

Operation / CS	OUT	IN	ALU operatio	ALU src	RegDst	MEM TO	FETCH EN (DATA EN	ALU EN	BR EN	MEM W EN	MEM R EN	SWAP	In SP	Increme nt or	EA or Imm
NOP	0	0	0000	0	0	0	0	0	0	0	0	0	0	0	0	0
NOT	0	0	0000	0	1	0	0	1	1	0	0	0	0	0	0	0
INC	0	0	0001	0	1	0	0	1	1	0	0	0	0	0	0	0
DEC	0	0	0010	0	1	0	0	1	1	0	0	0	0	0	0	0
OUT	1	0	1000	0	0	0	0	0	1	0	0	0	0	0	0	0
IN	0	1	1001	0	1	0	0	1	1	0	0	0	0	0	0	0
ADD	0	0	0011	0	1	0	0	1	1	0	0	0	0	0	0	0
SUB	0	0	0100	0	1	0	0	1	1	0	0	0	0	0	0	0
AND	0	0	0101	0	1	0	0	1	1	0	0	0	0	0	0	0
OR	0	0	0110	0	1	0	0	1	1	0	0	0	0	0	0	0
SHL	0	0	1010	1	1	0	1	1	1	0	0	0	0	0	0	0
SHR	0	0	1011	1	1	0	1	1	1	0	0	0	0	0	0	0
SWAP	0	0	1000	0	1	0	0	1	1	0	0	0	1	0	0	0
PUSH	0	0	0000	0	0	0	0	0	0	0	1	0	0	1	0	0
POP	0	0	0000	0	0	1	0	1	0	0	0	1	0	1	1	0
LDM	0	0	1001	1	0	0	1	1	1	0	0	0	0	0	0	0
LDD	0	0	1001	1	0	1	1	1	1	0	0	1	0	0	0	1
STD	0	0	1001	1	0	0	1	0	1	0	1	0	0	0	0	1
JZ	0	0	0111	0	0	0	0	0	1	1	0	0	0	0	0	0
JMP	0	0	0000	0	0	0	0	0	0	1	0	0	0	0	0	0
CALL	0	0	1001	0	0	0	0	0	1	0	1	0	0	1	0	0
RET	0	0	0000	0	0	1	0	0	0	0	0	1	0	1	1	0
RTI	0	0	0000	0	0	1	0	0	0	0	0	1	0	1	1	0
LADD	0	0	0011	0	1	0	0	1	1	0	0	0	0	0	0	0

JUMP	JUMP ZERO	FUNCTI ON	RTI	WB	Flush jump	Flush function	Flush JZ
0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
1	0	0	0	0	1	0	0
0	0	1	0	0	0	1	0
0	0	1	0	0	0	1	0
0	0	1	1	0	0	1	0
0	0	0	0	1	0	0	0