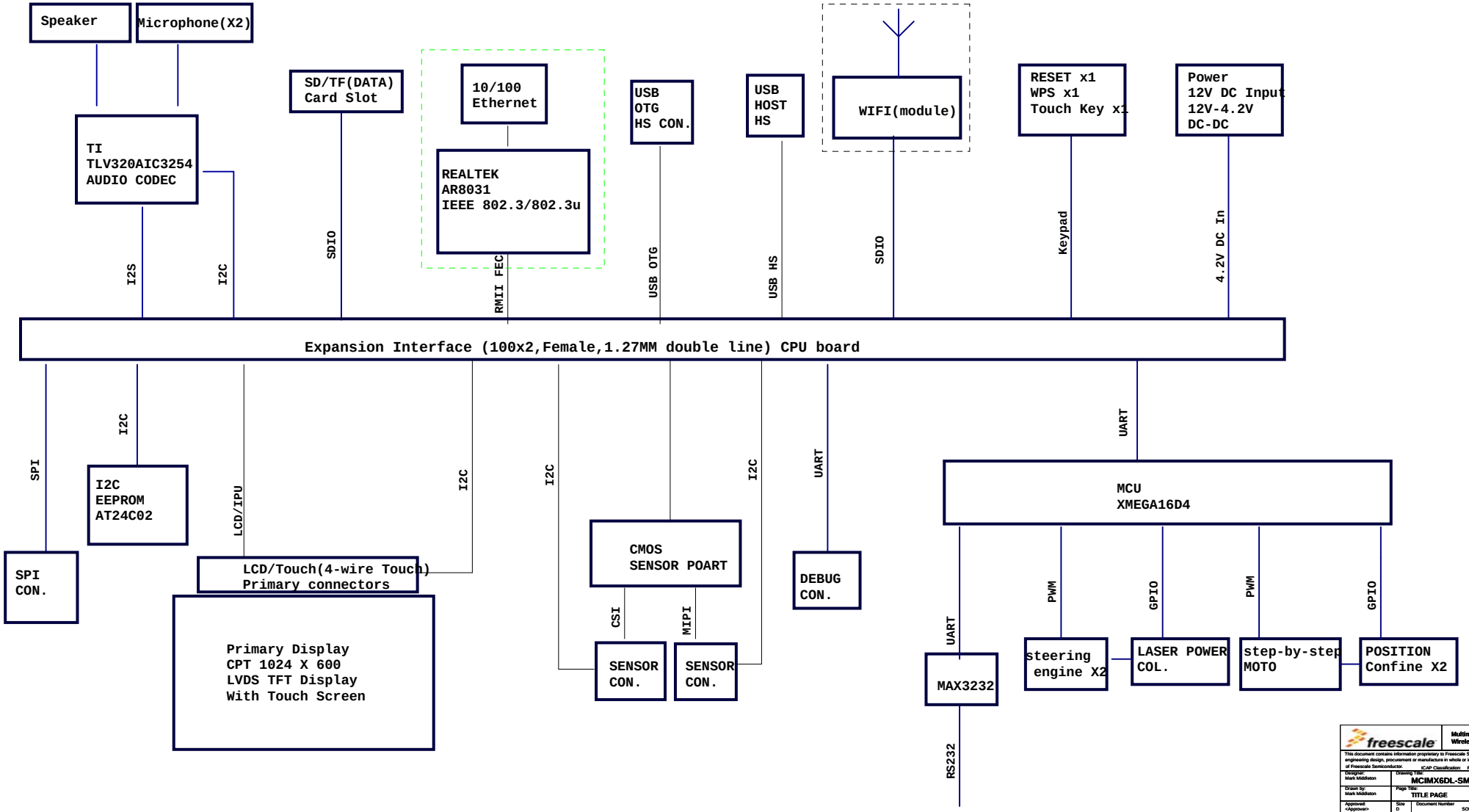
i.MX6 SMART DEVICE SYSTEM

MCIMX6L



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Multimedia Application Division,
Wireless & Mobile System Group

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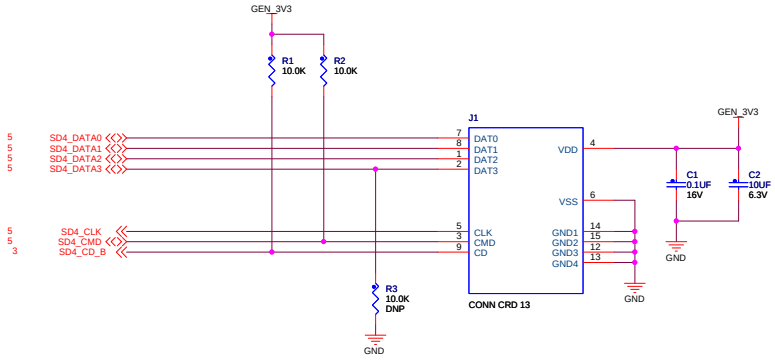
ECAP Classification: FCP: FIUO: PUBI: X

