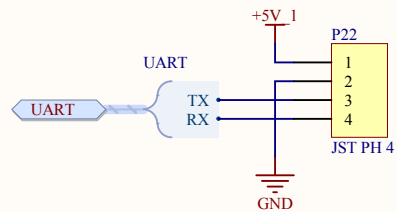


Title			
Size	Number		Revision
A4			
Date:	18/03/2013	Sheet	of
File:	C:\Users\...\General.SchDoc	Drawn By:	

BLUETOOTH

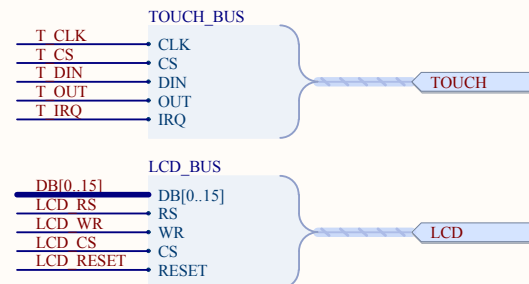
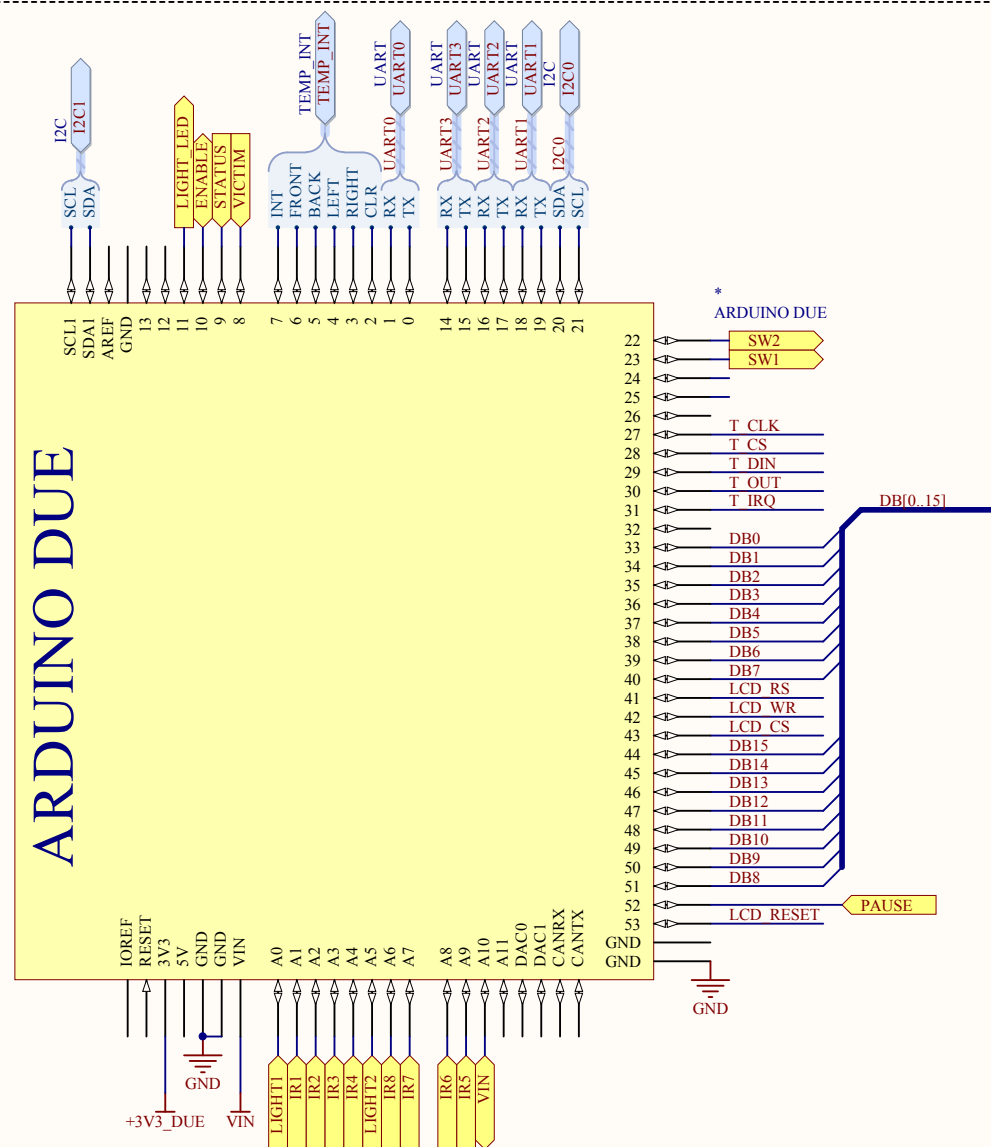
Bluetooth Module



