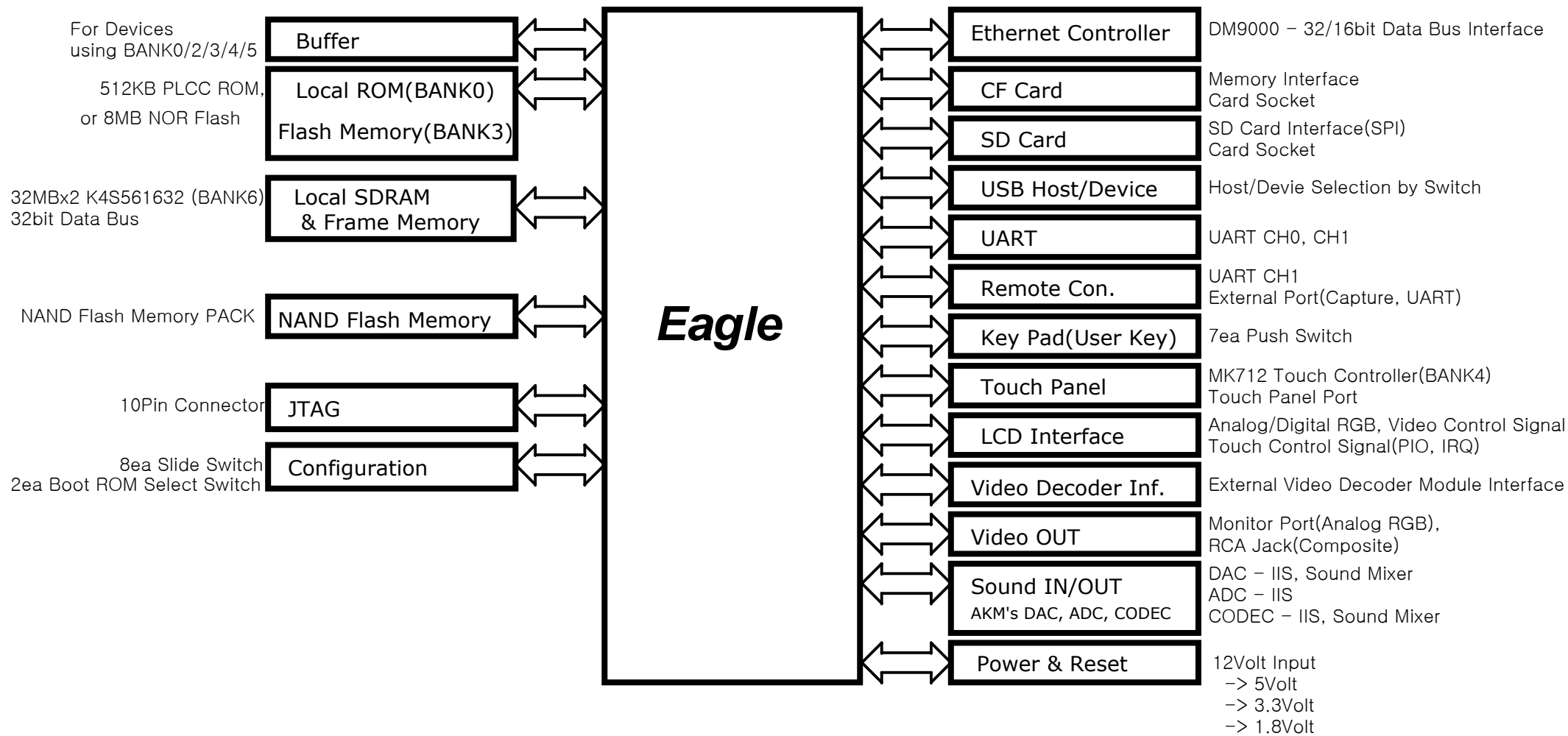
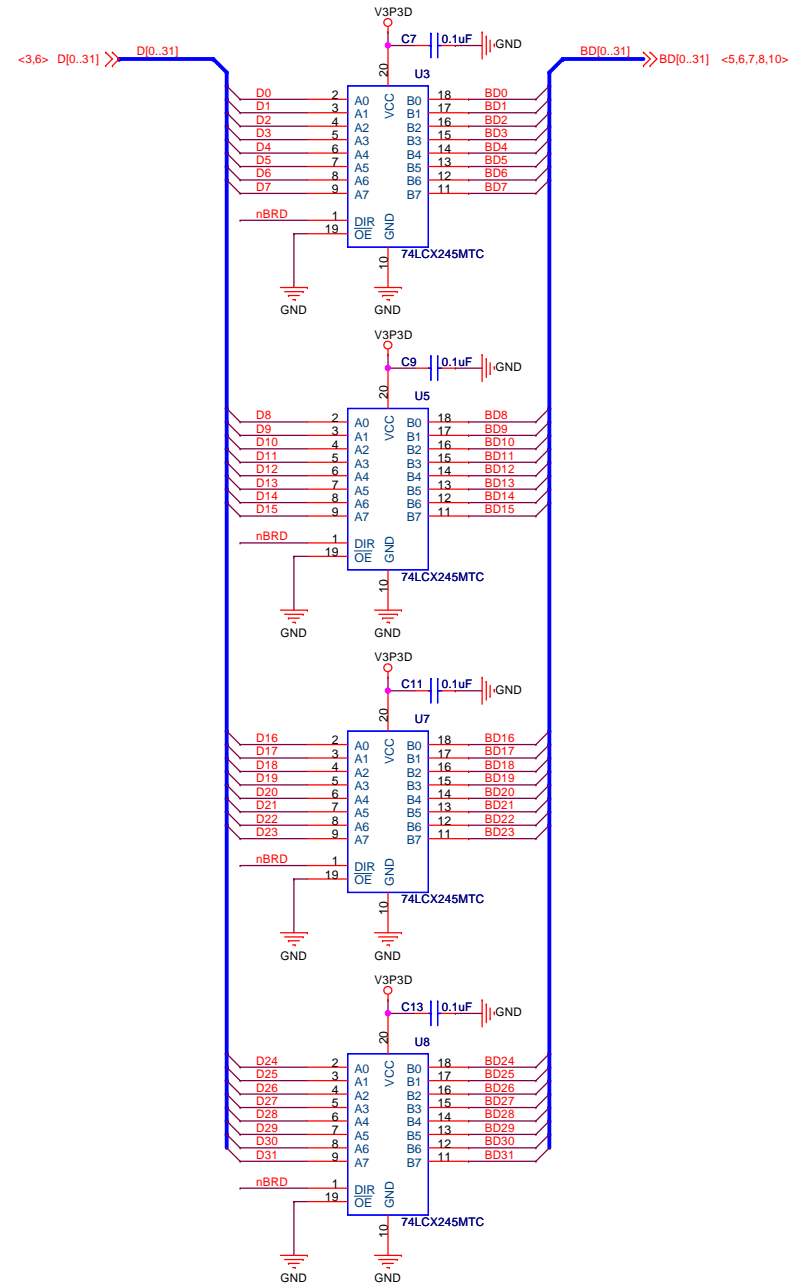
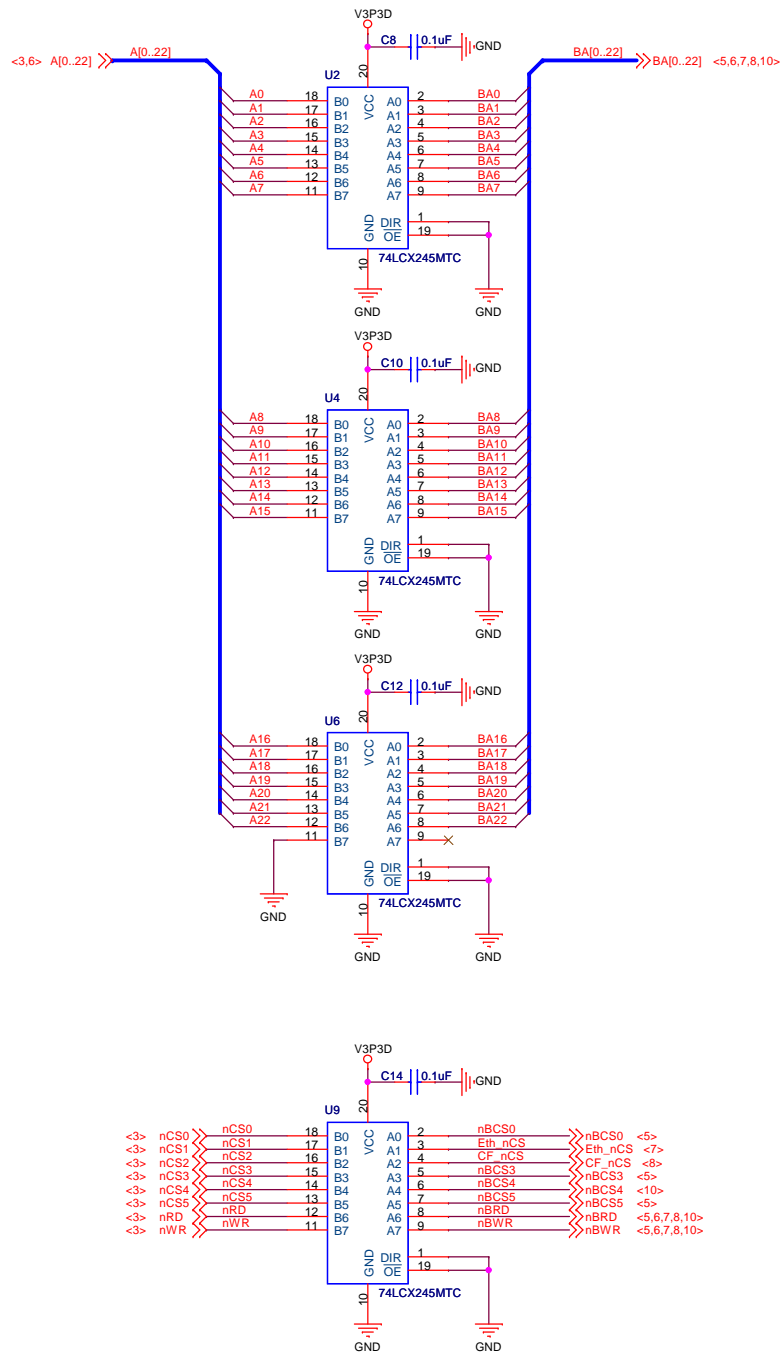