Designer: Mark Middleton	Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM
Drawn by: Mark Middleton	Page Title: TITLE PAGE
Approved: <Approver>	Size: D; Document Number: SOURCE:SCH-27417 PDF:SPF-27417; Rev: C3
	Date: Thursday, July 18, 2013; Sheet 1 of 11

SD CARD SOCKET



Layout:
50ohm, SD signals(SD_DATAx, SD_CMD, SD_CLK) length equal

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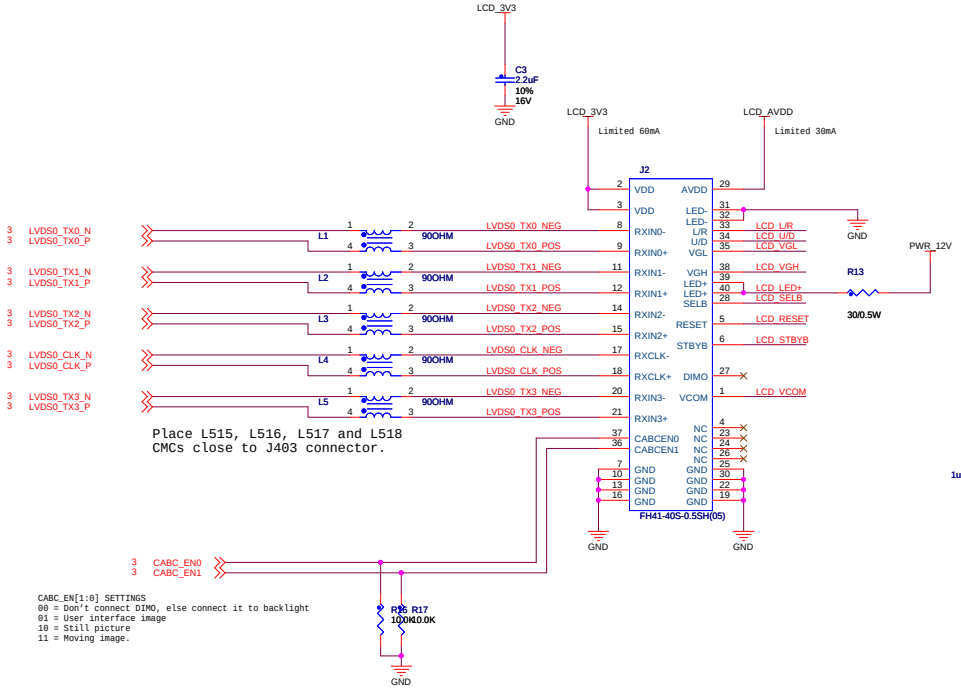
Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

Page Title: SD CARD, SATA

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 Sheet 2 of 11

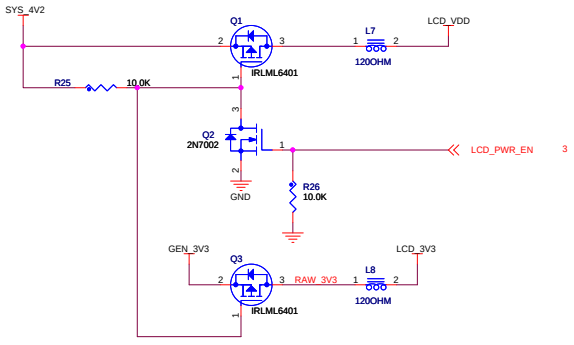
LVDS

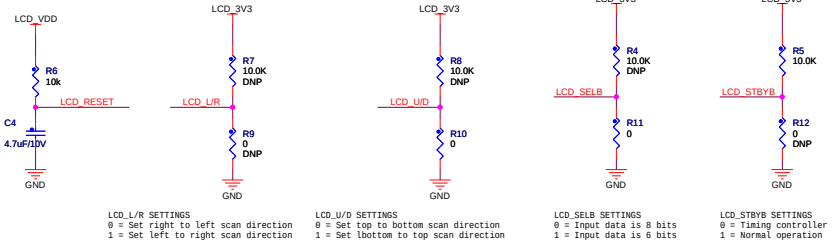


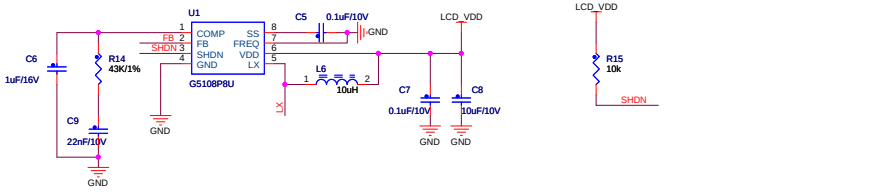
Place L515, L516, L517 and L518
CMCs close to J403 connector.