Title		
Size A4	Number	Revision
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Bluetooth.SchDoc	Drawn By:

CORE

Arduino DUE Main Board

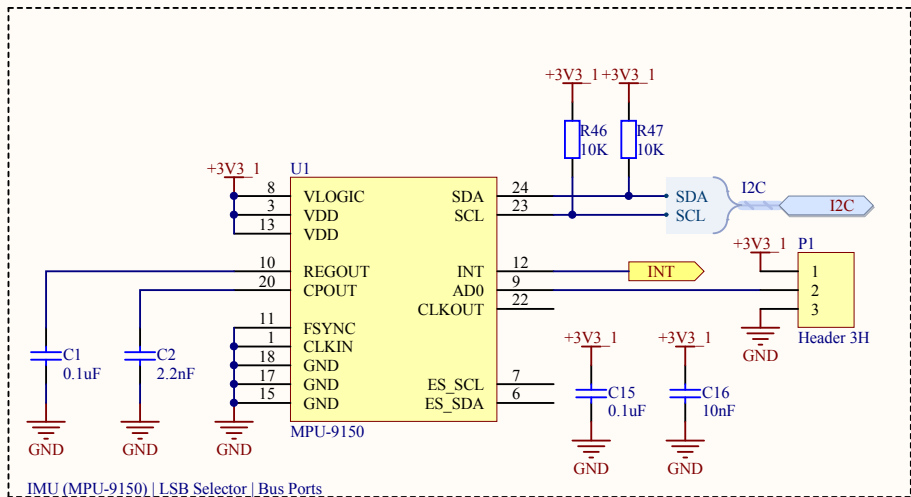


LCD BUS (Touch + LCD)

Title		
Size	Number	Revision
A4		
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Core.SchDoc	Drawn By:

IMU

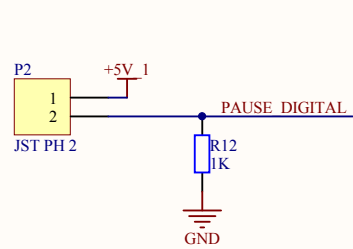
9 Axes IMU Slave | I2C Address: 0b110100X



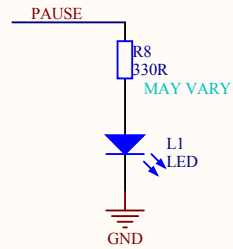
Title			IMU Sensor
Size	Number	Revision	
A4			
Date:	18/03/2013	Sheet* of *	
File:	C:\Users\...\IMU.SchDoc	Drawn By: Ivan Seidel	

INTERFACE

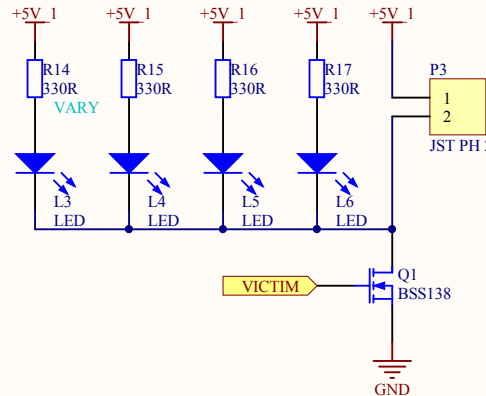
Capacitive/Switch Pause sensor | Up to 30mA



