

Recently Ratified Extensions

If you are looking for documentation on a recently ratified extension that has not yet been merged into the published specifications listed on the [RISC-V Specifications page](#), check the table below. These extensions are completely ratified by RISC-V and will be merged into the final specifications in the coming months.

Specification name	Ratification date	New extension(s) or Profile(s)
"Zihintntl" Non-Temporal Locality Hints	May 2023	Zihintntl
RISC-V Code Size Reduction	April 2023	Zca, Zcb, Zcd, Zce, Zcf, Zcmp, Zcmt
RISC-V Profiles	March 2023	RVA20, RVI20, RVA22
"Zicntr" and "Zihpm" Counters	March 2023	Zicntr, Zihpm
RV32E and RV64E Base Integer Instruction Sets	January 2023	RV32E/RV64E
"Ztso" Standard Extension for Total Store Ordering	January 2023	Ztso
RISC-V Wait-on-Reservation-Set (Zawrs) extension	November 2022	Zawrs
Zmmul Extension	June 2022	Zmmul
PMP Enhancements for memory access and execution prevention on Machine mode (Smepmp)	November 2021	Smepmp
RISC-V Base Cache Management Operation ISA Extensions	November 2021	Zicbom, Zicbop, Zicboz
RISC-V Bit-Manipulation ISA-extensions	November 2021	Zba, Zbb, Zbc, Zbs
RISC-V Count Overflow and Mode-Based Filtering Extension	November 2021	Sscopmf
RISC-V Cryptography Extensions Volume I: Scalar & Entropy Source Instructions	November 2021	Zbkb, Zbkc, Zbkx, Zknd, Zkne, Zknh, Zksed, Zksh, Zkn, Zks, Zkt, Zk, Zkr
RISC-V State Enable Extension	November 2021	Smstateen
RISC-V "stimecmp / vstimecmp" Extension	November 2021	Sstc
RISC-V Vector Extension	November 2021	Zve32x, Zve32f, Zve64x, Zve64f, Zve64d, Zve, Zvl32b, Zvl64b, Zvl128b, Zvl256b, Zvl512b, Zvl1024b, Zvl, Zv
The RISC-V Instruction Set Manual Volume II: Privileged Architecture	November 2021	Sm1p12, Ss1p12, Sv57, Hypervisor, Svinval, Svnapot, Svpbmt
"Zfh" and "Zfhmin" Standard Extensions for Half-Precision Floating-Point	November 2021	Zfh, Zfhmin
"Zfinx", "Zdinx", "Zhinx", "Zhinxmin": Standard Extensions for Floating-Point in Integer Registers	November 2021	Zfinx, Zdinx, Zhinx, Zhinxmin
"Zhintpause" Pause Hint	February 2021	Zhintpause