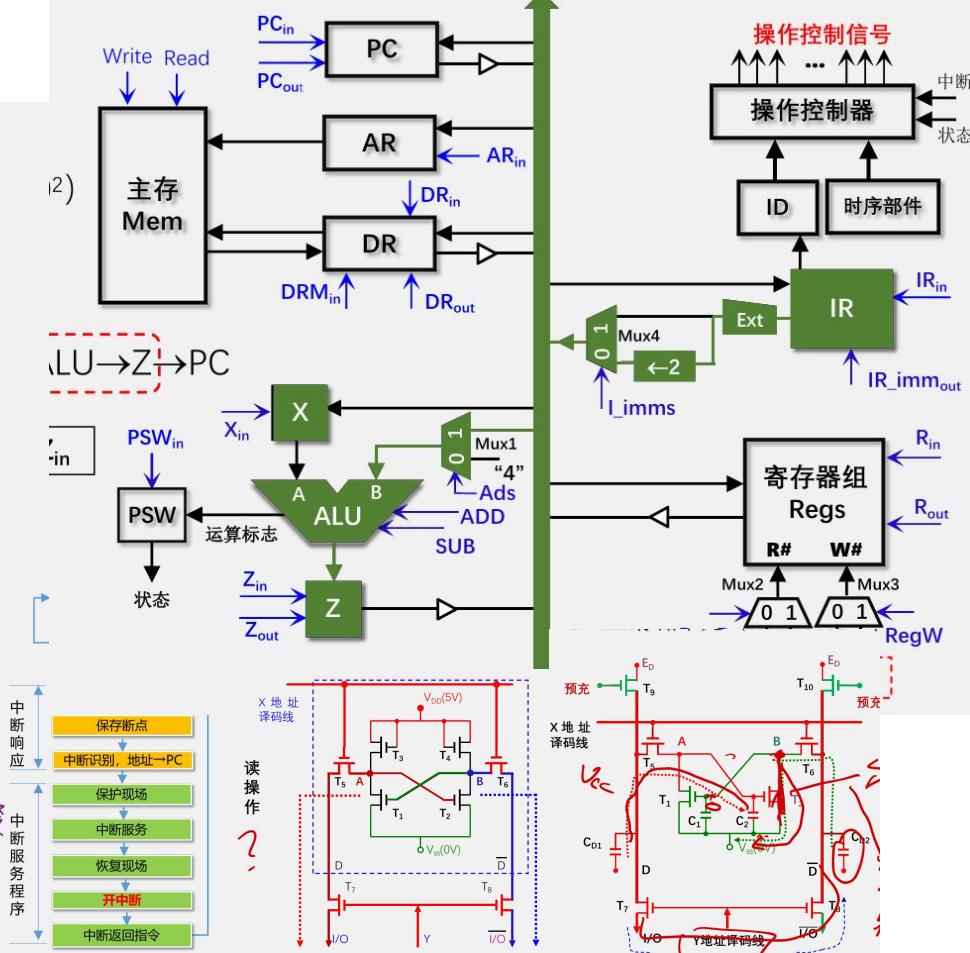
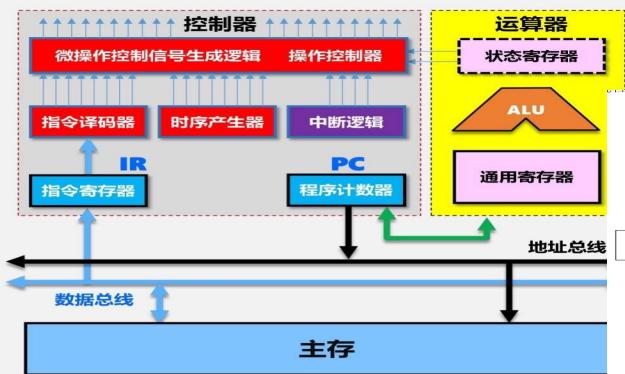
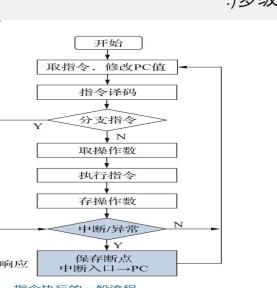
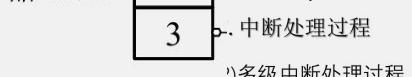
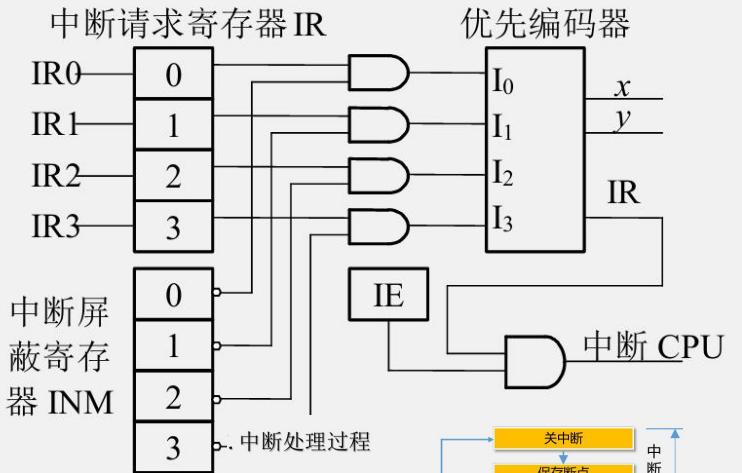
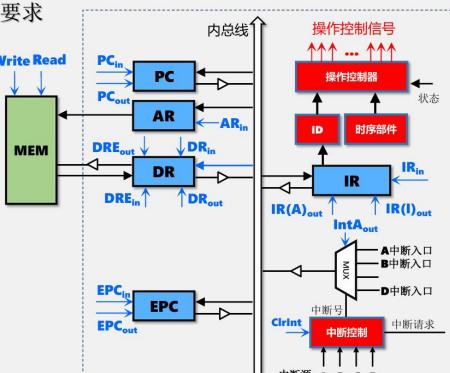
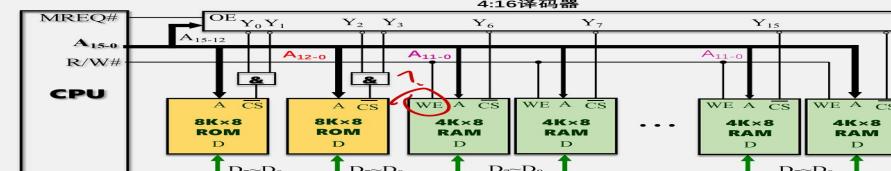