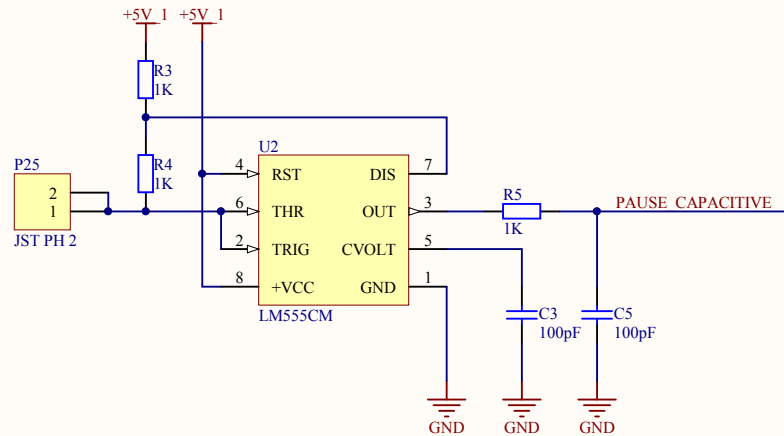
Switched pause sensor



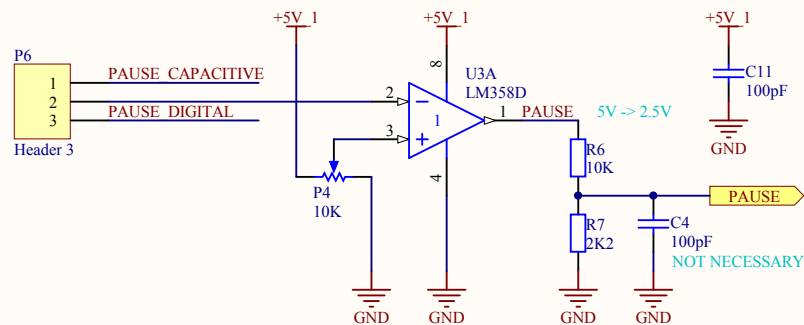
Active Pause sensor LED



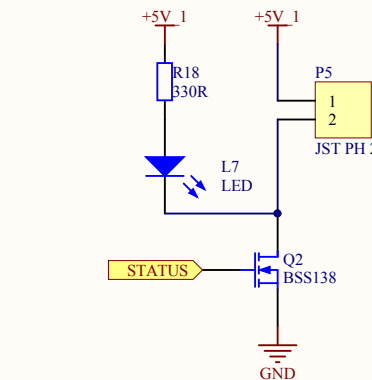
Victim LED's



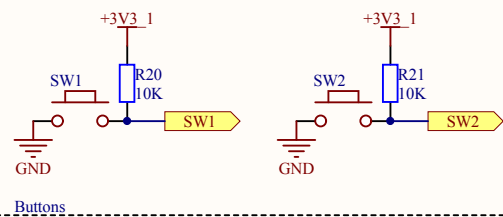
Capacitance sensor frequency modulator



Output selected signal to main Core



Status LED (Paused?)

