current state		add	sub	and	or	xor	jmp	jc	jnc	mov	ld	str	done	Nflag	Zflag	Cflag	NEXT STATE	
reset		1 or 0	1 or 0	1 or 0	1 or 0	1 or 0	1	1	1	1	1	1	1	*	*	*	State 0	
Fetch	State 0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 1	
Decode	State 1	1 or 0	1 or 0	1 or 0	1 or 0	1 or 0	0	0	0	0	0	0	0	*	*	*	State 2	Rtype
Decode	State 1	0	0	0	0	0	0	0	0	0	1 or 0	1 or 0	0	*	*	*	State 4	Itype
Decode	State 1	0	0	0	0	0	0	0	0	1	0	0	0	*	*	*	State 8	
Decode	State 1	0	0	0	0	0	0	1	0	0	0	0	0	*	*	0	State 0	Jtype
Decode	State 1	0	0	0	0	0	0	0	1	0	0	0	0	*	*	1	State 0	
Decode	State 1	0	0	0	0	0	1 or 0	1 or 0	1 or 0	0	0	0	0	*	*	0 or 1	State 9	
Rtype	State 2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 3	
Rtype	State 3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 0	
Itype	State 4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 5	
Itype	State 5	0	0	0	0	0	0	0	0	0	1	0	0	*	*	*	State 6	
Itype	State 5	0	0	0	0	0	0	0	0	0	0	1	0	*	*	*	State 7	
Itype	State 6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 0	
Itype	State 7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 0	
Itype	State 8	*	*	*	*	*	*	*	0	*	*	*	*	*	*	*	State 0	
Jtype	State 9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	State 0	

STATE		IRin	Pcin	Pcsel	RFaddr	RFout	RFin	OPC	Ain	Cin	Cout	Imm1_in	Imm2_in	Mem_in	Mem_out	Mem_wr
reset		0	0	0	0	0	0	0000	0	0	0	0	0	0	0	0
Fetch	State 0	1	1	10	0	0	0	0000	0	0	0	0	0	0	0	0
Decode	State 1	0	0	0	IR<7..4>	1	0	0000	1	0	0	0	0	0	0	0
Rtype	State 2	0	0	0	IR<3..0>	1	0	IR<15..12>	0	1	0	0	0	0	0	0
Rtype	State 3	0	0	0	IR<11..8>	0	1	0000	0	0	1	0	0	0	0	0
Itype	State 4	0	0	0	0	0	0	IR<15..12>	0	1	0	0	1	0	0	0
Itype	State 5	0	0	0	0	0	0	0000	0	0	1	0	0	1	0	0
Itype	State 6	0	0	0	IR<11..8>	0	1	0000	0	0	0	0	0	0	1	0
Itype	State 7	0	0	0	IR<11..8>	1	0	0000	0	0	0	0	0	0	0	1
Itype	State 8	0	0	0	IR<11..8>	0	1	0000	0	0	0	1	0	0	0	0
Jtype	State 9	0	0	01	0	0	0	0000	0	0	0	0	0	0	0	0