multivendor integration staged in preparation for the event showcased a live 400 GbE switch fabric, an implementation of Flex Ethernet (FlexE), 100Gb/s per lane over a direct attach cable (DAC) and analysis of PAM4 signaling, and a broad array of the latest Ethernet products and solutions. Components including routers, switches, active optical cables (AOCs), DACs, optical modules, active copper cables and interconnects ranged across the OSFP, QSFP28, QSFP56 and QSFP-DD form factors. Several test and measurement solutions for ensuring systems’ compliance with Ethernet specifications also were utilized.

“This product-based demonstration incorporating live 400GbE switch fabric illustrated Ethernet’s robust interoperability. Additionally, the emphasis on test and measurement at Ethernet’s highest speeds reflects a growing trend across the ecosystem,” said Dave Estes, Ethernet Alliance’s OFC 2020 technical leader and senior hardware engineer, Spirent Communications. “This is a sign that there is terrific pressure on the Ethernet industry to roll out solutions for the urgent, application-driven market demands of enterprise, data center, and service provider networks globally, because test coverage is crucial early in an innovation’s development cycle for accelerating time to market with an interoperable product.”

Representing all facets of the Ethernet ecosystem, the Ethernet Alliance technology integration incorporated equipment and solutions from 17 companies: Amphenol Corporation (NYSE: [APH](#)); Anritsu Company; Arista Networks, Inc. (NYSE: [ANET](#)); Cisco Systems, Inc. (NASDAQ: [CSCO](#)); Cloud Light Technology, Limited; EXFO Inc. (NASDAQ: [EXFO](#), TSX: [EXF](#)); Intel Corporation (NASDAQ: [INTC](#)); Keysight Technologies, Inc. (NYSE: [KEYS](#)); Juniper Networks (NYSE: [JNPR](#)); Panduit; Spectra7 Microsystems Inc. (TSX: [SEV](#)); Spirent Communications plc (LSE: [SPT](#)); TE Connectivity Ltd. (NYSE: [TEL](#)); Teledyne LeCroy, Inc. (NYSE: [TDY](#)); VeEX

Inc.; Xena Networks, Inc.; and Xilinx, Inc. (NASDAQ: [XLNX](#)).

“Multivendor interoperability is the bedrock of Ethernet, driving confidence in solutions and accelerating market adoption. The Ethernet Alliance works to constantly reinforce that core value of multivendor interoperability and, in doing so, illuminates and promotes the unparalleled value of Ethernet,” said Peter Jones, chair, Ethernet Alliance, and distinguished engineer, Enterprise Networking, Cisco Systems. “We are disappointed that we are unable to participate in OFC 2020 and look forward to participating at OFC events in the future.”

For more information about the Ethernet Alliance, please visit <http://www.ethernetalliance.org>, follow [@EthernetAllianc](#) on Twitter, visit its [Facebook](#) page, or follow its [LinkedIn](#) company page.

[About the Ethernet Alliance](#)

The Ethernet Alliance is a global consortium that includes system and component vendors, industry experts, and university and government professionals who are committed to the continued success and expansion of Ethernet technology. The Ethernet Alliance takes Ethernet standards to market by supporting activities that span from incubation of new Ethernet technologies to interoperability demonstrations and education. The organization’s plans for 2020 may be found on the [Events](#) page of its website.

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Additional Quotes:

“For the last several years, Amphenol has been a key interconnect provider for the live Ethernet Alliance demo at the OFC exhibition. We were looking forward to another successful show this year, but given the current circumstances and health concerns, we understand the EA’s decision to withdraw from this year’s event. This does not diminish the success that we saw at the hot stage with 17 companies interoperating using Amphenol’s world class 10 and 25GbE SFP+, 40GbE and 100GbE QSFP as well as our latest 400Gb OSFP and QSFP-DD connectors and cable interconnect products. We look forward to next year’s exhibition to be even bigger and better.” – *Greg McSorley, technical business development manager, Amphenol High-Speed Cables*

“Anritsu was excited to partner with fellow Ethernet Alliance members in our 4th year of demonstrating leading-edge interoperability among high-speed network equipment and interconnect manufacturers up to 400Gbps. As a world-class leader in optical transport and data network testing solutions, Anritsu welcomed its role in the Ethernet Alliance demonstrations proposed for OFC 2020. However, we understand the circumstances and in full agreement of EA’s decision to withdraw from OFC 2020. We look forward to showcasing our latest test capabilities alongside market leaders in their respective industry segments during next year’s scheduled event.” – *Daniel Gonzalez, business development manager, Anritsu*