Eagle Development Board

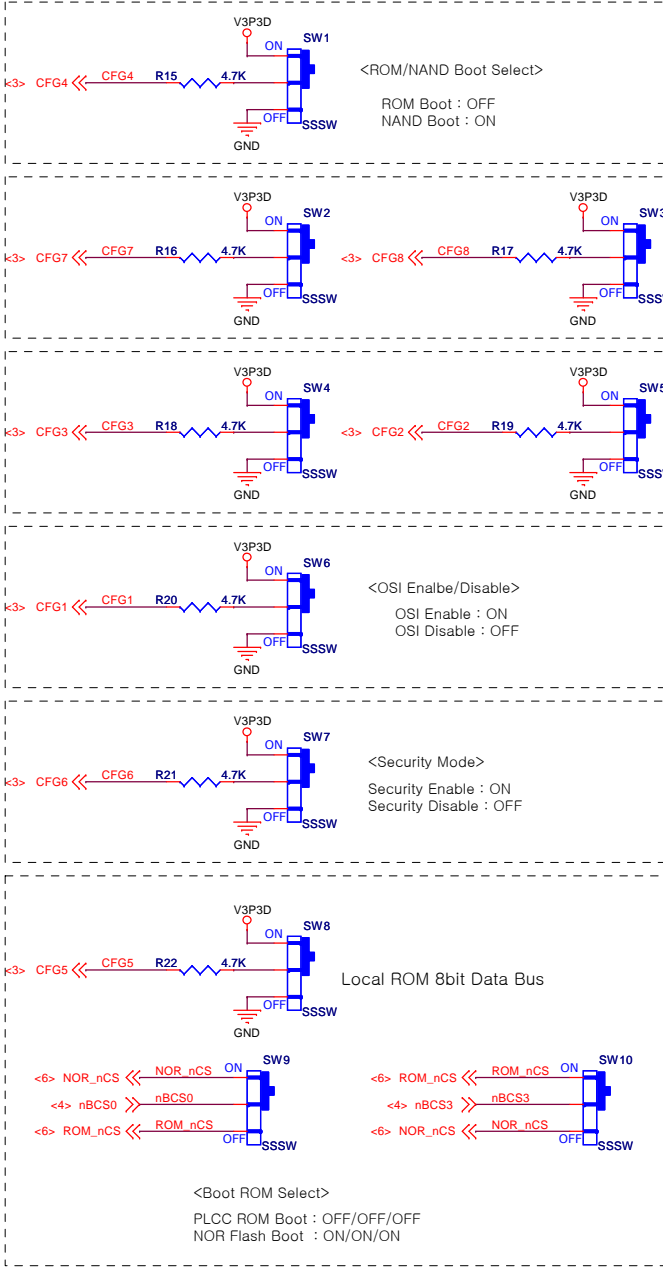
Page	Description
01	This Page (Contents & Revision History)
02	Board Overview
03	MCU - Eagle
04	Config & Buffer & JTAG
05	Local ROM/SDRAM/NAND Flash
06	Ethernet - DM9000
07	CF & SD Card
08	USB & UART & IrDA
09	Key Pad & Touch Panel
10	LCD/Video Decoder Interface & Video OUT
11	Sound IN/OUT
12	Power & Reset
13	Board Block Diagram

버전	날짜	수정 내용
1.0	2007-06-20 2007-06-27	1차 설계 완료 1차 Review 후, 회로 수정 및 추가 -> Eagle Power 통합(3.3V, 1.8V) -> NOR Flash(8MB) 추가(BANK0 or BANK3), Boot ROM Select 추가 -> JTAG Connector 교체, 보드 Reset Control Pin 추가 -> 모든 Buffer 칩 245로 교체 -> Control I/O 추가 -> CF/SD Card Power Control 추가 -> User Input Key 4ea 추가 -> External Camera Power Control 추가 -> 소프트웨어 RESET 추가 -> RTC Power 수정
	2007-07-26 2007-07-27 2007-08-02	Eagle 칩 최종 정리(Pin) Remote Control Receive 회로 추가 CF/SD 전원 제어 칩 변경(TPS2041D-->FDC6329L) Touch_IRQ(Schmitt Trigger포함된 핀) / SD_Detect 핀 교체 -> Touch Controller(U34)의 74LCX14 제거
	2007-08-08 2007-09-13 2007-09-19 2007-09-21 2007-11-15	Video DAC 회로 수정 Video Out 회로에 75ohm Driver 추가 U46-7432추가(IO IN/OUT 관련 회로 수정), TP 추가 SD Card Input Power 3.3V로 수정(8페이지) Eagle의 SD Card Pinmux 사용 변경으로 인한 SD Card 회로 변경 --> LCD Interface의 SPI 신호 제거 및 PIO로 대체 --> Key Scan (스위치4개) 제거 및 IO Read 형태(5페이지)로 Key Button 추가(3개) --> CFG7/8, SD_Protect, NOR_RnB 신호를 PIO로 변경 nCS4를 LCD Interface에서는 제거, Buffer 통과한 nBCS4를 Touch Controller(MK712)에 연결 --> Buffer(U9) 회로 변경 Y1(14.318MHz)의 주변 회로 부품 용량 변경 및 저항 추가 JTAG의 TRST에 Pull Up 저항 추가 USB Detect 회로 추가(5, 9페이지) Ethernet 칩의 IOWAIT 신호 제거(nWAIT 핀을 SD Card의 SD_CMD 신호로 사용함) Touch Screen Connector의 핀의 net 수정 VCLK 신호에 대한 OSC제거(Video Decoder로 부터 직접 입력 받아 사용) Video Decoder Interface의 회로의 부품 용량 변경 Sound 회로의 TWI_SCL, TWI_SDA를 끊을 수 있는 저항 추가 Power의 PLL (1.8V)와 DAC(3.3V)의 GND 통일, 일부 Capacitor용량 변경
	2007-12-17	Video DAC 관련 회로 변경(R12-220ohm) SDRAM BA0/BA1을 A15/A16으로 교체 SD Card의 Pull Up 회로 변경 USB Device 회로 저항 추가

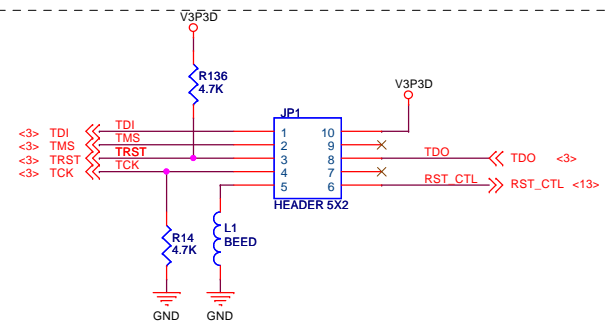




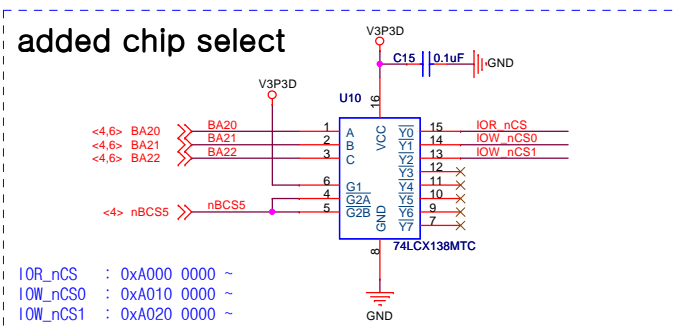
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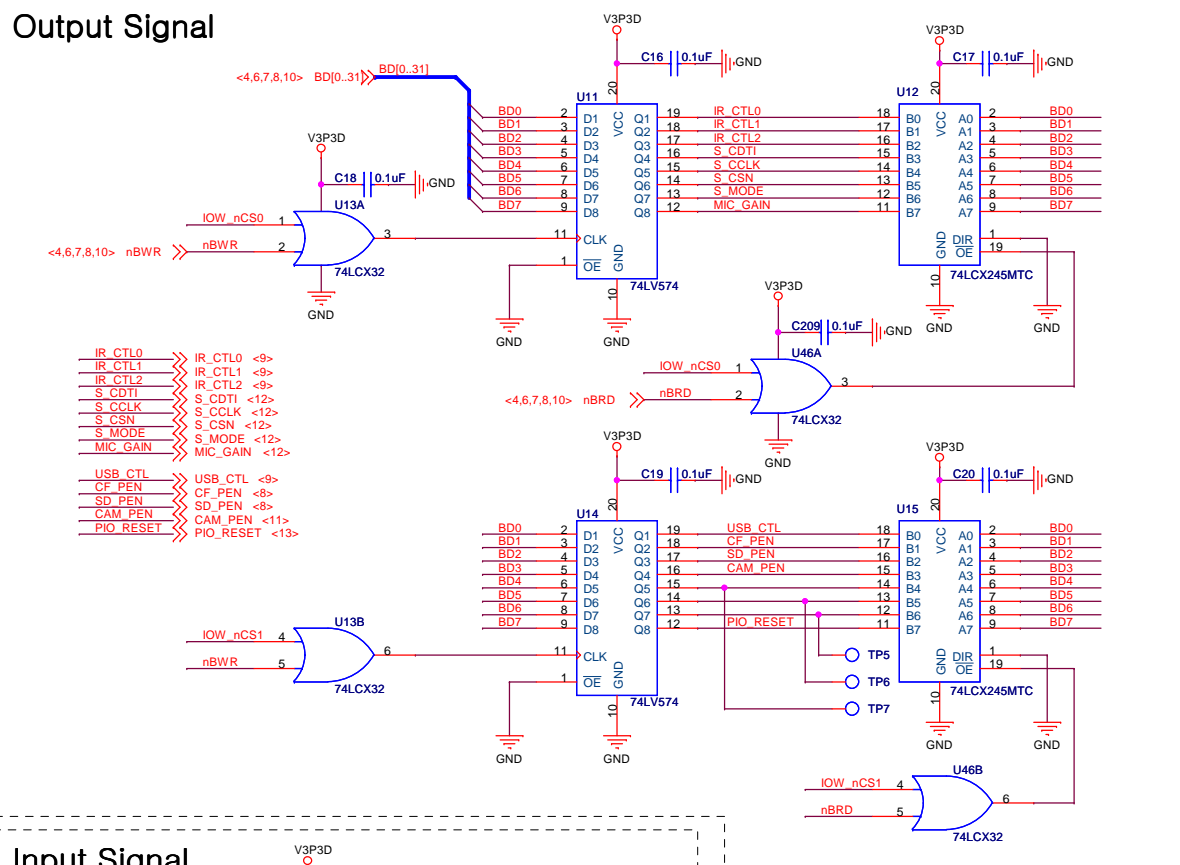
JTAG



