

RISC-V Specification Lifecycle

RISC-V Specifications

T	Key	Summary	Is Fast Track?	ISA or NON-ISA	Created	Due	Updated	Status	Public Review	Target BoD Ratification Approval	GitHub	Groups.io	Direct-Line Governing Committee
	RVS-560	Efficient Trace (e-Trace)	No	NON-ISA	May 30, 2023	May 10, 2022	Aug 25, 2023	SPECIFICATION DONE	Completed	Dec 15, 2021	https://github.com/riscv-non-isa/riscv-trace-spec	https://lists.riscv.org/g/tech-trace	SOC Infrastructure HC
	RVS-2688	Address Range Invalidation	Yes	NON-ISA	May 02, 2024		May 02, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv-non-isa/riscv-iommu-invalidation		
	RVS-1185	Architectural Test User Specification	No	NON-ISA	Jul 07, 2023		Jul 07, 2023	SPECIFICATION IN PLANNING	Not Started		https://github.com/riscv-non-isa/riscv-arch-test	https://lists.riscv.org/g/sig-arch-test	ISA Infrastructure HC
	RVS-1971	Dot-Product	Yes	ISA	Dec 22, 2023		Feb 19, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv/riscv-dot-product		
	RVS-1051	Instruction/Data Consistency	No	ISA	Jul 03, 2023		Jul 03, 2023	SPECIFICATION IN PLANNING	Not Started		https://github.com/riscv/riscv-j-extension	https://lists.riscv.org/g/tech-j-ext	Privileged Spec IC
	RVS-1948	Load/Store Pair for RV32	Yes	ISA	Dec 20, 2023	Aug 29, 2024	Mar 15, 2024	SPECIFICATION IN PLANNING		Sept 26, 2024	https://github.com/riscv/riscv-zilsd		
	RVS-2684	Non-leaf Invalidation	Yes	NON-ISA	May 02, 2024		May 02, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv-non-isa/riscv-iommu-invalidation		
	RVS-1135	Packed Single Instruction, Multiple Data (SIMD)	No	ISA	Jul 04, 2023	Dec 29, 2023	May 01, 2024	SPECIFICATION IN PLANNING	Not Started	Dec 29, 2023	https://github.com/riscv/riscv-p-spec	https://lists.riscv.org/g/tech-p-ext	Unprivileged Spec IC
	RVS-1153	Security Model	No	NON-ISA	Jul 07, 2023		Mar 19, 2024	SPECIFICATION IN PLANNING	Not Started		https://github.com/riscv-non-isa/riscv-security-model	https://lists.riscv.org/g/tech-security-model	Security HC
	RVS-2673	Semihosting	Yes	NON-ISA	May 01, 2024		May 01, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv-non-isa/riscv-semihosting		
	RVS-1781	Server Platforms	No	NON-ISA	Oct 17, 2023	May 31, 2024	Feb 19, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv-non-isa/riscv-server-platforms	https://lists.riscv.org/g/tech-server-platform	
	RVS-913	Vector Crypto - all-rounds AES	No	ISA	Jun 26, 2023	Dec 31, 2023	Aug 25, 2023	SPECIFICATION IN PLANNING	Not Started		https://github.com/riscv/riscv-crypto	https://lists.riscv.org/g/tech-crypto-ext	Unprivileged Spec IC
	RVS-1676	Zc* - Code Size Reduction	No	ISA	Oct 03, 2023	Apr 28, 2023	Mar 21, 2024	SPECIFICATION IN PLANNING			https://github.com/riscv/riscv-code-size-reduction	https://lists.riscv.org/g/tech-code-size	
	RVS-704	Brain Float 16 (BFloat16)	Yes	ISA	Jun 14, 2023	Apr 25, 2024	Mar 13, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	Apr 25, 2024	https://github.com/riscv/riscv-bfloat16	https://lists.riscv.org/g/tech-unprivileged	Unprivileged Spec IC

