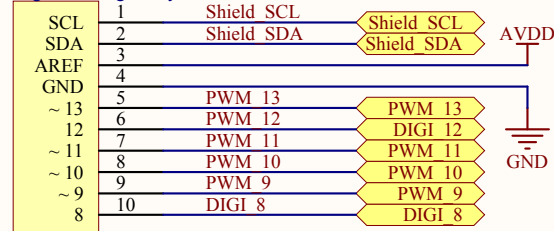


# Arduino Hardware Compatible IO Breakout

## Arduino Digital Higher Byte

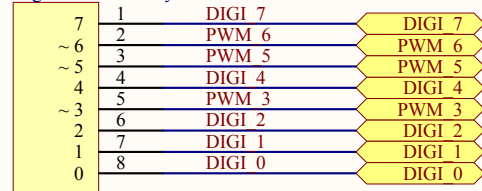
Digital IO Higher Byte1



Arduino Leonardo High Byte

## Arduino Digital Lower Byte

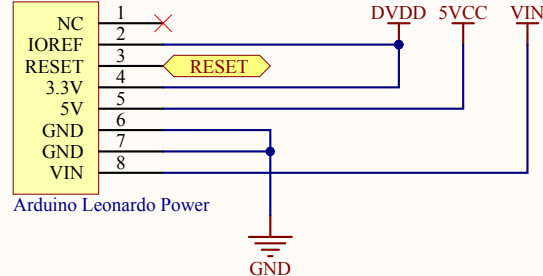
Digital IO Lower Byte1



Arduino Leonardo Low Byte

## Arduino Power & Reset

Power & Reset1



Arduino Leonardo Power

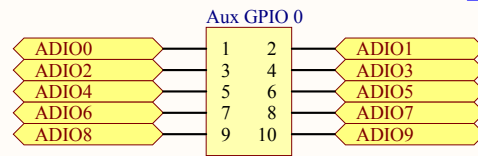
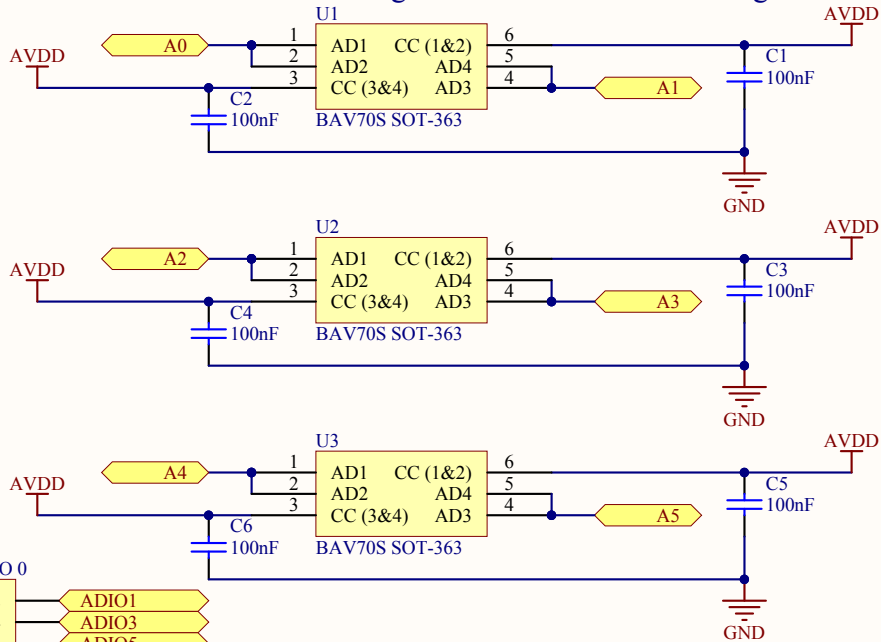
## Arduino Analog Input

