Sheet: LPC313x

File: LPC313x_Audio_Player-LPC313x.sch

Sheet: RAM_MMC

File: LPC313x_Audio_Player-RAM_MMC.sch

Double click inside the boxes to jump to the corresponding schematic page

Use mouse wheel to zoom in and out

Sheet: FLASH_Buttons

File: LPC313x_Audio_Player-FLASH_Buttons.sch

Sheet: Connectors_JTAG

File: LPC313x_Audio_Player-Connectors_JTAG.sch

Sheet: Power

File: LPC313x_Audio_Player-Power.sch

Sheet: Audio-Codec

File: LPC313x_Audio_Player-Audio-Codec.sch

Sheet: LCD

File: LPC313x_Audio_Player-LCD.sch

Sheet: Vias

File: LPC313x_Audio_Player-Vias.sch

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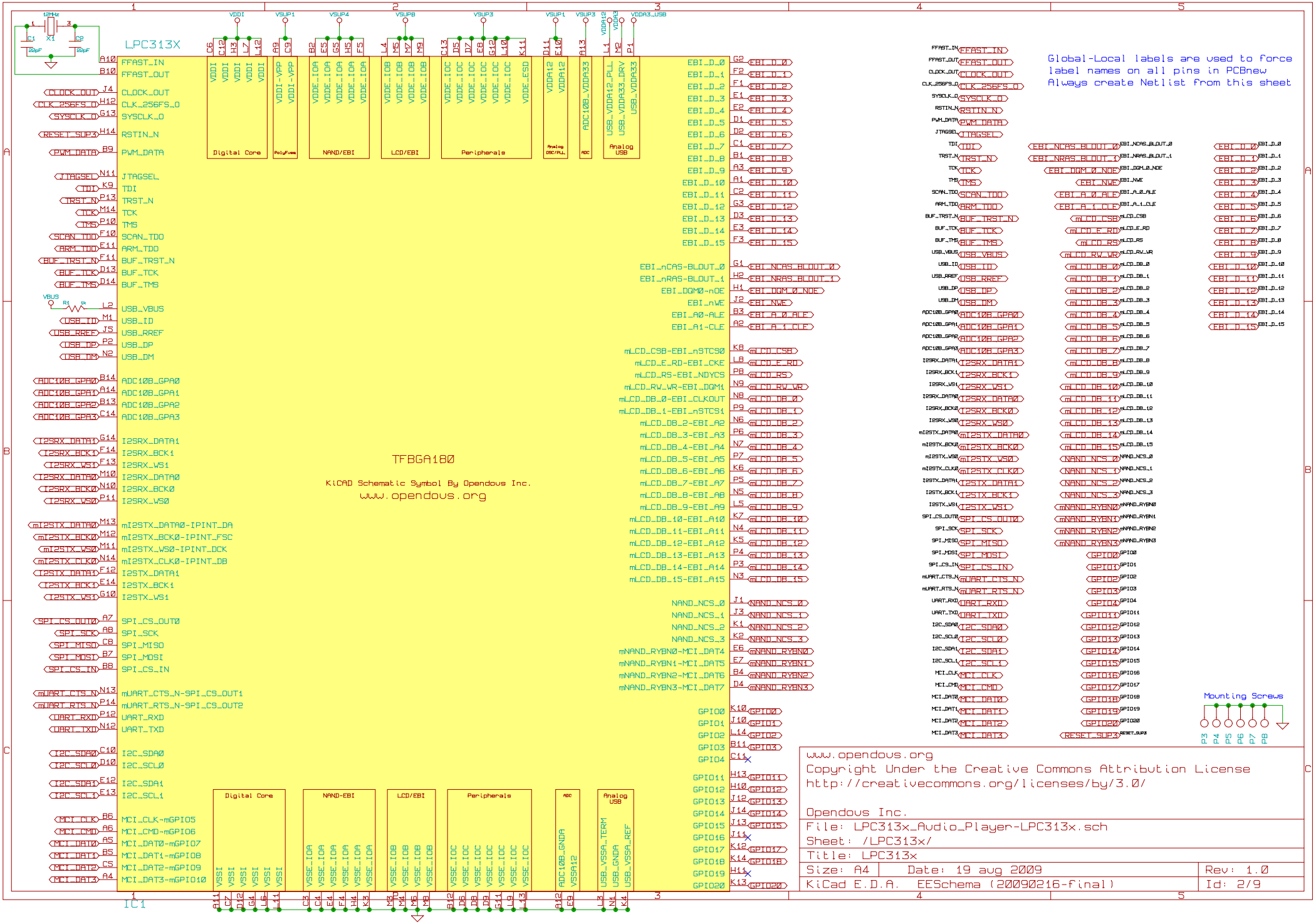
File: LPC313x_Audio_Player.sch Sheet: /		
Title: LPC313x_Audio_Player		
Size: A4	Date: 19 aug 2009	Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)		Id: 1/9


