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Marvell Automotive Gigabit Ethernet Technology Receives Compliance Approval from Premier Japanese Automotive Industry Body

88Q2112 1000BASE-T1 automotive Ethernet PHY surpasses stringent operational performance benchmarks set by JASPAR

SANTA CLARA, Calif., July 24, 2018 /PRNewswire/ -- Marvell Technology Group Ltd. (NASDAQ:MRVL) today confirmed that its 88Q2112 solution, the first IEEE® 802.3bp 1000BASE-T1 compliant automotive PHY to deliver 1 Gigabit/s data rates, has completed the conformance tests outlined by Japan Automotive Software Platform and Architecture (JASPAR) and passed 100%.

JASPAR was established in 2004 to facilitate the adoption of new automotive related technologies throughout Japan. The organization helps improve development efficiency and ensures reliability through standardization and sharing of sophisticated electronic automotive software and networks. It does this by providing common specification guidelines that can be referenced by the country's automobile OEMs and their tier 1 partners. Among its membership are globally recognized auto manufacturers such as Toyota, Nissan, Honda, Mazda, Suzuki, DENSO and Bosch.

JASPAR's Next Generation High-Speed Networking Group had previously evaluated both the IEEE 802.3 based 100BASE-T1 and 100BASE-TX connectivity solutions that are offered by Marvell, and the group's evaluation has now been extended to cover the company's latest 1000BASE-T1 automotive technology. The 88Q2112 based development boards utilized for the evaluation were designed and assembled by engineers from DENSO and tested by multiple tier 1 and tier 2 auto manufacturers coordinating with the JASPAR organization.

A comprehensive series of tests were conducted including, electromagnetic compatibility (EMC) emissions and immunity tests, bulk current injection (BCI) testing for RF immunity and extreme temperature testing with gigabit compatible harnesses. In addition, electrostatic discharge (ESD), transient noise, ground differential stress, clock skew, signal line short-to-power and short-to-ground testing were also performed. The Marvell 88Q2112 solution passed all tests by a considerable margin.

"88Q2112 is the first automotive Gigabit Ethernet solution in the market and we are excited to have successfully exceeded JASPAR's conformance testing. This represents a major milestone for our automotive connectivity technology," said Tim Lau, senior director of Automotive Product Marketing at Marvell. "We look forward to a continued partnership with JASPAR to ensure closer collaboration in testing market changing solutions from Marvell."

"Clearly, future in-vehicle network infrastructure will need to rely on high speed Ethernet technology, as car manufacturers expect greater functionality and more advanced safety-critical features to be incorporated," said Hideki Goto, chairman of JASPAR's Next Generation High-Speed Network Working Group and group manager at Toyota. "Marvell is making a real contribution towards this ongoing progression, thereby helping to accelerate the migration away from older and slower networking protocols."

"The core objective of JASPAR is to create an environment in which those serving the Japanese automotive sector can work together to further drive automotive innovation. Numerous JASPAR members have been involved in this test project and we are very pleased with the results that have been achieved," said Takashi Matsumoto, a member of Next Generation High-Speed Network Working Group at Nissan. "With the testing now complete, JASPAR plans to release a new standard that specifies circuit configuration and information on signal line impedance, AC coupling and termination resistance, CMC, ESD and crystals, later this year. This will be used as a reference for implementing 1000BASE-T1 technology to the Japanese OEMs and tier 1s."

For further information on the Marvell 88Q2112 PHY, please visit: https://www.marvell.com/automotive/ethernet/88q2112/

About Marvell

Marvell first revolutionized the digital storage industry by moving information at speeds never thought possible. Today, that same breakthrough innovation remains at the heart of the company's storage, processing, networking, security and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell's semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial and consumer markets. To learn more, visit: https://www.marvell.com

About JASPAR

Focused on the Japanese automotive market, JASPAR was established in order to pursue increasing development efficiency and ensuring reliability, by standardization and common use of electronic control system software and in-vehicle networks as they become more advanced and complex. Engineer staff from various car manufacturers, research institutes, academic establishments, software developers, electrical equipment suppliers and semiconductor vendors all participate in its activities. To learn more visit: www.jaspar.jp/en/about_us

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