FOR IMMEDIATE RELEASE
Contact: Caster Communications, Inc. at 401.792.7080

AVnu Alliance Launches Support for Industrial Market

Alliance creates capability for standard Ethernet to meet the needs of industrial market while embracing the future promise of IoT.

Beaverton, OR. – December 10, 2014 – AVnu Alliance, the industry consortium driving open standards-based deterministic networking through certification, announces a new Industrial market segment. Standard Ethernet continues to expand its range, functionality and applications with the evolution of the Audio Video Bridging (AVB) standard into Time Sensitive Networking (TSN). The new capabilities of TSN provide the Industrial community with the ability to use standard Ethernet to support highly reliable and precise synchronized networking appropriate for industrial control.

With the expansion into the Industrial Control market, AVnu Alliance announces three new members, **Belden**, with its Hirschmann, Tofino Security, GarrettCom and Lumberg Automation brands, is the global leader for mission-critical industrial network infrastructure; **General Electric**, global leaders in creating an electrical infrastructure with advanced technologies to safely and reliably distribute, protect and control electricity; and **National Instruments**, a leading test, measurement and embedded systems provider for engineers and scientists. These companies, as leaders in the industrial, automation and IT infrastructure space, are driving forces in the recent expansion, working within the Alliance to develop the foundational elements needed for industrial applications, based on the common elements of AVB/TSN. The industrial segment is also supported by existing AVnu Alliance members such as Broadcom, Cisco, Intel, Interval Zero, Marvell, Micrel, Vitesse, Xilinx and XMOS.

"It is incredibly important for GE to support and stay up to date on the evolving open standards in the industrial control market. Since AVnu Alliance is the only community consortium driving the expansion of AVB and TSN standards, we are excited to join and offer our expertise to the efforts," said John Garrity, Product Line Leader for General Electric Intelligent Platforms. "AVnu certification will ensure interoperability across multi-vendor solutions and our continued contribution to the TSN standards will help us deliver the next generation of reliable networked products to our customers. We are excited to join AVnu Alliance and contribute to the workgroups as the Alliance expands into this new market and continues to build on the open standards that are currently evolving. Our work with TSN better enables our customers to easily and rapidly create innovative next generation control systems transmitting real time traffic."

"IEEE and AVnu Alliance's work to bring open standards to industrial applications provides a great venue to amplify Belden's long history of standards work, and we recognize the immense value open standards offer to our customers," said Andreas Dreher, Strategic Technology Manager at Belden. "TSN technology shows promise to be the core technology for high-end industrial Ethernet communications in the future, solving challenges faced by our customers in

demanding, high-performance and high-precision industries, like motion control, robotics and high-speed manufacturing. Our plan for joining with the Alliance aligns well with our long-standing work in bringing innovation, standardization and awareness to the industrial market for new and emerging open standards."

"TSN promises through standard silicon to converge the previously disparate technologies needed for standard Ethernet communication, for deterministic high speed data transfer, and for high accuracy time synchronization. These developments will create a common foundation that will impact numerous applications and markets ranging from machine control and asset monitoring to test cells and vehicle control. Key technology and equipment providers to the industrial market are supporting the effort. National Instruments is happy to collaborate within the solid ecosystem that AVnu Alliance is building," said Mike Santori, Vice President, Product Marketing, National Instruments.

Standard Ethernet is evolving to enable next generation control systems. This will allow convergence of low latency control traffic and standard Ethernet traffic on the same network for demanding applications like multi-axis motion control, providing a foundation for more advanced manufacturing and production models where data can be shared more flexibly between layers of the control system and where Internet of Things (IoT) technology can be applied into production environments. The new capabilities of these open standards enable high-speed closed loop control networks to support any Ethernet device using standard IT components and creates the needed foundation for IoT integration with industrial production.

"As a founding member of AVnu Alliance, Intel is committed to advancing open standards that deliver time-sensitive communication" said Anthony Neal-Graves, Vice President, Internet of Things Group, Intel. "This is particularly important for cyber-physical-systems where multiple compute nodes cooperate to control physical systems ranging from industrial robots to autonomous vehicles and smart buildings. Intel has been a leader in this industry for more than two decades and we look forward to seeing the new opportunities TSN will bring to our customers."

The Alliance has previously announced support for TSN in automotive applications such as drive-by-wire and autonomous driving. The Industrial market, which parallels work that AVnu Alliance members have been doing in the Automotive segment, is a $150 billion a year market space and creates a pathway to the future of IoT.

"This new segment is very exciting for the Alliance. Adding new members who are from this space and the evolution of the standards makes AVnu Alliance and Time Sensitive Networking poised for rapid growth in this market. As a founding member, Cisco's contribution to AVnu Alliance will help guide the expansion and the standards work being done within the industrial segment," said Kip Compton, VP and General Manager of the Internet of Things (IoT) Systems and Software group, Cisco. "AVnu Alliance remains dedicated to its core work in professional audio and video, consumer electronics and automotive. Broad market expansion of AVB/TSN with wide deployment will only benefit all members and markets – both from a cost perspective as well as assuring long-term support for the capabilities in standard components."

"As a founding member of AVnu Alliance, Broadcom has been involved in the support of a variety of evolving market segments and expansion into the industrial control space is the next natural move for the Alliance," said Nicholas Ilyadis, Broadcom CTO, Infrastructure & Networking Group. "As the industrial market continues to expand, AVnu Alliance will become an

important driver in the interoperability and certification of networked devices and ensuring the deployment of reliable solutions in global markets."

AVnu Alliance is responsible for guiding the specification for new applications to simplify the process for engineers and designers to build products. AVnu Alliance has created an Industrial Advisory Council for manufacturers and end users to learn more about the Alliance and the standards and to get involved with shaping the future of industrial networking. If you or someone you know is interested in joining or finding out more, please contact administration@AVnu.org.