

RISC-V Specification Status

The RISC-V specification process is governed by the [Ratification Policy](#), which is more concisely articulated in the [Specification Lifecycle](#). To assist Task Group Chairs, Vice-chairs, and specification authors in navigating this process, the [RISC-V Lifecycle Guide](#) includes a comprehensive section on 'Specification Lifecycle.' This section begins with an introduction to the process and features subsections for each milestone, providing step-by-step descriptions of the procedures involved. Before embarking on the development of a RISC-V specification, it is advisable to familiarize oneself with this guide.

The development of RISC-V specifications is managed through [Jira](#). Participation in this process requires an [LFX ID](#). Further information on how to obtain one can be found in the '[Linux Foundation Tools](#)' section of the [RISC-V Getting Started Guide](#)."

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Ratification Projection per Quarter

1Q2024 (5 issues) | 2Q2024 (19 issues)
3Q2024 (2 issues) | 4Q2024 (0 issues)

Total Ratifications in 2024

Total: 8 issues

Inception

14 issues

Planning

9 issues

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Composable Extensions	No		Apr 25, 2024
Address Translation Cache Invalidation	Yes		Apr 26, 2024
Memory Tagging	No		May 02, 2024
CHERI	No		May 08, 2024
Attached Matrix Extension	No		May 08, 2024
High Assurance Cryptography (HAC)	No		May 08, 2024
Post Quantum Cryptography	No		May 08, 2024
Performance Events Specification	No		May 08, 2024
Zicfilp - CFI defend against COP/JOP	Yes		May 08, 2024

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Packed Single Instruction, Multiple Data (SIMD)	No	Dec 29, 2023	May 01, 2024
Load/Store Pair for RV32	Yes	Sept 26, 2024	May 08, 2024
Semihosting	Yes		May 01, 2024
Dot-Product	Yes		May 08, 2024
Server Platforms	No		May 08, 2024
Vector Crypto - all-rounds AES	No		May 08, 2024
Security Model	No		May 08, 2024
Architectural Test User Specification	No		May 08, 2024
Instruction/Data Consistency	No		May 08, 2024

Trace & Diagnostic Data Transport Encapsulation	No	May 08, 2024
Lightweight Isolation	No	May 08, 2024
External Debug Security	No	May 08, 2024
Integrated Matrix Specification	No	May 08, 2024
Platform Management Interface - RPMI	No	May 08, 2024

14 issues

9 issues

Under Development

10 issues

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Extra Vector Carry-Less/Crypto Extensions	Yes	Jul 25, 2024	May 09, 2024
Address Range Invalidation	Yes		May 08, 2024
Server SOC	No		May 08, 2024
Load-Acquire/Store-Release	Yes		May 08, 2024
Non-leaf Invalidation	Yes		May 08, 2024
Unified Discovery	No		May 08, 2024
Dynamic RVTSO	Yes		May 08, 2024
Confidential VM Extension (CoVE)	No		May 08, 2024
Supervisor Domains Access Protection	No		May 08, 2024
Confidential VM Extension (CoVE) with I/O	No		May 09, 2024

10 issues

Internal Review

2 issues

Summary	Is Fast Track?	Target BoD Ratification Approval	Target Public Review Completion	Updated
Load-Acquire /Store-Release	Yes			May 08, 2024
Supervisor Domains Access Protection	No			May 08, 2024

2 issues

Under AR Review for Freeze

4 issues

Freeze

5 issues

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Boot & Runtime Services (BRS)	No	Nov 07, 2023	May 09, 2024
Nexus-based Trace (N-Trace)	No	May 30, 2024	May 08, 2024
S-mode Physical Memory Protection (PMP)	No	Jun 27, 2024	May 08, 2024
Fast Interrupts (CLIC)	No	Jun 27, 2024	May 08, 2024
4 issues			

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Control Transfer Records (CTR)	No	Apr 25, 2024	May 07, 2024
Input/Output Physical Memory Protection (IOPMP)	No	May 30, 2024	May 08, 2024
Privileged Specification 1.13	No		May 01, 2024
RVA23	No		May 08, 2024
RVB23	No		May 08, 2024
5 issues			

Public Review

[2 issues](#)