10. 中断异常处理对CPU设计的新要求

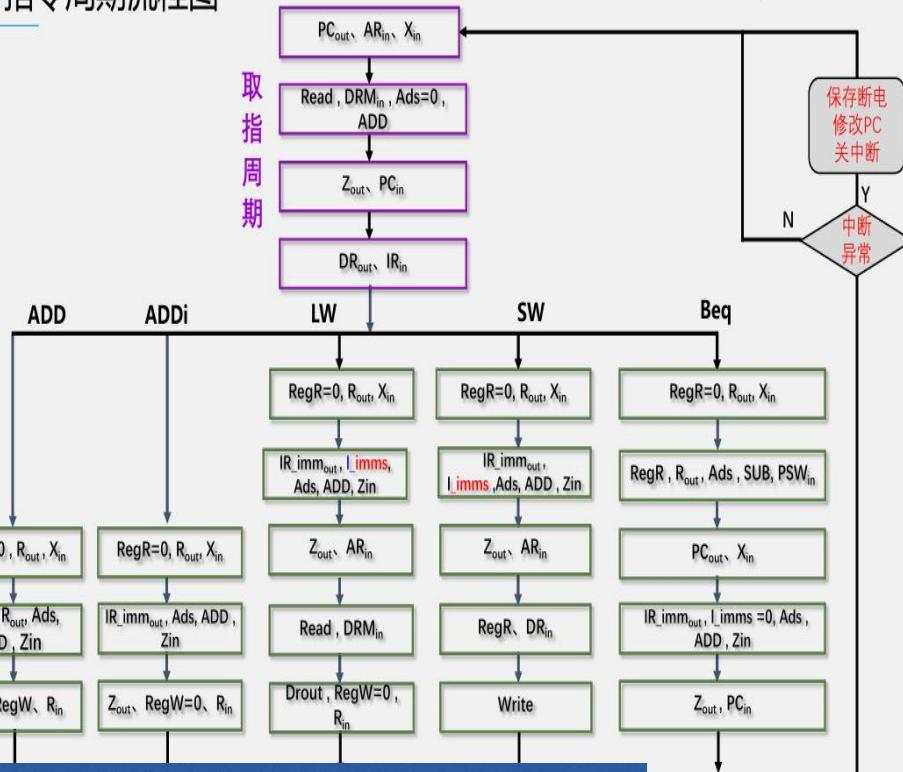
- ◆开关中断
增加IE寄存器
 - ◆保存断点
增加EPC寄存器/堆栈
 - ◆中断识别
增加中断控制逻辑
 - ◆软件支持
eret指令支持



