

1

1

2 1 0(20) ,

3 1 (3) ,

4 3 (31) ,

5 (4), 0(50), 0(60) ,

6 5 (4) ,

7 5 (50) ,

8 4(54) ,

9

< >

10,11,12,13,17: 3:

4: 50,51,52,53,54:

60,61,62,63,64: 20,21,22,23,24:

20a: SDRAM 20b: SDRAM

31: 32:

300: 301:

302: 303:

304: 41:

46: 31:

32: 33:

34: 35:

611: 410:

가

(latency time)

가

가

가

(priority mapper);

가

OR

(latency time)

가

가

가

(priority mapper);

가

OR

가
가

가

(difference) 가 가

1

1 (10,11,12,13,...,17), (20,21,22,23,24), (3), (4), (50,51,52), (53,54), (Pseudo-Delay) (60,61,62,63,64)

(10,11,12,13,...,17), (20,21,22,23,24) 가

(10,11,...,17) , DMA(Direct Memory Access) , (20,21,22,23,24) RAM, ROM, SDRAM, RDRAM , 가 SDRAM , 0,1,2(20,21,22) 가 (latency time) ROM 3,4(23,24)

(3) , (10,11,12,13,...,17) 가

(4) , (3) (50,51,52) 가 (53,54) 가 (20,21,22,23,24) 가

(4) (50,51,52) , 0,1,2 (20,21,22) , (60,61,62) (4) (53,54) 3,4 (23,24) (63,64)

(60,61,62,63,64) (20,21,22,23,24) ,
 (50,51,52) (53,54)
 (20,21,22,23,24) .

(60,61,62,63,64) (4) 가 ,
 (pseudo) .

2 1 0(20) . , 1,2 (21,22) .

2 , 0(10) , SDRAM (20a) SDRAM(20b) . SDRAM(20b)
 1(201) , 2(202), 1(201) 2(202)
 (200) . 1(201) 2(202)

SDRAM(20b) SDRAM (20a)가 , SDRAM (20a) 가 . SDR
 AM (20a) , (60) 1(201)
 2(202) SDRAM(20b)
 (CS#), RAS (RAS#), CAS (CAS#), (AD:Row Address Column Address),
 (BA:Bank Address), / (W#), (DQM: Data
 output/input enable)가 . RAS , CAS .

SDRAM (20a) 0(60)가 . 0
 (60) 0(50) , SDR
 AM (20a) .

3 1 (3) .

3 , (3) , (priority mapper)(31) (32) . (31)
 (10,11,12,13,...,17) 가 ,
 가 (10,11,12,13,...,17)
 (32) , (31) (10,11,... 17)

4 3 (31) .

4 , (31) (300), (301), (302),
 (303), (304) .

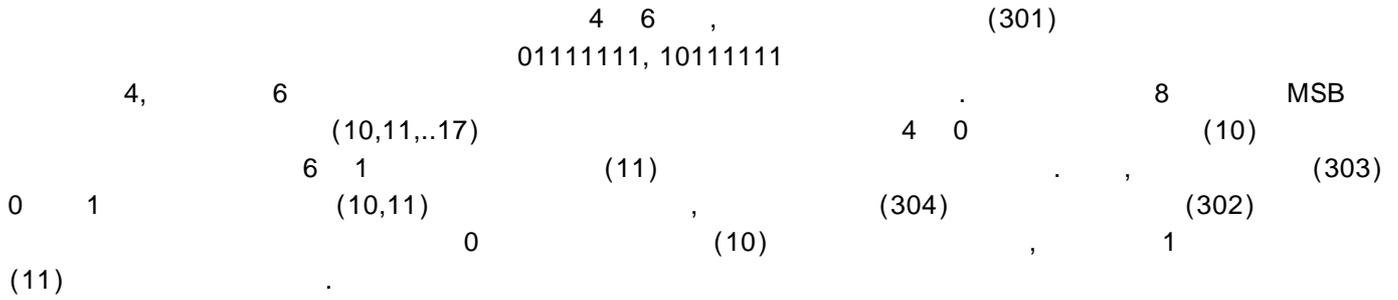
(300) , 가 (10,11,...17)
 (10,11,...17) 가 가 가
 (300) 가 가 (301) 가

8, 8 (10,11,12,13,...,17)가 (300)
 (0,..., 7)가 16
 OR (OR 0,...OR 15)가 (301)
 (302) (301)