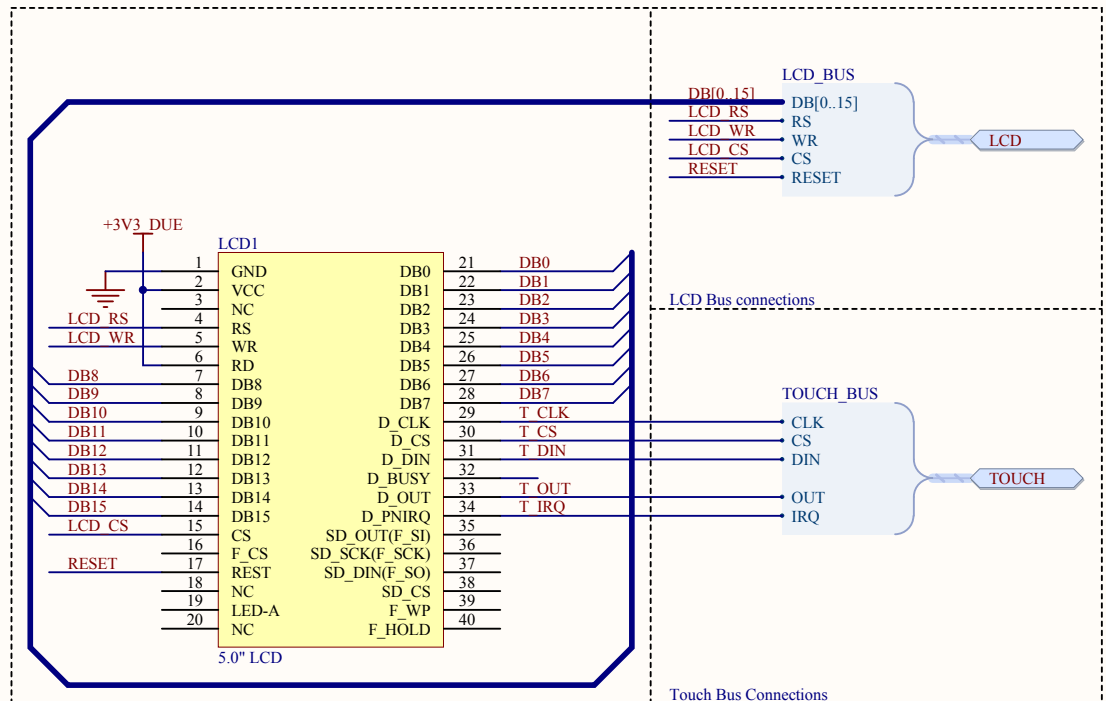


Buttons

Title		
Size	Number	Revision
A4		
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Interface.SchDoc	Drawn By:

LCD

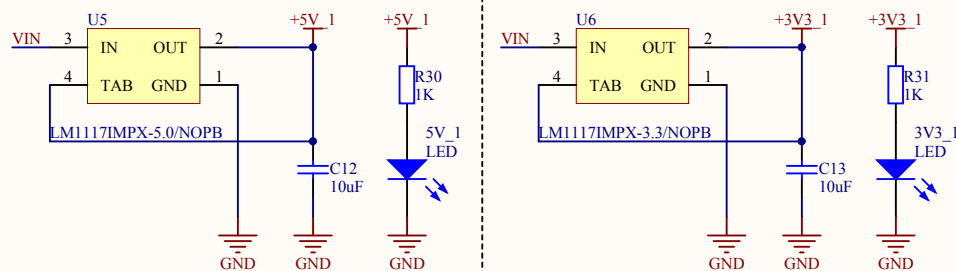
LCD Connector



Title			
Size	Number		Revision
A4			
Date:	18/03/2013	Sheet	of
File:	C:\Users\...\LCD.SchDoc	Drawn By:	

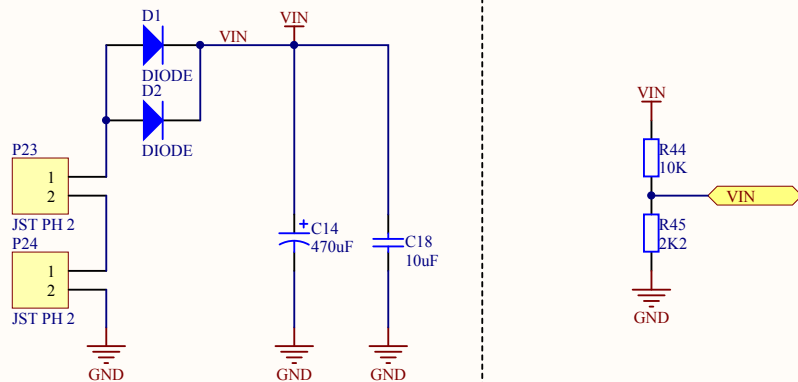
POWER SUPPLY

General Switch | Voltage Regulators | +5V_1 | +3V3_1



+5V regulator Power Supply (1)

+3V3 regulator Power Supply (1)