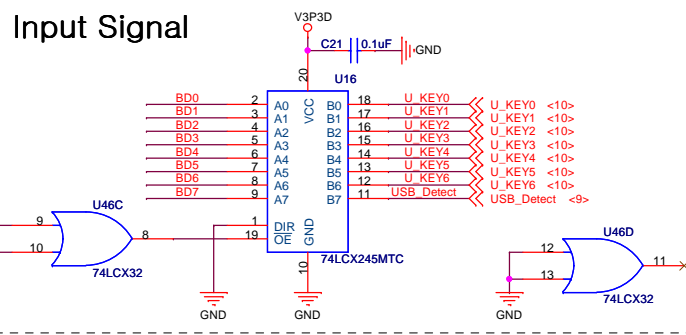
added chip select



Output Signal



Input Signal



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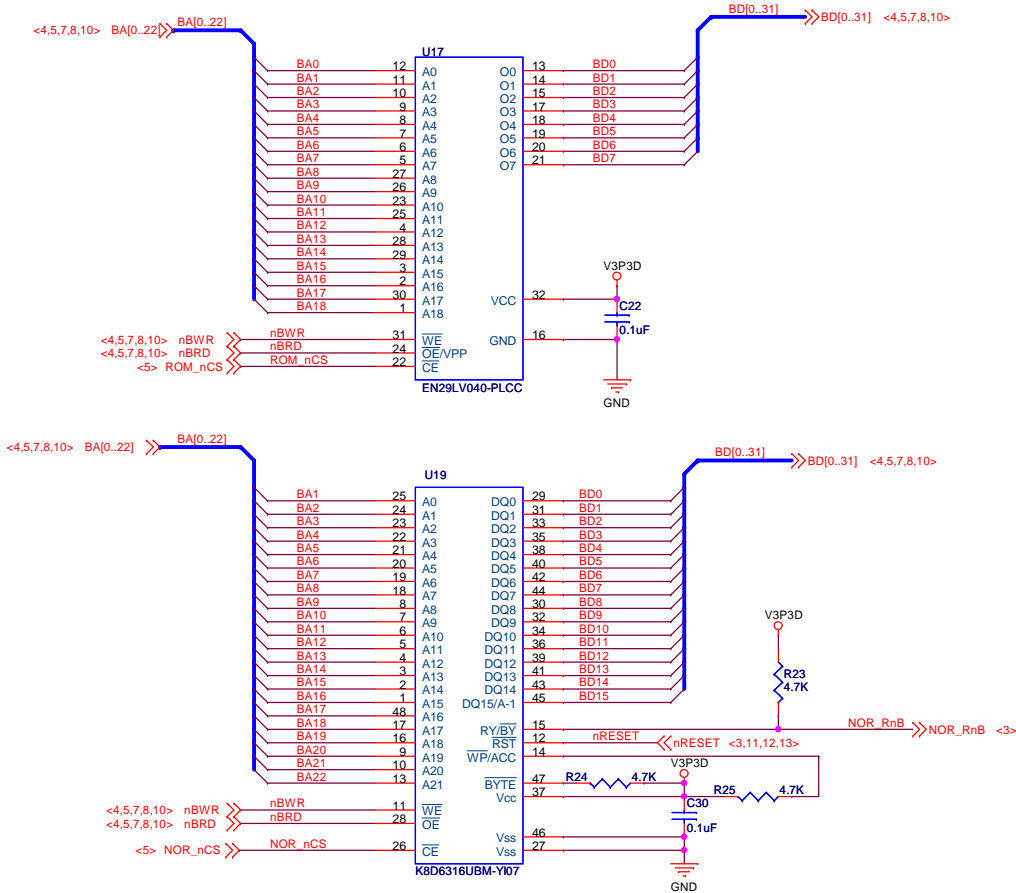
135-280
서울 강남구 대치동 1009-5 국민제1빌딩 8층
http://www.adc.co.kr

Eagle Development Board

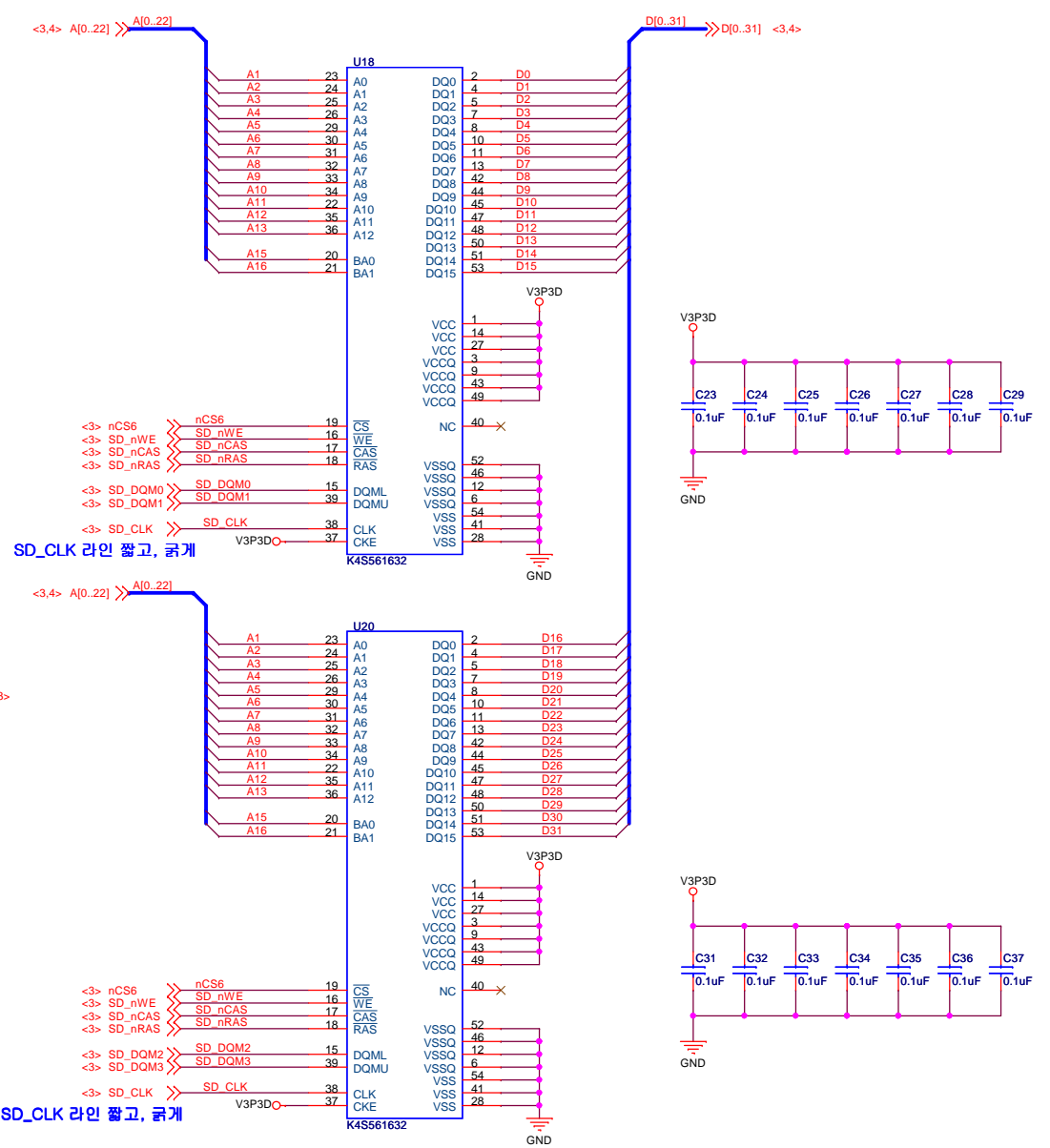
Designed by Y.B.Yang
oxyang@adc.co.kr

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Date	Monday, November 09, 2009	Page 5 of 14

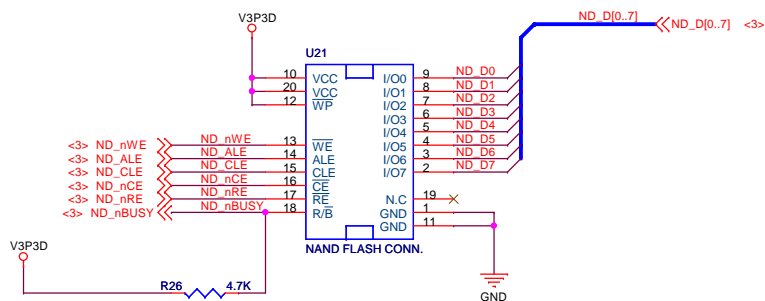
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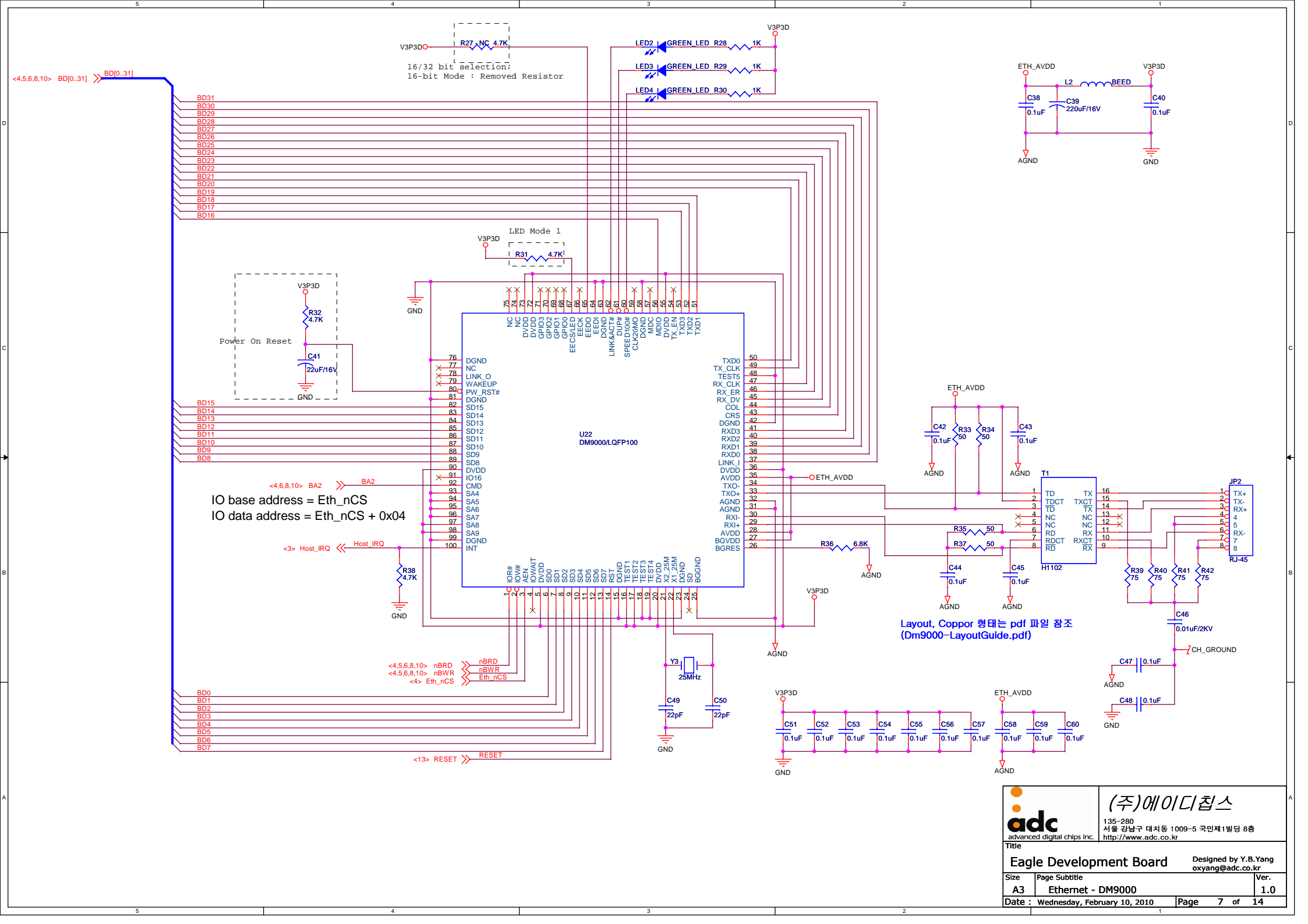