(304) (300) 가 (304)
 16 (0,..., 15)가 (304)
 (303) (302)

0 (10) 4, 1 (11) 6
 (300) 1110111111111111, 1111101111111111
 (302) 가 OR Flag0,...,Flag
 15 1110101111111111 MSB, 4 6 가 0 4 6
 가 (302),
 1111111111 0 가 4 6 () 111011
 (11), (10), () 1111101111111111 1
) 8*16, (12,..17) 1111111111111111(

1110111111111111
 1111101111111111
 1111111111111111
 1111111111111111
 1111111111111111
 1111111111111111
 1111111111111111
 1111111111111111



, C
 , 0 (10) (10) 0 0 16가 0 15 가 , 0

Case (0)

- 0 : 0 = 0b11111111111111110;
- 1 : 0 = 0b11111111111111101;
- 2 : 0 = 0b11111111111111011;
- 3 : 0 = 0b1111111111110111;
- 4 : 0 = 0b1111111111011111;
- 5 : 0 = 0b1111111110111111;
- 6 : 0 = 0b1111111101111111;
- 7 : 0 = 0b1111111011111111;
- 8 : 0 = 0b1111111011111111;
- 9 : 0 = 0b1111110111111111;
- 10 : 0 = 0b1111101111111111;
- 11 : 0 = 0b1111011111111111;
- 12 : 0 = 0b1110111111111111;
- 13 : 0 = 0b1101111111111111;
- 14 : 0 = 0b1011111111111111;
- 15 : 0 = 0b0111111111111111;

endcase

, 0b

1 7 (11,..17) 가

가

Flag0,..,Flag15

Flag0= 0 [0] or 1 [0]

or 2 [0] or 3 [0]

or 4 [0] or 5 [0]

or 6 [0] or 7 [0]

or 8 [0] or 9 [0]

or 10 [0] or 11 [0]

or 12 [0] or 13 [0]

or 14 [0] or 15 [0]

.....

0,..,7

Case (0)

0bddddddd0 : ld0 < = 0;

0bddddddd01 : ld0 < = 1;

0bddddddd011 : ld0 < = 2;

0bddd01111 : ld0 < = 3;

0bddd011111 : ld0 < = 4;

0bdd0111111 : ld0 < = 5;

0bd01111111 : ld0 < = 6;

0b011111111 : ld0 < = 7;

endcase

, d don't care

0,..,7

가

5 (4), 0(50), 0(60) ,
 1,2(51,52) 1,2(61,62) 0(50) 0(
 60) 가 .

5 , (4) , (3) 0(50)
 (41), (41) 가
 (60,61,62,63,64) 0(60)
 (46) .

(50) , (31), (32), (34), (33),
 (35) .

(31) , (41) .
 (32) , (31) .
 (33) , (20,21,22) .
 (34) (32) (33)
 (35) , (34)
 (31) (31)
 (60,61,62) .

(60) , 0(20) 가 (611) , 0(20)
 0(50) (611) (611) (60) (20)
 (611) (pesudo)

6 5 (4) .

6 , (4) (41) , (3)
 (410), (410) (411) .
 (4) (46) , (20,21,22,23,24)
 (460), (461) , (462) (463) .

(460) , (41) , (461) (460)
 (462) , (463) (462) 가
 0(60) , 0(60) .
 0(60) , (462) (463) , 0(20)
 (462) (463) 가 .

7 5 (50) , (50) , 2 0(20)
 SDRAM .
 (50) .

7, (31), 5, (31)
 가 (32),
 가 A(201) B(202) (320)
 (Row Address) 가 /
 1,12,13,...,17) 가 가 (10,1

(33), SDRAM (20a) A(201) B(202)
 (34), (320) (33)
 340) (33) (340) (320) (340)

(35), (351),
 (31) (351)
 (352,353) (351) (340) 가 2
 가 1 SDRAM(21)
 SDRAM(21) (precharge), 가 가
 (precharge), 가 가
 2, 1 가
 (31) (352,353) (352,353)
 0(60)

4, (3)가 (10,11,12,13,...,17)

17) (3) (31) (300) (10,11,12,13,...,
 (300)
 (301) OR
 (302)

, (303)

(304)
(32)

(302)

(10,11,12,13,...,17)

