RegWrite\_in

Inst[15:12] – cntrl opcode

Control Outputs

Pipe to Pipe

Inst[7:4]

reg\_rs

reg\_rt\_src

Inst[3:0]

Inst[11:8]

reg\_rt

StackReg

DataReg

sign\_ext\_sel

reg\_rd\_wb

reg\_rd\_data

sign\_ext

Reg\_16bit\_file

CONTROL

arith\_imm\_out

sign\_ext\_out

load\_save\_imm\_out

Read\_Bus\_2

Write\_Bus

Write\_Reg

Read\_Bus\_1

Read\_Reg\_2

Read\_Reg\_1

read\_data\_2

read\_data\_1