LPC313X
TFBGA180
KiCAD Schematic Symbol By Opendous Inc.
www.opendous.org
IC1
Global-Local labels are used to force label names on all pins in PCBnew
Always create Netlist from this sheet
Mounting Screws
Digital Core
NAND-EBI
LCD/EBI
Peripherals
ADC
Analog USB
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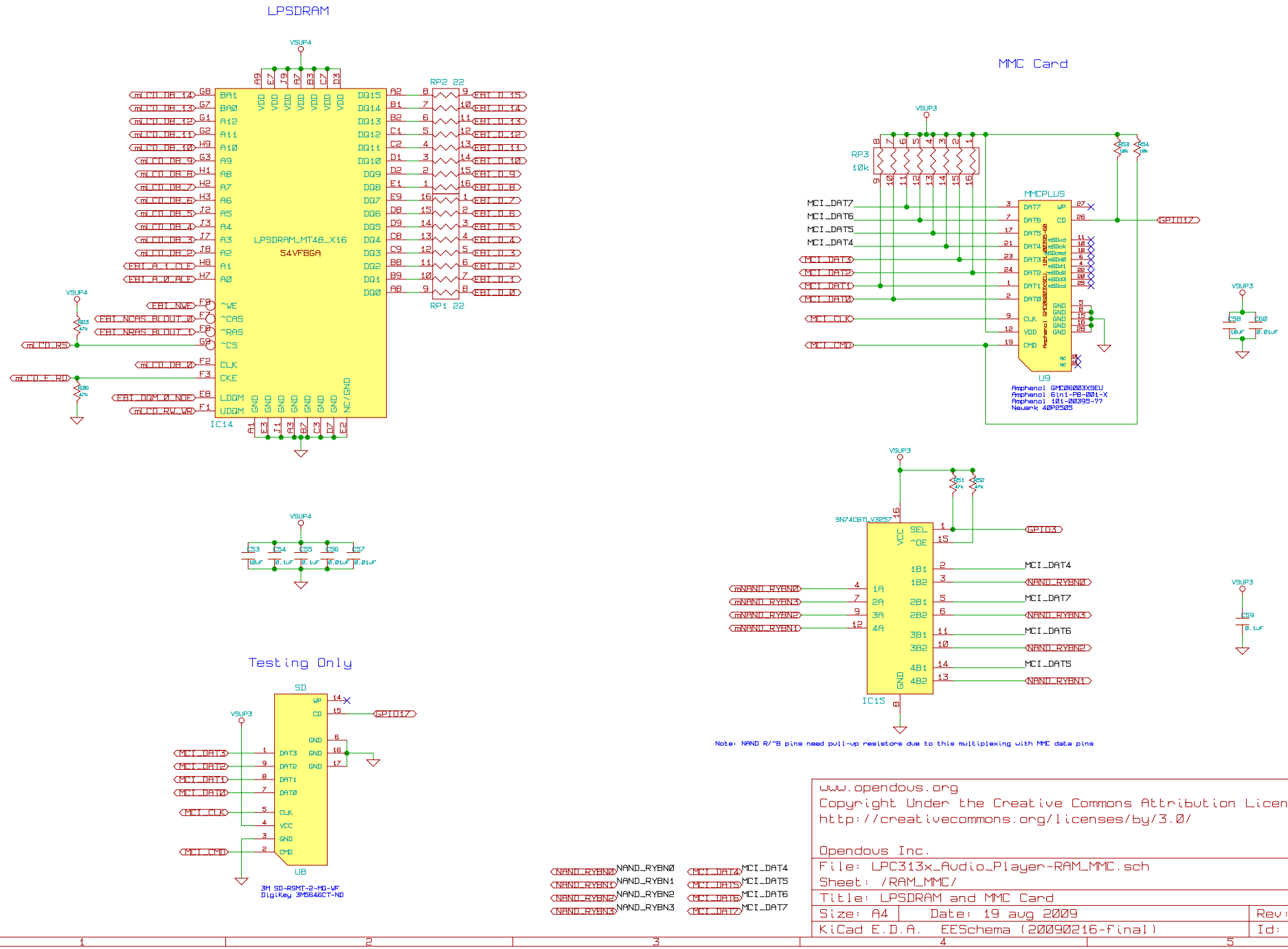
File: LPC313x_Audio_Player-LPC313x.sch
Sheet: /LPC313x/
Title: LPC313x
Size: A4
Date: 19 aug 2009
Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)
Id: 2/9