LOCAL SDRAM

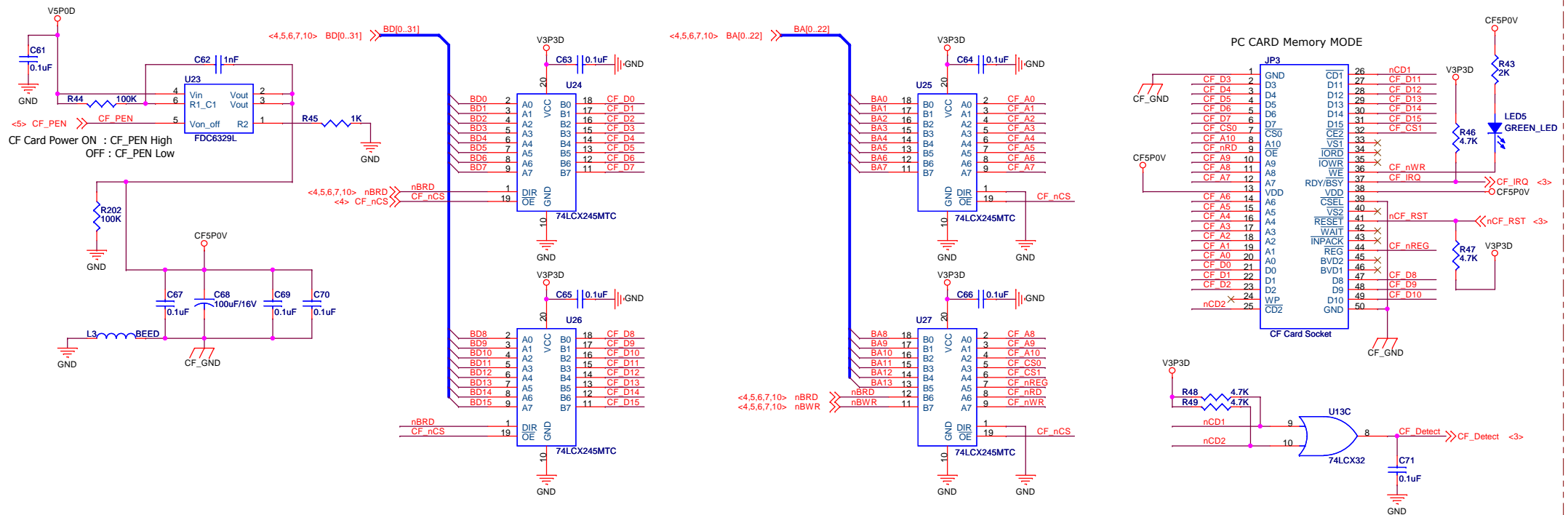


NAND Flash Memory

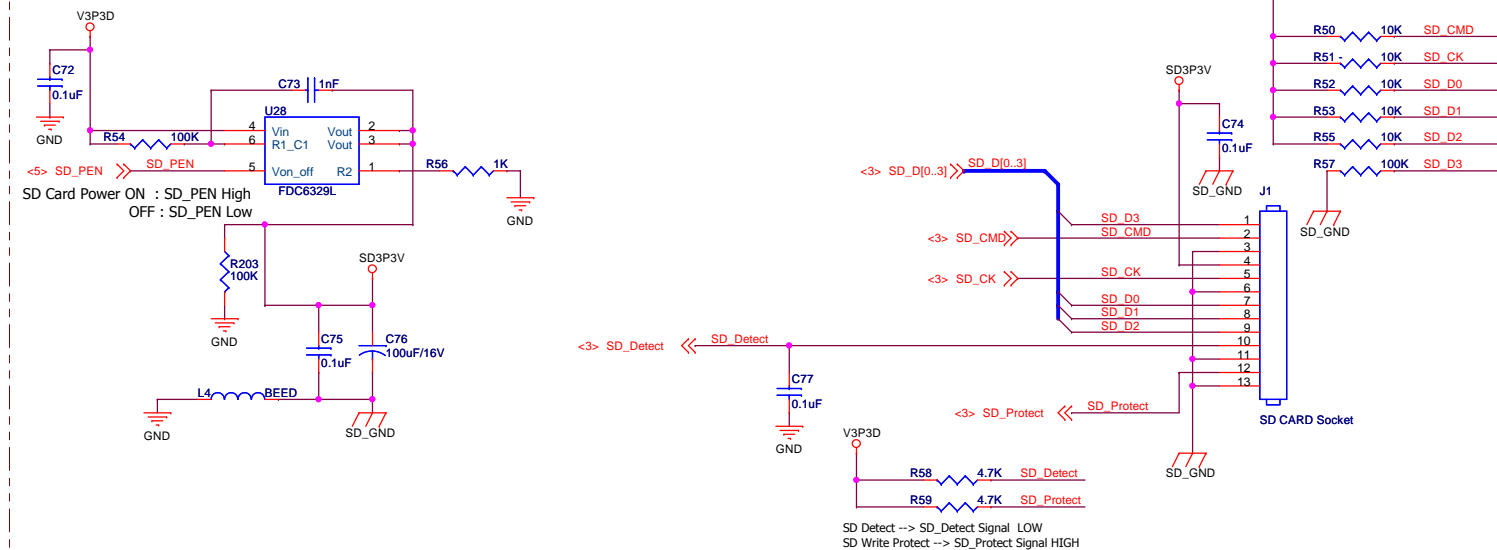




CF Card Connector

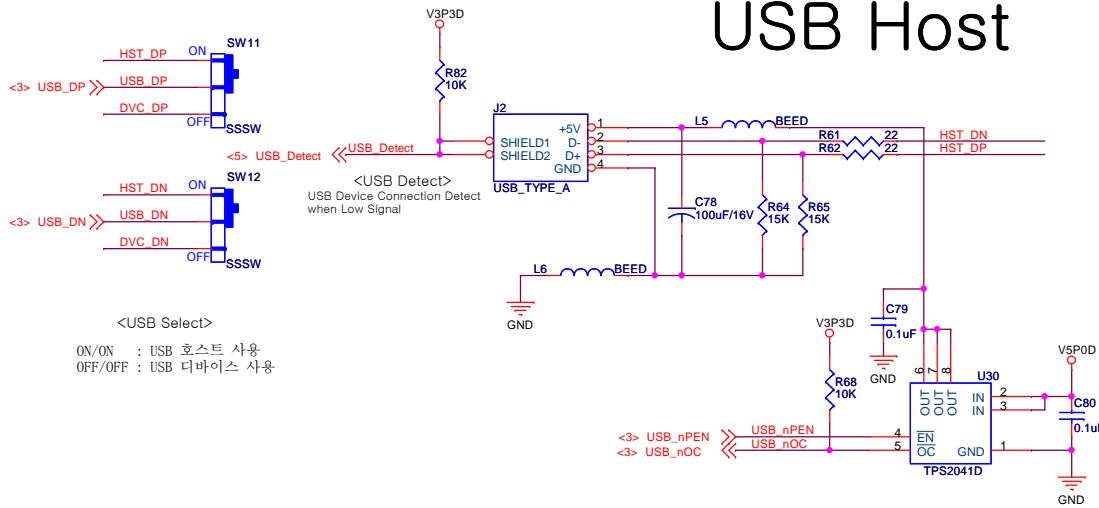


SD Card Connector

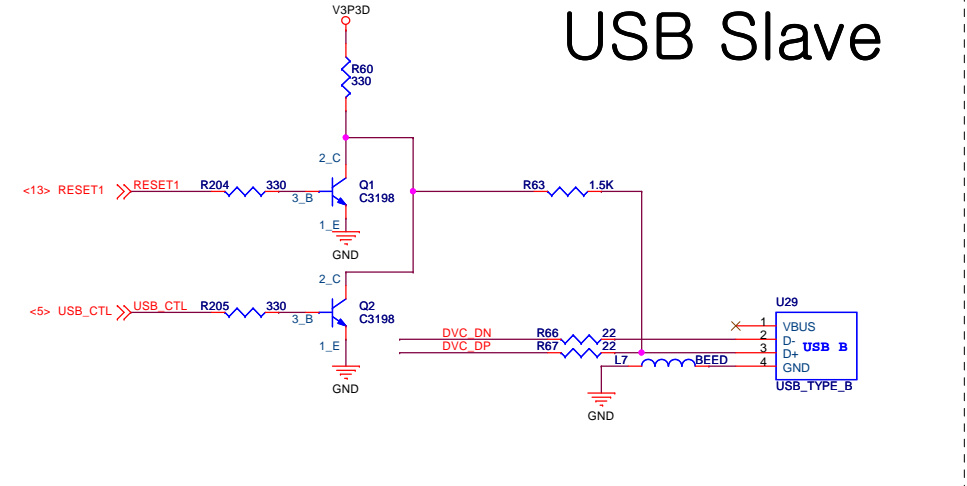


 advanced digital chips inc.		(주)에이디칩스 135-280 서울 강남구 대치동 1009-5 국민재1빌딩 8층 http://www.adc.co.kr	
Title			
Eagle Development Board		Designed by Y.B. Yang oxyang@adc.co.kr	
Size	Page Subtitle	Ver.	
A3	CF & SD Card	1.0	
Date : Monday, November 09, 2009		Page	8 of 14