(10,11,12,13,...,17)

(3)

(4)

, 6 ,

(4)

(46) ,

(60,61,62,63,64)
(460)

가 ,

(460)

가

(60,61,62,63,64)

가

(60,61,62,63)

가 ,

(462)

가

(60,61,62,63,64)

(20,21,22,23,24)

(461)

(461)

(20,21,22,23,24)

가

(460)

(463)

(463)

(460)

(50,51,52)

(53,54)

, 7 ,

(50)

(50)

2

0(20) SDRAM

(50)

(31)

(320) ,

(340)

(33)

1

가

, 2

가

가

가 (351)

가

(352, 353)

(351)

(60)

(351)

(340) ,

, 2

가

" 0" , " 1" ,

(351) ,

가

(340)

01" " 11"

2

" 00"
(352,353)

,"

가

(0)

" 10" ,

(1)

" 01" ,

(2)

" 10" ,

(3)

" 00" , (4) " 10" , " 100010011
 0" . (351) " 1000100110" 2 5 , " " 100010011
 00" . , " 00" (3) (3)
 , " 01" " 11" (1) (1) 가 1 가 .
 (1) (0) (2) (4) 가 . , (3)
 , 8 4(54) , 4(54)
 , 3(53) .
 4(54) , (541), (541)
 (540) (540)
 541) (64) (4) ((64)
 , 5 , (60)
 (60) , 0(20) 가 (611) , 0(20)
 0(50) (611)
 , 0(20) 가
 (4) (10,11,12,13,...,17)
 0(20) (4) (10,11,12,13,...,17)
 (10,11,12,13,...,17) 가 .
 , (4) , (20) ((4)
) (pesudo)
 , (20,21,22,23,24)
 5 , 6 , 4 , 0 , 1 , 1 , 0 , 2 , 6 , 5
 , 가 (Difference) 가 . , (60)
 (20,21,22,23,24) 6
 , (611) 1 .
 , 가 4 , 4 가 ((4)
 60) 6
 (4) (60,61,62,63,64)
 , (20,21,22,23,24) 가

(pseudo)
가 .

(57)

1.

(latency time) , , ;

가 ;

가 ;

가 ;

2.

1 , ;

가 ;

가 ;

(priority mapper);

가 , .

3.

1 , , ;

4.

3 ,

,

.

5.

4 ,

,

OR

.

6.

2 ,

,

,

;

.

7.

6 ,

,

.

8.

1 ,

,

;

9.

8 ,

,

,

;

,

가

;

가

가

10.

9 ,

,

11.

8 ,

,

;

;

;

;

12.

11 ,

,

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,

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,

,

,

,

,

13.

11 12 ,

14.

13 ,

가 , 1

15.

14 ,

가 , 2

16.

11 ,

17.

1 ,

(difference)

가 가
가 가

18.

(latency time)

;

가

,
;

,
,

가

19.

18 ,

,
;

가

,

;

;

(priority mapper);

가

,

20.

18 ,

,
,

21.

20 ,

,

22.

21 ,

,

OR

23.

19 ,

,
,

,

24.

23 ,

,

25.

24 ,

,

;

26.

25 ,

,

,

;

가

;

가

가

27.

26 ,

,

28.

18

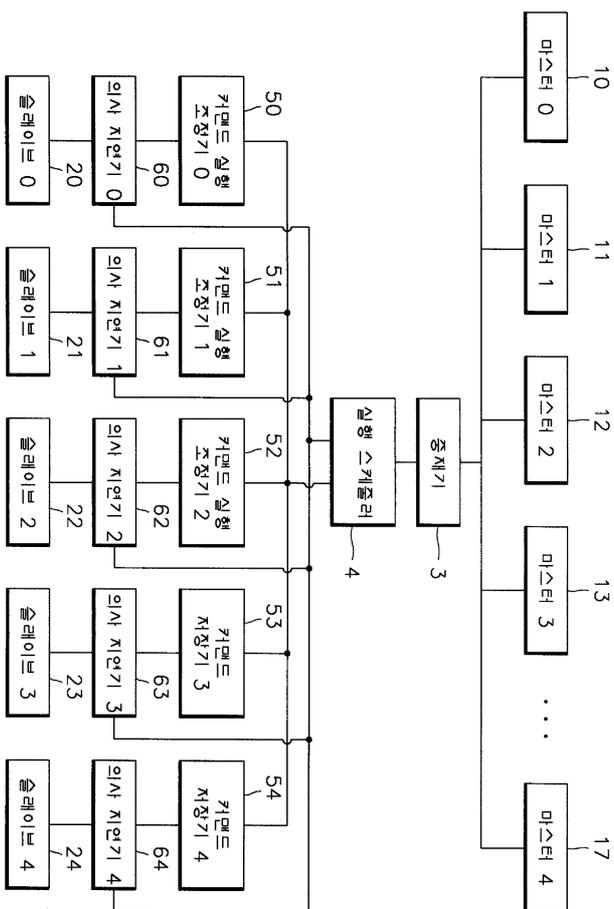
29.

