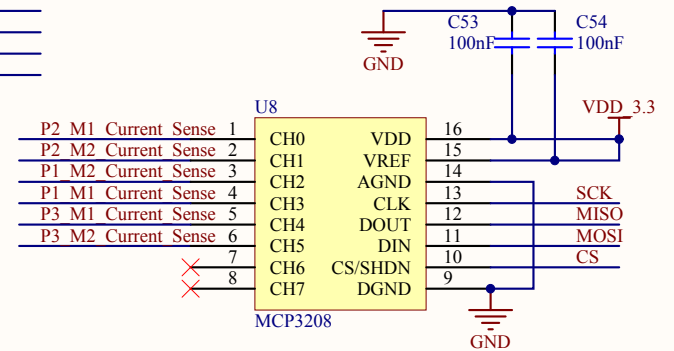
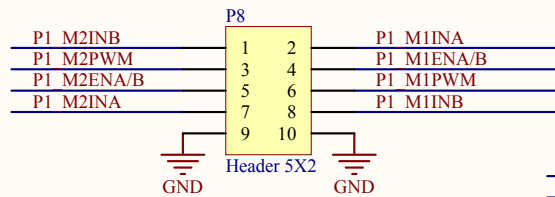
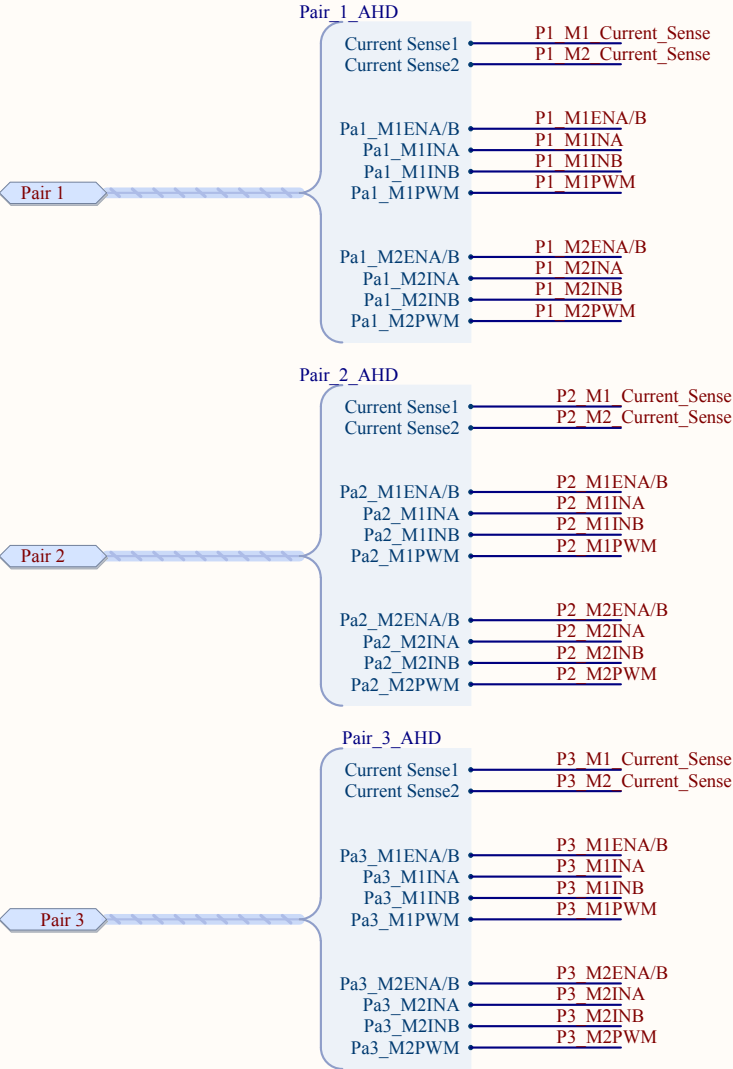
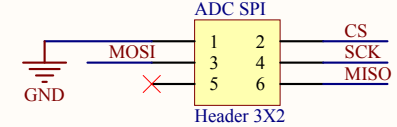