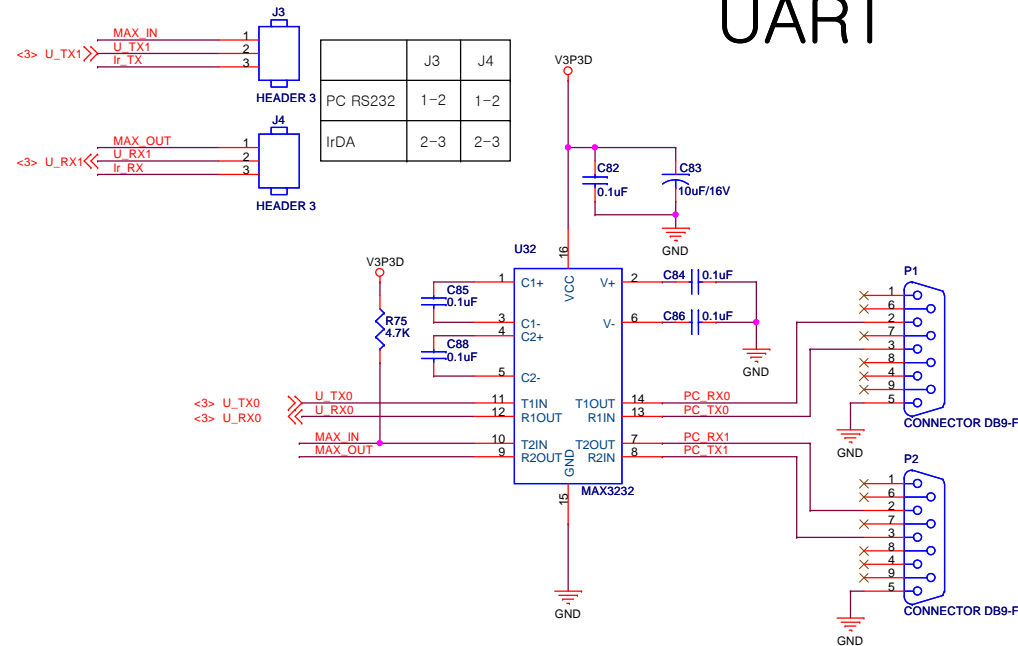
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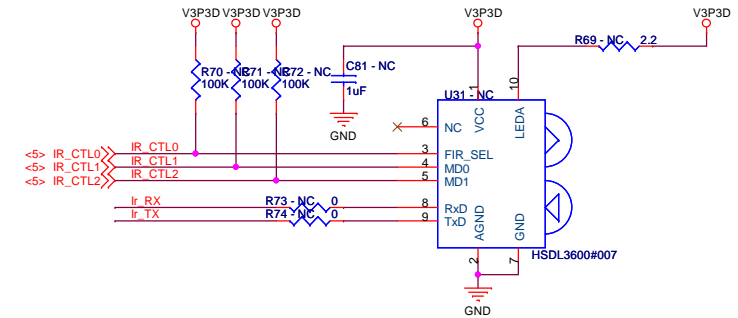
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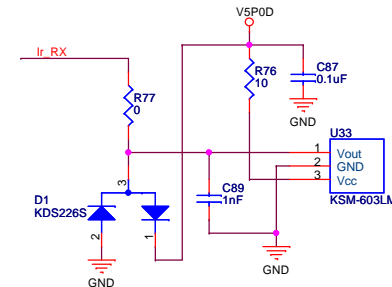
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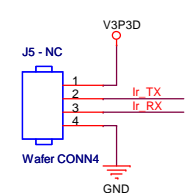
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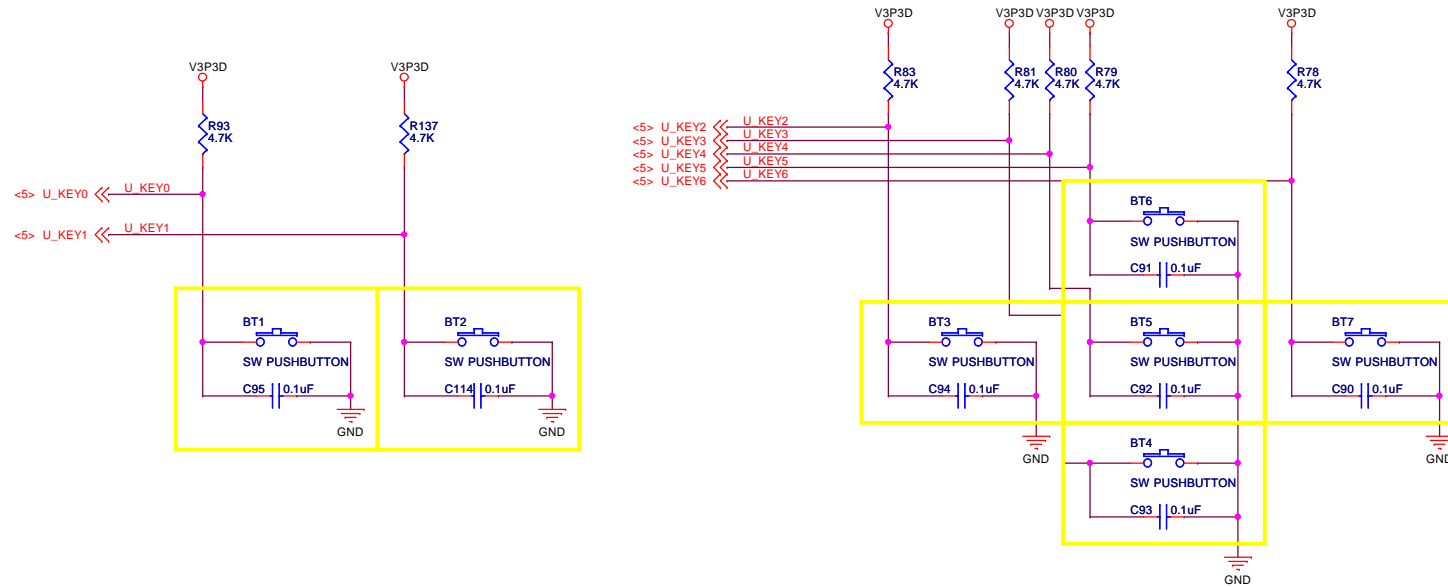
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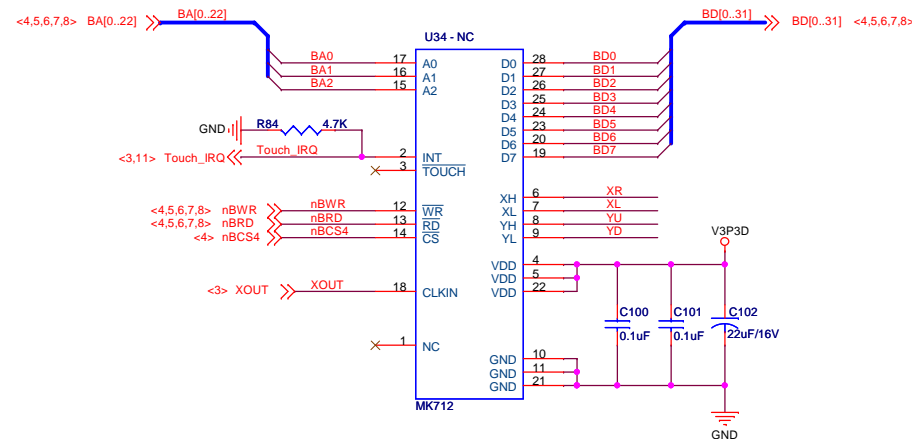
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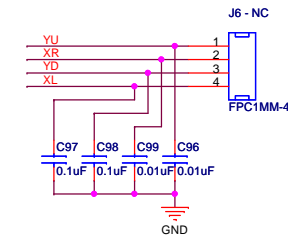
User Input Key