18

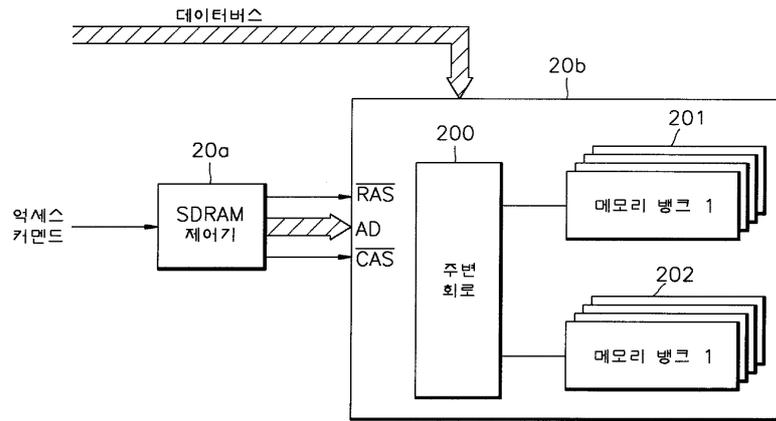
(difference)

가
가
가

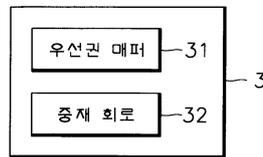
1



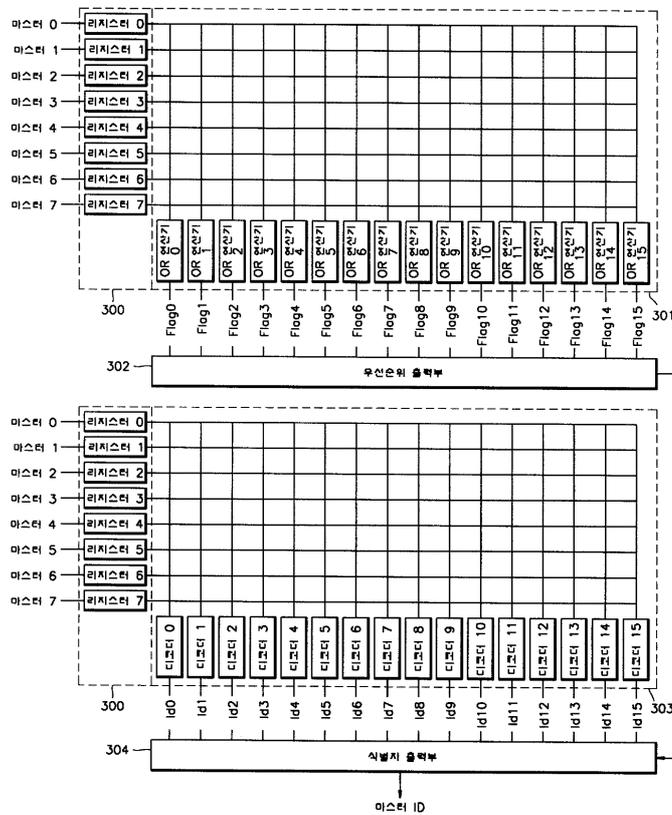
