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RISC-V Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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Abstracts

The Global RISC-V Market was valued at USD 1.76 billion in 2024 and is estimated to grow at a CAGR of 30.7% to reach USD 25.73 billion by 2034. This impressive expansion is attributed to the growing preference for customizable and license-free processor architectures, increasing integration of RISC-V cores in AI and machine learning systems, and rising funding and support from ecosystem players. With RISC-V offering a more affordable and flexible alternative to traditional proprietary architectures, its adoption is spreading quickly across multiple end-use sectors. The movement toward open-source silicon, combined with government incentives to strengthen domestic chip manufacturing capabilities in emerging economies, is further enhancing adoption. Additionally, the global surge in smart connected devices and automation is fueling consistent demand for adaptable, low-power, and scalable processor platforms powered by RISC-V.

RISC-V adoption in the automotive space is accelerating, particularly for real-time computing needs across systems like ADAS, infotainment, and powertrain controllers. The architecture is also gaining traction in IoT environments such as home automation, industrial monitoring, and connected wearables, where its modularity and cost efficiency provide substantial benefits. Strong development in these areas, especially across key regions in Southeast Asia, India, and China, is fueled by supportive public initiatives, local semiconductor infrastructure investments, and increasing emphasis on open computing models.

The standard RISC-V architecture segment held 43% share and recorded revenue of USD 758.6 million. Its popularity stems from widespread usage in embedded and IoT applications due to its open design, reliable specs, and modular features, making it ideal for budget-sensitive markets. Meanwhile, the custom RISC-V architecture segment is

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expected to register a robust CAGR of 33.6% through 2034 as enterprises increasingly seek tailored chip solutions for high-performance tasks in areas like AI, cloud computing, and real-time control systems.

In 2024, the industrial and IoT segment was the largest application area, holding a 28.2% share and generating USD 497.5 million. Adoption in this sector is rising thanks to the need for energy-efficient processors that can support edge computing, predictive analytics, and advanced automation systems. RISC-V enables scalable deployment across devices such as sensors, controllers, and gateways, all requiring compact yet powerful computing resources.

U.S. RISC-V Market generated USD 350.4 million in 2024, supported by rising use in aerospace, data centers, and industrial environments that prioritize AI-powered and secure systems. Companies in the U.S. are transitioning from proprietary architectures to open, customizable ones to reduce dependency and encourage innovation. RISC-V firms in the U.S. are focused on delivering high-performance cores for demanding applications across automotive, cloud, and mission-critical workloads, all while aligning with federal priorities for secure and independent tech ecosystems.

Top participants in the RISC-V Market include Codasip S.R.O., SiFive, Inc., Infineon Technologies AG, Andes Technology Corp., and Starfive Technology Co. Ltd. Firms operating in the RISC-V sector are prioritizing customizable core design to address specific performance needs in AI, industrial automation, and next-gen automotive systems. Strategic partnerships with software ecosystem players and toolchain developers help accelerate time to market. Many companies are heavily investing in R&D to build robust silicon platforms that integrate RISC-V cores with advanced memory, security, and connectivity features. Regional expansion, especially in emerging markets, is supported through local collaborations and licensing models.

Comprehensive Market Analysis and Forecast

Industry trends, key growth drivers, challenges, future opportunities, and regulatory landscape

Competitive landscape with Porter’s Five Forces and PESTEL analysis

Market size, segmentation, and regional forecasts

In-depth company profiles, business strategies, financial insights, and SWOT

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analysis

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9.9 SiFive, Inc.
9.10 Starfive Technology Co. Ltd.

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