Arteris Network-on-Chip IP Deployed in Renesas' Next-Gen R-Car Automotive Technology

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FlexNoC interconnect IP with resilience option and advanced memory data traffic management enables Renesas to create power-efficient, low-latency, high-performance systems-on-chips (SoCs) with functional safety support for automated vehicles

CAMPBELL, Calif., March 24, 2026 (GLOBE NEWSWIRE) -- Arteris, Inc. (Nasdaq: AIP), a leading provider of semiconductor technology for accelerating innovation in the AI era, today announced that its Arteris FlexNoC network-on-chip (NoC) interconnect IP has been licensed and deployed by Renesas for its most advanced R-Car Gen 5 SoC series. Tailored for advanced driver-assistance (ADAS) and automated driving (AD) systems, the SoC and its chiplet extensions rely on Arteris NoC IP for the underlying data movement that is essential for high-performance, energy-efficient AI-enabled SoCs that will be used in future autonomous vehicles.

The latest R-Car X5H SoC, currently sampling, delivers high-speed image recognition and processes surrounding objects using automotive cameras, radar, and lidar. It delivers AI acceleration of up to 400 trillions of operations per second (TOPS) and with UCIe protocol-based chiplet extensions to boost AI performance by a factor of four or more. Its native NPU and GPU processing engines, along with Arm CPU clusters, are all connected via Arteris NoC interconnect IP technology for underlying data movement at top performance.

Developed leveraging the TSMC 3 nm automotive process, the X5H SoC achieves a 30% to 35% reduction in power consumption over the previous generation processes, lowering overall system costs by reducing the need for additional cooling solutions while also extending vehicle driving range. This is achieved while enabling customers to meet ISO 26262 automotive safety integrity level (ASIL D) requirements at the system level. Physical awareness, including support for advanced nodes in Arteris FlexNoC interconnect IP, and support for energy-efficient design make this possible.

"Arteris provides high-performance, physically aware, and flexible interconnect technology, which is increasingly needed to meet the advanced requirements of state-of-the-art, software-defined vehicles," said Aish Dubey, VP and head of SoC division, high performance computing, Renesas Electronics Corporation. "Arteris FlexNoC IP enables us to achieve the performance, power reductions, and functional safety for our next-generation ADAS SoCs for level 2+, 3 and even level 4 automated vehicles, while supporting chiplet extensions to scale AI performance."

"Intelligent automotive SoC compute platforms increasingly need to deliver a smarter, safer and more connected experience and scale with future AI mobility demands via chiplets extensions," said K. Charles Janac, president and CEO of Arteris. "We are pleased to continue to expand our collaboration with Renesas, including the work on R-Car Gen 5 SoCs, and provide the underlying connectivity and enablement of high-performance, energy-efficient and safe data movement for automotive innovations."

FlexNoC interconnect IP enables efficient, high-performance network-on-chip designs for complex SoCs. It improves SoC design success with its advanced physical awareness capability that minimizes development time, improves performance, lowers power consumption, and enables functional safety for mission-critical applications such as autonomous driving. Learn more about it and other solutions for automotive at arteris.com/automotive/.

About Arteris

Arteris is a leading provider of semiconductor technology that accelerates the creation of high-performance, power-efficient silicon with built-in safety, reliability, and security. Innovative Arteris products are designed to optimize data movement and help ease complexity in the modern AI era with network-on-chip (NoC) interconnect intellectual property (IP), system-on-chip (SoC) software for integration automation and hardware security assurance. All are used by the world's top technology companies to improve overall performance and engineering productivity, reduce risk, lower costs, and bring cutting-edge designs to market faster. Learn more at **arteris.com**.

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