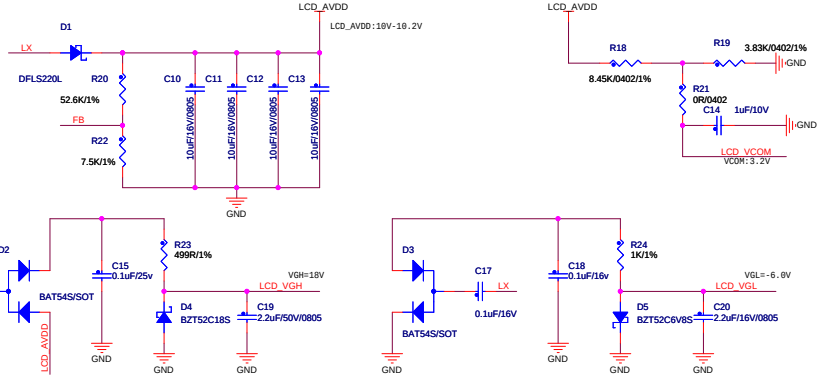
CABC_EN[1:0] SETTINGS
00 = Don't connect DIMO, else connect it to backlight
01 = User interface image
10 = Still picture
11 = Moving image.

Layout: LVDS 100 ohm differential pairs









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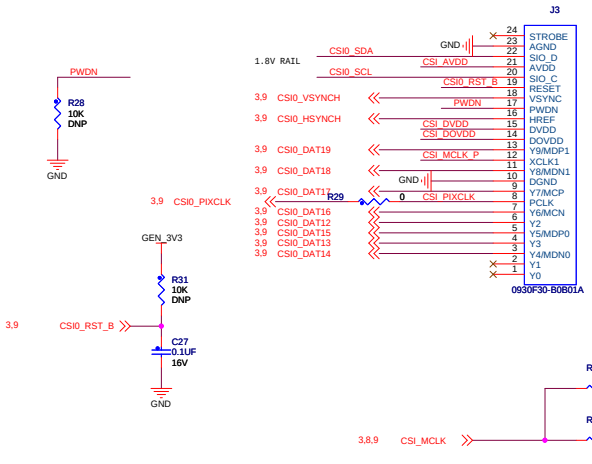
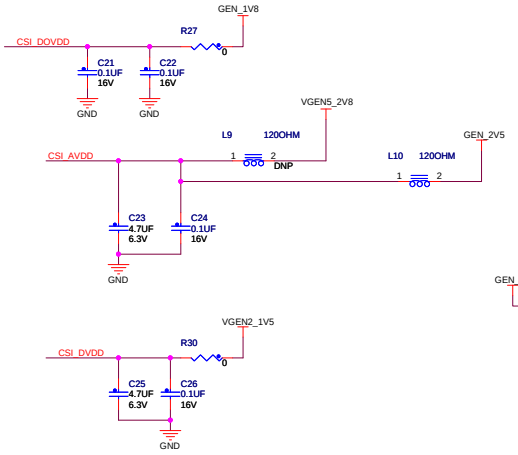
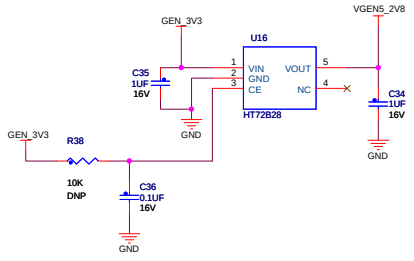
ICAP Classification:	FCP: ___ FIUO: ___	PUBI: X
Drawing Title:	MCIMX6DL-SMART DEVICE PLATFORM	
Page Title:	LVDS, HDMI	
Size: C	Document Number: SOURCE:SCH-27417 PDF:SPF-27417	Rev: C3
Date: Thursday, July 18, 2013	Sheet 3 of 11	

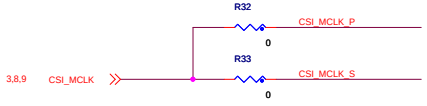
CSI CMOS Sensor
OV5642 5M Pixel

Place R180 close to connector J9 to in the event
a reflected signal from camera needs to be supressed.





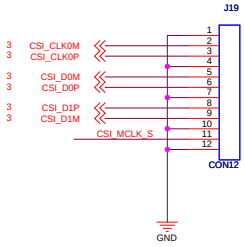


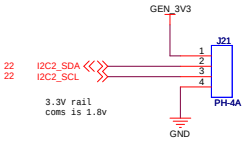


NOTE:
The Camera Analog Power supply has been moved to VGEN3. Freescale SW will program VGEN3
to operate at 2.8V. L25 and L26 are now populated and L10 and L17 are depopulated. See the
Freescale HW User Guide for the Smart Device board for details (to be published 4Q12).

