

CPU_R_M:1

inv

clk_INV_74_o1

DecodingController_M

func(5:0)

ALU_OP(2:0)

ALU_OP(2:0)

OP(5:0)

Write_Reg

Write_Reg

DecodingController_I

Fetch_Inst_M

clk

address(25:0)

func(5:0)

func(5:0)

imm(31:0)

imm(31:0)

op_code(5:0)

OP(5:0)

rd_addr(4:0)

rd(4:0)

rs_addr(4:0)

rs(4:0)

rt_addr(4:0)

rt(4:0)

shamt(4:0)

Fetch_Inst_I

MultifunctionalALU_32bit_M

A(31:0)

F(31:0)

W_Data(31:0)

ALU_OP(2:0)

OF

OF

B(31:0)

ZF

ZF

MultifunctionalALU_32bit_I

RegisterFile_32x32bit_M

R_Addr_A(4:0)

R_Data_A(31:0)

R_Data_A(31:0)

R_Addr_B(4:0)

W_Addr(4:0)

W_Data(31:0)

clk

Reset

Write_Reg

R_Data_B(31:0)

R_Data_B(31:0)

RegisterFile_32x32bit_I

CPU_R_M