

MUX 4

IN
IR [15:12]
IR [23:20]

RD-SEL (FROM CTRL.V)
-OUT
MUX4-OUT

RF

IN
REG A [19:16]
REG B MUX4-OUT (MUX4.V)
IR 23:20
WRITE DATA (MUX32.V)
RFWE (CTRL) ←

OUT
RSA
RSB

MUX 32

IN
ALU-RESULT (ALU)
ZERO MUX 32

WB-SEL (CTRL.V)
OUT
WRITE DATA

ALU

IN
RSA (RF.V)
RSB (RF.V)

IR [15:0]
ALU-OP (CTRL.V)

OUT
ALU-RESULT
CC
STAT-EN

STATREG

IN
CC (ALU.V)
STAT-EN (ALU.V)

OUT
STAT-OUT

CTRL

IN
IR [31:28]
IR [27:24]

STAT-OUT

OUT
RF-WE
ALU-OP
WB-SEL
RB-SEL