Place R158 and R159 near U15.
Acts as source termination.

MIPI CMOS Sensor
OV5640 5M Pixel





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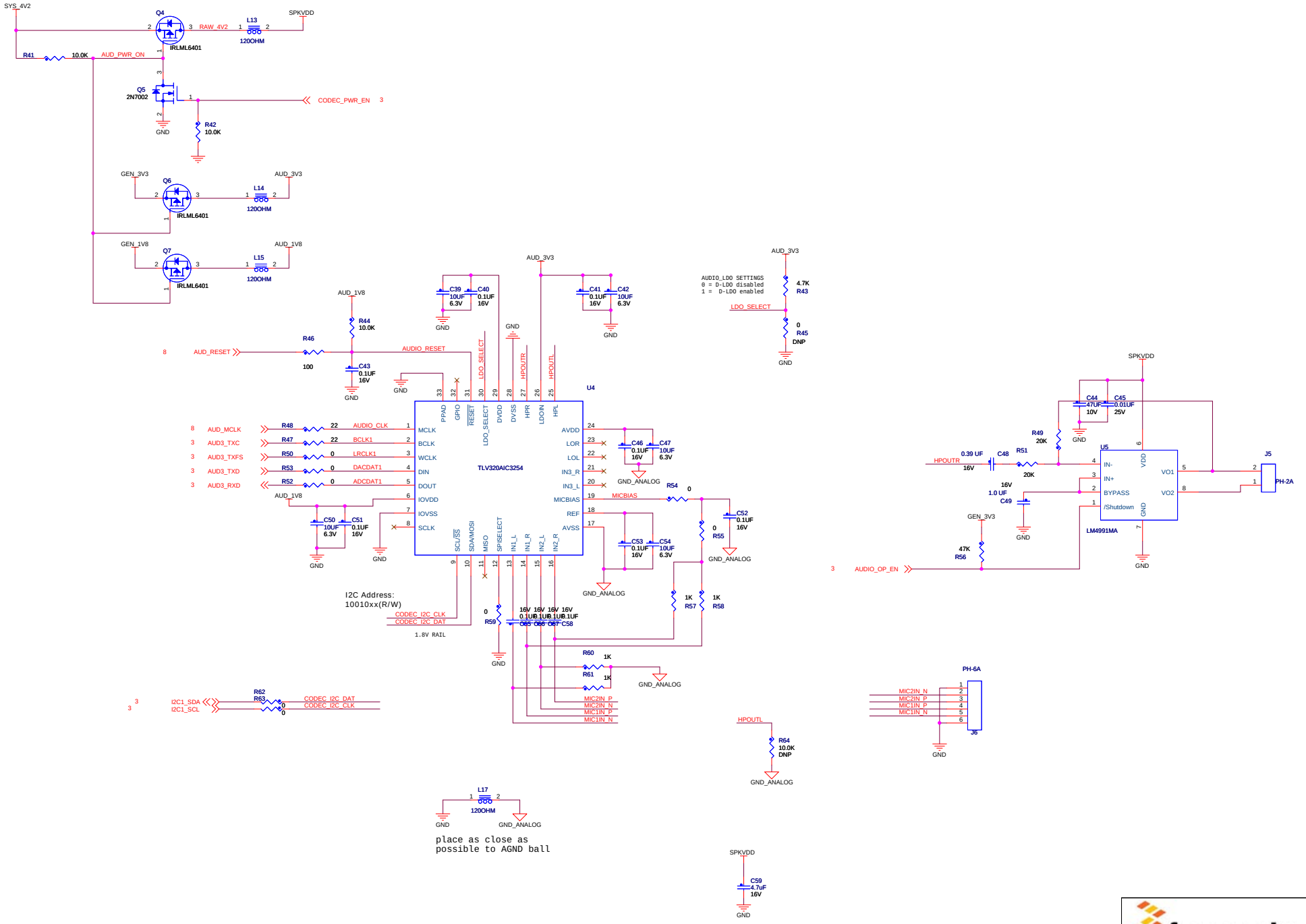
Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

Page Title: CAMERA, EXP PORT

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 Sheet 4 of 11



NOTE:
On Rev B4 boards, buffers U500 and U520 are removed, and a wire is added by hand connecting pins 2 and 4 together. On Rev C boards, the layout will be modified to remove the hand rework.