	RVS-1982	Capacity and Bandwidth controller QoS Register Interface (CBQRI)	No	NON-ISA	Dec 22, 2023		Apr 26, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	May 30, 2024	https://github.com/riscv-non-isa/riscv-cbqri		
	RVS-981	Debug for Hardware Platforms	No	ISA + NON-ISA	Jun 29, 2023	Apr 25, 2024	May 01, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	Apr 25, 2024	https://github.com/riscv/riscv-debug-spec/	https://lists.riscv.org/g/tech-debug	Privileged Spec IC
	RVS-2291	Double Trap	Yes	ISA	Jan 26, 2024	Jun 27, 2024	May 01, 2024	SPECIFICATION IN RATIFICATION-READY	In Progress	Jun 27, 2024	https://github.com/riscv/riscv-double-trap		
	RVS-1933	E-Trace Encapsulation	No	NON-ISA	Dec 12, 2023	Jun 27, 2024	Apr 13, 2024	SPECIFICATION IN RATIFICATION-READY	In Progress	Jun 27, 2024	https://github.com/riscv-non-isa/e-trace-encap		
	RVS-1984	Eliding Memory-Management Fences on Setting PTE Valid	Yes	ISA	Dec 22, 2023	May 30, 2024	Apr 23, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	May 30, 2024	https://github.com/riscv/riscv-svptc		
	RVS-1111	Pointer Masking (J)	No	ISA	Jul 04, 2023	Apr 25, 2024	Apr 23, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	Apr 25, 2024	https://github.com/riscv/riscv-j-extension	https://lists.riscv.org/g/tech-j-ext	Privileged Spec IC
	RVS-753	Quality-of-Service (QoS) Identifiers	Yes	ISA	Jun 16, 2023		Apr 26, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	May 30, 2024	https://github.com/riscv/riscv-ssqosid	https://lists.riscv.org/g/tech-cbqri	SOC Infrastructure HC
	RVS-1590	RAS Error Record Interface (RERI)	No	NON-ISA	Sept 20, 2023	Mar 04, 2024	Apr 19, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	Apr 25, 2024	https://github.com/riscv-non-isa/riscv-ras-eri	https://lists.riscv.org/g/tech-ras-eri	
	RVS-1083	Resumable Non-maskable Interrupts	Yes	ISA	Jul 04, 2023	May 30, 2024	May 03, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	May 30, 2024	https://github.com/riscv/riscv-isa-manual/blob/dfe0bbe540021ed3637c3ef0d76f05c780974eb6/src/rmmi.adoc#L135	https://lists.riscv.org/g/tech-privileged	Privileged Spec IC
	RVS-1059	Shadow Stacks and Landing Pads	No	ISA	Jul 03, 2023		May 02, 2024	SPECIFICATION IN RATIFICATION-READY	Completed	May 30, 2024	https://github.com/riscv/riscv-clf	https://lists.riscv.org/g/	Privileged Spec IC, Unprivileged Spec IC
	RVS-479	IOMMU	No	NON-ISA	May 30, 2023	Jun 29, 2023	Aug 25, 2023	ECOSYSTEM DEVELOPMENT	Completed	May 21, 2023	https://github.com/riscv-non-isa/riscv-iommu	https://lists.riscv.org/g/tech-iommu	SOC Infrastructure HC
	RVS-438	Smaia, Ssaia - Advanced Interrupt Architecture (AIA)	No	ISA	May 29, 2023	Jun 29, 2023	Oct 02, 2023	ECOSYSTEM DEVELOPMENT	Completed	Jun 30, 2023	https://github.com/riscv/riscv-aia	https://lists.riscv.org/g/tech-aia	Privileged Spec IC
