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Micron, Rambus, Northwest Logic and Avery Design to Deliver a Comprehensive GDDR6 Solution for Next-Generation Applications

Comprehensive solution including memory, PHY, Controller and Verification IP for ASIC and FPGA to enable GDDR6 adoption beyond graphics

BOISE, Idaho, Jan. 23, 2018 (GLOBE NEWSWIRE) -- Micron Technology, Inc. (NASDAQ:MU), a leading memory and storage provider, today announced with Rambus Inc., Northwest Logic and Avery Design, their efforts to deliver a comprehensive solution for GDDR6, the world's fastest discrete memory. This first-of-its-kind solution would enable GDDR6 use in advanced applications such as high-performance networking, autonomous vehicles, artificial intelligence and 5G infrastructure.

Prior generations of GDDR memories, enabled by GPU vendors, were focused exclusively on the graphics market. While this allowed graphics and game console designs to take advantage of the significant performance advantage offered by GDDR, other applications could not because the necessary building blocks were not available.

This comprehensive solution brings together the unique contributions of each company to solve that problem, extending the reach and benefit of GDDR6 well beyond its traditional graphics market. The solution would include:

- | [GDDR6 Memory \(Micron\)](#)
- | [GDDR6 PHY \(Rambus\)](#)
- | [GDDR6 Controller \(Northwest Logic\)](#)
- | [GDDR6 Verification IP \(Avery Design\)](#)

Targeting up to 64GB/s, GDDR6 brings a significant improvement over the fastest available DDR4. This unprecedented level of single-chip performance, using proven, industry-standard BGA packaging provides designers a powerful, cost-efficient and low-risk solution using the most scalable, high-speed discrete memory available to the market. For more information, visit www.micron.com.

"With our GDDR6N for Networking announcement at the Linley Processor Conference last October and considerable interest from automotive customers, Micron continues to leverage our extensive experience and leadership in graphics memory," said Tom Eby, senior vice president and general manager, Compute and Networking Business Unit at Micron. "This solution promises to unlock GDDR6 performance for a new wave of exciting and innovative products."

"We are excited to work with our memory partners to deliver the best possible GDDR6 memory solution. Initially designed for high-performance graphics, the high bandwidth delivered by GDDR6 makes it ideal for other data-intensive applications like AI, ADAS (advanced driver assistance systems), and high-speed networking," said Luc Seraphin, senior vice president and general manager of the Rambus Memory and Interfaces Division. "Leveraging nearly 30 years of experience in high-speed interface design, we are proud to be the first IP provider to offer a PHY solution for GDDR6 and continue our position on the leading edge of industry standards."

"Northwest Logic's is adapting its widely used, silicon-proven Memory Controller solution to support GDDR6 memory. The fully configurable, high-performance GDDR6 Controller will be fully integrated, verified and delivered with the Rambus GDDR6 PHY enabling customer to quickly and reliably create GDDR6 designs," said Brian Daellenbach, president of Northwest Logic.

"Avery is extending our proven line of memory models to support GDDR6. These models provide significant performance monitoring and other useful features not found in the memory vendor models. The Avery GDDR6 memory models will enable GDDR6-based SoC designs to be robustly verified and performance-optimized quickly and effectively," said Chris Browy, vice president of sales and marketing for Avery Design.

About Micron

We are an industry leader in innovative memory and storage solutions. Through our global brands — Micron®, Crucial®, and Ballistix® — our broad portfolio of high-performance memory and storage technologies, including DRAM, NAND, NOR Flash, and 3D XPoint™ memory, is transforming how the world uses information to enrich life. Backed by nearly 40 years of

technology leadership, our memory and storage solutions enable disruptive trends, including artificial intelligence, machine learning, and autonomous vehicles in key market segments like cloud, data center, networking, and mobile. Our common stock is traded on the NASDAQ under the MU symbol. To learn more about Micron Technology, Inc., visit micron.com.

About Rambus Inc.

Dedicated to making data faster and safer, Rambus creates innovative hardware, software and services that drive technology advancements from the data center to the mobile edge. Our Memory and Interfaces Division develops products and services that solve the power, performance, and capacity challenges of the communications and data center computing markets. Rambus enhanced standards-compatible and custom memory and serial link solutions include chips, architectures, memory and SerDes interfaces, IP validation tools, and system and IC design services. We collaborate with the industry, partnering with leading chip and system designers, foundries, and service providers. Integrated into tens of billions of devices and systems, our products power and secure diverse applications, including Big Data, Internet of Things (IoT) security, mobile payments, and smart ticketing. For more information, visit rambus.com.

About Northwest Logic

Northwest Logic, founded in 1995 and located in Beaverton, Oregon, provides high-performance, silicon-proven, easy-to-use IP cores including high-performance PCI Express Solution (PCI Express 4.0/3.0/2.1/1.1 cores, DMA cores and drivers), Memory Interface Solution (GDDR6, HBM2, DDR4/3, LPDDR4/3, MRAM), and MIPI Solution (CSI-2, DSI-2, DSI). These solutions support a full range of platforms including ASICs, Structured ASICs and FPGAs. For additional information, visit www.nwlogic.com.

About Avery Design Systems

Founded in 1999, Avery Design Systems, Inc. enables system and SOC design teams to achieve dramatic functional verification productivity improvements through the use of formal analysis applications for gate-level X-pessimism verification and real X root cause and sequential backtracing; and robust core-through-chip-level Verification IP for PCI Express, CCIX, Gen-Z, USB, AMBA, UFS, MIPI CSI/DSI, I3C, DDR/LPDDR, HBM, ONFI/Toggle, NVM Express, SATA, AHCI, SAS, eMMC, SD/SDIO, CAN FD, and FlexRay standards. The company has established numerous Avery Design VIP partner program affiliations with leading IP suppliers. More information about the company may be found at www.avery-design.com.

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