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Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

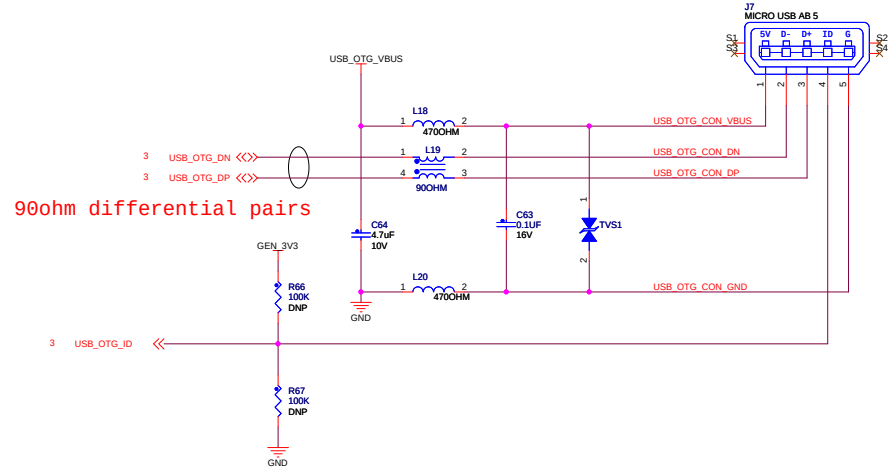
Page Title: AUDIO

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

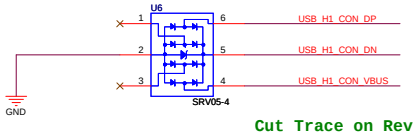
Date: Thursday, July 18, 2013 Sheet 5 of 11

NOTE:
Due to placement requirements on the SABRE SD board set, layout routing for the USB_OTG_DP and USB_OTG_DN traces are sub-optimal. It is recommended that customers consider using the USB layout on the Freescale i.MX6 SABRE AI board as a better example of proper USB trace routing.

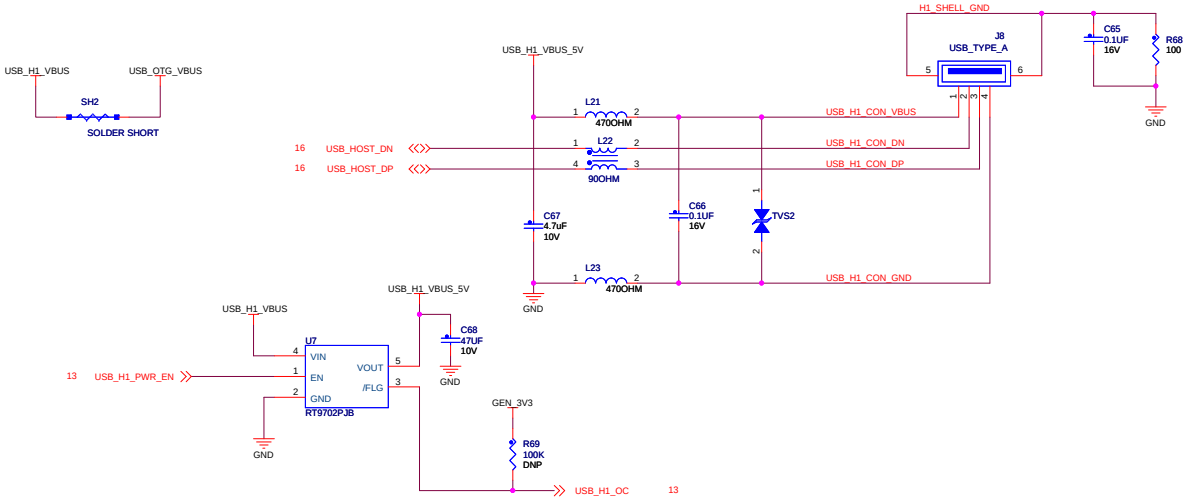
Layout: 90ohm differential pairs



ESD Protection



Cut Trace on Rev B1 Boards



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ICAP Classification: FCP: ___ FIUO: ___ PUBI: X

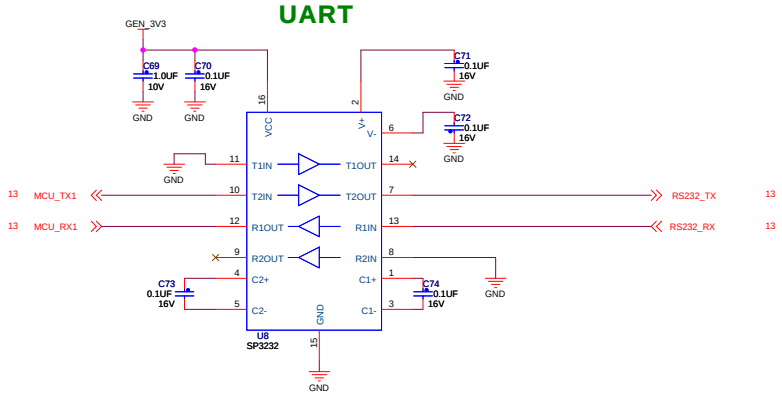
Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