2



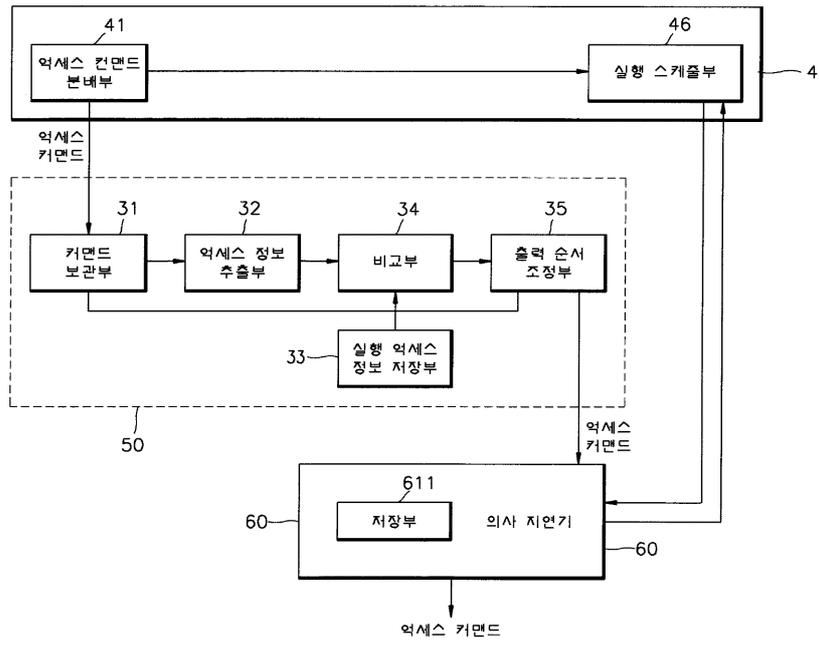
3



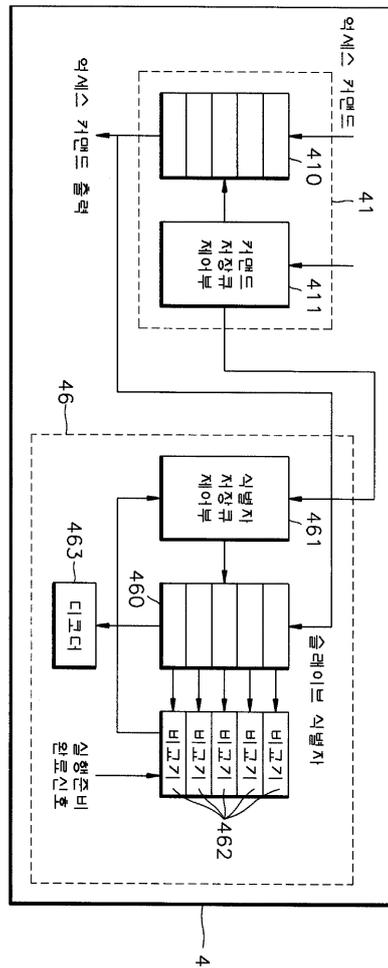
4



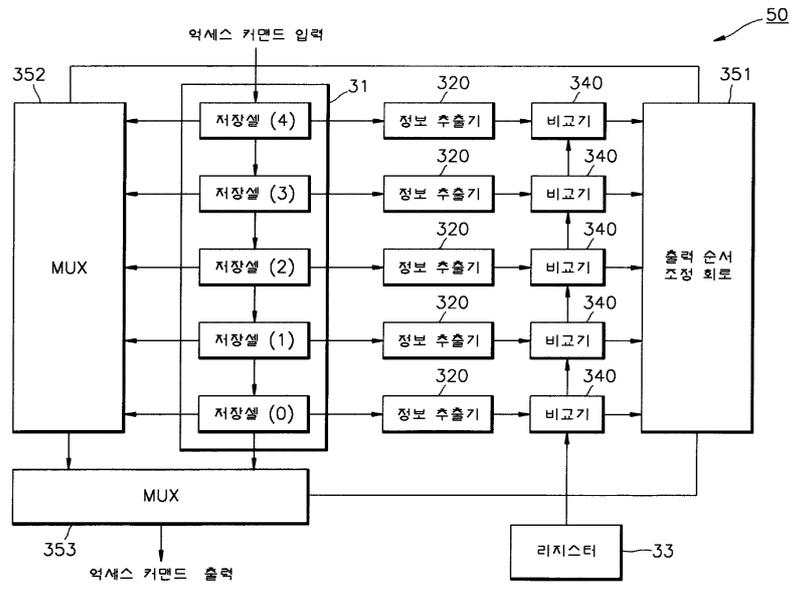
5



6



7



8