	RVS-871	Zvfh, Zvfhmin - Vector IEEE FP16	Yes	ISA	Jun 26, 2023	Jun 29, 2023	Oct 02, 2023	ECOSYSTEM DEVELOPMENT	Completed	Jun 30, 2023	https://github.com/riscv/riscv-v-spec		Unprivileged Spec IC
	RVS-2613	Address Translation Cache Invalidation	Yes	NON-ISA	Apr 26, 2024		Apr 26, 2024	SPECIFICATION INCEPTION					
	RVS-1790	Attached Matrix Extension	No	ISA	Oct 19, 2023		Jan 17, 2024	SPECIFICATION INCEPTION				https://lists.riscv.org/g/tech-attached-matrix-facility	
	RVS-2141	CHERI	No	ISA	Jan 05, 2024		Feb 19, 2024	SPECIFICATION INCEPTION			https://github.com/riscv/riscv-cheri		
	RVS-2611	Composable Extensions	No	ISA	Apr 25, 2024		Apr 25, 2024	SPECIFICATION INCEPTION			https://github.com/riscv/composable-extensions		

	RVS-1792	External Debug Security	No	NON-ISA	Oct 19, 2023		Oct 20, 2023	SPECIFICATION INCEPTION				https://github.com/riscv-non-isa/riscv-external-debug-security	https://lists.riscv.org/g/tech-external-debug-security	
	RVS-2362	High Assurance Cryptography (HAC)	No	ISA	Feb 02, 2024		Feb 02, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/riscv-hac		
	RVS-1930	Integrated Matrix Specification	No	ISA	Dec 11, 2023		Feb 19, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/integrated-matrix-extension		
	RVS-1794	Lightweight Isolation	No	ISA	Oct 20, 2023		Feb 19, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/lightweight-isolation	https://lists.riscv.org/g/tech-lightweight-isolation	
	RVS-2706	Memory Tagging	No	ISA	May 02, 2024		May 02, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/riscv-memory-tagging		
	RVS-1942	Performance Events Specification	No	ISA	Dec 14, 2023		Dec 14, 2023	SPECIFICATION INCEPTION				https://github.com/riscv/riscv-performance-events		
	RVS-1944	Platform Management Interface - RPMI	No	NON-ISA	Dec 14, 2023		Feb 19, 2024	SPECIFICATION INCEPTION				https://github.com/riscv-non-isa/riscv-rpmi		
	RVS-2360	Post Quantum Cryptography	No	ISA	Feb 02, 2024		Feb 02, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/riscv-pqc		
	RVS-1473	Trace & Diagnostic Data Transport Encapsulation	No	NON-ISA	Aug 28, 2023		Aug 28, 2023	SPECIFICATION INCEPTION				https://github.com/riscv-non-isa/e-trace-encap	https://lists.riscv.org/g/tech-e-trace-encap	SOC Infrastructure HC
	RVS-1695	Zicflp - CFI defend against COP /JOP	Yes	ISA	Oct 03, 2023		Jan 19, 2024	SPECIFICATION INCEPTION				https://github.com/riscv/riscv-cf		
	RVS-1995	A Extension Components	Yes	ISA	Dec 22, 2023		Apr 25, 2024	SPECIFICATION RATIFIED	Completed	Apr 25, 2024		https://github.com/riscv/riscv-zaamo-zaalrsc		
	RVS-653	Advanced Configuration and Power Interface (ACPI) Functional Fixed Hardware (FFH)	No	NON-ISA	Jun 12, 2023		Feb 19, 2024	SPECIFICATION RATIFIED	Completed	Jan 25, 2024		https://github.com/riscv-non-isa/riscv-acpi-ffh	https://lists.riscv.org/g/tech-prs	Privileged Software HC
	RVS-2006	B Extension Components	Yes	ISA	Dec 22, 2023	Apr 25, 2024	Apr 25, 2024	SPECIFICATION RATIFIED	Completed	Apr 25, 2024		https://github.com/riscv/riscv-b		