“Arista is pleased to be a regular part of the Ethernet Alliance multi-vendor demonstrations. Multi-vendor interoperability with Arista’s 7060X4 and 7280R3 Series of high-density 100G and 400G systems, and a wide range of 100G and 400G optical and copper media in OSFP and QSFP-DD form factors, were demonstrated at the Ethernet Alliance’s staging event in preparation for OFC2020. Arista supports the Ethernet Alliance’s decision to withdraw from OFC 2020 in light of the ongoing health concerns. As an industry leader in high speed networking, supporting interoperability between systems with industry-standard optics and cables is essential for accelerating customer adoption of 400G. Technology transitions take place over time and Arista looks forward to demonstrating our range of systems and connectivity innovations with the Ethernet Alliance in the future.” – *Christophe Metivier, vice president, manufacturing and platform engineering, Arista Networks*

“Cisco is pleased to participate in the Ethernet Alliance interoperability demo that was in preparation for OFC 2020. Cisco’s participation is focused on showcasing interoperability of 400 GbE with the high-density Nexus 3432D Ethernet switch, featuring thirty two 400 GbE QSFP-DD ports in a single RU. This demonstration is an excellent example of industry leaders coming together to show the maturity of 400 GbE technology from component and interconnect suppliers to test and measurement and system vendors. Cisco has created a broad portfolio of 400 GbE solutions that enable customers to easily migrate their networks with a variety of switching, routing and transceiver solutions featuring 400 GbE QSFP-DD ports and modules.” – *Mark Nowell, fellow, Cisco Systems*

“Cloud Light is excited to participate in the Ethernet Alliance interoperability demo and to enable 400G connectivity with its QSFP-DD and OSFP pluggable optics. The demo allows Cloud Light to showcase multi-vendor interoperability that ultimately simplifies qualifications and accelerates deployments.” – *Dennis Tong, founder and CEO, Cloud Light*

“EXFO was proud to participate in Ethernet Alliance’s hot stage held in Milpitas, CA, this February. Together with other industry leaders, we collaborated on several innovative interoperability demonstrations. New technologies are emerging fast as networks undergo unprecedented transformations in the era of 5G. Given this environment, it’s critical that vendors work together to ensure the interoperability required to facilitate a smooth transition of

these new technologies from lab to field. Our live demos showcased: 400G ecosystem, including FlexE; 400G/200G multivendor interconnections using multiple interfaces, including QSFP-DD and OSFP; 100G testing featuring the latest optical transceiver technologies; and 50G Ethernet, a key migration rate for data centers and 5G wireless networks. Each demo was facilitated by our Open Transceiver System (OTS)—a unique, modular system that delivers the capability to swap out transceiver inserts, enabling EXFO test platforms to support both today's high speed interfaces and tomorrow's yet undetermined ones. Additionally, we were excited to introduce the new and innovative PBT-4000, our 400G electrical bit error rate tester designed to extend testing capabilities for transceiver manufacturing." – *Stéphane Chabot, vice president, test and measurement, EXFO*

"Juniper Networks is a proud and active member of Ethernet Alliance. As an industry leader in automated, scalable and secure network and datacenter solutions, we prioritize collaboration and interoperability in community-led, standards-based activities to drive meaningful and lasting innovation. We are honored to work alongside fellow industry experts to advance Ethernet technologies." – *Ben Baker, senior director service provider & cloud portfolio marketing, Juniper Networks*

"Keysight is proud to participate in Ethernet Alliance's high-speed Ethernet, multi-vendor interoperability demonstrations in preparation for OFC 2020. Our work showcases the expansion of the 400GE and 100GE network equipment and interconnect ecosystems. Joining with other industry-leading companies, we showcased testing of all Ethernet speeds from 50GE to 400GE. We are pleased to demonstrate our latest testing solutions such as the ultra-high density, UHD100T32 100GE test solution which brings affordable and high density 100GE testing to data center operators." – *Aniket Khosla, senior director, product management, Keysight Network Applications & Security group (formerly Ixia Solutions Group)*

"Panduit is pleased to be participating in the Ethernet Alliance booth at OFC 2020. We look forward to demonstrating interoperability of 100G and 400G optical products supplied by many of the leading electronic and interconnect manufacturers." – *Bob Wagner, fiber connectivity product line manager, Panduit Corporation*