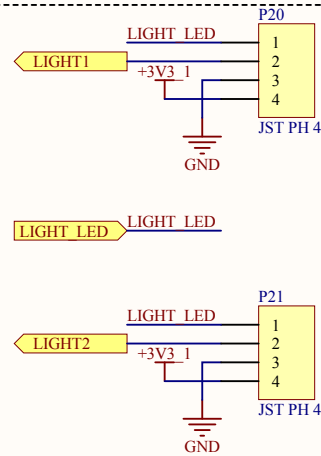
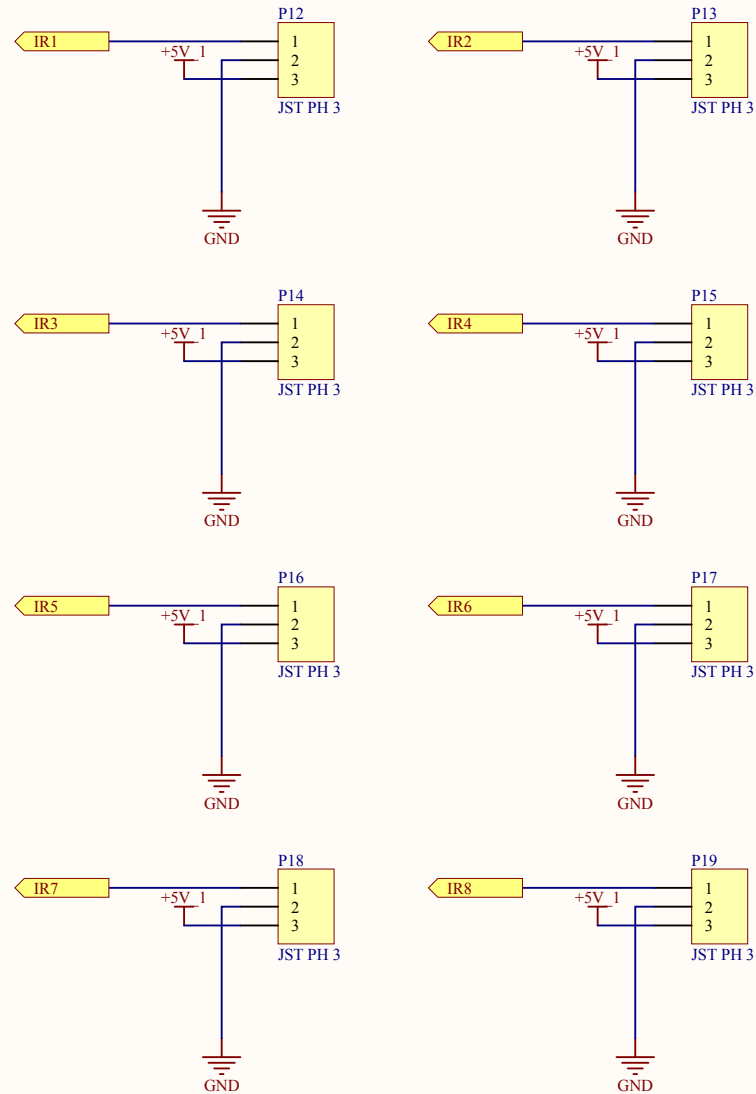


VIN (MAX 13V) to 3.2V_{out}

Title		
Size	Number	Revision
A4		
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Power Supply.SchDoc	Drawn By:

