

ETHERNET ALLIANCE MAPS OUT ETHERNET'S FUTURE IN HPC AT SC16

Interoperability demo brings HPC's Ethernet roadmap to life depicting next-generation ecosystem built on 25G and 100G high speed Ethernet interconnects

BEAVERTON, OR, NOVEMBER 02, 2016 – The [Ethernet Alliance](#), a global consortium dedicated to the continued success and advancement of Ethernet technologies, today revealed details of its [SC16](#) multi-vendor interoperability demo. A premier international conference for high-performance computing (HPC), networking, storage, and analysis, SC16 is an ideal backdrop for emphasizing Ethernet's vital role in enabling supercomputing's continued advancement and successful future. The Ethernet Alliance's demo can be found in booth 1101 on the SC16 expo floor, November 14 – 17, 2016 at the [Calvin L. Rampton Salt Palace Convention Center](#), Salt Lake City, Utah.

To follow the latest Ethernet Alliance SC16 news and events, please follow [#EASC16](#) on Twitter.

"Adding newly ratified speeds to high-performance computing environments achieves the goal of providing scalability and usability in and across multiple applications. Customers and applications that benefit from the next-generation 25/100 Gigabit Ethernet (GbE) high-speed interconnects may shift from or add to their 10/40GbE infrastructures to accommodate all necessary requirements in the enterprise," said David J. Rodgers, Ethernet Alliance director; and senior product marketing manager, Teledyne LeCroy. "Seamless interoperability is key to any communication standard, as is stability, cost-effective deployment, and a robust supply chain to ensure longevity. The Ethernet Alliance's SC16 multi-vendor interoperability demo not only reaffirms these values within the HPC community, but truly brings the Ethernet roadmap in to life."

Driven by the popularity of 10/25/40/50 GbE servers and proven capabilities as a reliable storage medium, Ethernet remains HPC's leading interconnect technology, representing 44 percent of the June 2016 [TOP500](#) list of supercomputers. The Ethernet Alliance's SC16 demo combines server, switch, testing, cabling, and optical equipment from a diverse array of vendors in a simulated real-world data center environment, and underscores Ethernet's importance to HPC. Among technologies and equipment being showcased in the demo are copper and fiber cable assemblies; fiber trunks; and 1, 10, 25, 40, 50, and 100GbE switches; and 25, 50, and 100GbE NIC adapters. Additionally, the demo features a 100GbE link between the Ethernet Alliance and [California Institute of Technology](#) (Caltech), depicting how a typical connection between different sites can be integrated in high-performance and other environments.



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Ethernet Alliance member companies taking part in and contributing equipment and technologies to the organization's SC16 demo include Amphenol Corporation (NYSE: [APH](#)); Dell Technologies; Hitachi Ltd.; Mellanox Technologies, Ltd. (NASDAQ: [MLNX](#)); TE Connectivity (NYSE: [TEL](#)); and Teledyne LeCroy, Inc. (NYSE: [TDY](#)).

“Ethernet’s continued evolution has helped it to achieve a long history of success in serving a broad range of existing and emerging HPC applications. The next-generation Ethernet-based HPC ecosystem is forming around 25/100GbE, which will open the door to the next era of HPC innovation,” said [John D’Ambrosia](#), chairman, Ethernet Alliance; and senior principal engineer, Huawei. “Our SC16 demo highlights the multiple intertwined roadmaps of synergistic technologies that form the whole of the Ethernet ecosystem. As witnessed by its dominance in the industry segment of the TOP500, Ethernet’s unique ability to effortlessly harness the power of these combined elements, while still maintaining interoperability and a low cost-per-bit, make it the workhorse of the supercomputing world.”

To experience the Ethernet Alliance live demo, please visit booth 1101 on the SC16 expo floor. For more information about the Ethernet Alliance, visit <http://www.ethernetalliance.org>, follow [@EthernetAllianc](#) on Twitter, visit its [Facebook](#) page, or join the EA [LinkedIn](#) group.

[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.

