

RISC-V ("RISC Five") is a modern RISC instruction set developed at the University of California, Berkeley, which was made free and openly adoptable in response to requests from industry. In addition to a full software stack (compilers, operating systems, and simulators), there are several RISC-V implementations freely available for use in custom chips or in field-programmable gate arrays.

Developed 30 years after the first RISC instruction sets, RISC-V inherits its ancestors' good ideas—a large set of registers, easy-to-pipeline instructions, and a lean set of operations—while avoiding their omissions or mistakes. It is a free and open, elegant example of the RISC architectures, which is why more than 60 companies have joined the RISC-V foundation, including AMD, Google, HP Enterprise, IBM, Microsoft, Nvidia, Qualcomm, Samsung, and Western Digital. Hennessy&Patterson, Computer Architecture, a quantitative approach the 6th edition