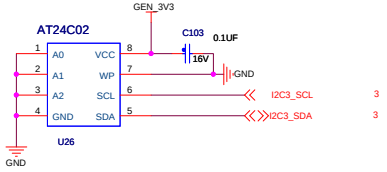
Page Title: USB

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 Sheet 6 of 11

UART





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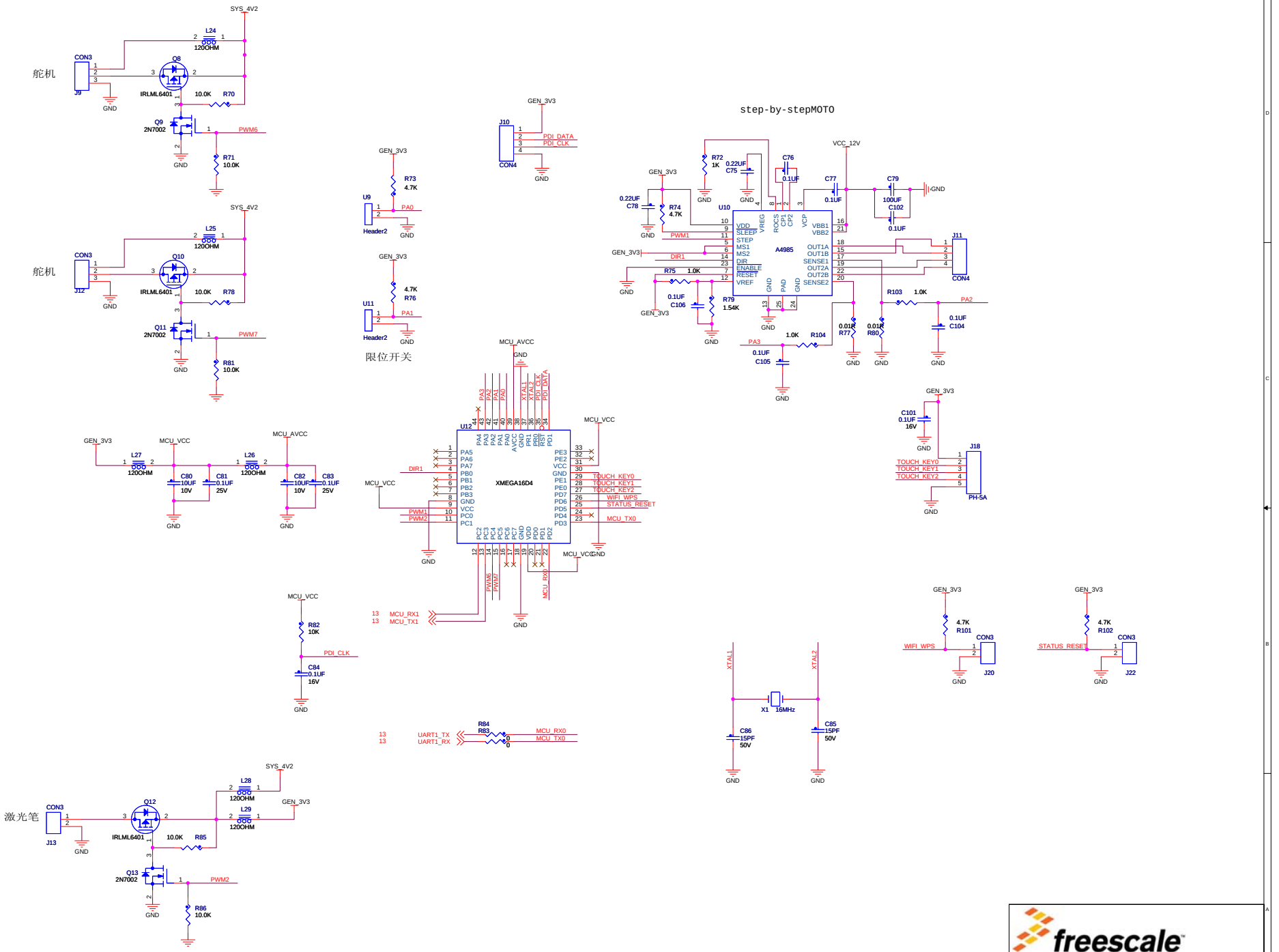
ICAP Classification: FCP: ___ FIUO: ___ PUBI: X

