	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
IR																

BUS	hex	4096	256	16	1
1st	x				
2nd	x				
3rd	x				

GatePC

DR

GateMARMUX

R0

R1

R2

PC   x

R3

+ 1

R4

MARMUX

TRAPVECTOR

PCMUX

R5

X 0 0

R6

ZEXT

R7

OFFSET6 OR

X

SR2   SR1

PCOFFSET

PC OR BASER

X

ADDR2MUX

ADDR1MUX

[7:0]

[10:0]   SEXT

0

[8:0]   SEXT

X   IMM5

[5:0]   SEXT

1   SR2MUX

SEXT   FINITE

STATE   2

MACHINE

[4:0]   AL select   Arith/Logic Operation

15   0   N   Z   P   X

IR   A/L RESULT

LOGIC   GateALU

GateMDR

MDR   16   MAR   16

X   X

16

MEMORY

X

X   INPUT   OUTPUT

X

xFE02

xFE06