Analog Input1

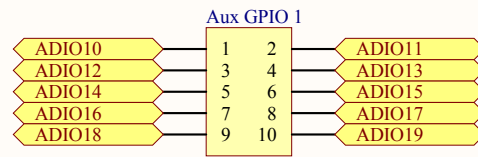


Arduino Leonardo Analog

## Analog 5V Tolerance Level Shifting



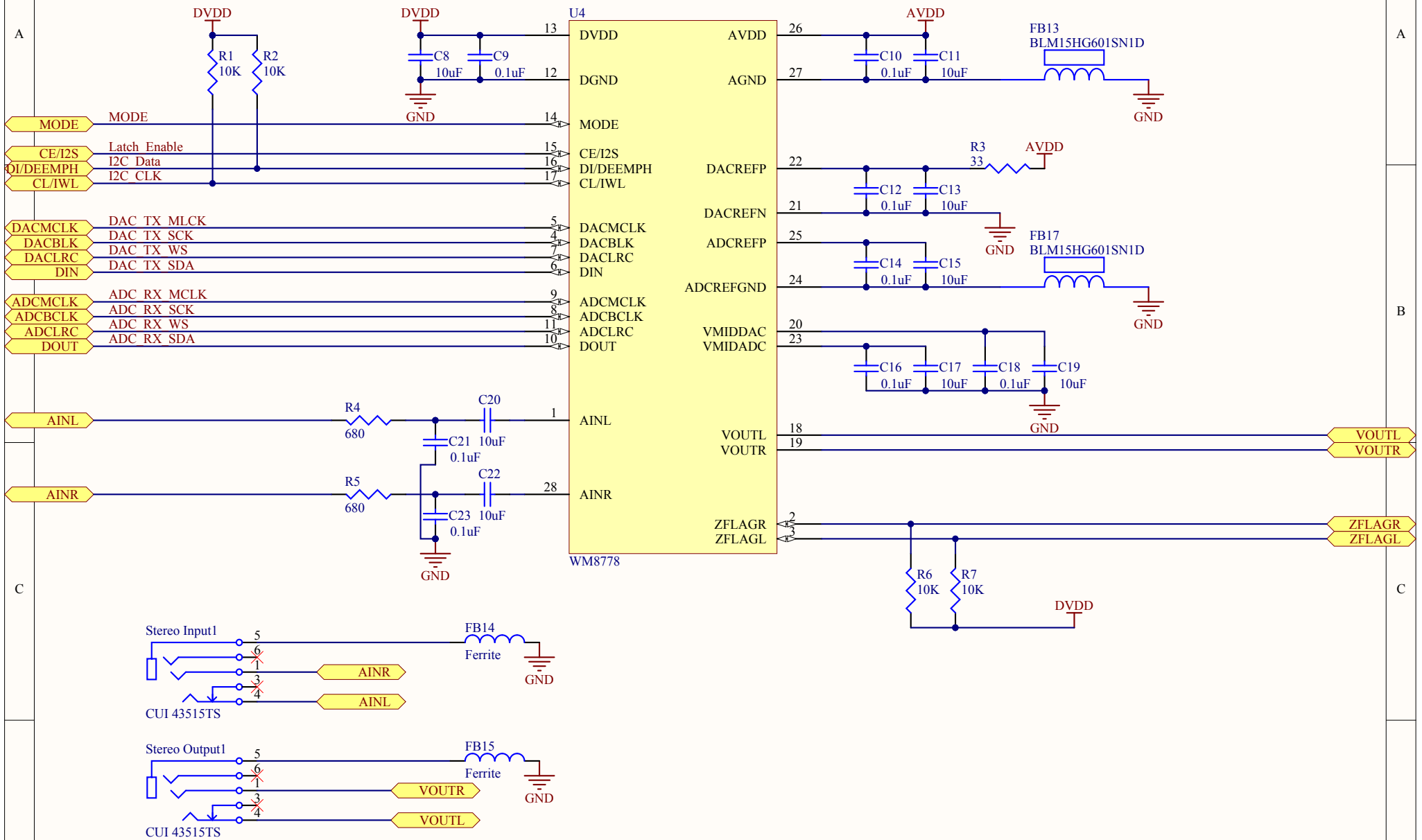
Header 5X2



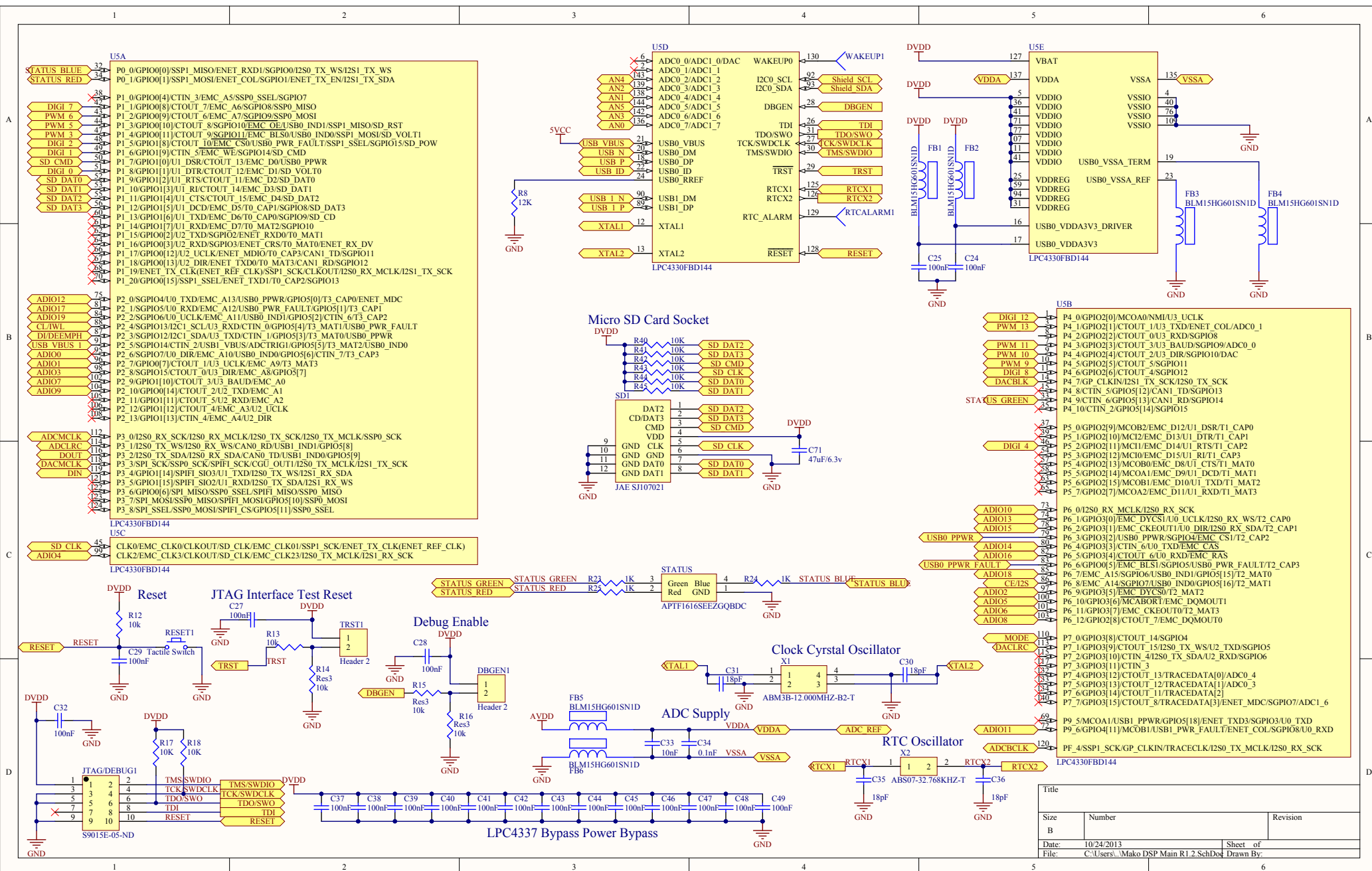
Header 5X2

Title		
Size	Number	Revision
A		
Date:	10/24/2013	Sheet of
File:	C:\Users\...\Mako DSP Arduino IO R1.2.Sch	Drawn By:

# WM8778 Stereo Audio Codec I2S/I2C

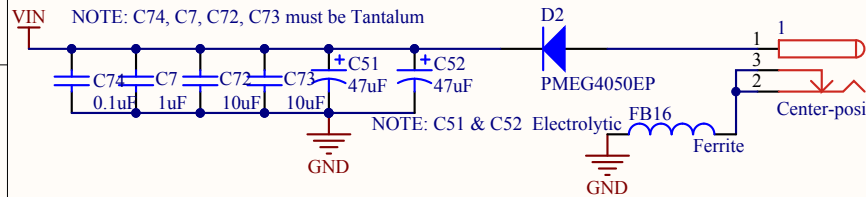


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Size	Number	Revision
A		
Date:	10/24/2013	Sheet of
File:	C:\Users\...\Mako DSP Audio Codec R1.2	Sho Doc By:

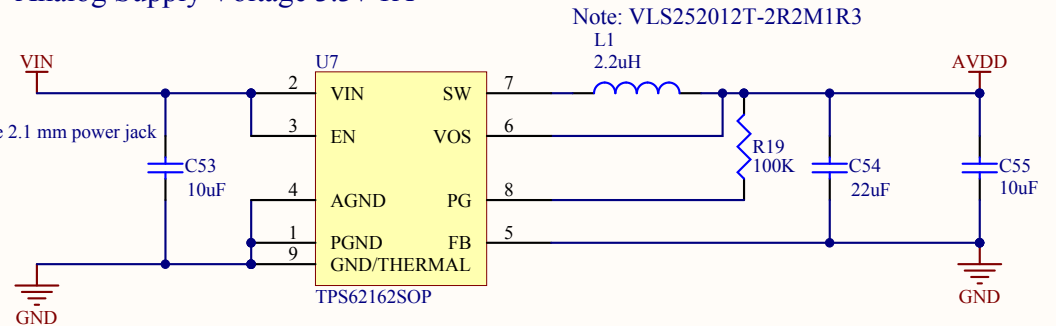


# 3.3V DVDD and 5V Supply DCDC Converters

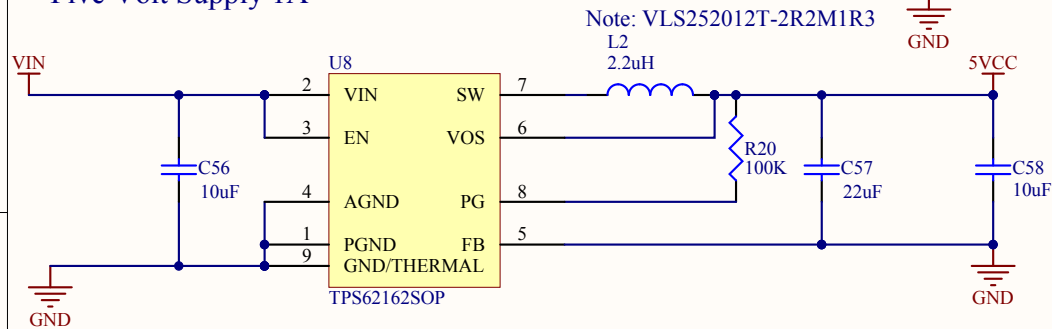
## Input Power 12v w/ Schottky Protection & Filtering