# AHD Header Pinout

## Current Sense Digital Sampling Section



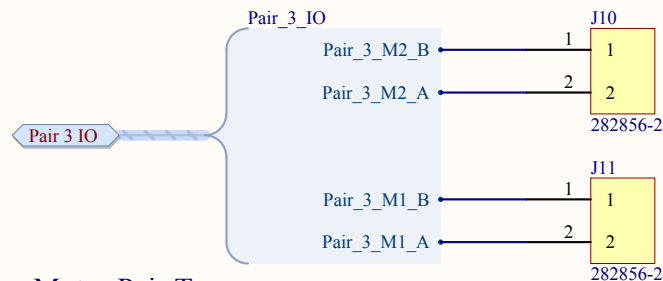
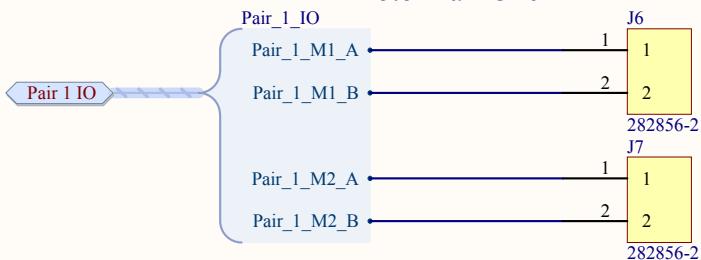
## SPI Connection



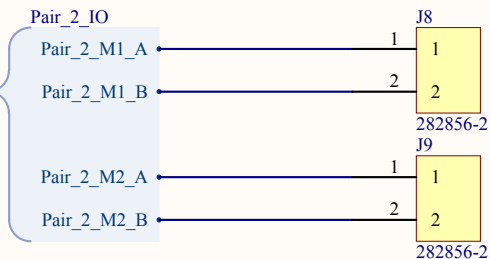
Title		
Size	Number	Revision
A		
Date:	2/26/2013	Sheet of
File:	C:\Users\...\Breakout to AHD Shield.SchDoc	Drawn By:

# Motor Terminal Breakout

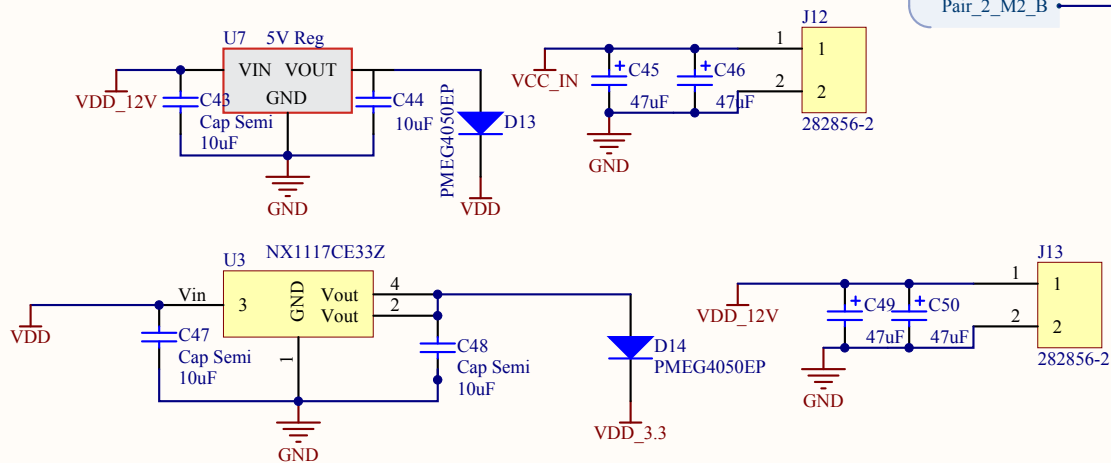
## Motor Pair One



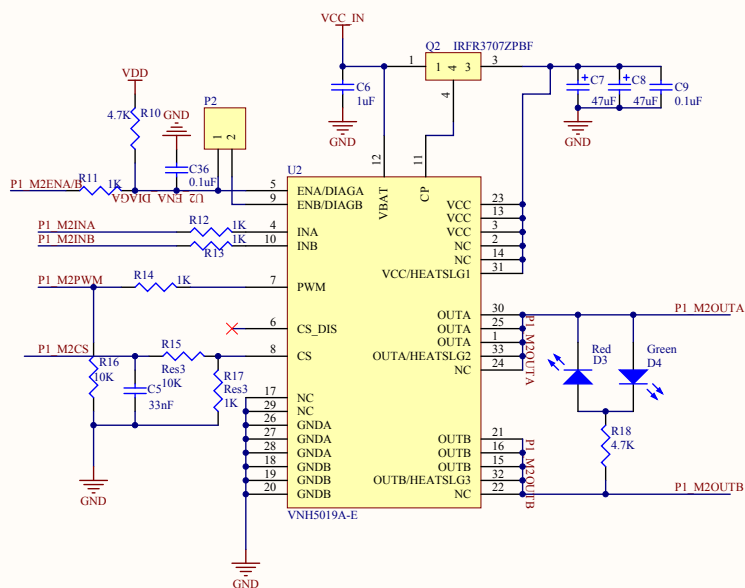
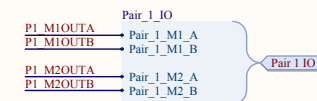
## Motor Pair Two



