



which is maximum size immediate field in instructions of RV32E?



The maximum immediate size for RV32E instructions is 16 bits. RV32E instructions use a fixed 32-bit instruction encoding format, with a 12-bit opcode field and various other fields for register and immediate operands. The immediate fields can be up to 16 bits in size, which allows for a wide range of constant values to be used directly in instructions.



which RV32E instructions use such 16bit immediate field?



Several RV32E instructions use a 16-bit immediate field. Here are some examples:

LUI: This instruction loads a 20-bit immediate value into the upper 20 bits of a register.

AUIPC: This instruction adds a 20-bit immediate value to the program counter and stores the result in a register.

JAL: This instruction jumps to a target address specified by a 20-bit immediate value, and stores the return address in a register.

JALR: This instruction jumps to a target address computed by adding a 12-bit immediate value to a register, and stores the return address in a register.

ADDI: This instruction adds a 12-bit immediate value to a register and stores the result in a register.

SLTI: This instruction compares a register with a 12-bit immediate value and sets a destination register to 1 if the register is less than the immediate value, or 0 otherwise.

SLTIU: This instruction compares a register with a 12-bit unsigned immediate value and sets a destination register to 1 if the register is less than the immediate value, or 0 otherwise.

XORI: This instruction performs a bitwise exclusive OR operation between a register and a 12-bit immediate value, and stores the result in a register.

These are just a few examples of RV32E instructions that use a 16-bit immediate field. There are several other instructions that use smaller immediate fields as well, such as 8-bit and 5-

bit immediates.

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