LPSDRAM
VSUP4
RP2 22
RP1 22
LPSDRAM_MT48_X16
54VFBGA
IC14
MMC Card
VSUP3
RP3
10k
MMCPLUS
U9
Amphenol GM106003X9EU
Amphenol 6ini-PB-001-X
Amphenol 101-00395-??
Newark 40P2525
SN74CBT_V3257
IC15
Testing Only
SD
U8
3M SD-RSMT-2-MQ-WF
DigiKey 3MS646CT-ND
Note: NAND R/^B pins need pull-up resistors due to this multiplexing with MMC data pins
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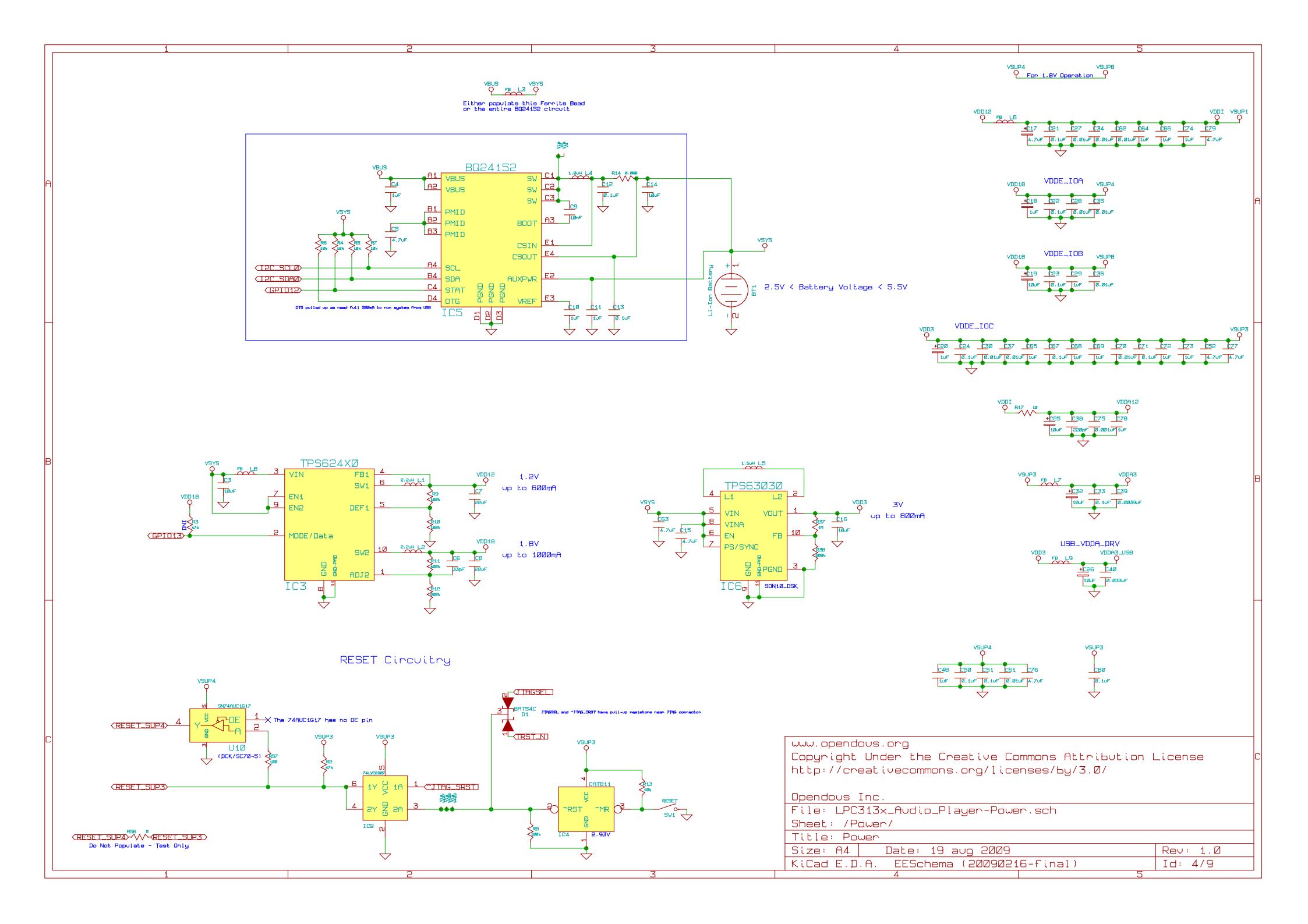
File: LPC313x_Audio_Player-RAM_MMC.sch
Sheet: /RAM_MMC/
Title: LPSDRAM and MMC Card
Size: A4
Date: 19 aug 2009
Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)
Id: 3/9