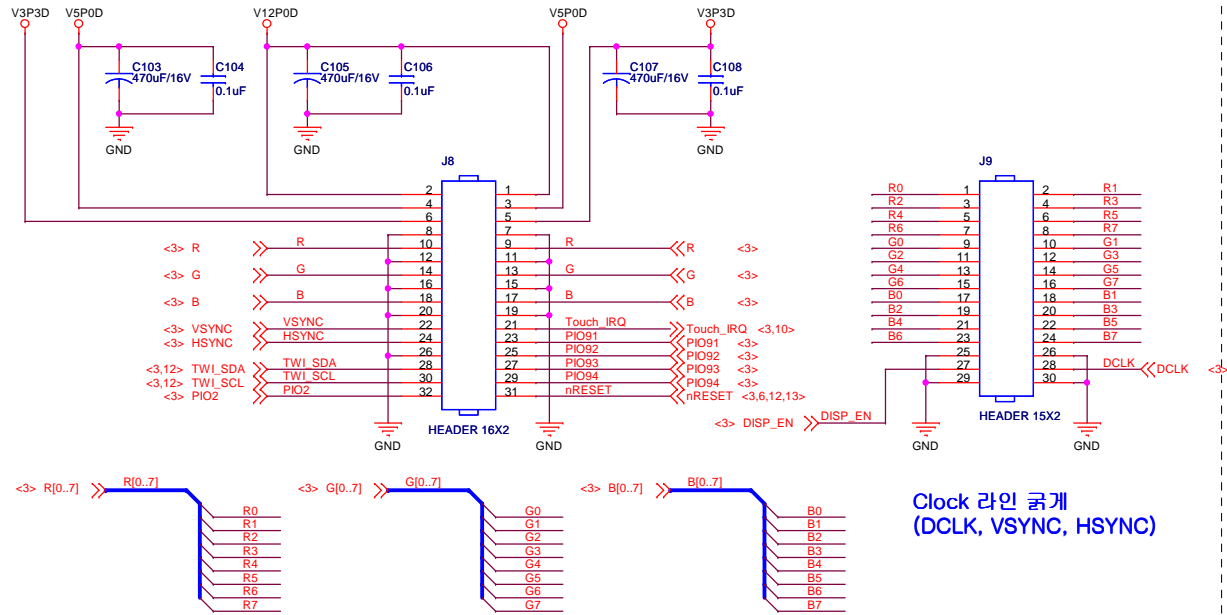
Touch Screen Controller



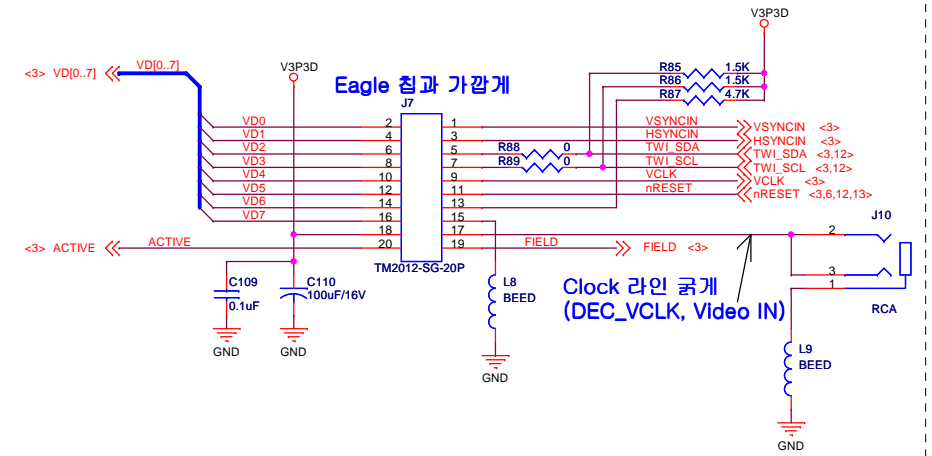
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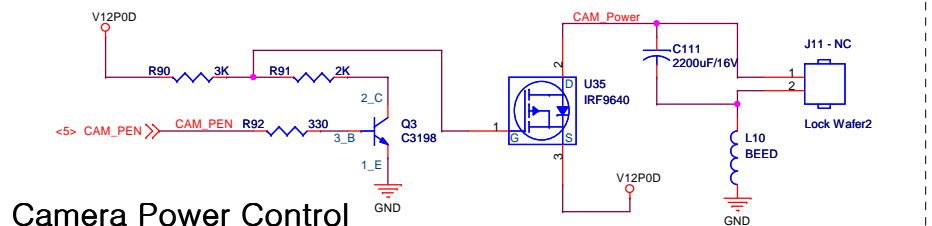
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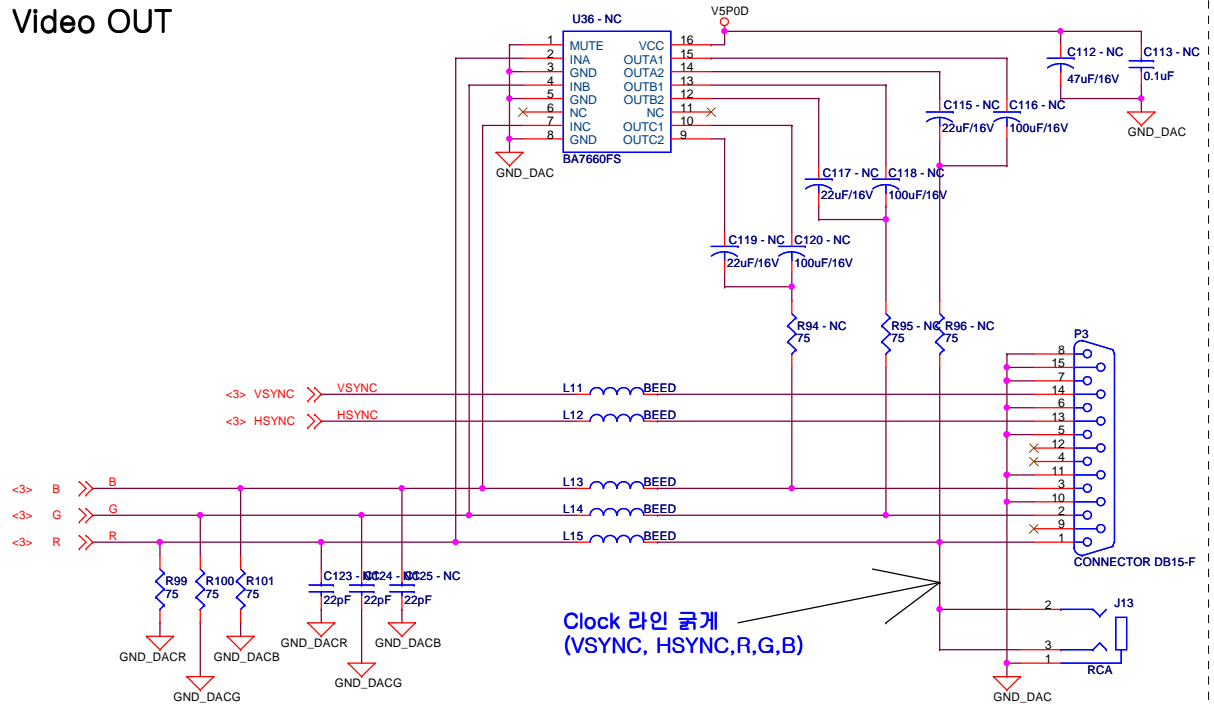
Video Decoder Interface



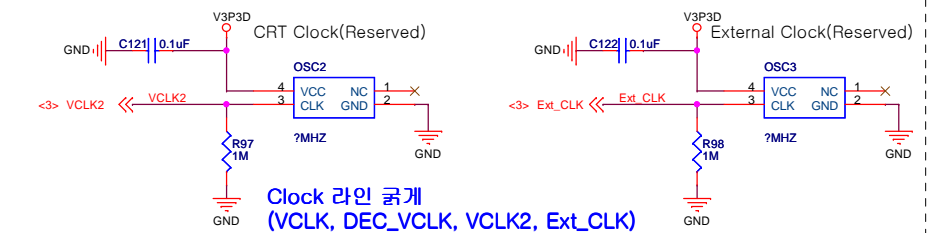
Camera Power Control



Video OUT



Video CLK & Ext. CLK



Sound OUT

V3P3D A3P3V

L16 BEED C130 0.1uF C131 100uF/16V

GND A_GND

<5> S_CDTI S_CDTI 1 CDTI HPL 16

<5> S_CCLK S_CCLK 2 CCLK HPR 15

<5> S_CSN S_CSN 3 CSN HVDD 14

<3> SND_SDO SND_SDO 4 SDATA VDD 13

<3> SND_LRCK SND_LRCK 5 LCK VSS 12

<3> SND_SCK SND_SCK 6 BICK MUTET 11

<3> SND_MCLK SND_MCLK 7 MCLK VCOM 10

<3,6,11,13> nRESET nRESET 8 PDN P/S 9

<5> S_MODE S_MODE

H : Parallel

L : 3-wire Serial

A_GND

C126 0.1uF C127 10uF/16V C128 0.1uF C129 10uF/16V

A_GND A_GND

C132 220uF/16V R102 0 C133 220uF/16V R103 0

A_GND

R104 16 R105 16

A_GND

J14 J15 J16

PHONEJACK STEREO SW

U38 - NC SBS001734P

Sound IN

A3P3V

R107 10 R108 100

A_GND

IIS Interface

A3P3V

R109 4.7K

U39 AK5355

15 TST1 VCOM 1

14 NC RIN 2

13 DIF LIN 3

12 PDN VSS 4

11 BCLK MCLK 5

10 MCLK VA 6

9 LRCK LRCK 7

8 SDTO SEL 8

NC NC

<3,6,11,13> nRESET nRESET

<3> IIS_SCK IIS_SCK

<3> IIS_MCLK IIS_MCLK

<3> IIS_LRCK IIS_LRCK

<3> IIS_SDI IIS_SDI

A_GND

C139 0.1uF C140 10uF/16V C141 0.1uF C142 2.2uF C137 0.1uF C138 10uF/16V

A_GND A_GND

C143 10uF/16V C144 10uF/16V

A_GND

R110 560 R111 560

A_GND

J17

PHONEJACK STEREO SW

Sound IN/OUT

J18 J19

PHONEJACK STEREO SW

U40 - NC SBS001734P

R133 0 R134 0

A_GND

C145 47uF/16V R112 6.8 C147 47uF/16V R113 6.8

A_GND

R114 10 C148 0.22uF R115 10 C150 0.22uF

A_GND

C149 1uF

A3P3V

U41 AK4645EN

24 RIN4 TVDD 16

23 MUTE1 DVDD 15

22 HPL HPR 14

21 HVDD 13

20 HVSS 12

19 MCKO MCLK 11

18 MCKO MCLK 10

17

25 LIN4

26 ROUT

27 LOUT

28 MIN

29 RIN2

30 LIN2

31

32 RIN1

MPWR

VCOM

AVSS

AVDD

VCOC

IS2

IS1

PDN

CSN

16 TVDD

15 DVDD

14 BICK

13 LRCK

12 SDTO

11 SDTI

10 CDTI

9 CCLK

V3P3D

TP1 MCKO

A_GND

C151 0.1uF

A_GND

A3P3V A3P3V

R116 4.7K R117 4.7K

NC

A_GND

R138 0 R139 0

0 TWI_SDA <3,11>

0 TWI_SCL <3,11>

A_GND

R120 10 C154 0.1uF

A_GND

A3P3V

nRESET <nRESET <3,6,11,13>

R121 4.7K

A_GND

R122 4.7K

A_GND

R123 10K

A_GND

C156 0.1uF C157 2.2uF C158 4.7nF C155 0.1uF

A_GND A_GND

ADC

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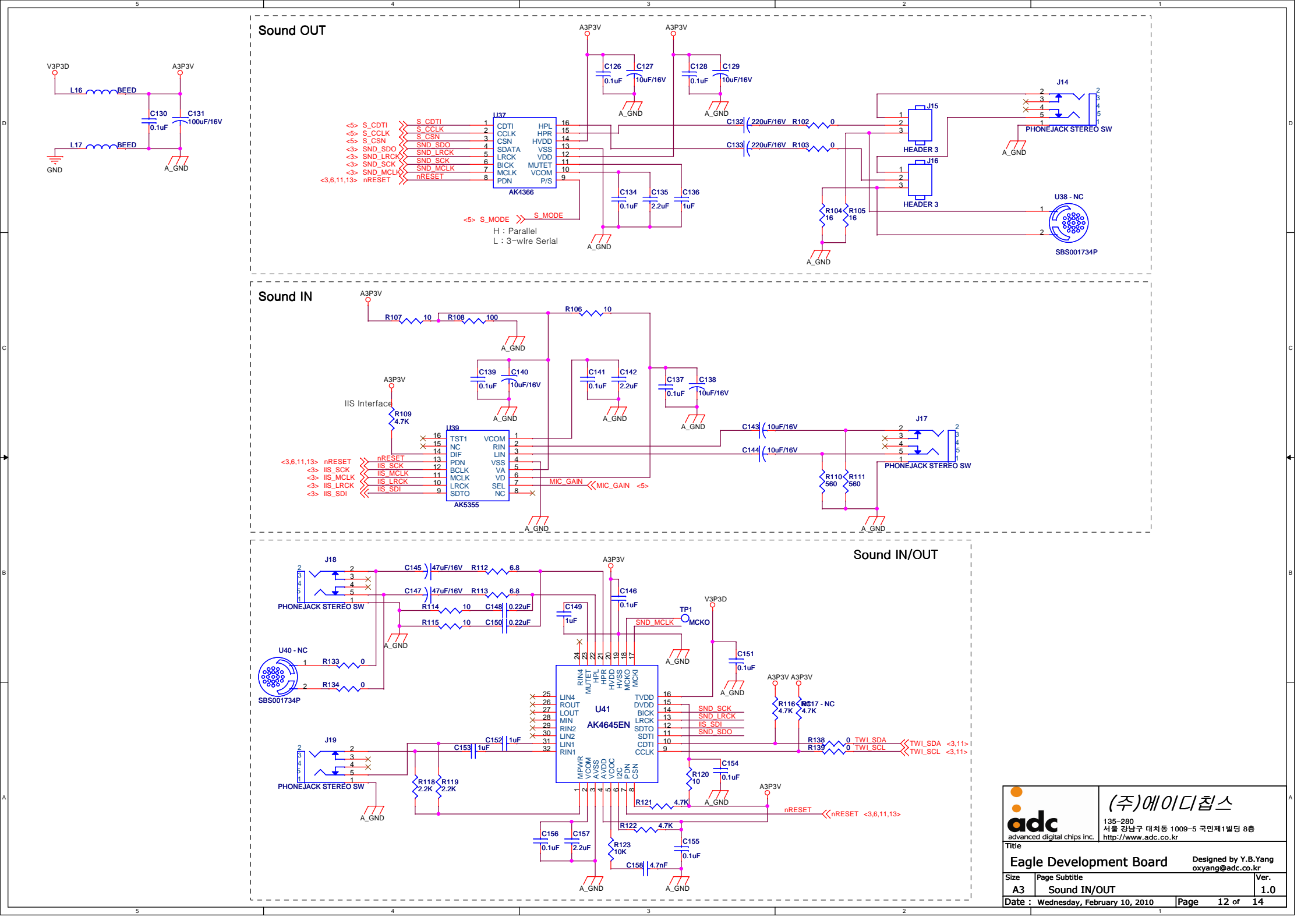
Eagle Development Board

