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RISC-V Gains Ground with New Qualcomm Joint Venture

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RECENT DEVELOPMENT

In a press release from August 4, 2023, Qualcomm Technologies, Inc. announced the formation of a company aimed at the acceleration and future of products based on the open-standard RISC-V instruction set architecture (ISA). Formed with Robert Bosch GmbH, Infineon Technologies AG, Nordic Semiconductor, and NXP Semiconductors, this as of yet unnamed company will also provide reference architectures and help establish industry-wide solutions. The initial focus of the effort will be in the automotive sector, with expectations for expansion to mobile and IoT.

Being a central source for RISC-V products isn't the only goal stated in the release. The venture seeks to contribute to the greater RISC-V open-standard corpus, encourage further adoption of the technology and, in turn, "promote even more diversity in the electronics industry, reducing the barriers to entry for smaller and emergent companies and enabling increased scalability for established companies." Those engaging in the joint venture also believe initiatives and organizations aimed at promoting the RISC-V open specifications will ultimately help increase the resilience of the global semiconductor ecosystem.

ANALYST COMMENT

Although its near-term focus is on automotive applications, the formation of this venture is significant in ways beyond the products that will be initially produced. Firstly, it promises a tremendous influx of participation in the RISC-V technology ecosystem. This growth of adoption rates, especially in cases of open-standard technology, can serve to greatly advance the technology and its capabilities across application areas. Secondly, it indicates a potential industry move away from proprietary ISAs like Arm, especially as Qualcomm is currently a sizeable Arm user. For some, these proprietary options can be costly, restrictive, or too sensitive to shifts in business or corporate strategy. Finally, RISC-V offers considerable political and market neutrality that create both challenges and opportunities for those involved in the international flow of technological know-how.

The RISC-V architecture has recently been seeing greater trust and adoption as more industry players are attracted to its neutral, free-to-license, and open implementation capabilities. As the focus of semiconductor development has shifted towards concepts like indigenous production, decentralization, and resilience, open-standard technology like RISC-V will likely continue to gain momentum.