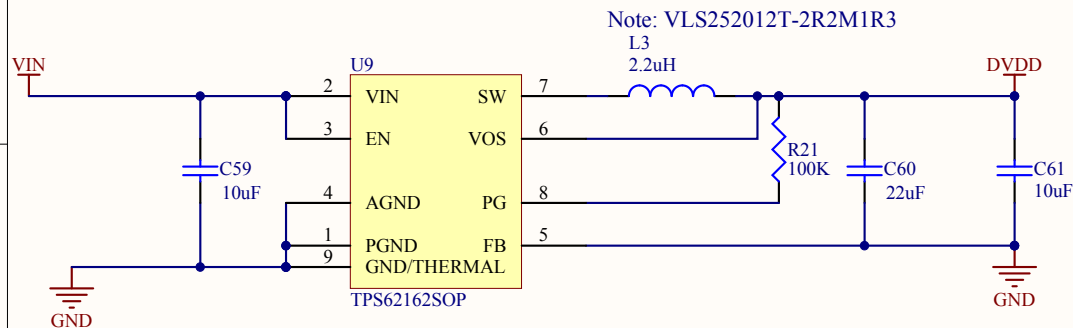
## Analog Supply Voltage 3.3v 1A



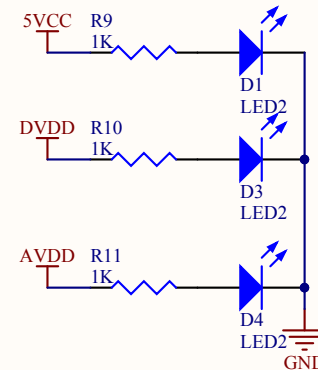
## Five Volt Supply 1A



## Digital Supply Voltage 3.3v 1A

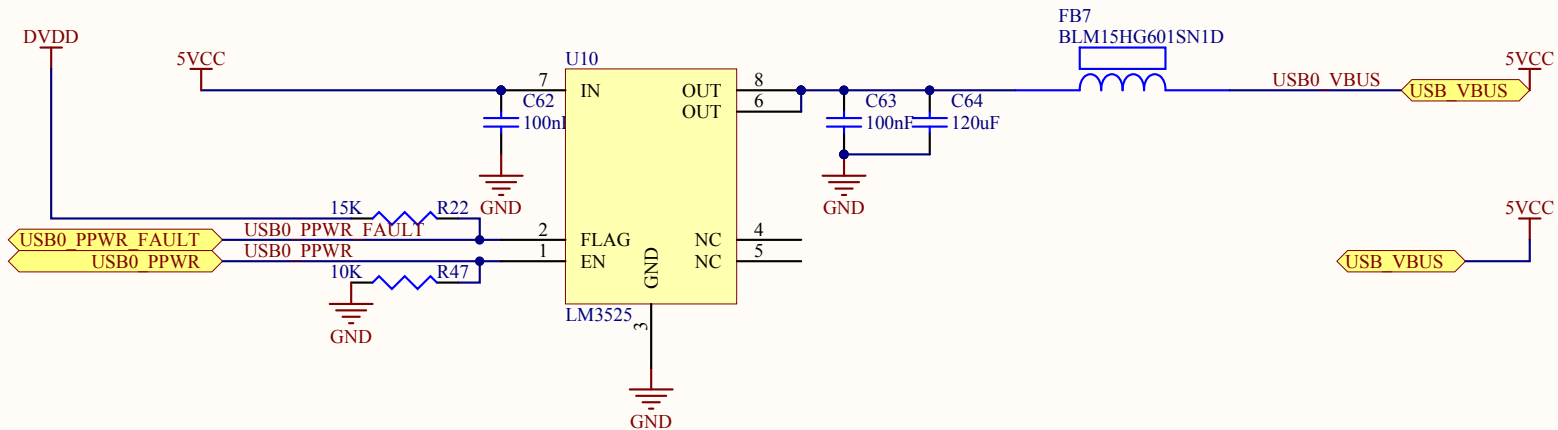


## Supply Indicators

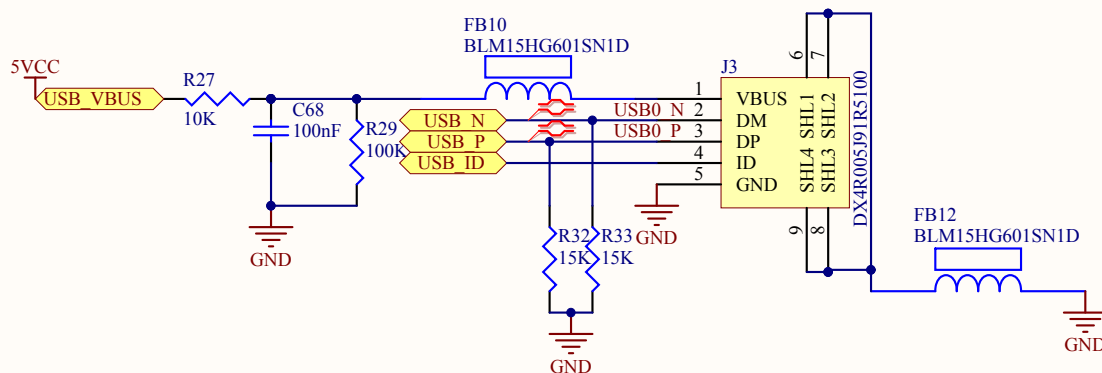


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Size	Number	Revision
A		
Date:	10/24/2013	Sheet of
File:	C:\Users\...\Mako DSP Power R1.2.SchDocDrawn By:	