Designed by Y.B.Yang

oxyang@adc.co.kr

Size A3 Page Subtitle Sound IN/OUT Ver. 1.0

Date : Wednesday, February 10, 2010 Page 12 of 14



Sound OUT

V3P3D A3P3V

L16 BEED C130 0.1uF C131 100uF/16V

GND A_GND

<5> S_CDTI S_CDTI 1 CDTI HPL 16

<5> S_CCLK S_CCLK 2 CCLK HPR 15

<5> S_CSN S_CSN 3 CSN HVDD 14

<3> SND_SDO SND_SDO 4 SDATA VSS 13

<3> SND_LRCK SND_LRCK 5 LRCK VDD 12

<3> SND_SCK SND_SCK 6 BICK MUTET 11

<3> SND_MCLK SND_MCLK 7 MCLK VCOM 10

<3,6,11,13> nRESET nRESET 8 PDN P/S 9

AK4366

<5> S_MODE S_MODE

H : Parallel

L : 3-wire Serial

A_GND

C126 0.1uF C127 10uF/16V

A_GND

C128 0.1uF C129 10uF/16V

A_GND

C132 220uF/16V R102 0

C133 220uF/16V R103 0

R104 16 R105 16

A_GND

J14

PHONEJACK STEREO SW

J15

HEADER 3

J16

HEADER 3

U38 - NC

SBS001734P

Sound IN

A3P3V

R107 10 R108 100

A_GND

A3P3V

IIS Interface

R109 4.7K

U39

15 TST1 VCOM 1

14 NC RIN 2

13 DIF LIN 3

12 PDN BCLK 4

11 MCLK VA 5

10 LRCK SEL 6

9 IIS_SDI SDTO 7

AK5355

<3,6,11,13> nRESET nRESET

<3> IIS_SCK IIS_SCK

<3> IIS_MCLK IIS_MCLK

<3> IIS_LRCK IIS_LRCK

<3> IIS_SDI IIS_SDI

MIC_GAIN MIC_GAIN <5>

A_GND

C139 0.1uF C140 10uF/16V

A_GND

C141 0.1uF C142 2.2uF

A_GND

C137 0.1uF C138 10uF/16V

A_GND

C143 10uF/16V

C144 10uF/16V

R110 560 R111 560

A_GND

J17

PHONEJACK STEREO SW

Sound IN/OUT

J18

PHONEJACK STEREO SW

U40 - NC

SBS001734P

R133 0 R134 0

A_GND

C145 47uF/16V R112 6.8

C147 47uF/16V R113 6.8

R114 10 R115 10

C148 0.22uF C149 0.22uF

A_GND

A3P3V

C146 0.1uF

TP1

V3P3D

C151 0.1uF

A_GND

A3P3V A3P3V

R116 4.7K R117 4.7K

NC

R138 0 R139 0

0 TWI_SDA <3,11>

0 TWI_SCL <3,11>

U41

AK4645EN

25 LIN4 TVDD 16

26 ROUT DVDD 15

27 LOUT 14

28 LRCK BICK 13

29 RIN2 SDTO 12

30 LIN2 SDTI 11

31 RIN1 CCLK 10

32 CDTI 9

24 RIN4 MCLK 17

23 MCLK 18

22 HVDD 19

21 HPR 20

20 VCOM 21

19 AVSS 22

18 VDD 23

17 PDN 24

16 CSN 25

15 I2C 26

14 VDD 27

13 VCOM 28

12 VDD 29

11 VDD 30

10 VDD 31

9 VDD 32

8 VDD 33

7 VDD 34

6 VDD 35

5 VDD 36

4 VDD 37

3 VDD 38

2 VDD 39

1 VDD 40

R120 10 C154 0.1uF

A_GND

R121 4.7K

A_GND

nRESET nRESET <3,6,11,13>

R122 4.7K

R123 10K

C155 0.1uF

C156 0.1uF C157 2.2uF

A_GND

C158 4.7nF

A_GND

J19

PHONEJACK STEREO SW

J18

PHONEJACK STEREO SW

J17

PHONEJACK STEREO SW

J16

PHONEJACK STEREO SW

J15

PHONEJACK STEREO SW

J14

PHONEJACK STEREO SW

J13

PHONEJACK STEREO SW

J12

PHONEJACK STEREO SW

J11

PHONEJACK STEREO SW

J10

PHONEJACK STEREO SW

J9

PHONEJACK STEREO SW

J8

PHONEJACK STEREO SW

J7

PHONEJACK STEREO SW

J6

PHONEJACK STEREO SW

J5

PHONEJACK STEREO SW

J4

PHONEJACK STEREO SW

J3

PHONEJACK STEREO SW

J2

PHONEJACK STEREO SW

J1

PHONEJACK STEREO SW

J0

PHONEJACK STEREO SW

J-1

PHONEJACK STEREO SW

J-2

PHONEJACK STEREO SW

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PHONEJACK STEREO SW

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PHONEJACK STEREO SW

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J-63

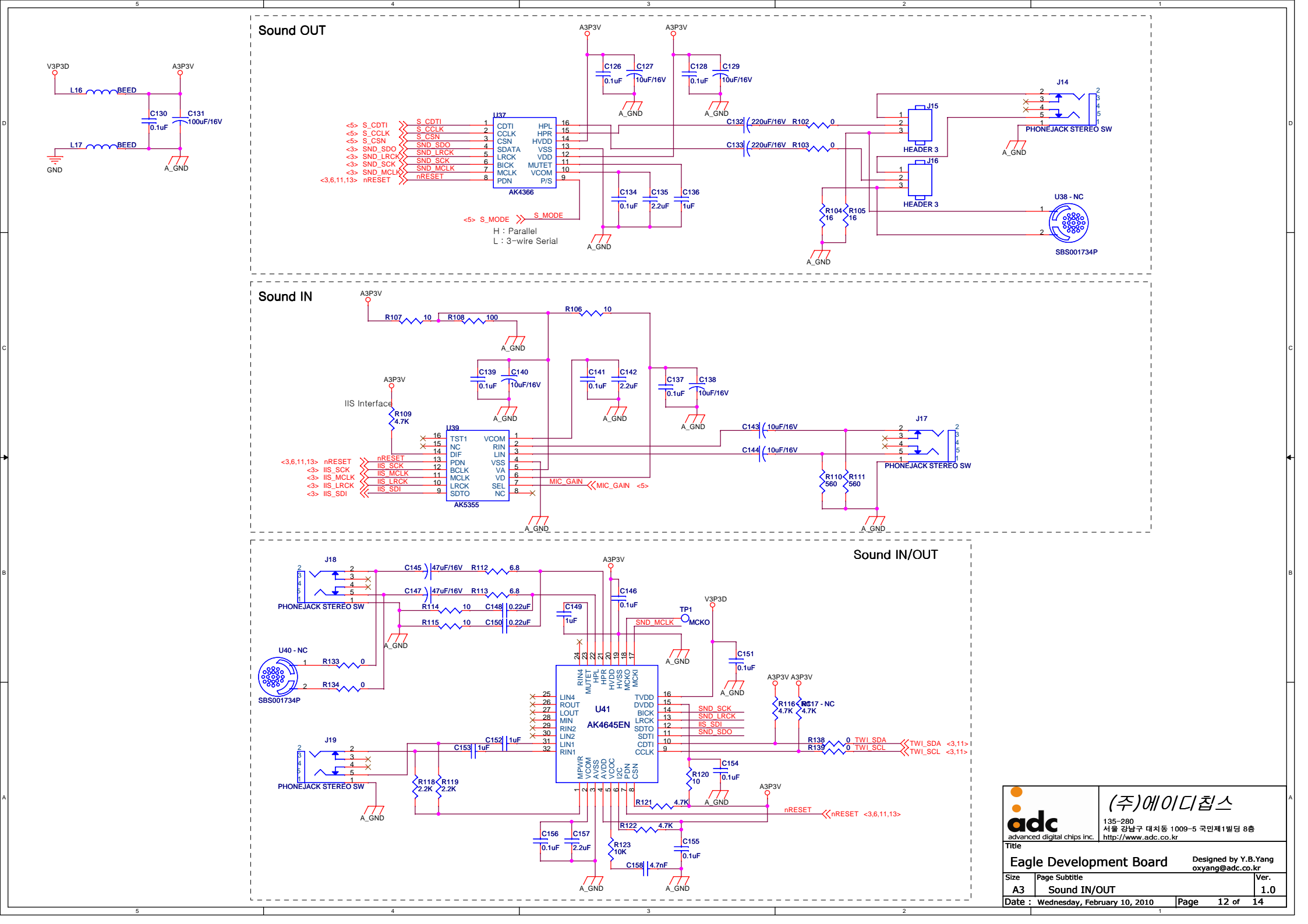
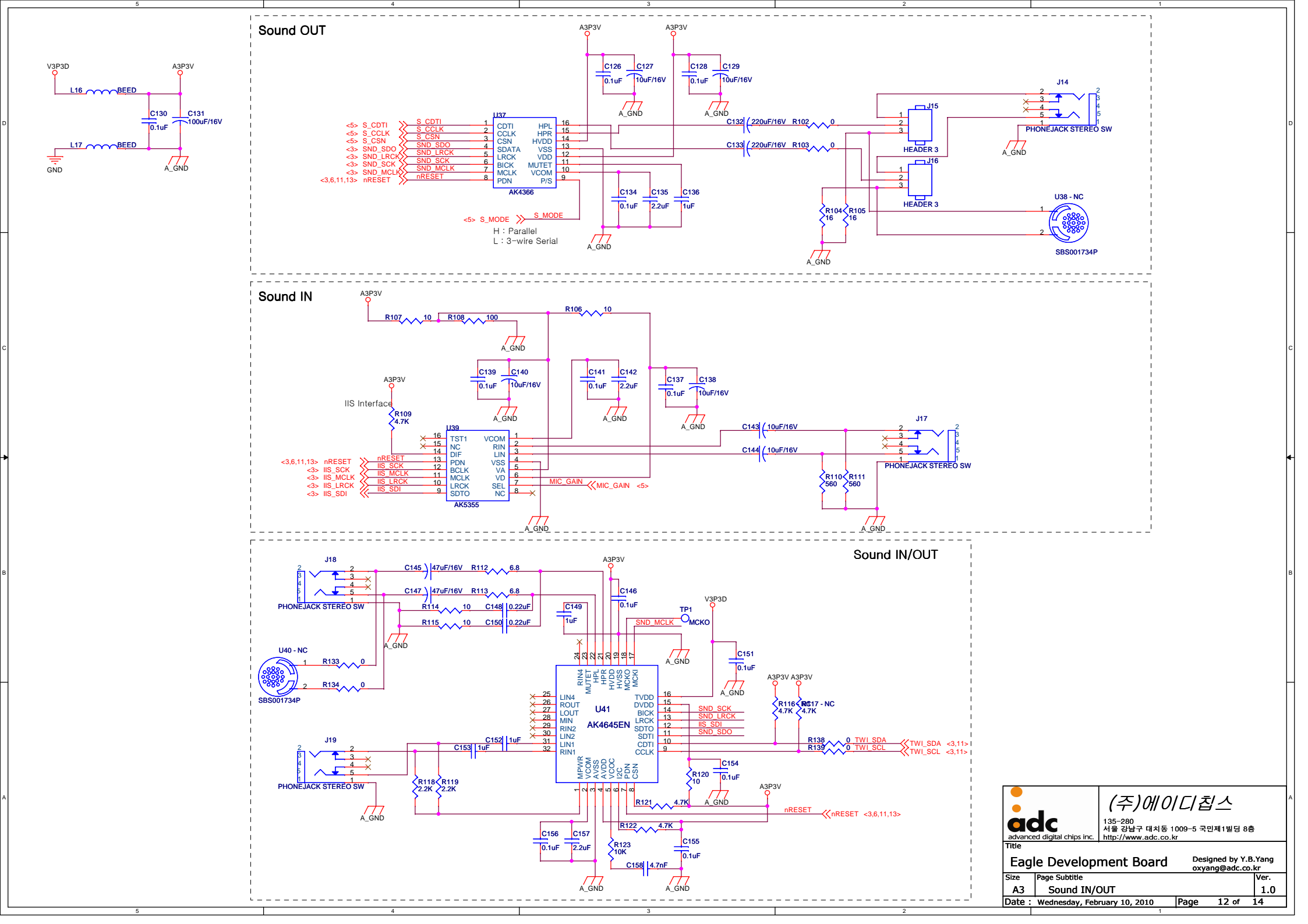
PHONEJACK STEREO SW