Either populate this Ferrite Bead
or the entire BQ24152 circuit
BQ24152
IC5
2.5V < Battery Voltage < 5.5V
For 1.8V Operation
VDDE_IOA
VDDE_IOB
VDDE_IOC
TPS624X0
IC3
1.2V
up to 600mA
1.8V
up to 1000mA
TPS63030
IC6
3V
up to 800mA
USB_VDDA_DRV
RESET Circuitry
The 74AUC1G17 has no OE pin
Do Not Populate - Test Only
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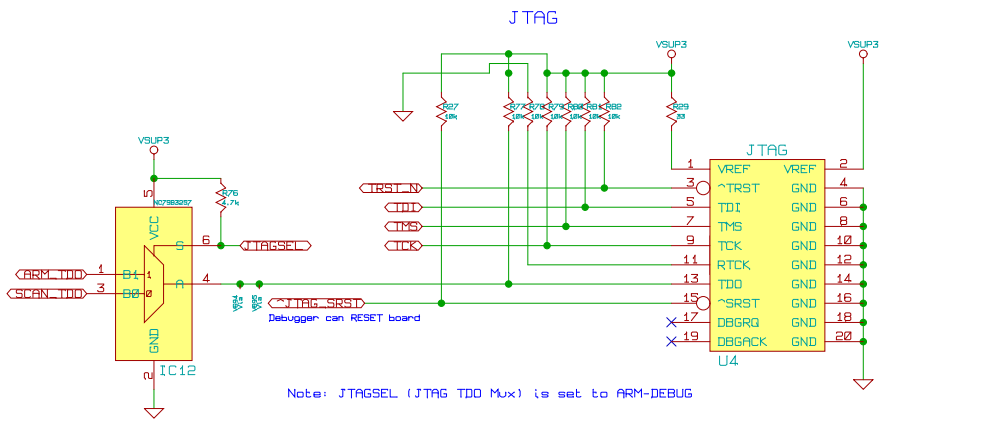
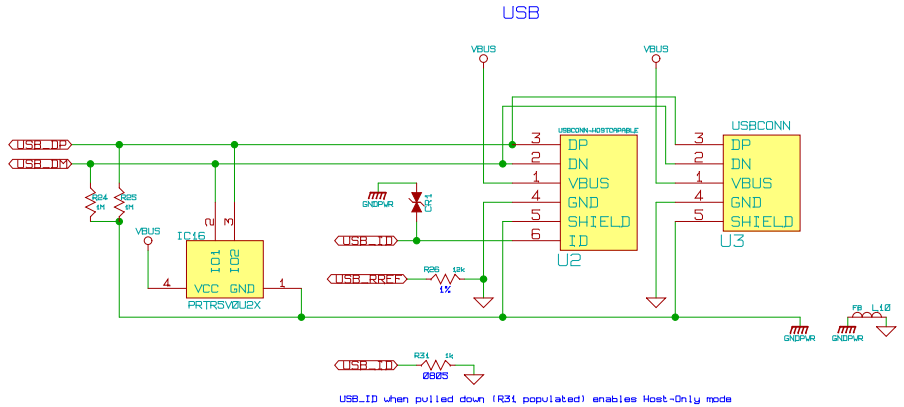
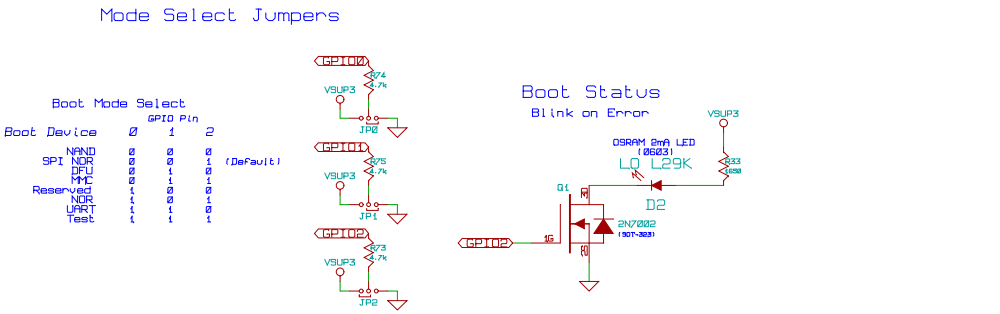
Opendous Inc.
File: LPC313x_Audio_Player-Power.sch
Sheet: /Power/
Title: Power
Size: A4
Date: 19 aug 2009
Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)
Id: 4/9