"Spectra7 is proud to be showcasing our Active Copper Cable (ACC) technology in the Ethernet Alliance Interop Demo at OFC 2020. As the industry leader in ACCs, we will be demonstrating broad interoperability and robust performance in form factors including SFP, QSFP, QSFP-DD and OSFP at data rates from 25Gbps to 400Gbps. Hyperscalers and Switch OEMs are now deploying ACCs in new networks and see them playing a critical role in 2020 as data rates and interface densities increasingly shorten the lengths that passive copper cables can service." – *John Mitchell, chief marketing officer, Spectra7*

"Spirent is proud to participate in Ethernet Alliance's ground-breaking interoperability demonstrations in preparation for OFC 2020. This joint demonstration showcases the latest technological advances in Flex Ethernet (FlexE) and High-Speed Ethernet, enabling flexibility, reliability, and new services required to support next generation network evolution. Working together with fellow industry experts, Spirent was pleased to demonstrate its industry-leading test solutions for 400G and FlexE, delivering reliability and high performance, highlighting innovative test capabilities that are helping operators, network equipment manufacturers and device makers deploy leading-edge network technologies faster and more reliably." – *Abhitesh Kastuar, general manager, cloud & IP business unit, Spirent Communications*

"As a founding principal member of the Ethernet Alliance, TE Connectivity (TE) is proud to participate in the Ethernet Alliance interoperability demonstrations at the Ethernet Alliance hot stage event in February. In this year's demonstration, we are showing our SFP56, QSFP56, OSFP, QSFP-DD and OSFP to QSFP-DD cable

assemblies and AOCs operating at 400 Gbps, and we are also demonstrating our 800G OSFP cable. These performance levels will be essential as Ethernet connectivity evolves to support the applications of the future, and TE innovations pave the way.” – *Nathan Tracy, technologist and manager of industry standards, TE Connectivity*

“The Test and Measurement community is again, leading the effort to ensure new technologies are able to come to market on time and conforming with the high-speed variants of Ethernet. As we’ve noted in our involvement with the EA over the past few years, the advancement of mission critical storage applications, industrial automation, broadcast video, and automotive adaptations, as well as the legacy implementations are driving the Ethernet market.

“Teledyne LeCroy is leading the Test & Measurement analysis segment with new, purpose build platforms, test solutions and services to ensure specification compliance and operational readiness for the Ethernet community.

“The Ethernet Ecosystem is universally aware of the need to ensure interoperability and ‘out of the box’ performance. Teledyne LeCroy’s SierraNet product family fulfills a critical requirement towards achievement of that goal.” – *David J. Rodgers, senior product marketing manager, ENET/SAN protocol tools, Teledyne LeCroy*

“VeEX successfully participated in Ethernet Alliance’s staged multi-vendor integration with our multi-port, multi-rate MPA Series platform for lab and production applications, and the RXT-6400, the first and truly portable test set supporting native PAM4 QSFP-DD and OSFP. As a global leader in test and measurement solutions, VeEX understands that multi-vendor interoperability is critical to the successful adoption and deployment of next generation equipment and services. We look forward to participating in future OFC events.” – *Keith Cole, VP product marketing NEMs, VeEX*

“Validating the performance and interoperability of Xena's traffic generation and analysis solutions is essential. Being part of the Ethernet Alliance stand at OFC is a great opportunity to demonstrate Xena's commitment to delivering best-in-class solutions that let customers work with the widest range of vendors. We'll have our 400GE Thor test modules showing Auto-Negotiation and Link Training (AN/LT) for both PAM4 and NRZ speeds, as well as staff on hand to explain how our customer use Valkyrie in a wide range of test scenarios and industries to test different DUTs both in the lab, during production and in the field.” – *Jacob Nielsen, CEO at Xena Networks*

“Xilinx is pleased to be a part of the Ethernet Alliance multi-vendor 10G to 400G Ethernet interoperability technology validation by contributing our 7nm Versal ACAP devices utilizing the integrated multi-rate hardened Ethernet subsystem and our Virtex UltraScale+ 58G PAM-4 solutions. This demonstrates the maturity of our solutions ranging from 10GE through 400GE to enable numerous applications such as data center interconnect platforms for higher bandwidth capacity, next-generation switch and router high density line cards with newer optical modules, and high-end OTN transponders for more efficient optical infrastructure networks.” – *Dan Mansur, vice president, communications markets, Xilinx*