WITH 99 PERCENT SUCCESS RATE, 2.5GBASE-T AND 5GBASE-T ETHERNET PLUGFEST SHOWS TECHNOLOGY IS READY FOR PRIMETIME

First joint Ethernet Alliance, NBASE-T Alliance test event demonstrates market readiness of next-gen Ethernet

BEAVERTON, OR, FEBRUARY 2, 2017 – The <u>Ethernet Alliance</u>, a global consortium dedicated to the continued success and advancement of Ethernet technologies, and <u>NBASE-T Alliance</u>, an industry-wide cooperative effort focused on enabling the development and deployment of products that support 2.5GBASE-T and 5GBASE-T Ethernet, today shared findings from their recent plugfest. The two organizations' first-ever joint test event was held October 10 – 14, 2016 at the <u>University of New Hampshire InterOperability Laboratory</u> (UNH-IOL) in Durham, N.H. Aimed at verifying interoperability, robustness, and standards conformance of 2.5GBASE-T and 5GBASE-T Ethernet technologies, the plugfest results confirm the specifications' maturity and readiness for adoption by the market.

"When the NBASE-T Alliance was formed just over two years ago, we had a vision of new Ethernet solutions enabling enterprises to evolve their access layer networks, providing up to five times the bandwidth without recabling—and now that vision is a reality," said Peter Jones, chairman, NBASE-T Alliance; and principal engineer, Cisco. "This most recent plugfest proves that NBASE-T technology is ready for mass deployment in a variety of applications. It is also a tribute to our many members who played an active role in delivering a technology that will have a major impact on several different industries."

"With the release of the IEEE 802.3bz™ 2.5GBASE-T and 5GBASE-T standard, NBASE-T Alliance's PHY interface specifications, and other application-driven standards, we're on the cusp of the largest Ethernet build-out ever. We'll see networks gaining the ability to connect more people and deliver better end user experiences and new services, thereby increasing the value of the networks themselves," said John D'Ambrosia, chairman, Ethernet Alliance; and senior principal engineer, Huawei. "Our plugfest results illustrate 2.5GBASE-T and 5GBASE-T are ready to go, as is the Ethernet ecosystem. As we enter the next era of Ethernet, the Ethernet Alliance is ready to accelerate market acceptance of these advanced technologies by helping to instill confidence in their multivendor interoperability and educating users on the benefits they offer."

During the event, more than 1,100 interoperability link up and Frame Error Rate (FER) tests were completed, covering the complementary IEEE 802.3bz standard and NBASE-T Alliance PHY interface specifications, resulting in a >99 percent success rate for all cabling and equipment combinations. A broad array of products supporting 2.5GBASE-T and 5GBASE-T were thoroughly evaluated against multiple test scenarios and checks, such as:

Conformance – verifying equipment conformance against the IEEE 802.3bz standard and NBASE-T

Alliance specifications;

- Link up authenticating ability of 2.5GBASE-T and 5GBASE-T equipment to connect with other devices;
- FER monitoring of errors in data frames passed between devices; and
- Downshift confirming NBASE-T ports' capacity to move to a slower data rate when the capacity of the cabling is constrained due to noise.

The five-day gathering marked the first test of IEEE 802.3bz. The industrywide effort brought together 15 diverse stakeholders from across the Ethernet ecosystem, including manufacturers of Ethernet switches, network interface controllers (NICs), wireless LAN access ports, physical layers components, cabling, and protocol test and electrical test equipment. Among the companies and equipment vendors taking part were Aquantia Corp.; Aukua Systems, Inc.; Berk-Tek LLC (EPA: NEX); Broadcom Limited (NASDAQ: AVGO); Cisco Systems, Inc.: Dell, Inc.; Extreme Networks, Inc. (NASDAQ: EXTR); Fluke Corporation (NYSE: DHR); Huawei Technologies Co. Ltd.; Intel Corporation (NASDAQ: INTC); Marvell Technology Group Ltd. (NASDAQ: MRVL); Panduit Corp.; Rohde & Schwarz USA, Inc.; Spirent Communications plc (LSE: SPT); and Tektronix, Inc. (NYSE: DHR).

Complete details and analysis of the plugfest results will be presented during a joint Ethernet Alliance/NBASE-T Alliance webinar scheduled for March 9, 2017, at 8am PST, with a second presentation at 5pm PST the same day. The webinar will provide a comprehensive, in-depth review of testing performed during the plugfest and its subsequent results. For more information or to register for the 8am presentation, please visit http://bit.ly/NBASET-Webinar. To register for the 5pm presentation, please visit http://bit.ly/NBASET-Webinar.

For more information about the Ethernet Alliance, visit http://www.ethernetalliance.org, follow @EthernetAllianc on Twitter, visit its Facebook page, or join its LinkedIn group.

For additional information about the NBASE-T Alliance, visit http://www.nbaset.org, follow @NBASETAlliance on Twitter, or join its LinkedIn group.

Note to Editors: The Ethernet Alliance and NBASE-T Alliance believe the IEEE 802.3bz standard and NBASE-T Alliance PHY interface specifications work together, hence their referral as "complementary".

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.

About the NBASE-T Alliance

The NBASE-T Alliance is an industry-wide cooperative effort focused on enabling the development and deployment of products that support 2.5G and 5GBASE-T Ethernet. The alliance was founded in 2014 to build consensus and help streamline the development of a new standard. That standard, IEEE 802.3bz, was approved in September 2016 and is compatible with specifications published by the NBASE-T Alliance. In addition, the specification includes additional features that further optimize networks based on the standard. The specifications enabled member companies to quickly develop and deploy 2.5G and 5GBASE-T products, making use of the large, installed base of copper cabling, such as Cat5e and Cat6, found in many places including enterprise, home and service provider networks. Today, the alliance continues to publish specifications, facilitate interoperability and educate the market about the multiple applications of the technology.

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