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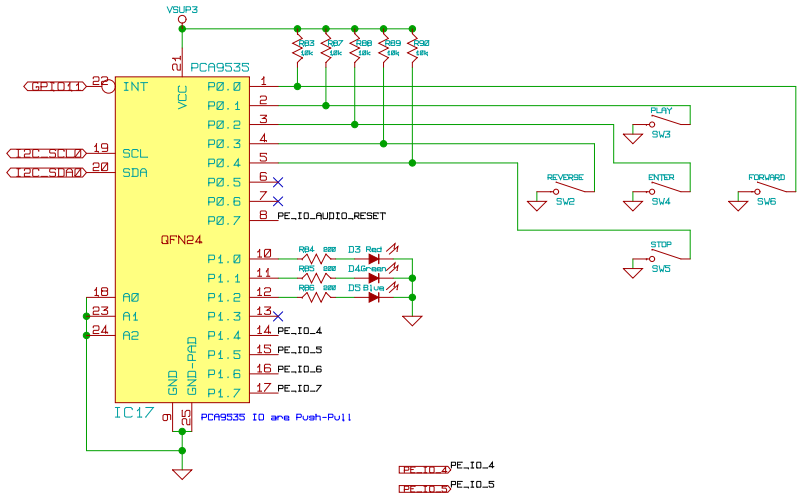
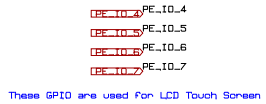
File: LPC313x_Audio_Player-Connectors_JTAG.sch		
Sheet: /Connectors_JTAG/		
Title: Connectors and JTAG		
Size: A4	Date: 19 aug 2009	Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)		Id: 5/9



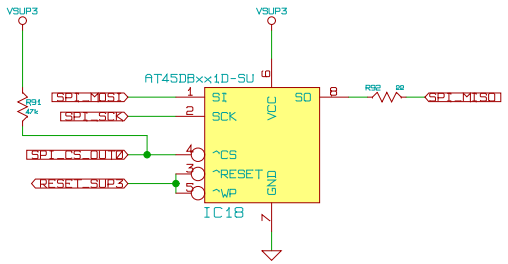


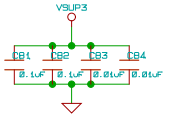
These GPIO are used for LCD Touch Screen

This GPIO is used for the Audio CODEC

SPI Boot Flash

(Optional)





