Reduced Instruction Set Computer V (Risc-V) Market - Opportunities, Share, Growth and Competitive Analysis

The Business Research Company's Reduced Instruction Set Computer V (Risc-V) Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

The Business Research Company

LONDON, GREATER LONDON, UNITED KINGDOM, October 3, 2025 /EINPresswire.com/ -- What Is The Forecast For The Reduced Instruction Set Computer V (Risc-V) Market From 2024 To 2029?

The market size of Reduced Instruction Set Computer V (RISC-V) has witnessed significant expansion in recent years. The market will increase from a worth of $1.85 billion in 2024, escalating to an impressive $2.49 billion in 2025. The surge can be credited to a Compound Annual Growth Rate (CAGR) of 34.5%. The significant growth witnessed historically is owed to factors including rising academic and research interests, an expanding open-source hardware movement, increasing demand for flexible instruction sets, growing adoption at the university level, and an increasing requirement for customized processor architectures.

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The market size for the reduced instruction set computer V (RISC-V) is anticipated to experience a sharp increase in the coming years, propelling to a value of $8.04 billion by 2029 at a compound annual growth rate (CAGR) of 34.1%. The marked growth during the forecast timeline is due to the burgeoning use in automotive fields, the rising demand for edge computing gadgets, the broadening use of RISC-V in internet of things (IoT) environments, its increasing utilization in data centers and artificial intelligence tasks, and the growing focus on national semiconductor independence. The key trends for the forecast period are advancements in RISC-V chip design technology, creativity in diverse computing architectures, financial backing for RISC-V-oriented hardware accelerators, progress in RISC-V software toolchains, and inventiveness in the creation of low-power RISC-V core implementations.

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What Are The Core Growth Drivers Shaping The Future Of The Reduced Instruction Set Computer V (Risc-V) Market?
The expansion of industrial automation is predicted to drive the evolution of the reduced instruction set computer V (RISC-V) market. Industrial automation involves the use of control mechanisms such as computers and robotics to independently operate machinery and processes, thereby reducing the need for human intervention. As businesses aim to amplify their operational efficiency, this form of automation, which minimizes human errors and boosts production speed, is gaining traction. RISC-V, with its flexible, open-source processor layout, is a key supporter of industrial automation. It enables custom-made, high-performance control systems and offers scalability and energy conservation for real-time processing in fields like robotics, IoT devices, and smart factories, thereby increasing precision and operational efficiency. For instance, data from the International Federation of Robotics, a non-profit organization based in Germany, indicates a 5% rise in the installment of industrial robots worldwide in 2022, reaching a total of 553,052 compared to the previous year. Hence, the escalating trend of industrial automation acts as a major catalyst for the progress of the reduced instruction set computer V (RISC-V) market.

Which Companies Are Currently Leading In The Reduced Instruction Set Computer V (Risc-V) Market?
Major players in the Reduced Instruction Set Computer V (Risc-V) Global Market Report 2025 include:
• Western Digital Corporation
• Infineon Technologies Aktiengesellschaft (AG)
• Renesas Electronics Corporation
• Microchip Technology Incorporated
• Lattice Semiconductor Corporation
• Tenstorrent Inc.
• SiFive Inc.
• Rivos Inc.
• Codasip S.R.O.
• Ventana Micro Systems Inc.

What Are The Prominent Trends In The Reduced Instruction Set Computer V (Risc-V) Market?
Leading businesses in the RISC-V market are striving to create innovative solutions like processors based on full out-of-order vector implementation to cater to the complex workloads in data centers and performance-intensive embedded applications. Such processors, renowned for superior performance, operate instructions out of sequence to enhance efficacy and concurrently process huge amounts of data through vector operations, thus improving processing speed for computing and AI tasks. For example, SiFive Inc., a fabless semiconductor

company based in the US, in November 2022, unveiled the P670 and P470 RISC-V processors. These novel models come equipped with sophisticated features like full out-of-order vector implementation, comprehensive virtualization support, and RISC-V vector cryptography, targeting to provide top-notch performance and productivity for small-sized, high-volume gadgets such as wearables, intelligent home appliances, and industrial internet of things systems, along with AR or VR headsets. Moreover, they offer extended versatility for the Android Open Source Project ecosystem and establish themselves as potent alternatives to traditional processor architectures.

Comparative Analysis Of Leading Reduced Instruction Set Computer V (Risc-V) Market Segments
The reduced instruction set computer v (risc-v) market covered in this report is segmented

1) By Architecture Type: Standard Reduced Instruction Set Computer V (RISC-V) Architecture, Custom Reduced Instruction Set Computer V (RISC-V) Architecture, Extensible Reduced Instruction Set Computer V (RISC-V) Architecture
2) By Product Type: Microcontroller (MCU), Microprocessor (MPU)
3) By Application: Smartphones, Fifth Generation (5G) Devices, Internet Of Things Devices
4) By Industry Vertical: Consumer Electronics, Automotive, Industrial And Internet Of Things (IoT), Data Centers And High-Performance Computing (HPC), Networking And Telecom, Aerospace And Defense, Other Industry Verticals

Subsegments:
1) By Standard Reduced Instruction Set Computer V Architecture: High Performance, Low Power, Embedded
2) By Custom Reduced Instruction Set Computer V Architecture: Application Specific, Domain Specific, Configurable
3) By Extensible Reduced Instruction Set Computer V Architecture: Modular, Scalable, Flexible

View the full reduced instruction set computer v (risc-v) market report:
https://www.thebusinessresearchcompany.com/report/reduced-instruction-set-computer-v-risc-v-global-market-report

Which Regions Are Dominating The Reduced Instruction Set Computer V (Risc-V) Market Landscape?
In 2024, North America dominated the global reduced instruction set computer V (RISC-V) market. However, the Asia-Pacific region is projected to exhibit the most rapid growth in the forthcoming period. The global market report for RISC-V includes various regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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