15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
rs2				rd / rs1				0	0	0	0	0	0	0	0	add
rs2				rd / rs1				0	0	0	1	0	0	0	0	sub
rs2				rd / rs1				0	0	1	0	0	0	0	0	addc
rs2				rd / rs1				0	0	1	1	0	0	0	0	subb
rs2				rd / rs1				0	1	0	0	0	0	0	0	and
rs2				rd / rs1				0	1	0	1	0	0	0	0	or
rs2				rd / rs1				0	1	1	0	0	0	0	0	xor
rs2				rd / rs1				0	1	1	1	0	0	0	0	shl
rs2				rd / rs1				1	0	0	0	0	0	0	0	lsr
rs2				rd / rs1				1	0	0	1	0	0	0	0	asr
rs2				rd / rs1				1	0	1	0	0	0	0	0	mul (opt)
rs2				rd / rs1				1	0	1	1	0	0	0	0	unused alu 1
rs2				rd / rs1				1	1	0	0	0	0	0	0	unused alu 2
rs2				rs1				1	1	0	1	0	0	0	0	cmp
rs				rd				1	1	1	0	0	0	0	0	mov
0	0	0	0	rd / rs				1	1	1	1	0	0	0	0	not
0	0	0	1	rd / rs				1	1	1	1	0	0	0	0	neg
0	0	1	0	rd / rs				1	1	1	1	0	0	0	0	negb
...				rd / rs				1	1	1	1	0	0	0	0	unused alu 3
1	1	1	1	-				1	1	1	1	0	0	0	0	halt
0	0	[4:3]		rd / rs				[5]		[2:0]		1	0	0	0	addi
0	1	[4:3]		rs				[5]		[2:0]		1	0	0	0	cmpi
1	0	[4:3]		rs				[5]		[2:0]		1	0	0	0	jal
1	1	0	0	rd / rs				[3]		[2:0]		1	0	0	0	shli
1	1	0	1	rd / rs				[3]		[2:0]		1	0	0	0	lsri
1	1	1	0	rd / rs				[3]		[2:0]		1	0	0	0	asri
1	1	1	1	rd / rs				[3]		[2:0]		1	0	0	0	andi
rs				rd				[3]		[2:0]		0	0	1	0	ld
rs				rd				[3]		[2:0]		1	0	1	0	ld8
rs2				rs1				[3]		[2:0]		0	1	0	0	st
rs2				rs1				[3]		[2:0]		1	1	0	0	st8
rs				rd				[3]		[2:0]		0	1	1	0	ld8s
[6:3]				[8]	0	0	0	[9]		[2:1]	[7]	1	1	1	0	br.eq
[6:3]				[8]	0	0	1	[9]		[2:1]	[7]	1	1	1	0	br.ne
[6:3]				[8]	0	1	0	[9]		[2:1]	[7]	1	1	1	0	br.lt
[6:3]				[8]	0	1	1	[9]		[2:1]	[7]	1	1	1	0	br.ge
[6:3]				[8]	1	0	0	[9]		[2:1]	[7]	1	1	1	0	br.lts
[6:3]				[8]	1	0	1	[9]		[2:1]	[7]	1	1	1	0	br.ges
[6:3]				[8]	1	1	0	[9]		[2:1]	[7]	1	1	1	0	jr
[6:3]				[8]	1	1	1	[9]		[2:1]	[7]	1	1	1	0	jral
[6]	[10:8]			rd				[15]	[14:13]		[7]	[12:11]		0	1	lui
[6]	[10:8]			rd				[15]	[14:13]		[7]	[12:11]		1	1	auipc