ANALOG SENSORS

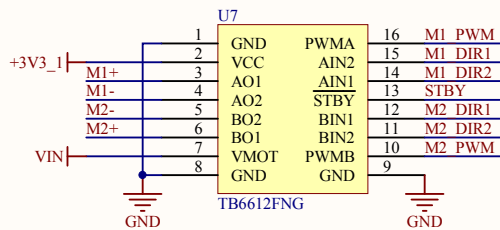
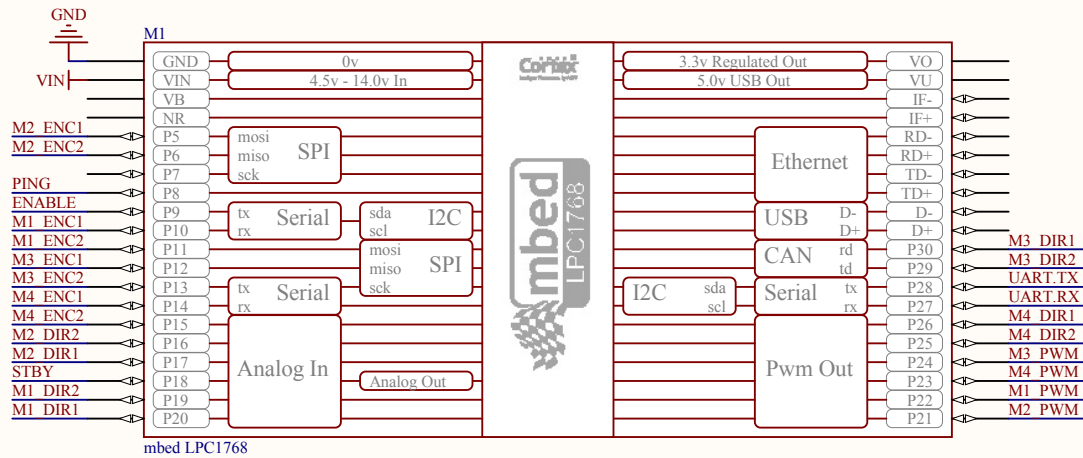
8 Analog ports for IR Distance Sensor | 2 Analog Light sensor | 1 Battery port



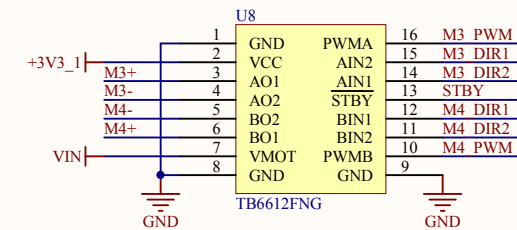
Title		
Size	Number	Revision
A4		
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Sensors.SchDoc	Drawn By:

SPEED CONTROLLER

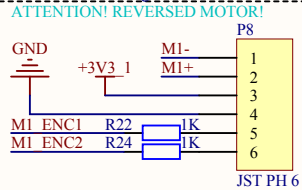
Controls 4 Motors with PID using 2 Dual H Bridges and 1 Mbed uController



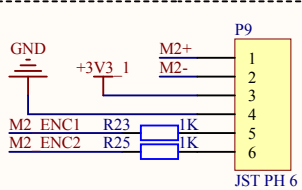
Motors 1 and 2 H Bridge



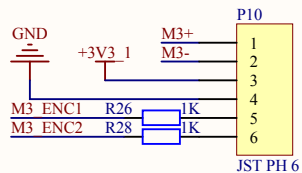
Motors 3 and 4 H Bridge



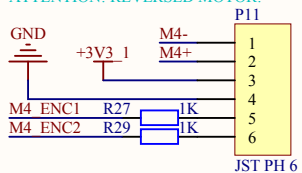
Motor 1 Header



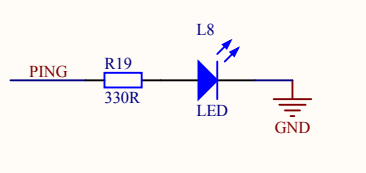
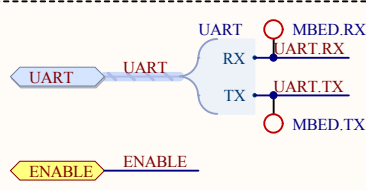
Motor 2 Header