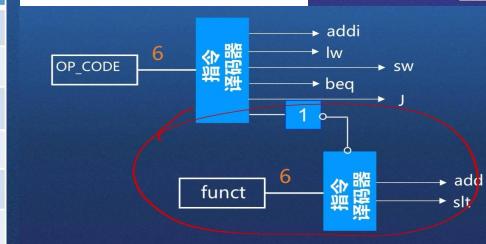
3. 位址同时扩展



9.4 指令周期流程图



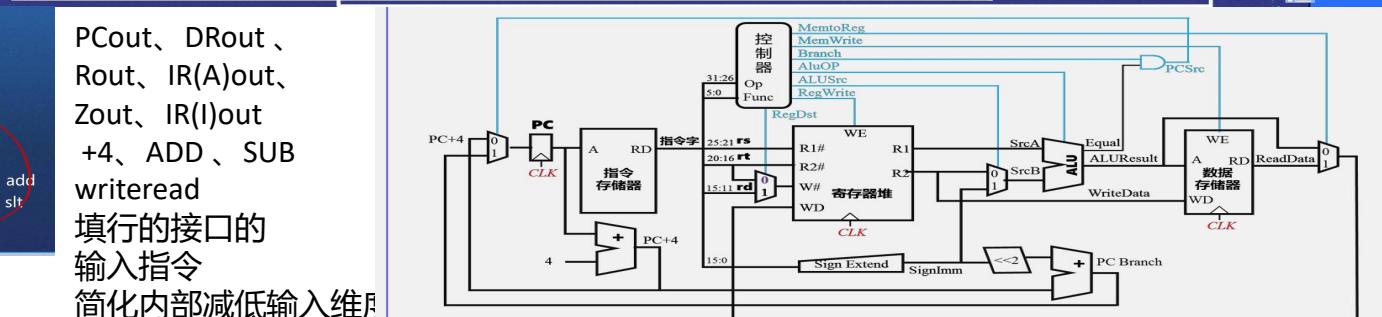
指令	PC_S(2)	RF.WE	RF.WS	RF.DS(2)	ALU_BS	DM.WE
add rd rs, rt	0 0	1	1	0 0	0	0
slt rd rs, rt	0 0	1	1	0 1	0	0
Addi rt,rs,imm	0 0	1	0	0 0	1	0
lw rt, imm(rs)	0 0	1	0	1 0	1	0
sw rt, imm(rs)	0 0	0	0	0 0	1	1
beq rs, rt, imm*	1 0	0	0	0 0	0	0
j addr	0 1	0	0	0 0	0	0
lb rs,rt,imm	0 0	1	0	1 1	1	0



PCout、DRout、Rout、IR(A)out、Zout、IR(I)out
+4、ADD、SUB
writeread
填行的接口的输入指令
简化内部减低输入维数

状态	微地址	操作控制字段												顺序控制字段								
		0	1	2	3	4	5	6	7	8	9	10	11	0	1	2	3	4	5	6	7	
0	00000	1												0	0	0	0	1				
1	00001		1											0	0	0	0	0	1			
2	00010			1										0	0	0	0	0	1			
3	00011	1			1									0	0	0	0	0	1			
4	00100		1			1								0	0	1	0	1				
5	00101			1			1							0	0	1	0	1				
6	00110				1			1						0	0	1	1					
7	00111					1			1					0	0	1	0	0	0	0	0	
8	01000	1					1							0	0	0	0	0	0	0	0	
9	01001		1				1							0	0	0	0	0	0	0	0	
10	01010			1				1						0	0	0	0	0	0	0	0	
11	01011				1				1					0	0	0	0	0	0	0	0	
12	01100					1				1				0	0	0	0	0	0	0	0	
13	01101						1							0	0	0	0	0	0	0	0	
14	01110							1						0	0	0	0	0	0	0	0	
15	01111								1					0	0	0	0	0	0	0	0	
16	10000	1							1					0	0	0	0	0	0	0	0	
17	10001								1					0	0	0	0	0	0	0	0	
18	10010									1				0	0	0	0	0	0	0	0	
19	10011										1			0	0	0	0	0	0	0	0	
20	10100											1		0	0	0	0	0	0	0	0	
21	10101												1	0	0	0	0	0	0	0	0	
22	10110													1	0	1	1					
23	10111														1	0	0	0	0	0	0	0
24	11000																					

指令	PC_S(2)	PC_add	PC_A	RF.Dm	RF.Ds	RF.Dt	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds	RF.Ds
add rd rs, rt	PC_add	PC	PC	I[25:21]	I[20:16]	I[15:11]	ALU_re	RF_RDI	RF_RD2													
slt rd rs, rt	PC_add	PC	PC	I[25:21]	I[20:16]	I[15:11]	1:ALU_re=1 0:ALU_re=0	RF_RDI	S_EXT													
Addi t,rs,imm	PC_add	PC	PC	I[25:21]		I[20:16]	DM	RF_RDI	S_EXT													
lw rt, imm(rs)	PC_add	PC	PC	I[25:21]		I[20:16]	RF_Ds	RF_RDI	S_EXT	ALU_re	RF_RDI											
Sw rt, imm(rs)	PC_add	PC	PC	I[25:21]		I[20:16]	RF_Ds	RF_RDI	S_EXT	ALU_re	RF_RDI											
beq rs, rt, imm*	PCB_add	PC	PC	I[25:21]	I[20:16]		RF_Ds	RF_RDI	S_EXT													
j addr	SL2*																					
LB rt,rs,imm	PC_add	PC	PC	I[25:21]		I[20:16]	B_EXT	RF_RDI	S_EXT													



3. 位址同时扩展