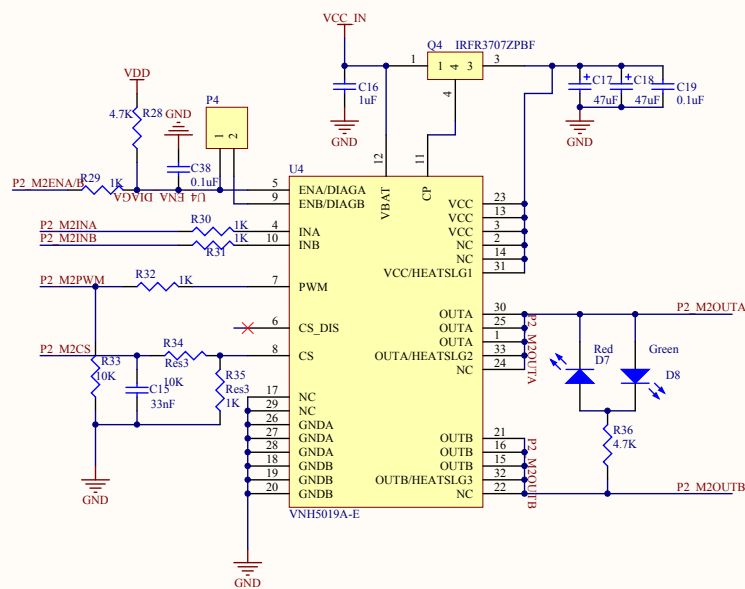
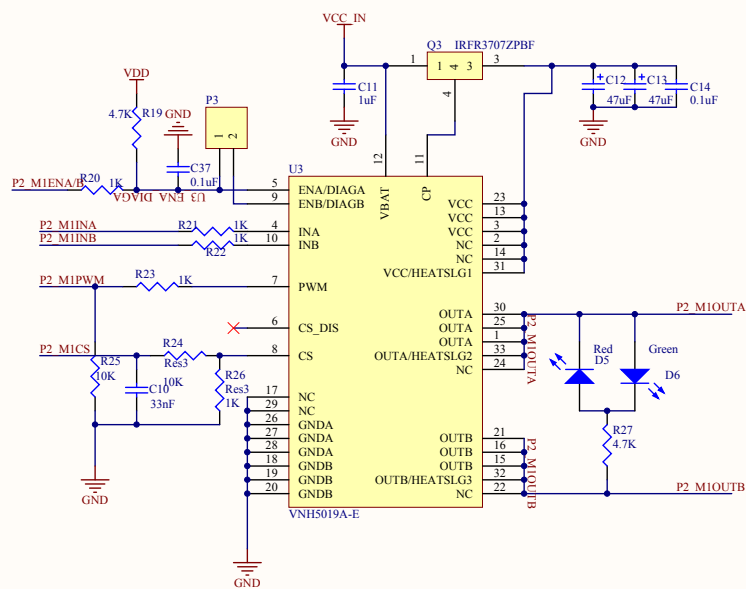
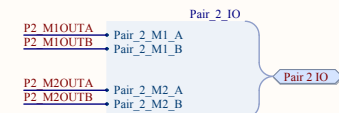
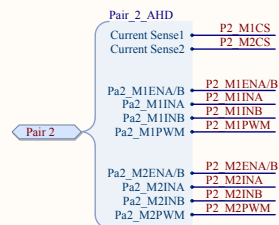
## 18.5V Rail Connection Terminal



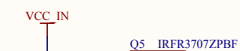
Title		
Size	Number	Revision
A		
Date:	2/26/2013	Sheet of
File:	C:\Users\...\Motor and Power IO.SchDoc	Drawn By:



Date:	2/26/2013	Sheet of
File:	C:\Users\Pair 1\SchDoc	Drawn By:

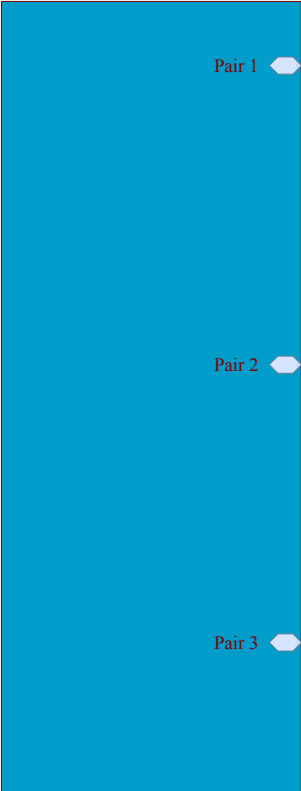


Title		
Size	Number	Revision
B		
Date:	2/26/2013	Sheet of
File:	C:\Users\Pair 2\SchDoc	Drawn By:

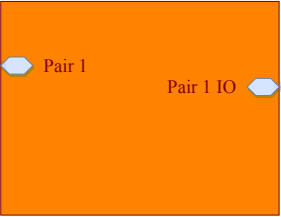


Date:	2/26/2013	Sheet of
File:	C:\Users\...\Pair 3.SchDoc	Drawn By:

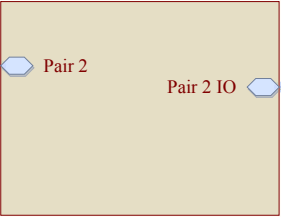
AHD Breakout  
Breakout to AHD Shield.SchDoc