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Additional Quotes:

“Amphenol is once again proud to continue our partnership with the Ethernet Alliance by participating in the live demo at this year’s Super Computing conference. This marks the ninth year in a row Amphenol has been a part of the demonstration. The Super Computing conference and exhibition is one of the premier high performance computer events of the year. The Ethernet Alliance booth is a great place for designers and end users to get unbiased information on the latest GbE and see the latest products in live and static demos.

Amphenol will be showing our world class 10GbE SFP+ and 40GbE QSFP+ and just released this year our 100GbE interconnect systems. From our passive, active copper cables and the latest active optical cable

assemblies to our SFP+ and QSFP+ cages and connectors. Additionally we will be showcasing a new offering of High Density (HD) rack mount optical connectivity panels and trunk cable solutions designed to increase density to improve cable routing, tray congestion, and air flow. We will also be showing our just released TOR RCx connector system for high density inter rack applications.” – *Greg McSorley, Technical Business Development Manager, Amphenol*

“Our Caltech team has been engaged in working at the frontiers of both physics and networks for the last two decades. The two major milestones during all this time have been the emergence of optical networks and of Ethernet not only in the data center, but on all distance scales. We are very glad to be working with the Ethernet Alliance as they continue to define the standards that shape our ability to make the next round of discoveries at the Large Hadron Collider (LHC), and move towards meeting the challenges of handling exascale data, as the LHC moves to ever greater intensities, working across technology generations and defining the path forward for many fields of science over the next 20 years.” – *Harvey B. Newman, professor of physics, California Institute of Technology (Caltech)*

“Dell EMC is excited to participate in the continued evolution of bandwidth and content distribution by providing the Multi-Rate 100GbE SDN/openflow S6100-ON switch using Open Networking as the infrastructure fabric for our Ethernet Alliance partners.” – *James Wynia, director, product management, Infrastructure Solutions Group, Dell EMC.*

“Hitachi Cable America is pleased to participate in the Ethernet Alliance’s interoperability demonstration with our high-performance passive and active interconnects, designed to meet the market requirements for speed, density, power consumption and reliability. We’re grateful for the opportunity to highlight our active optical cables and direct attach passive copper cables with data rates of single channel 25GbE DACs, and DAC breakout cables (QSFP/QSFP 2x50 & QSFP/SFP+ 4x25) at SC16.” – *Michael Ressler, vice president, business development and technology, Hitachi Cable America Inc.*

“The Ethernet Alliance is pulling in major stakeholders of the Ethernet ecosystem to demonstrate how the Ethernet roadmap comes into life from sub 1GbE speeds and up to 100GbE speed per link. Mellanox Technologies is happy to participate with contribution of network interface cards, interconnect optics and switch systems ranging from speeds of 1GbE to 100GbE based on home grown Mellanox Spectrum™, LinkX™ and ConnectX-4™ Switch, transceiver and NIC ASIC and with building a collaborated interoperable network that demonstrates the Ethernet ecosystem.” – *Ran Almog, director, product marketing, Mellanox Technologies*

“Since the beginning, the Ethernet Alliance and TE Connectivity have worked together to enable and promote the innovative Ethernet connections that count in high-performance computing and networking. From 1 to 100 Gbps and beyond, TE is proud to display and offer our critical Ethernet solutions including I/O, backplane and copper cable assemblies for a broad range of communications applications.” – *Nathan Tracy, technologist, Data and Devices, TE Connectivity*

“Ethernet is rapidly becoming the “ubiquitous” fabric, for both traditional implementations as well as new, critical storage applications. Teledyne LeCroy is continues to advance new solutions and services to help our customers face the challenges of deploying and supporting the new, high-speed Ethernet products.

As evidenced in recent interoperability Plug Fests, the intricacies of confirming disparate vendor offerings work in concert and in conformance to the myriad of specification nuances is no small matter. Every participant in the Ethernet Ecosystem is keenly aware of the need to ensure ‘out of the box’ performance, and our leading role in Test and Measurement fulfills a critical requirement of that goal.

Teledyne LeCroy is committed to advancing improved features and greater functionality in our SierraNet family of



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Ethernet protocol tools and we embrace the challenges ‘high-speed’ design and deployment bring to the market.”
– *David J. Rodgers, senior product marketing manager, Teledyne LeCroy*