

All five RV32 Load Instructions

Encodes data size and "signedness" of load operation

		funct3		opcode	
imm[11:0]	rs1	000	rd	0000011	lb
imm[11:0]	rs1	001	rd	0000011	lh
imm[11:0]	rs1	010	rd	0000011	lw
imm[11:0]	rs1	100	rd	0000011	lbu
imm[11:0]	rs1	101	rd	0000011	lhu

- **lb**: "load byte," **lh**: "load halfword" (16 bits)

- *Sign extend* to fill upper bits of destination 32-bit register.

- **lbu**: "load unsigned byte," **lhu**: "load unsigned halfword"

- *Zero extend* to fill upper bits of destination 32-bit register.

- **Note no lwu instruction in RISC-V.**

- Simplicity: No need to sign/zero extend when copying 32 bits into 32-bit register.