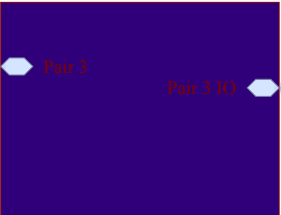
Thruster Pair 1  
Pair 1.SchDoc



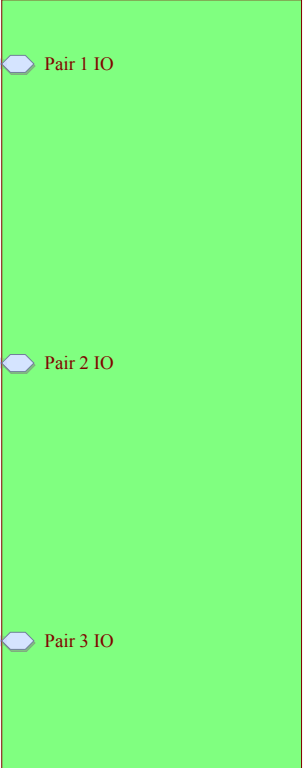
Thruster Pair 2  
Pair 2.SchDoc



Thruster Pair 3  
Pair 3.SchDoc



Motor and Power IO  
Motor and Power IO.SchDoc



Pair 1



Pair 1

Pair 1 IO



Pair 1 IO

Pair 2



Pair 2

Pair 2 IO



Pair 2 IO

Pair 3



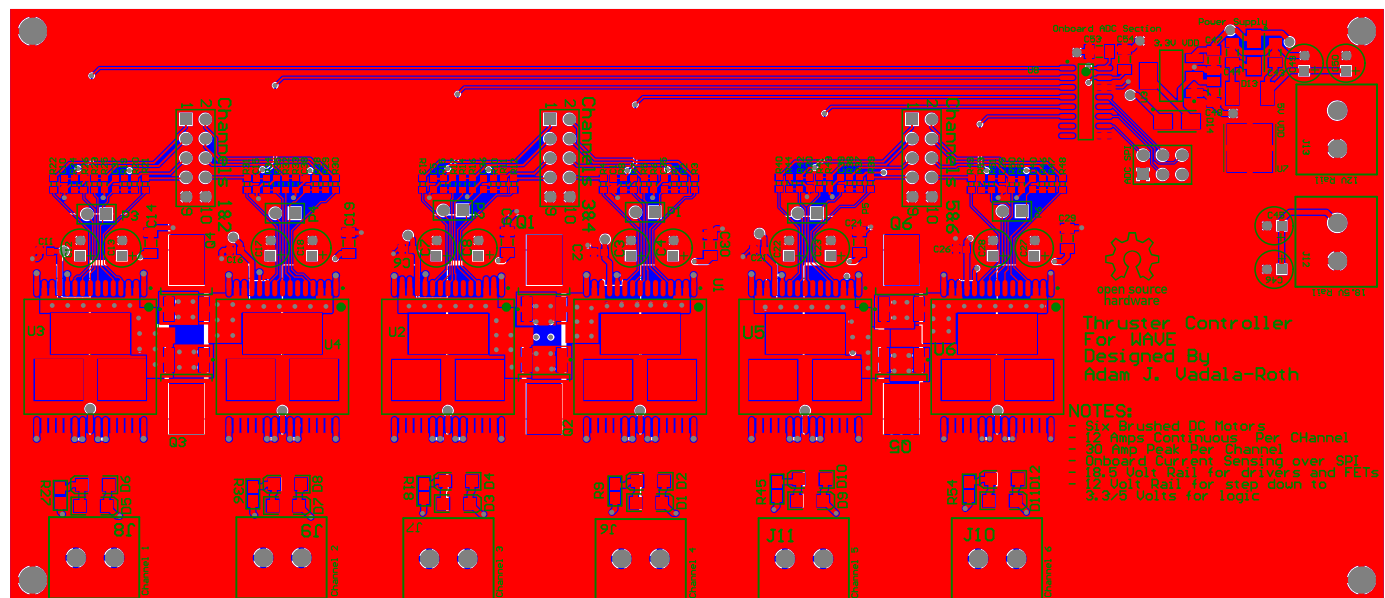
Pair 3

Pair 3 IO



Pair 3 IO

Title			
Size	Number		Revision
A			
Date:	2/26/2013	Sheet	of
File:	C:\Users\...\Thruster Shield.SchDoc	Drawn By:	



Comment	Description	Designator	Footprint	LibRef	Quantity
Header 3X2	Header, 3-Pin, Dual row	ADC SPI	HDR2X3	Header 3X2	1
Cap Semi	Capacitor (Semiconductor SIM Model)	C1, C2, C5, C6, C10, C11, C15, C16, C20, C21, C25, C26, C35, C36, C37, C38, C39, C40	1608[0603]	Cap Semi	18
Cap Pol2	Polarized Capacitor (Axial)	C3, C4, C7, C8, C12, C13, C17, C18, C22, C23, C27, C28	CAPPR2-5x6.8	Cap Pol2	12
Cap Semi	Capacitor (Semiconductor SIM Model)	C9, C14, C19, C24, C29, C30, C43, C44, C47, C48, C53, C54	C1206	Cap Semi	12
Cap Pol2	Polarized Capacitor (Axial)	C45, C46, C49, C50	CAPPR2.5-6.3x11	Cap Pol2	4
LED2	Typical RED, GREEN, YELLOW, AMBER GaAs LED	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12	3.2X1.6X1.1	LED2	12
PMEG4050EP	Default Diode	D13, D14	PMEG4050EP	Diode	2
282856-2	Two pole screw terminal	J6, J7, J8, J9, J10, J11, J12, J13	282856-2	282856-2	8
Header 2	Header, 2-Pin	P1, P2, P3, P4, P5, P6	HDR1X2	Header 2	6
Header 5X2	Header, 5-Pin, Dual row	P8, P9, P10	HDR2X5	Header 5X2	3
IRFR3707ZPBF	Power FET	Q1, Q2, Q3, Q4, Q5, Q6	IRFR3707ZPBF	IRFR3707ZPBF	6
Res3	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R10, R11, R12, R13, R14, R15, R16, R17, R19, R20, R21, R22, R23, R24, R25, R26, R28, R29, R30, R31, R32, R33, R34, R35, R37, R38, R39, R40, R41, R42, R43, R44, R46, R47, R48, R49, R50, R51, R52, R53	RESC1608L	Res3	48
Res3	Resistor	R9, R18, R27, R36, R45, R54	0805 SMD Resistor	Res3	6
VNH5019A-E	VNH5019A-E H-Bridge	U1, U2, U3, U4, U5, U6	VNH5019A-E	VNH5019A-E	6
NX1117CE33Z	3.3v Linear Regulator	U3	NX1117CE33Z	NX1117CE33Z	1
5V Reg	Voltage regulator	U7	DPAK-3	VOLT REG	1
MCP3208		U8	MCP3208 - duplicate	MCP3208	1