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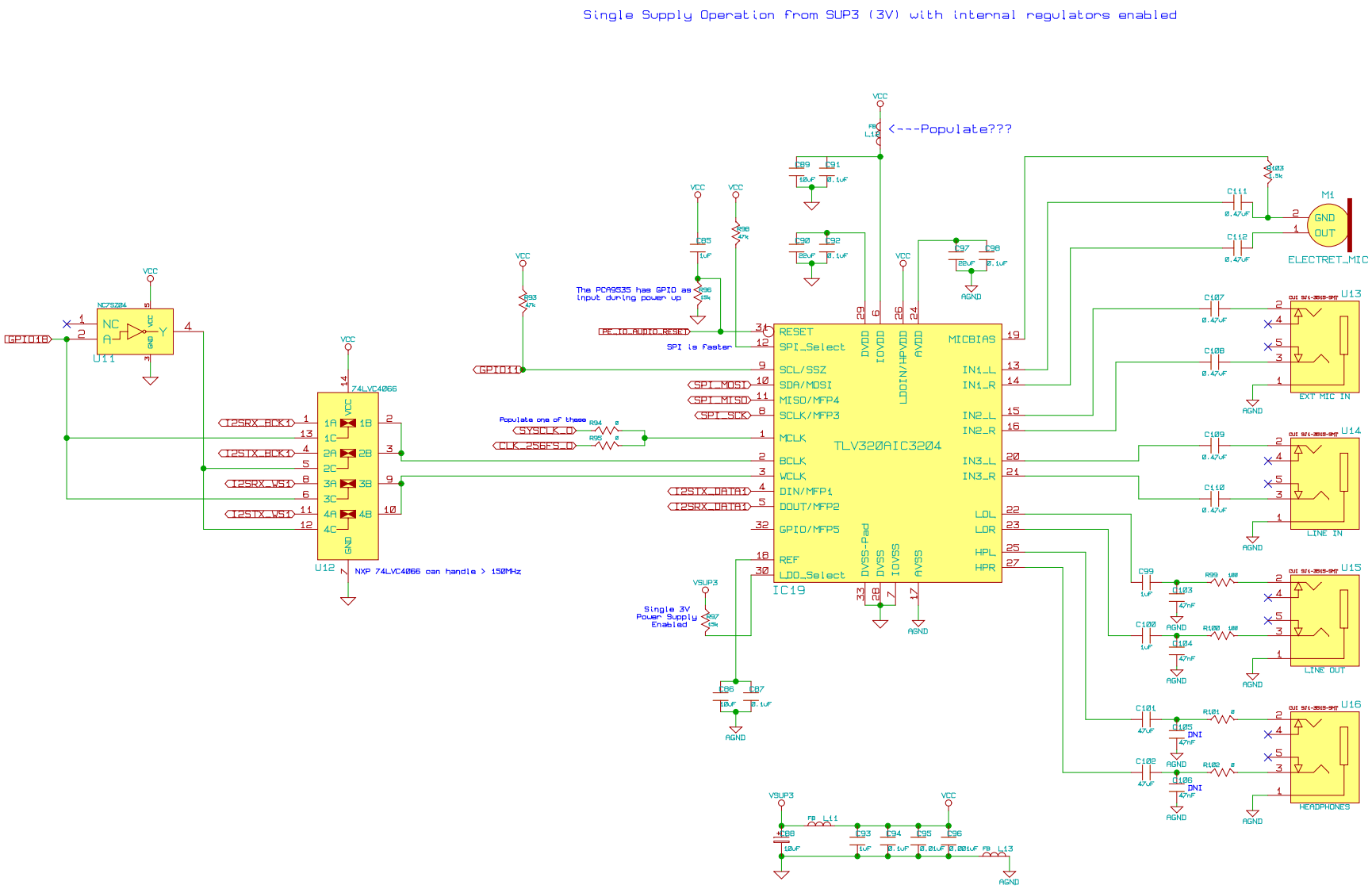
File: LPC313x_Audio_Player-FLASH_Buttons.sch		
Sheet: /FLASH_Buttons/		
Title: FLASH and Buttons		
Size: A4	Date: 19 aug 2009	Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)		Id: 6/9


