Micron's Full Suite of Automotive-Grade Solutions Qualified for Qualcomm Automotive Platforms to Power AI in Vehicles

April 10, 2024 at 2:00 AM EDT

Micron's automotive memory and storage enable central compute, digital cockpit and advanced driver-assistance systems for Qualcomm customers

NUREMBERG, Germany, April 10, 2024 (GLOBE NEWSWIRE) -- Embedded World -- Micron Technology, Inc. (Nasdaq: MU), today announced that it has qualified a full suite of its automotive-grade memory and storage solutions for Qualcomm Technologies Inc.'s Snapdragon® Digital Chassis ™, a comprehensive set of cloud-connected platforms designed to power data-rich, intelligent automotive services. Micron's low-power double data rate 5X (LPDDR5X) memory, Universal Flash Storage (UFS) 3.1, Xccela™ flash memory and quad serial peripheral interface NOR (SPI-NOR) flash have been pre-integrated for the latest generation of Snapdragon automotive solutions and modules, including the Snapdragon® Cockpit Platform, Snapdragon Ride™ Platform and Snapdragon Ride™ Flex System-on-Chip (SoC), all of which are intended to handle the increasing requirements of modern and future workloads for artificial intelligence (AI) technologies. This work between Micron and Qualcomm Technologies is aimed at helping the ecosystem build next-generation intelligent vehicles powered by sophisticated AI.

"Today's software-defined vehicles and immersive cockpits require highly reliable, ultralow-latency memory and storage to process massive amounts of data at the edge and enable time-critical near-instant decision-making," said Chris Jacobs, vice president of Micron's embedded market segments. "Our broad portfolio of automotive memory and storage solutions provides the instant-on performance required on the road, and we're thrilled to work with Qualcomm Technologies to accelerate ecosystem adoption of the leading-edge solutions designed to make vehicles safer and smarter."

Micron offers a wide portfolio of automotive-grade solutions with high reliability, fast boot times, high bandwidth, low power and a small footprint. Unlike many automotive-marketed solutions that are built for consumer devices, Micron's automotive-grade products are uniquely ruggedized, built and optimized to meet demanding automotive standards through its process technology and product development. These automotive products are rigorously tested to provide the extreme stability, quality, thermal tolerances, reliability and longevity that the automotive market requires.

Micron's solutions are qualified for a range of Snapdragon Digital Chassis solutions that support a range of AI-driven features:

- Snapdragon Cockpit Platform is designed for software-rich, personalized digital cockpits, supporting immersive audio, intelligent driving assistance and rich visual experiences across multiple displays. Equipped with high-performance computing and machine learning accelerators, the Snapdragon Cockpit Platform features multimodal generative AI capabilities and enables the development of digital cockpits that can intuitively adapt and evolve with driver needs and technological advancements.

- Snapdragon Ride Platform enables advanced driver-assistance systems (ADAS) features and supports a range of functionalities from basic parking assistance to higher levels of autonomy and technologies such as computer vision, complex AI networks, camera visualization, sensor fusion, lidar perception, automated driving maps and ultrasonic sensor processing.

- Snapdragon Ride™ Flex SoCis designed to support mixed-criticality workloads with central compute, integrating digital cockpit, ADAS and automated driving capabilities on a single chip. This centralization helps automakers achieve a unified software-defined vehicle architecture, paving the way for multimodal AI networks in automotive systems.

Micron's automotive solutions will deliver powerful benefits for Qualcomm Technologies' automotive customers and the broader ecosystem:

- **Micron's automotive LPDDR5X** is the flagship memory solution for applications needing the fastest speeds and lowest power profile. LPDDR5X enables improved energy efficiency and performance for intelligent vehicles with increasingly bandwidth- and energy-hungry technologies such as AI-based autonomous driving features. Notably, Micron's LPDDR5X is backward-compatible for LPDDR5 speeds of 6.4 gigabits per second, which Qualcomm Technologies has qualified the memory for. With this qualification, Qualcomm Technologies' latest generation Snapdragon automotive SoCs are the first SoC family enabling the LPDDR5 interface.
- **Micron's automotive UFS 3.1 storage** enables two times faster read performance and a 50% improvement in sustained write performance,[1] enabling faster startups and over-the-air updates, more responsive launching of applications and an overall smoother user experience. This boost in speed brings the driver experience in line with the expectations of consumers who have little tolerance for latency while on the road, especially when accessing critical data such as directions from their digital cockpit.
- **Micron's Xccela™ flash memory**is one of the industry's highest-performance NOR flash memories, delivering five times the performance and reducing energy consumption by three times.[2] This capability enables instant-on performance and

fast system responsiveness in automotive applications.

- **Quad SPI-NOR flash** delivers fast code execution and high reliability for applications such as boot code and program code. This is especially critical for scenarios such as reliably booting up a vehicle's digital cockpit and operating system as soon as a driver starts the engine, as code failure may result in cars being "bricked" or rendered inoperable.

These Micron solutions have been enabled in all the volatile and nonvolatile memory sockets of the latest generation Snapdragon Cockpit Platforms. The companies' work builds on a long-standing working relationship that spans multiple generations of platforms between Micron and Qualcomm Technologies to bring immersive in-vehicle experiences to cars. With this qualification, Micron and Qualcomm Technologies together help the ecosystem build next-generation intelligent vehicles powered by sophisticated AI.

Used by leading automakers, Micron's automotive solutions have accumulated trillions of miles on the road [3] over the company's nearly 35 years in the automotive market. Micron's deep expertise stems from tight collaboration with automotive customers on designing memory into evolving architectures underpinning cutting-edge automotive technologies.

This announcement complements Micron's unveiling of the Micron 4150AT SSD at Embedded World in Germany this week. Offering first-of-its-kind virtualization, and four customizable ports, the automotive-grade drive enables a new paradigm of centralized architectures for intelligent vehicles. Together, these launches extend Micron's automotive leadership and better empower the automotive ecosystem to usher vehicles into a new era of intelligence at the edge.

Resources

- Portfolio page: Automotive memory and storage solutions

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About Micron Technology, Inc.
We are an industry leader in innovative memory and storage solutions transforming how the world uses information to enrich life for all. With a relentless focus on our customers, technology leadership, and manufacturing and operational excellence, Micron delivers a rich portfolio of high-performance DRAM, NAND and NOR memory and storage products through our Micron® and Crucial® brands. Every day, the innovations that our people create fuel the data economy, enabling advances in artificial intelligence and 5G applications that unleash opportunities — from the data center to the intelligent edge and across the client and mobile user experience. To learn more about Micron Technology, Inc. (Nasdaq: MU), visit micron.com.

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[1] Over prior-generation UFS 2.1 devices
[2] Compared to the page mode parallel NOR solution
[3] Based on Micron's calculations

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