Motor 3 Header



Motor 4 Header



Busv LED indicator

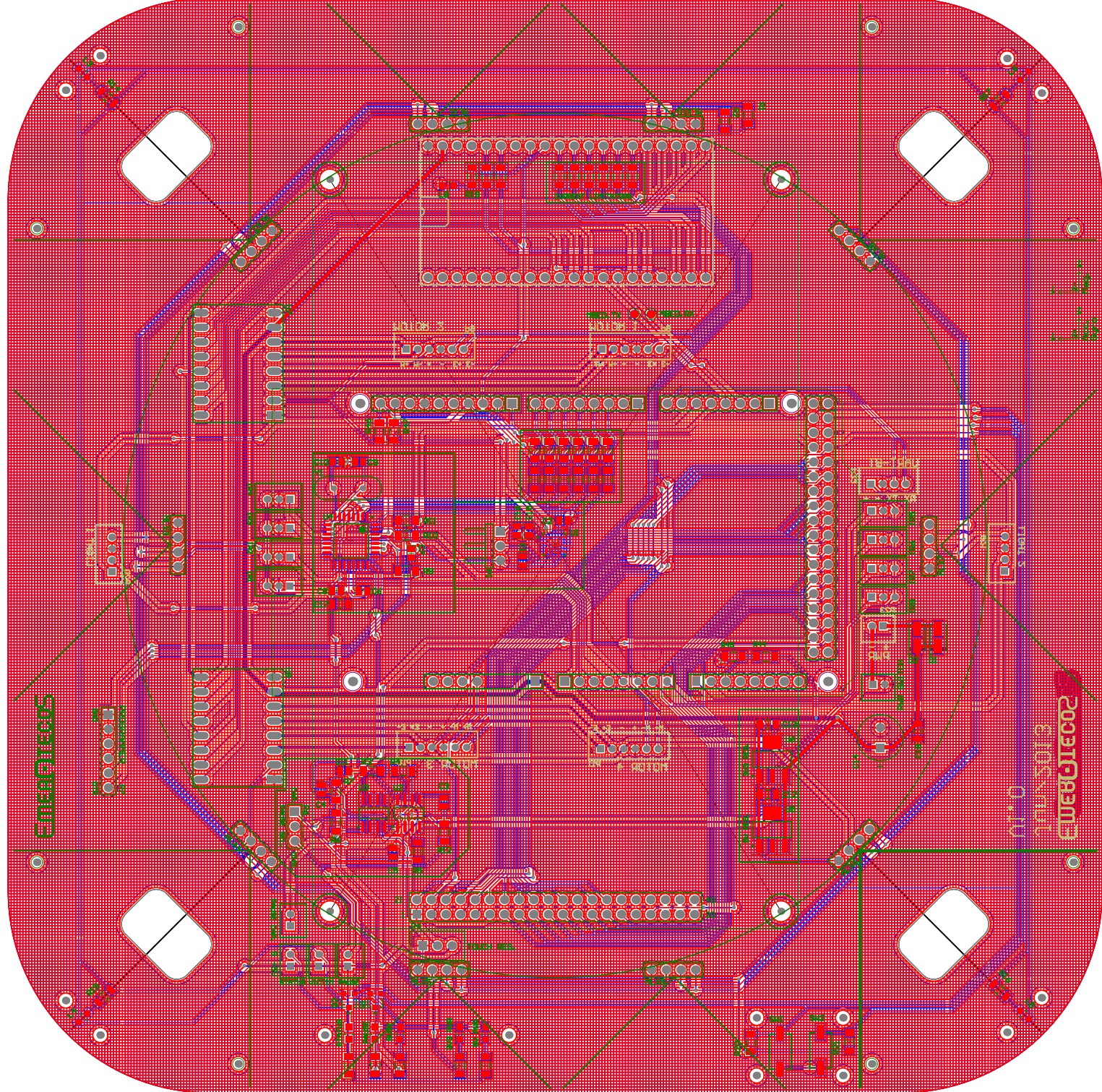
Title		
Size	Number	Revision
A4		
Date:	18/03/2013	Sheet of
File:	C:\Users\...\Speed Controller.SchDoc	Drawn By:

uController + 1 I2C to 8 IR Thermal Sensors



Voltage dividers from 5V to 3.2V MAX

Title		
Size A4	Number	Revision
Date:	18/03/2013	Sheet of
File:	C:\Users\YTemperature\SchDoc	Drawn By:



