1 Instruction Set Reference List

Formats

	31	25	21	17	13	0

r-type:

opcode	rd	rs1	rs2	0

i-type:

opcode	rd	rs	18-bit immediate

l-type:

opcode	rd	22-bit immediate

Instructions

NOP

000000	0

SET

000001	rd	rs	18-bit immediate

LOAD

000010	rd	22-bit immediate

MOV

000011	rd	rs	0

FADD

000011	rd	rs1	rs2	0

FSUB

000100	rd	rs1	rs2	0

NEG

000101	rd	rs1	0	0

NOP   No operation

Opcode:	000000
Syntax:	NOP
Purpose:	Perform no oprations.

SET   Set register to floating-point value

Opcode:	000001
Syntax r-type:	SET, rd, #<32-bit FP value>
Purpose:	Assign a 32-bit floating point value to rd.
Operation:	rd ← FPvalue

LOAD   Load value from memory

Opcode:	000010
Syntax r-type:	LOAD, rd, M[rs]
Purpose:	Assign the value from the memory address specified in rs to rd.
Operation:	rd ← FPvalue

FADD   Add 32-bit floating-point numbers

Opcode:	000101
Syntax r-type:	FADD, rd, rs1, rs2
Syntax i-type:	FADD, rd, rs1, <32-bit ? immediate>
Purpose:	Performs addition on two 32-bit floating-point integers from rs1 and rs2, or an immediate in place of rs2, and stores the result in rd.
Operation:	rd ← rs1 + rs2 or rd ← rs1 + immediate
Condition Codes:	$\frac{\text{N Z V}}{\text{x - x}}$