

INUM	Instruction	Mnemonic	Format	Inputs			Control outputs			ST	MSZ	BROp	RfW	ALUOp	ALUSrcA	ALUSrcB	PCsel	WDsel	Output bits
				opcode	funct3	funct7	funct6	MR	LD										
0	addi	ADDI	I	0010011	000	xxxxxxx	xxxxxxx	0	0	0	00	000	1	0000	0	001	0	0	0b0000000010000000100
1	add	ADD	R	0110011	000	0000000	xxxxxxx	0	0	0	00	000	1	0000	0	000	0	0	0b0000000010000000000
2	sll	SLL	R	0110011	001	0000000	xxxxxxx	0	0	0	00	000	1	0100	0	000	0	0	0b0000000010100000000
3	srl	SRL	R	0110011	101	0000000	xxxxxxx	0	0	0	00	000	1	0101	0	000	0	0	0b0000000010101000000
4	mul	MUL	R	0110011	000	0000001	xxxxxxx	0	0	0	00	000	1	0010	0	000	0	0	0b0000000010010000000
5	sub	SUB	R	0110011	000	0100000	xxxxxxx	0	0	0	00	000	1	0001	0	000	0	0	0b0000000010001000000
6	and	AND	R	0110011	111	0000000	xxxxxxx	0	0	0	00	000	1	0111	0	000	0	0	0b0000000010111000000
7	slli	SLLI	I	0010011	001	xxxxxxx	0000000	0	0	0	00	000	1	0100	0	001	0	0	0b0000000010100000100
8	srlr	SRLI	I	0010011	101	xxxxxxx	0000000	0	0	0	00	000	1	0101	0	001	0	0	0b0000000010101000100
9	ld	LD	I	0000011	011	xxxxxxx	xxxxxxx	1	1	0	11	000	1	0000	0	001	0	0	0b1101100010000000100
10	lb	LB	I	0000011	000	xxxxxxx	xxxxxxx	1	1	0	01	000	1	0000	0	001	0	0	0b1100100010000000100
11	lw	LW	I	0000011	010	xxxxxxx	xxxxxxx	1	1	0	10	000	1	0000	0	001	0	0	0b1101000010000000100
12	jai	JAL	J	1101111	xxx	xxxxxxx	xxxxxxx	0	0	0	00	000	1	0000	1	010	1	1	0b0000000010000101011
13	jalr	JALR	I	1100111	000	xxxxxxx	xxxxxxx	0	0	0	00	000	1	0000	0	010	1	1	0b0000000010000001011
14	blt	BLT	B	1100011	100	xxxxxxx	xxxxxxx	0	0	0	00	001	0	0000	1	100	0	1	0b00000000100000110001
15	beq	BEQ	B	1100011	000	xxxxxxx	xxxxxxx	0	0	0	00	010	0	0000	1	100	0	1	0b00000001000000110001
16	bge	BGE	B	1100011	101	xxxxxxx	xxxxxxx	0	0	0	00	011	0	0000	1	100	0	1	0b0000001100000110001
17	sd	SD	S	0100011	011	xxxxxxx	xxxxxxx	0	1	1	11	000	0	0000	0	011	0	0	0b0111100000000001100
18	sb	SB	S	0100011	000	xxxxxxx	xxxxxxx	0	1	1	01	000	0	0000	0	011	0	0	0b0110000000000001100
19	sw	SW	S	0100011	010	xxxxxxx	xxxxxxx	0	1	1	10	000	0	0000	0	011	0	0	0b01110000000000001100
20	lui	LUI	U	0110111	xxx	xxxxxxx	xxxxxxx	0	0	0	00	000	1	0000	0	101	0	0	0b00000000100000010100
21	bne	BNE	B	1100011	001	xxxxxxx	xxxxxxx	0	0	0	00	100	0	0000	1	100	0	1	0b0000010000000110001
22	or	OR	R	0110011	110	0000000	xxxxxxx	0	0	0	00	000	1	1000	0	000	0	0	0b0000000011000000000
23	addw	ADDW	R	0111011	000	0000000	xxxxxxx	0	0	0	00	000	1	0011	0	000	0	0	0b0000000010011000000