Drawing Title: **MCIMX6DL-SMART DEVICE PLATFORM**

Page Title: **JTAG, DEBUG**

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 | Sheet 7 of 11



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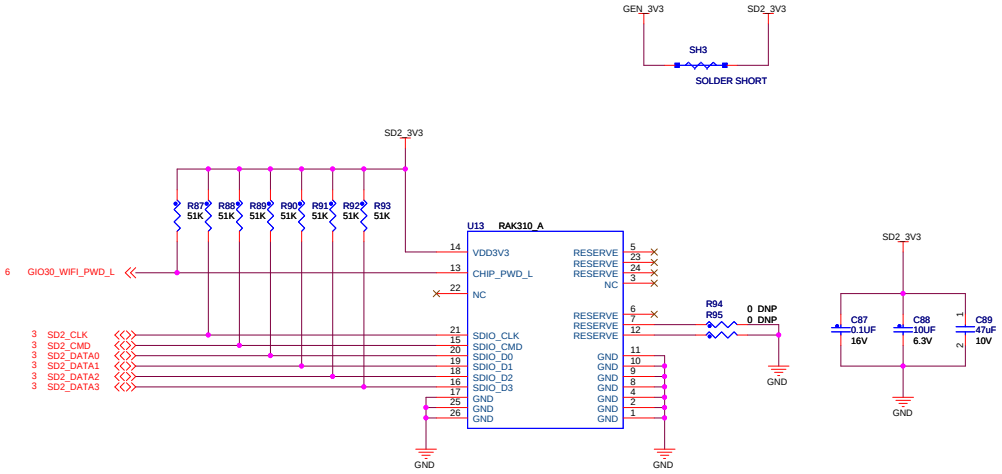
Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

Page Title: SENSORS

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 Sheet 8 of 11

AUX SDIO CARD SOCKET



Layout:
50ohm, SD signals(SD_DATAx, SD_CMD, SD_CLK) length equal

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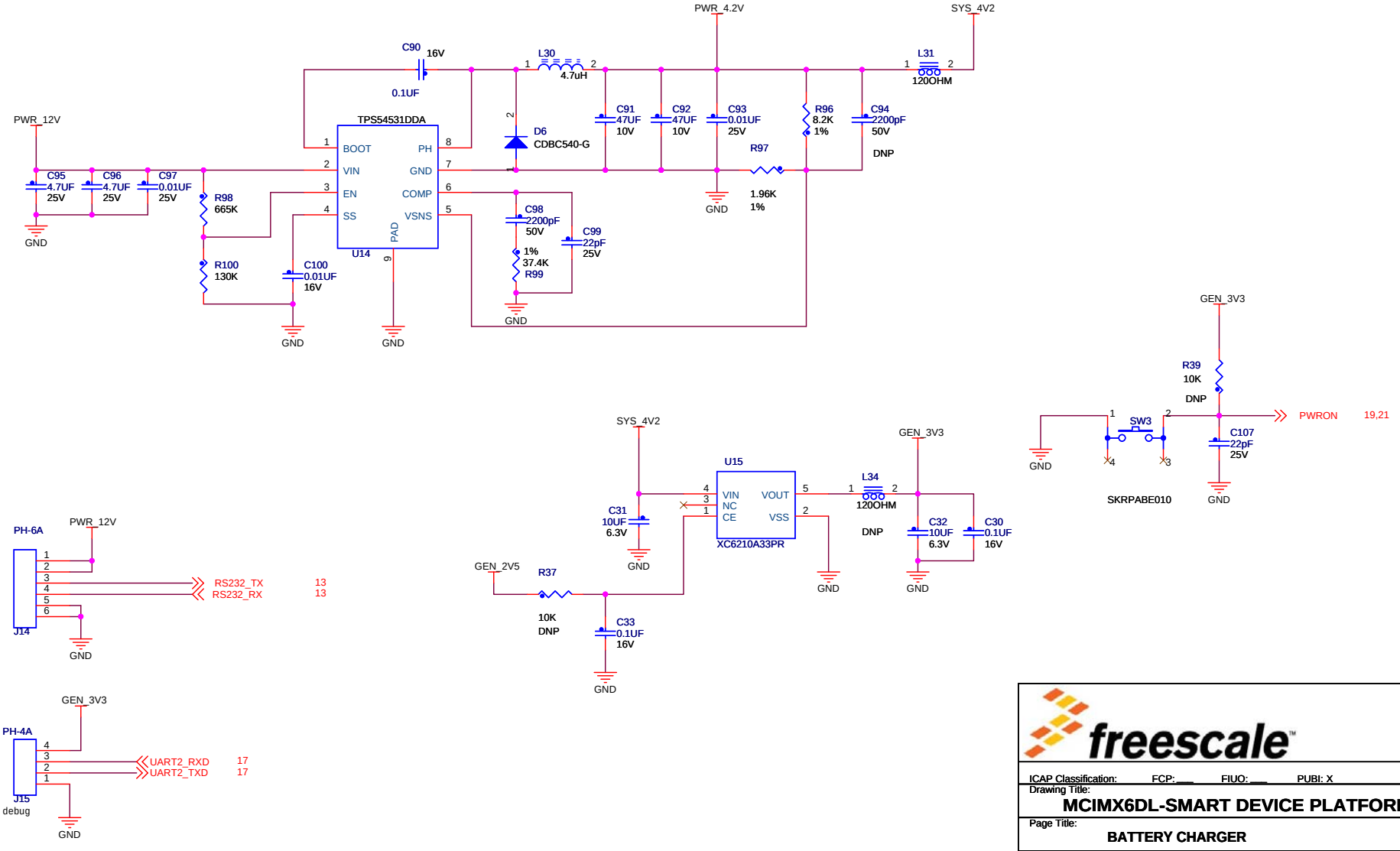
ICAP Classification: FCP: ___ FIUO: ___ PUBI: X