	RVS-1685	Byte and Halfword Atomic Memory Operations	Yes	ISA	Oct 03, 2023	Apr 25, 2024	Apr 25, 2024	SPECIFICATION RATIFIED	Completed	Apr 25, 2024		https://github.com/riscv/riscv-zabha		
	RVS-931	Conditional Ops	Yes	ISA	Jun 29, 2023	Jun 30, 2023	Dec 01, 2023	SPECIFICATION RATIFIED	Completed	Jun 30, 2023		https://github.com/riscv/riscv-zicond	https://lists.riscv.org/g/tech-unprivileged	Unprivileged Spec IC
	RVS-1250	Indirect Control and Status Register (CSR) Access	Yes	ISA	Jul 12, 2023		Feb 27, 2024	SPECIFICATION RATIFIED	Completed	Feb 22, 2024		https://github.com/riscv/riscv-indirect-csr-access	https://lists.riscv.org/g/tech-privileged	Privileged Spec IC
	RVS-1603	May-Be-Operations	Yes	ISA	Sept 25, 2023	Mar 28, 2024	Mar 28, 2024	SPECIFICATION RATIFIED	Completed	Mar 28, 2024		https://github.com/riscv/riscv-isa-manual/blob/main/src/zimop.adoc	https://lists.riscv.org/g/tech-unprivileged	

	RVS-803	Smcntrpmf - Counter Mode Filtering	Yes	ISA	Jun 22, 2023	Sept 30, 2023	Dec 22, 2023	SPECIFICATION RATIFIED	Completed		https://github.com/riscv/riscv-smcntrpmf		Privileged Spec IC
	RVS-1161	Supervisor Binary Interface 2.0	No	NON-ISA	Jul 07, 2023	Jan 25, 2024	Feb 19, 2024	SPECIFICATION RATIFIED	Completed	Jan 25, 2024	https://github.com/riscv-non-isa/riscv-sbi-doc	https://lists.riscv.org/g/tech-prs	Privileged Software HC
	RVS-1005	Supervisor Counter Delegation	Yes	ISA	Jun 30, 2023	Mar 28, 2024	Mar 28, 2024	SPECIFICATION RATIFIED	Completed	Mar 28, 2024	https://github.com/riscv/riscv-smcdeleg-ssccfg	https://lists.riscv.org/g/tech-privileged	Privileged Software HC
	RVS-1019	Svadu - Hardware Updating of PTE A/D Bits	Yes	ISA	Jul 03, 2023	Sept 30, 2023	Dec 22, 2023	SPECIFICATION RATIFIED	Completed	Sept 30, 2023	https://github.com/riscv/riscv-svadu	https://lists.riscv.org/g/tech-privileged	Privileged Spec IC
	RVS-680	Zacas - Atomic Compare-and-Swap (CAS)	Yes	ISA	Jun 14, 2023	Sept 01, 2023	Dec 01, 2023	SPECIFICATION RATIFIED	Completed	Dec 21, 2023	https://github.com/riscv/riscv-zacas	https://lists.riscv.org/g/tech-unprivileged	Unprivileged Spec IC
	RVS-829	Zfa - Additional Scalar FP	Yes	ISA	Jun 23, 2023	Sept 28, 2023	Dec 22, 2023	SPECIFICATION RATIFIED	Completed	Jun 30, 2023	https://github.com/riscv/riscv-isa-manual	https://lists.riscv.org/g/tech-privilege-d/	Unprivileged Spec IC
	RVS-1631	Zihintntl - Non-Temporal Locality Hints	Yes	ISA	Oct 02, 2023	May 31, 2023	Feb 13, 2024	SPECIFICATION RATIFIED	Completed	May 31, 2023	https://github.com/riscv/riscv-isa-manual/blob/main/src/zihintntl.adoc	https://lists.riscv.org/g/tech-privileged	
	RVS-715	Zv* - Vector Crypto	No	ISA	Jun 16, 2023	Sept 28, 2023	Nov 16, 2023	SPECIFICATION RATIFIED	Completed	Sept 28, 2023	https://github.com/riscv/riscv-crypto	https://lists.riscv.org/g/tech-crypto-ext	Unprivileged Spec IC
	RVS-1193	Boot & Runtime Services (BRS)	No	NON-ISA	Jul 07, 2023	Nov 07, 2023	Feb 19, 2024	SPECIFICATION IN FREEZE	Not Started	Nov 07, 2023	https://github.com/riscv-non-isa/riscv-brs	https://lists.riscv.org/g/tech-brs	Privileged Software HC
