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1 This file contains the logic necessary for a GAL16V8 to perform I/O
2 Decoding for the Micro Innovations Adamnet Floppy Disk Drive.
3
4
5 I/O Pin Definitions:
6
7 GAL16V8  1: A9,          2: A10,          3: A11,          4: A12,
8           5: A13,        6: A14,          7: A15,          8: RW,
9           9: E,          11: EPri me,       12: FDCRE,       13: FDCWE,
10          14: FDCA0,      15: FDCA1,       16: OECLK,       17: PROMCE,
11          18: RAMWE,      19: RAMCE
12
13 Acronyms:
14
15     Inputs -
16
17     A9-A15 = 6803 Address Lines A9 - A15
18     RW      = 6803 Read/Write Line
19     E        = 6803 Output Clock (2Mhz)
20     EPri me  = Delayed 6803 Output Clock
21
22     Outputs:
23
24     FDCRE    = Read Enable line to 2793 FDC
25     FDCWE    = Write Enable line to 2793 FDC
26     FDCA0    = Address 0 line to 2793 FDC
27     FDCRE    = Address 1 line to 2793 FDC
28     OECLK    = RAM/PROM Output Enable & FDC Clock
29     PROMCE   = PROM Chip Enable
30     RAMWE    = RAM Write Enable
31     RAMCE    = RAM Chip Enable
32
33     Hi gh: A[9..15], RW, E, EPri me
34
35     FDCRE    = (E & A14' & A11 & A12') # (E & A15' & A11 & A12')
36     FDCWE    = (E & A14' & A11 & A12) # (E & A15' & A11 & A12)
37     FDCA0    = A13'
38     FDCA1    = A14'
39     OECLK    = E
40     PROMCE   = A14 & A15
41     RAMWE    = (E & A14' & A10 & A12') # (E & A15' & A10 & A12')
42     RAMCE    = (A14' & A10) # (A15' & A10)
43
44     Signature: "FDRVrev1"
1289 Complex GAL architecture selected.

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#### RESOLVED EXPRESSIONS (Reduction 2)

Signal name	Row	Terms
FDCRE	57	A11 A12' A14' E
	58	A11 A12' A15' E
FDCWE	49	A11 A12 A14' E
	50	A11 A12 A15' E
FDCA0	41	A13'
FDCA1	33	A14'

## FDRV0G1.LST

OECLK	25	E		
PROMCE	17	A14	A15	
RAMWE	9	A10	A12'	A14' E
	10	A10	A12'	A15' E
RAMCE	1	A10	A14'	
	2	A10	A15'	

## ♀ SIGNAL ASSIGNMENT

Pi n	Si gnal name	Col umn	Rows			Acti vi ty	
			Beg	Avai l	Used		
1.	A9	2	-	-	-	Hi gh	(Cl ock)
2.	A10	0	-	-	-	Hi gh	
3.	A11	4	-	-	-	Hi gh	
4.	A12	8	-	-	-	Hi gh	
5.	A13	12	-	-	-	Hi gh	
6.	A14	16	-	-	-	Hi gh	
7.	A15	20	-	-	-	Hi gh	
8.	RW	24	-	-	-	Hi gh	
9.	E	28	-	-	-	Hi gh	
11.	EPri me	30	-	-	-	Hi gh	(Enabl e)
12.	FDCRE	1	56	8	2	Low	(Three-state)
13.	FDCWE	27	48	8	2	Low	(Three-state)
14.	FDCA0	23	40	8	1	Low	(Three-state)
15.	FDCA1	19	32	8	1	Low	(Three-state)
16.	OECLK	15	24	8	1	Low	(Three-state)
17.	PROMCE	11	16	8	1	Low	(Three-state)
18.	RAMWE	7	8	8	2	Low	(Three-state)
19.	RAMCE	1	0	8	2	Low	(Three-state)
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			64	12	(19%)		

W320 Signal RW is not used in the final equations.

I 200 No fatal errors found in source code.

I 201 One warning.

## ♀OrCAD PLD

Type: GAL16V8

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QP20\* QF2194\* QV1024\*

F0\*

L0000	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L0032	01	11	11	11	11	11	11	11	11	10	11	11	11	11	11	11	*
L0064	01	11	11	11	11	11	11	11	11	11	11	10	11	11	11	11	*
L0256	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L0288	01	11	11	11	11	10	11	11	11	11	10	11	11	11	11	01	*
L0320	01	11	11	11	11	10	11	11	11	11	11	10	11	11	11	01	*
L0512	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L0544	11	11	11	11	11	11	11	11	11	01	11	01	11	11	11	11	*
L0768	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L0800	11	11	11	11	11	11	11	11	11	11	11	11	11	11	01	11	*

	FDRVOG1. LST																
L1024	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L1056	11	11	11	11	11	11	11	11	11	10	11	11	11	11	11	11	*
L1280	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L1312	11	11	11	11	11	11	11	10	11	11	11	11	11	11	11	11	*
L1536	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L1568	11	11	01	11	01	11	11	11	10	11	11	11	11	11	01	11	*
L1600	11	11	01	11	01	11	11	11	11	11	10	11	11	11	01	11	*
L1792	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L1824	11	11	01	11	10	11	11	11	10	11	11	11	11	11	01	11	*
L1856	11	11	01	11	10	11	11	11	11	11	10	11	11	11	01	11	*
L2048	00	00	00	00	01	00	01	10	01	00	01	00	01	01	00	10	*
L2080	01	01	01	10	01	11	00	10	01	10	01	01	01	11	01	10	*
L2112	00	11	00	01	11	11	11	11	11	11	11	11	11	11	11	11	*
L2144	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	*
L2176	11	11	11	11	11	11	11	11	11	*							
C5A57	*																

I 202 12/26/91 2:41 pm (Thursday)  
 I 203 Memory utilization 2198/22374 (10%)  
 I 204 Elapsed time 3 seconds

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