Drawing Title: MCIMX6DL-SMART DEVICE PLATFORM

Page Title: AUX SDIO CONN, CAN

Size	Document Number	Rev
C	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, July 18, 2013 Sheet 9 of 11



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Drawing Title:

MCIMX6DL-SMART DEVICE PLATFORM

Page Title:

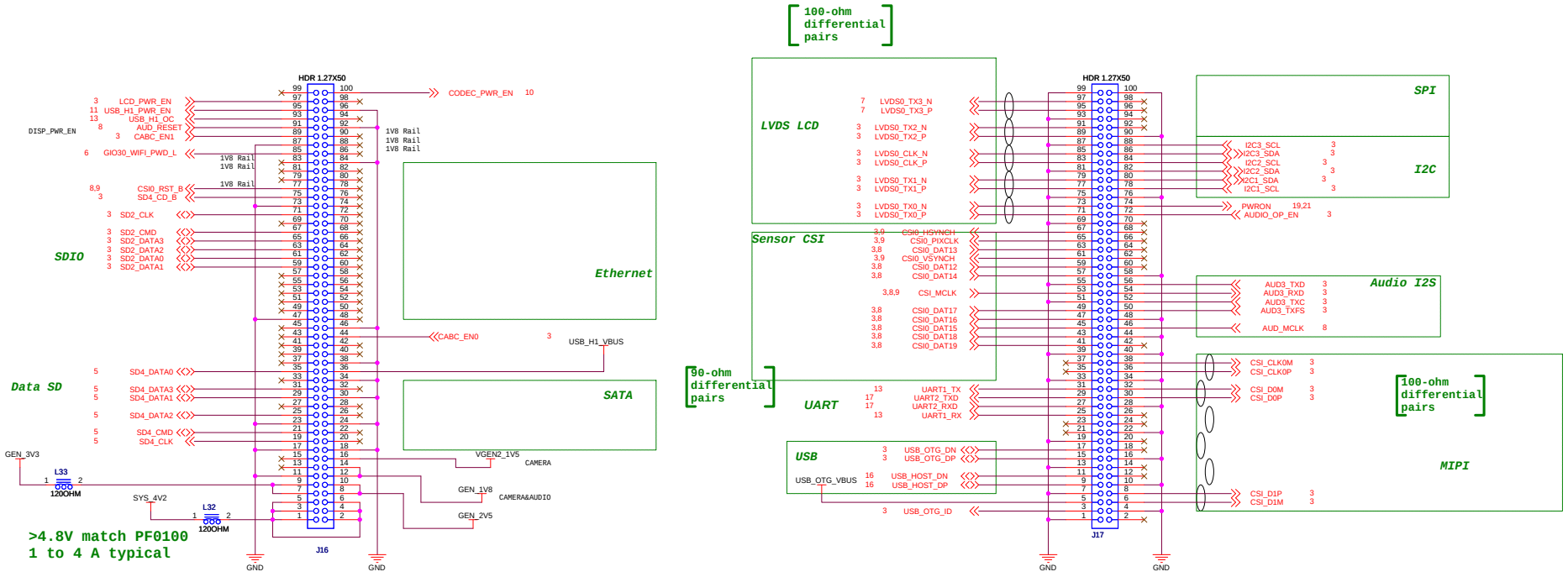
BATTERY CHARGER

Size	Document Number	Rev
B	SOURCE:SCH-27417 PDF:SPF-27417	C3

Date: Thursday, August 15, 2013 Sheet 10 of 11

BOARD-TO-BOARD CONNECTION

Mating connector on Base Board



ERROR:
1 J16.77 and J16.94 same name
2 J17.42 and J17.65 same name

NOTES:

1 If not Android, can be used as GPIO on Main Board. Main Board schematic cross-reference table does not apply to MX6.

2 Could be used as spare GPIO if SPI NOR is not needed.

3 Could be used as spare open-drain GPIO if not needed for local CAN PHY wake up.

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ICAP Classification: FCP: ___ FIUO: PUBI: X

Drawing Title: **MCIMX6DLAICPU1**

Page Title: **Card Edge Fingers**

Size	Document Number	Rev
C	SCH-27767 PDF: SPF-27767	A

Date: Thursday, July 18, 2013 Sheet 11 of 11