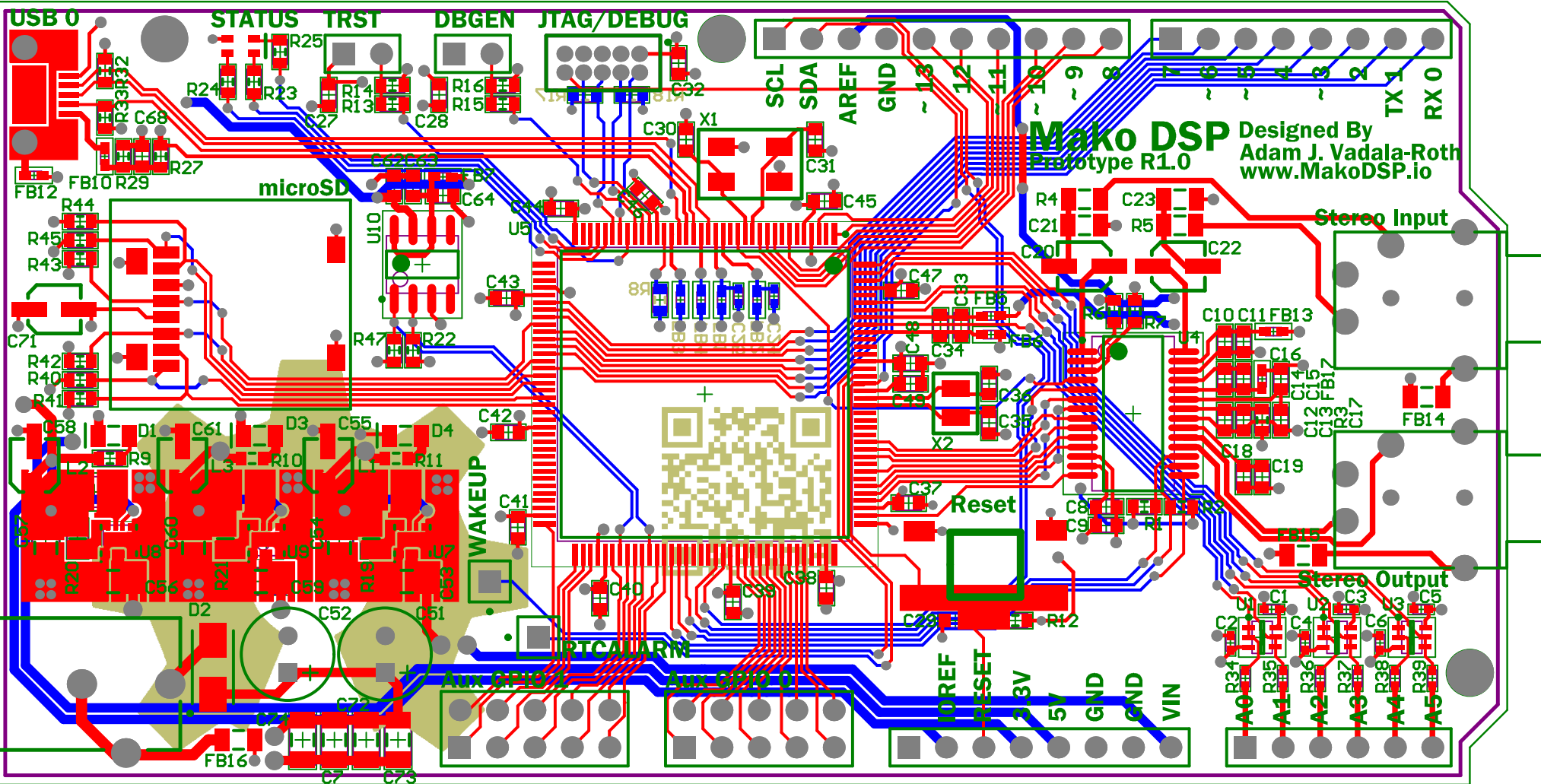
## USB Ports



## USB Module 0 Device/Host/OTG



Title			
Size A	Number		Revision
Date:	10/24/2013	Sheet of	
File:	C:\Users\...\Mako DSP USBRI 2.SchDoc	Drawn By:	