	RVS-973	Control Transfer Records (CTR)	No	ISA	Jun 29, 2023	Jun 27, 2024	May 07, 2024	SPECIFICATION IN FREEZE	Not Started	Apr 25, 2024	https://github.com/riscv/riscv-control-transfer-records	https://lists.riscv.org/g/tech-control-transfer-records	Privileged Spec IC
	RVS-1017	Fast Interrupts (CLIC)	No	ISA	Jul 03, 2023	Jun 27, 2024	Mar 13, 2024	SPECIFICATION IN FREEZE	Not Started	Jun 27, 2024	https://github.com/riscv/riscv-fast-interrupt	https://lists.riscv.org/g/tech-fast-int	Privileged Spec IC
	RVS-793	Input/Output Physical Memory Protection (IOPMP)	No	NON-ISA	Jun 21, 2023	May 30, 2024	Feb 19, 2024	SPECIFICATION IN FREEZE	Not Started	May 30, 2024	https://github.com/riscv-non-isa/iopmp-spec	https://lists.riscv.org/g/tech-iopmp	Security HC
	RVS-1564	Nexus-based Trace (N-Trace)	No	NON-ISA	Sept 13, 2023	May 30, 2024	Feb 19, 2024	SPECIFICATION IN FREEZE		May 30, 2024	https://github.com/riscv-non-isa/tg-nexus-trace	https://lists.riscv.org/g/tech-nexus	SOC Infrastructure HC
	RVS-2364	Privileged Specification 1.13	No	ISA	Feb 12, 2024		May 01, 2024	SPECIFICATION IN FREEZE			https://github.com/riscv/riscv-isa-manual		
	RVS-921	S-mode Physical Memory Protection (PMP)	No	ISA	Jun 26, 2023	Jun 27, 2024	Feb 19, 2024	SPECIFICATION IN FREEZE		Jun 27, 2024	https://github.com/riscv/riscv-smp	https://lists.riscv.org/g/tech-smp	Security HC
	RVS-1906	Confidential VM Extension (CoVE)	No	NON-ISA	Nov 21, 2023		May 06, 2024	SPECIFICATION UNDER DEVELOPMENT			https://github.com/riscv-non-isa/riscv-ap-tee		
	RVS-1618	Confidential VM Extension (CoVE) with I/O	No	NON-ISA	Sept 27, 2023	Jun 24, 2024	Feb 19, 2024	SPECIFICATION UNDER DEVELOPMENT			https://github.com/riscv-non-isa/riscv-ap-tee-io	https://lists.riscv.org/g/tech-ap-tee	

	RVS-1895	Dynamic RVTSO	Yes	ISA	Nov 20, 2023		Feb 19, 2024	SPECIFICATION UNDER DEVELOPMENT		https://github.com/riscv/riscv-sdts0		
	RVS-1915	Extra Vector Carry-Less /Crypto Extensions	Yes	ISA	Dec 01, 2023	Jul 25, 2024	Feb 19, 2024	SPECIFICATION UNDER DEVELOPMENT	Jul 25, 2024	https://github.com/riscv/riscv-crypto/pull/362		
	RVS-1770	Load-Acquire /Store-Release	Yes	ISA	Oct 16, 2023		Mar 20, 2024	SPECIFICATION UNDER DEVELOPMENT		https://github.com/riscv/riscv-zalacr		
	RVS-1852	Server SOC	No	NON-ISA	Nov 13, 2023		Apr 18, 2024	SPECIFICATION UNDER DEVELOPMENT		https://github.com/riscv-non-isa/server-soc/	https://lists.riscv.org/g/tech-server-soc	
	RVS-1345	Supervisor Domains Access Protection	No	ISA	Aug 23, 2023		Apr 22, 2024	SPECIFICATION UNDER DEVELOPMENT	Not Started	https://github.com/riscv/riscv-smmtt	https://lists.riscv.org/g/tech-smmtt	Privileged Spec IC
	RVS-1145	Unified Discovery	No	NON-ISA	Jul 07, 2023		Aug 29, 2023	SPECIFICATION UNDER DEVELOPMENT	Not Started	https://github.com/riscv/configuration-structure	https://lists.riscv.org/g/tech-config	Privileged Software HC

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