Rescue.PrjPCB			18/03/2013			TOTAL R\$ -				
PLANILHA DE CUSTOS			Bill of Materials							
			Dolar: \$ 2.20							
LibRef	Footprint	Comment	Designator	Description	Quanti Extra	Valor	Imposto	Dolar?	Subtotal	Link
ARDUINO DUE	ARDUINO-DUE	ARDUINO DUE			1					
LED	LED0805	LED	3V3_1, 5V_1, L1, L2, L3, L4, L5, L6, L7, L8		10					
				Capacitor (Semiconductor SIM Model)	5					
Cap Semi	C0805	0.1uF	C1, C6, C7, C8, C15							
Cap Semi	C0805	2.2nF	C2		1					
Cap Semi	C0805	100pF	C3, C4, C5, C11		4					
Cap Semi	C0805	22pF	C9, C10		2					
Cap Semi	C1206	10uF	C12, C13, C17, C18		4					
EKA00PB310U00	CAPPR3.5-8X11.5	470uF	C14	Aluminum Electrolytic Capacitor, Radial Style with Long Leads: 100uF, 63V	1					
				Capacitor (Semiconductor SIM Model)	1					
Cap Semi	C0805	10nF	C16		2					
DIODE	DIODESMA	DIODE	D1, D2							
TFT LCD 5.0 INCHES	TFT LCD 5.0 INCHES	5.0" LCD	LCD1		1					
mbed LPC1768	DIP40-LARGE	mbed LPC1768	M1		1					
MLX-BREAKOUT	MLX-BREAKOUT	MLX90614	MLX1, MLX2, MLX3, MLX4, MLX5, MLX6, MLX7, MLX8, MLX9, MLX10		10					
				Header, 3-Pin, Right Angle	1					
Header 3H	HDR1X3H	Header 3H	P1							
JST PH 2	B2B-PH-K	JST PH 2	P2, P3, P5, P23, P24, P25		6					
TRIMPOT	TRIMPOT-3296W	10K	P4		1					
Header 3	HDR1X3	Header 3	P6	Header, 3-Pin	1					
Header 6	HDR1X6	Header 6	P7	Header, 6-Pin	1					
JST PH 6	B6B-PH-K	JST PH 6	P8, P9, P10, P11		4					
JST PH 3	B3B-PH-K	JST PH 3	P12, P13, P14, P15, P16, P17, P18, P19		8					
			P20, P21, P22		3					
JST PH 4	B4B-PH-K	JST PH 4		N-Channel Enhancement Mode Vertical DMOS FET	2					
BSS138	SOT23	BSS138	Q1, Q2							
RES	RES1206	10K	R1, R2, R6, R9, R10, R20, R21, R32, R34, R36, R38, R40, R42, R44, R46, R47		16					
			R3, R4, R5, R12, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31		14					
RES	RES1206	1K	R7, R11, R33, R35, R37, R39, R41, R43, R45		9					
RES	RES1206	330R	R8, R13, R14, R15, R16, R17, R18, R19		8					
PUSH BUTTON	PUSH-BUTTON 5,2X1,6MM	PUSH BUTTON	SW1, SW2		2					
MPU-9150	LGA-24	MPU-9150	U1	InveSense MPU-9150 IMU 9 axes	1					
LM555CM	M08A_N	LM555CM	U2	Timer, 8-pin Narrow SOIC	1					
LM358D	751-02_N	LM358D	U3	Dual Low-Power Operational Amplifier	1					
				8-bit AVR Microcontroller, 32KB Flash, 1KB EEPROM, 2KB SRAM, 32-pin TQFP, Industrial Grade (-40°C to 85°C)	1					
ATmega328-AU	32A_N	ATmega328-AU	U4							
LM1117IMPX-5.0/NOPB	MP04A_N	LM1117IMPX-5.0/NOPB	U5	800mA Low-Dropout Linear Regulator, 4-pin SOT-223, Pb-Free	1					
LM1117IMPX-3.3/NOPB	MP04A_N	LM1117IMPX-3.3/NOPB	U6	800mA Low-Dropout Linear Regulator, 4-pin SOT-223, Pb-Free	1					
TB6612FNG	TB6612FNG	TB6612FNG	U7, U8	H BRIDGE	2					
OSC-2-PIN	OSC-2-PIN-TH	16Mhz	Y1	2 pin oscillator	1					