Single Supply Operation from SUP3 (3V) with internal regulators enabled
<---Populate???
TLV320AIC3204
IC19
RESET
SPI_Select
SCL/SSZ
SDA/MOSI
MISO/MFP4
SCLK/MFP3
MCLK
BCLK
WCLK
DIN/MFP1
DOUT/MFP2
GPIO/MFP5
REF
LDO_Select
MICBIAS
IN1_L
IN1_R
IN2_L
IN2_R
IN3_L
IN3_R
LOL
LOR
HPL
HPR
The PCA9535 has GPIO as input during power up
SPI is faster
Populate one of these
Single 3V Power Supply Enabled
NXP 74LVC4066 can handle > 150MHz
ELECTRET_MIC
EXT MIC IN
LINE IN
LINE OUT
HEADPHONES
U11
U12
U13
U14
U15
U16
M1
74LVC4066
NC7SZ04
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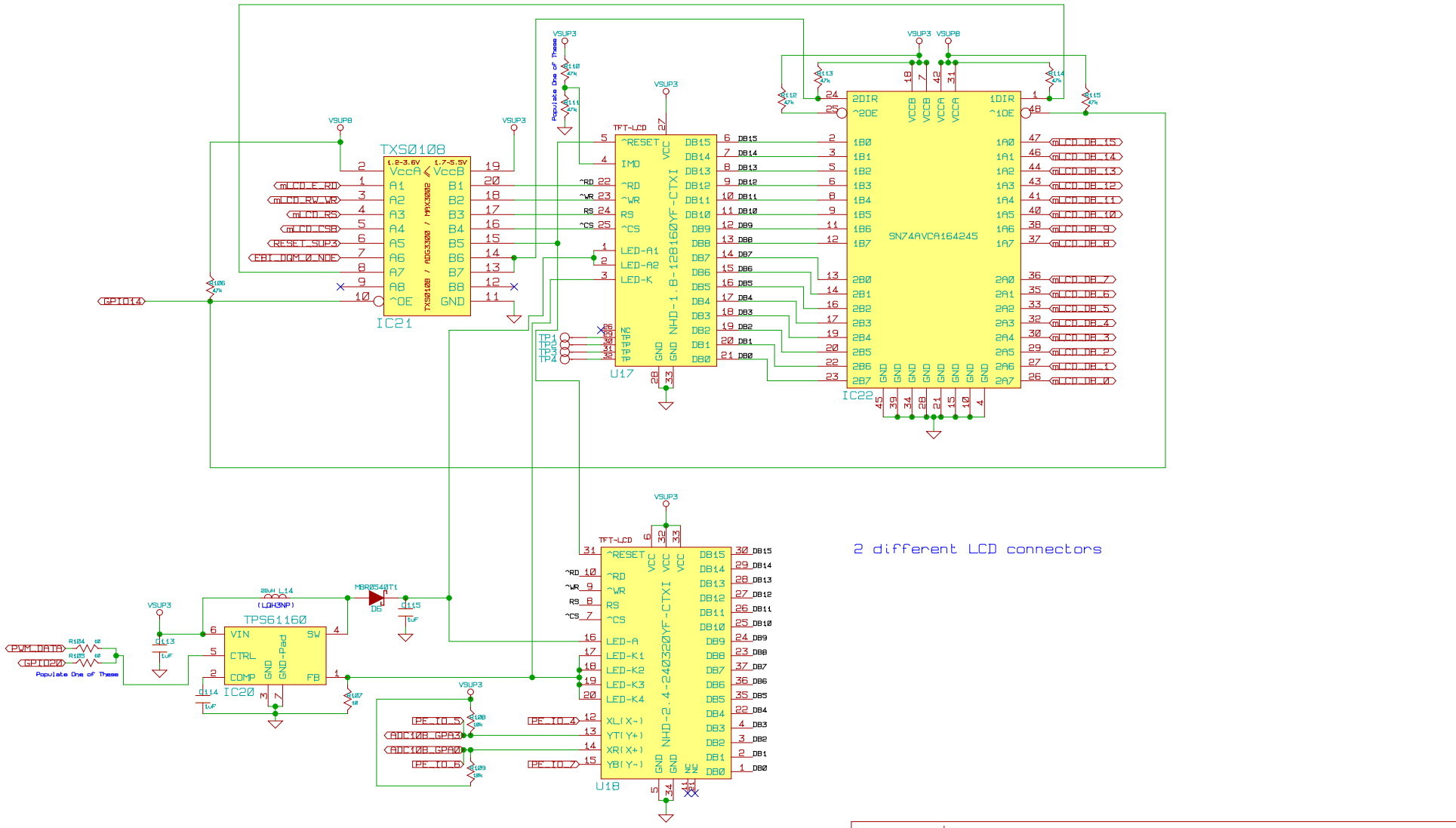
Opendous Inc.
File: LPC313x_Audio_Player-Audio-Codec.sch
Sheet: /Audio-Codec/
Title: Buttons
Size: A4
Date: 19 aug 2009
Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)
Id: 7/9