Bill of Materials					
<Parameter Title not found>					
Source Data From: Mako DSP.PrjPCB					
Project: Mako DSP.PrjPCB					
Variant: None					
Creation Date: 10/24/2013 4:54:37 AM					
Print Date: 41571 41571.20472					
Footprint	Comment	LibRef	Designator	Description	Quantity
PJ-102AH	Center-positive 2.1 mm power jack	PWR2.5	1	Power jack	1
Arduino	Arduino	Arduino	Analog Input1		1
Leonardo	Leonardo	Leonardo			
Analog	Analog	Analog			
HDR2X5	Header 5X2	Header 5X2	Aux GPIO 0, Aux GPIO 1	Header, 5-Pin, Dual row	2
0402	Cap Semi	Cap Semi	C1, C2, C3, C4, C5, C6, C24, C25	Capacitor (Semiconductor SIM Model)	8
C1206	Cap Semi	Cap Semi	C7, C53, C54, C56, C57, C59, C60, C72, C73, C74	Capacitor (Semiconductor SIM Model)	10
1608[0603]	Cap Semi	Cap Semi	C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C30, C31, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C62, C63, C64, C68	Capacitor (Semiconductor SIM Model)	35
Panasonic	Cap Semi	Cap Semi	C20, C22, C55, C58, C61, C71	Capacitor (Semiconductor SIM Model)	6
VS B	Cap Semi	Cap Semi	C21, C23	Capacitor (Semiconductor SIM Model)	2
SM 0805 - gap trimmed	Cap Semi	Cap Semi	C27, C28, C29, C32	Capacitor (Semiconductor SIM Model)	4
CAPC1608L	Cap Pol1	Cap Pol1	C51, C52	Polarized Capacitor (Radial)	2
CAPPR2.5- 6.3x5	LED2	LED2	D1, D3, D4	Typical RED, GREEN, YELLOW, AMBER	3
SM 0805 polarized	PMEG4050EP	Diode	D2	GaAs LED	1
PMEG4050EP	Header 2	Header 2	DBGEN1, TRST1	Header, 2-Pin	2
HDR1X2	Arduino	Arduino	Digital IO Higher Byte1		1
Arduino	Leonardo High	Leonardo High			
Leonardo	Byte	Byte	Digital IO Lower Byte1		1
High Byte	Arduino	Arduino			
Arduino	Leonardo Low	Leonardo Low			
Leonardo	Byte	Byte	FB1, FB2, FB3, FB4, FB5, FB6, FB7, FB10, FB12, FB13, FB17	BLM15HG601SN1D	11
Low Byte	BLM15HG601S	BLM15HG601S	FB14, FB15, FB16	Inductor	3
BLM18PG12	N1D	N1D			
15SN1D	Ferrite	Inductor			
SM 0805 - gap trimmed	DX4R005J91R51	Micro USB	J3	Micro USB Jack B	1
Micro USB	00				
Circular	S9015E-05-ND	S9015E-05-ND	JTAG/DEBUG1		1
Holes Only	Inductor	Inductor	L1, L2, L3	Inductor	3
S9015E-05-ND	Arduino	Arduino	Power & Reset1		1
VLS252012T- 2R2M1R3	Leonardo Power	Leonardo Power			
Arduino	Res3	Res3	R1, R2, R3, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R22, R23, R24, R25, R27, R29, R32, R33, R40, R41, R42, R43, R44, R45, R47	Resistor	31
Leonardo	Res3	Res3	R4, R5	Resistor	2
Power	Res3	Res3	R19, R20, R21	Resistor	3
J1-0603	Res3	Res3	R34, R35, R36, R37, R38, R39	Resistor	6
SM 0805 - gap trimmed	Tactile Switch	Tactile Switch	RESET1		1
RESC2012L	Socket	Socket	RTCALARM1, WAKEUP1	Socket	2
0402 - duplicate	JAE SJ107021	JAE SJ107021	SD1		1
TL3301	JAE SJ107021	microSD Card			
PIN1	Socket	Socket			
JAE	RGB LED	RGB LED	STATUS	RGB LED	1
SJ107021	APTF1616SEEZ	APTF1616SEEZ			
RGB LED	GQBDC	GQBDC			
APTF1616SE	CUI 43515TS	CUI 43515TS	Stereo Input1, Stereo Output1		2
EZGQBDC	BAV70S SOT-363	BAV70S SOT-363	U1, U2, U3		3
CUI S-J- 43515TS	WM8778	WM8778	U4		1
BAV70S_SO	LPC4330FBD14	LPC4330FBD14	U5	32-bit ARM Cortex-M4 MCU, 264 kB SRAM, 2 HS USB with on-chip PHY, Ethernet, CAN, AES, SPIFI, SGPIO, SCT, 144-Pin LQFP	1
T363	TPS62162SOP	TPS62162SOP	U7, U8, U9		3
WM8778	LM3525	LM3525	U10	LM3525	1
SOT486-1_V	ABM3B-12.000MHZ-B2-T	ABM3B-12.000MHZ-B2-T	X1		1
TPS62162SOP	ABS07-32.768KHZ-T	ABS07-32.768KHZ-T	X2	ABS07-32.768KHZ-T RTC Crystal Oscillator	1
P					159
Approved Notes					