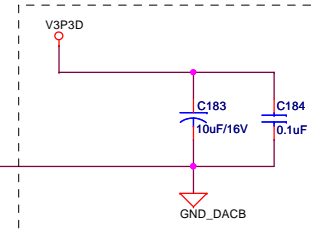
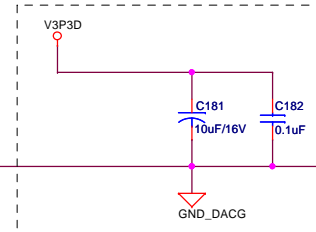
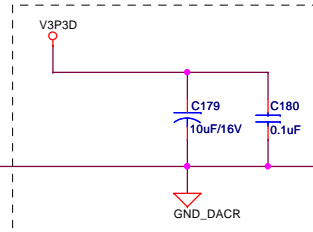
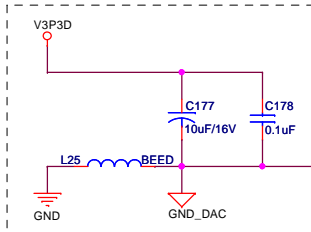
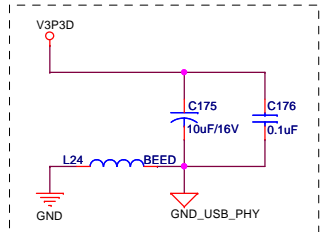
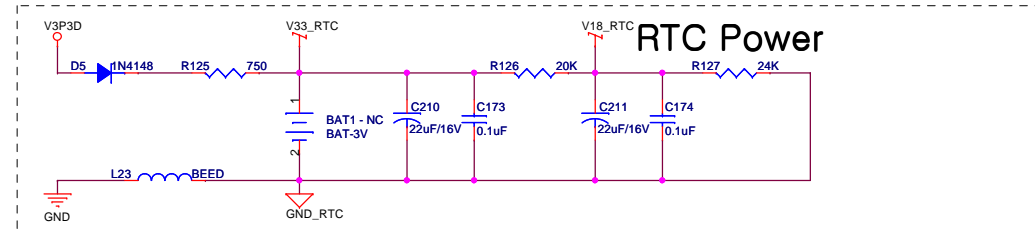
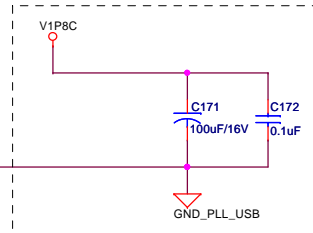
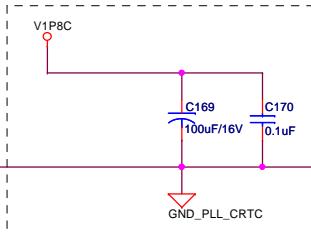
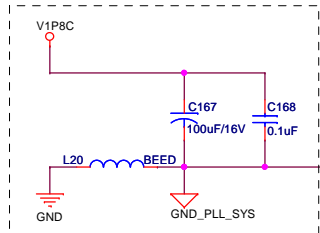
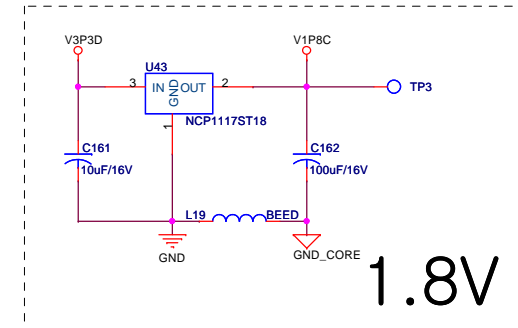
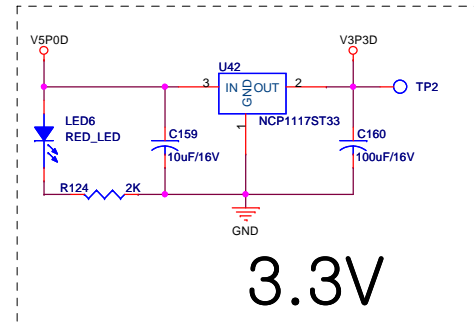
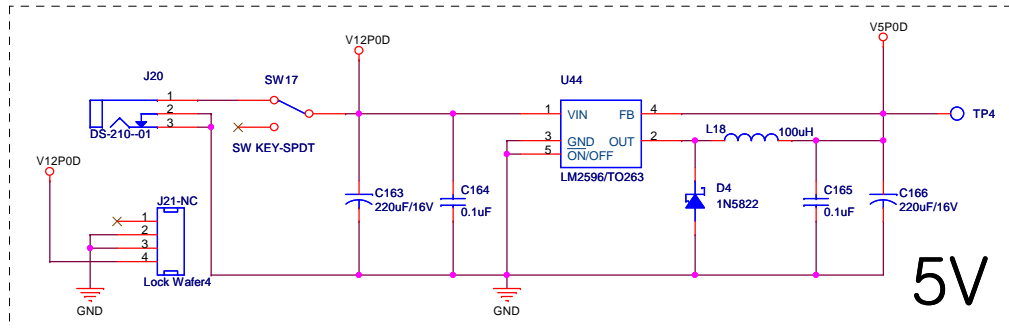
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PHONEJACK STEREO SW

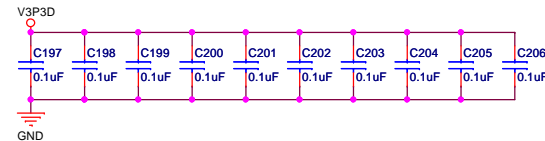
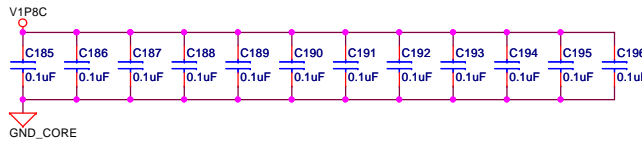
J-65

PHONEJACK STEREO SW

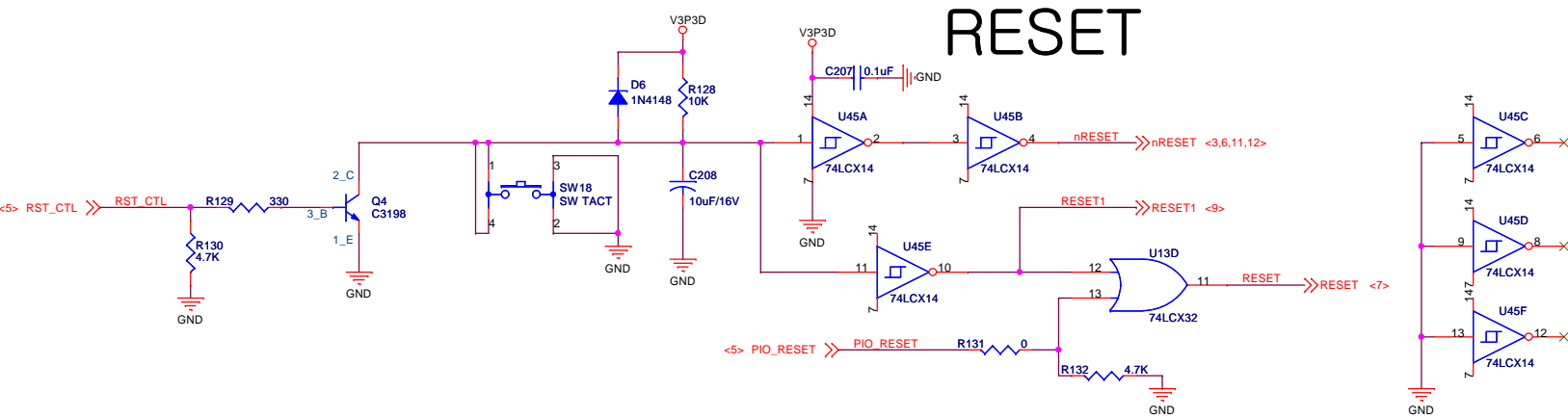
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분리된 GND들은 Eagle 칩에 가깝게



Bypass CAP들은 Eagle 칩에 가깝게



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A3	Power & Reset	1.0	
Date	Wednesday, February 10, 2010	Page	13 of 14

Board Block Diagram(300x200)