TXS0108
IC21
TFT-LCD
NHD-1.8-128160YF-CTXI
U17
SN74AVCA164245
IC22
TPS61160
IC20
NHD-2.4-240320YF-CTXI
U18
2 different LCD connectors
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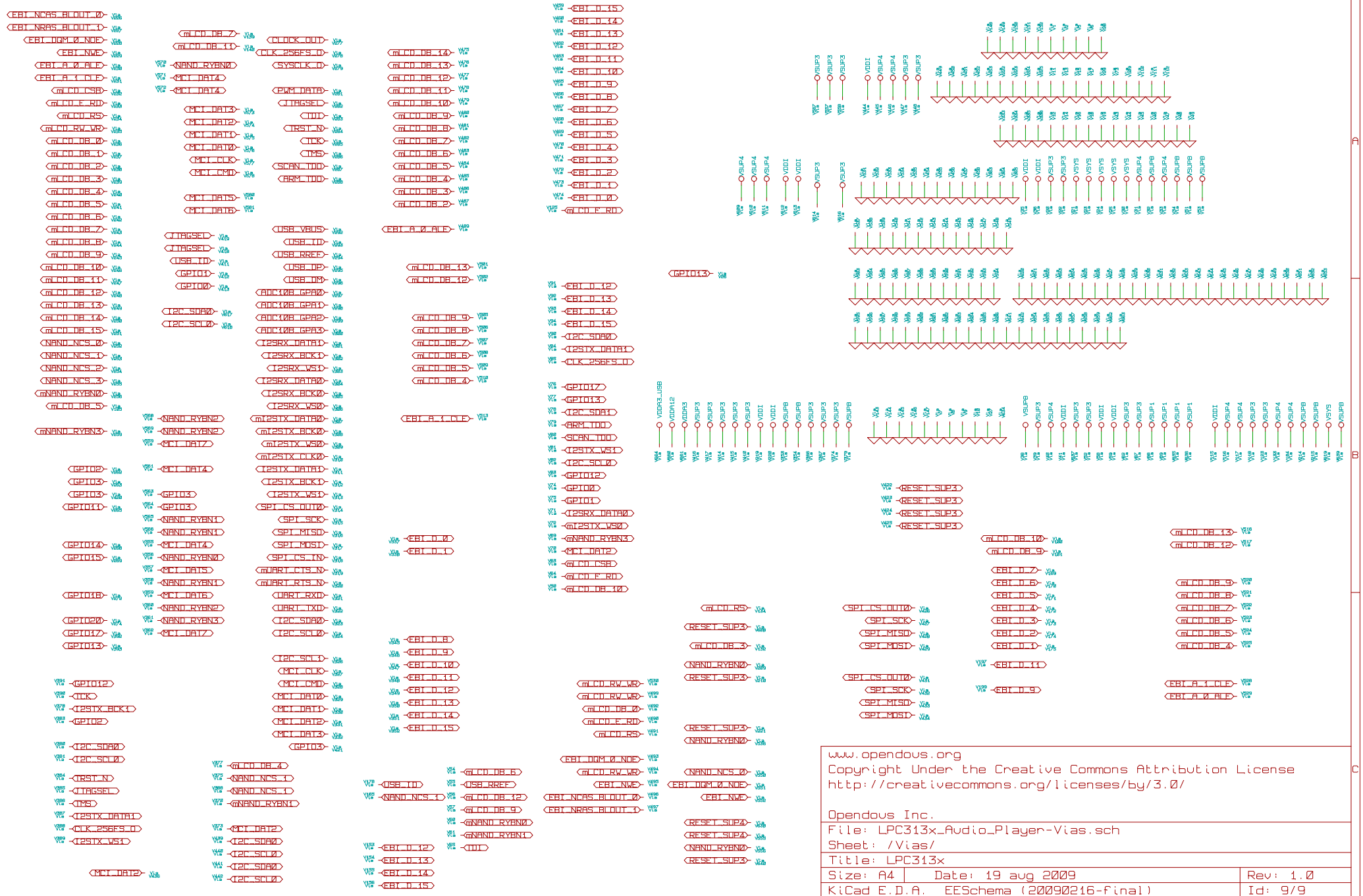
File: LPC313x_Audio_Player-LCD.sch
Sheet: /LCD/
Title: LCD
Size: A4
Date: 19 aug 2009
Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)
Id: 8/9

When routing a board this complex, it helps to have persistant vias (vias that behave like components)



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File: LPC313x_Audio_Player-Vias.sch		
Sheet: /Vias/		
Title: LPC313x		
Size: A4	Date: 19 aug 2009	Rev: 1.0
KiCad E.D.A. EESchema (20090216-final)		Id: 9/9