Summary	Is Fast Track?	Target BoD Ratification Approval	Target Public Review Completion	Updated
E-Trace Encapsulation	No	Jun 27, 2024	May 10, 2024	May 08, 2024
Double Trap	Yes	Jun 27, 2024	May 31, 2024	May 01, 2024
2 issues				

Ratification-Ready

[9 issues](#) | [Fast-Tracks: 4 issues](#) | [Regular: 5 issues](#)

Summary	Is Fast Track?	Target BoD Ratification Approval	Updated
Quality-of-Service (QoS) Identifiers	Yes	May 30, 2024	Apr 26, 2024
Capacity and Bandwidth controller QoS Register Interface (CBQRI)	No	May 30, 2024	Apr 26, 2024
Shadow Stacks and Landing Pads	No	May 30, 2024	May 02, 2024
Eliding Memory-Management Fences on Setting PTE Valid	Yes	May 30, 2024	May 08, 2024
Brain Float 16 (BFloat16)	Yes	May 30, 2024	May 09, 2024
RAS Error Record Interface (RERI)	No	May 30, 2024	May 09, 2024
Resumable Non-maskable Interrupts	Yes	Jun 27, 2024	May 09, 2024
Debug for Hardware Platforms	No	Jun 27, 2024	May 09, 2024
Pointer Masking (J)	No	Jun 27, 2024	May 09, 2024
9 issues			

Latest Updates

2024 Ratifications

Summary	Updated	Is Fast Track?	Status	Target BoD Ratification Approval	Summary	Updated	Is Fast Track?	Status	Actual BoD Ratification Approval
Pointer Masking (J)	May 09, 2024	No	SPECIFICATION IN RATIFICATION-READY	Jun 27, 2024	B Extension Components	Apr 25, 2024	Yes	SPECIFICATION RATIFIED	Apr 25, 2024
Debug for Hardware Platforms	May 09, 2024	No	SPECIFICATION IN RATIFICATION-READY	Jun 27, 2024	A Extension Components	Apr 25, 2024	Yes	SPECIFICATION RATIFIED	Apr 25, 2024
RAS Error Record Interface (RERI)	May 09, 2024	No	SPECIFICATION IN RATIFICATION-READY	May 30, 2024	Byte and Halfword Atomic Memory Operations	Apr 25, 2024	Yes	SPECIFICATION RATIFIED	Apr 25, 2024
Resumable Non-maskable Interrupts	May 09, 2024	Yes	SPECIFICATION IN RATIFICATION-READY	Jun 27, 2024	Supervisor Counter Delegation	Mar 28, 2024	Yes	SPECIFICATION RATIFIED	Mar 28, 2024
Brain Float 16 (BFloat16)	May 09, 2024	Yes	SPECIFICATION IN RATIFICATION-READY	May 30, 2024	May-Be-Operations	Mar 28, 2024	Yes	SPECIFICATION RATIFIED	Mar 28, 2024
Boot & Runtime Services (BRS)	May 09, 2024	No	SPECIFICATION IN FREEZE	Nov 07, 2023	Indirect Control and Status Register (CSR) Access	Feb 27, 2024	Yes	SPECIFICATION RATIFIED	Feb 27, 2024
Confidential VM Extension (CoVE) with I/O	May 09, 2024	No	SPECIFICATION UNDER DEVELOPMENT		Supervisor Binary Interface 2.0	Feb 19, 2024	No	SPECIFICATION RATIFIED	Jan 29, 2024
Extra Vector Carry-Less /Crypto Extensions	May 09, 2024	Yes	SPECIFICATION UNDER DEVELOPMENT	Jul 25, 2024	Advanced Configuration and Power Interface (ACPI) Functional Fixed Hardware (FFH)	Feb 19, 2024	No	SPECIFICATION RATIFIED	Jan 29, 2024
Eliding Memory-Management Fences on Setting PTE Valid	May 08, 2024	Yes	SPECIFICATION IN RATIFICATION-READY	May 30, 2024	8 issues				
E-Trace Encapsulation	May 08, 2024	No	SPECIFICATION IN RATIFICATION-READY	Jun 27, 2024					

Showing 10 out of [73 issues](#)