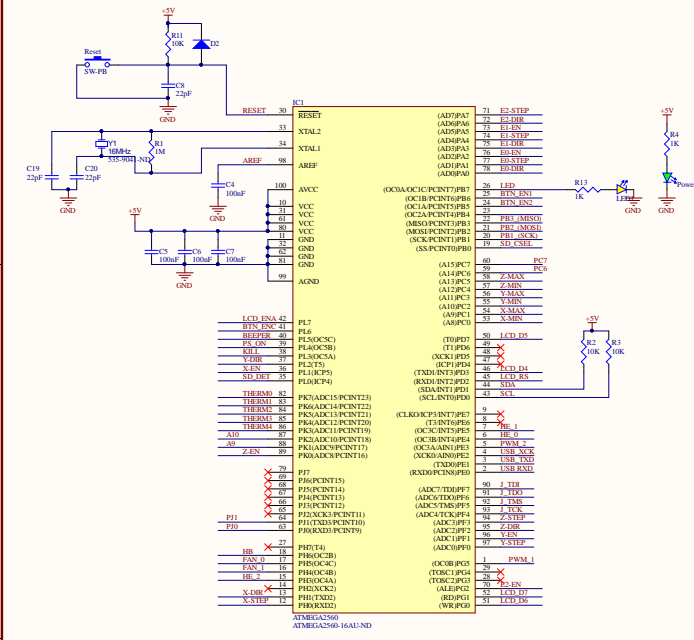
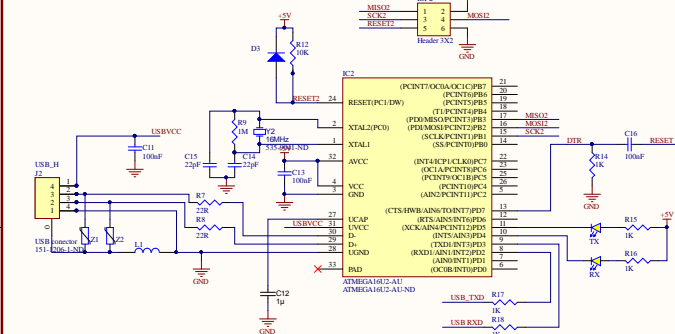


Microcontroller



USB Interface



Aus3D

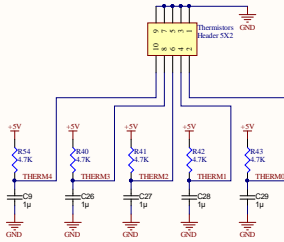
GPLv2
github.com/Aus3D/RUMBA-Plus
reprap.org/wiki/RUMBA

Original RUMBA design by RepRapDiscount.com
Updated to RUMBA+ by Chris Barr for Aus3D
See the GitHub page for changelist

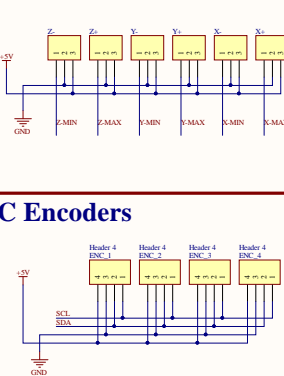
Date: 21/9/2016

REV: 1.1A

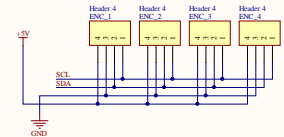
Thermistors



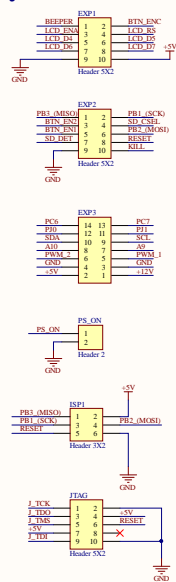
Endstops



I2C Encoders



Auxiliary IO



Designator	Description	Comment	Value	Quantity	Manufacturer 1	Manufacturer Part Number 1	Supplier 1
VV, 12V, FAN0, 1, FAN1, 1, PS_ON, PWR	Header, 2-Pin	Header 2		6	BM	W61102-6404-AB	Digi-Key
SV_SEL, VFA0_sel, VFA1_sel, VH2_sel, X+, X-, Y-, Y+, Z-, Z+	Header, 8-Pin	Header 3		10	BM	W61103-6404-AB	Digi-Key
C1	Polarized Capacitor (Surface Mount)	CapE 4.3-47uF -50V	47uF 50V	1	United Chemi-Con	BMVE500ADA470M8R05	Digi-Key
C2	Polarized Capacitor (Surface Mount)	CapE 4.3-100uF -16V	100uF 16V	1	United Chemi-Con	BMVE140ADA101M55G	Digi-Key
C3, C4, C5, C6, C7, C11, C13, C16, C18, C33	Capacitor (Semiconductor SMD Model)	CapC-0603-100nf	100nf	10	Tyago	CC0603KRX78BB104	Digi-Key
C8, C14, C15, C19, C20	Capacitor (Semiconductor SMD Model)	CapC-0603-22pf	22pf	5	AVX Corporation	06035C220JAT2A	Digi-Key
C9, C12, C26, C27, C28, C29	Capacitor SMD Cer 1uF 10% 16V X7R 0603	approved sub OK	1u	6	TDK Corporation	C1608X7R1C105K	Digi-Key
C71, C22, C23, C24, C25, C30, C31, C32	Polarized Capacitor (Surface Mount)	CapE 4.3-100uF -35V	100uF 35V	8	Panasonic Electronic Components	VEE-47V101AP	Digi-Key
D1, D6, D7	Default Diode	M4		3	Infachild Semiconductor	S1G	Digi-Key
D2, D3, D4	Default Diode			3	Bourns Inc.	CD1206-5015175	Digi-Key
D5	Default Diode	Diode MBRM140	MBRM140	1	ON Semiconductor	MBRM140T3G	Digi-Key
D8	Default Diode	Diode MURS320	MURS320	1	Diodes Incorporated	MURS320-13.F	Digi-Key
D9, D10, D11, D12, D13, D14	Diode SMD 100V 1.5A SMA	100V 1.5A	W - 1.15V @ 1.5A (RMS)	6	Diodes Inc	S2BA-13-F	Digi-Key
E0, E1, E2, X, Y, Z	A4988BBIAKOUT			6	Sullins Connector Solutions	WPC0811J8N-BC	Digi-Key
E0_MOT, E1_MOT, E2_MOT, X_MOT, Y_MOT, Z_MOT	Screw Terminal 3.5mm 4-Way	Screw Terminal 3.5mm 4-Way		6	Phoenix Contact	1751264	Digi-Key
E0_MOT1A, E1_MOT1A, E2_MOT1A, ENC1, ENC2, ENC3, ENC4, USB_H, X_MOT1A, Y_MOT1A, Z_MOT1A	Header, 4-Pin	Header 4		11	BM	W61104-4404-AB	Digi-Key
E0_MS, E1_MS, E2_MS, X_MS, Y_MS, Z_MS	DIP Switch	SW DIP-3		6	Wurth Electronics Inc.	4.16131E+11	Digi-Key
EXP1, EXP2	Header, 5-Pin, Dual row	Header 5X2		2	BM	W61210-4404-AB	Digi-Key
EXP3	Header, 7-Pin, Dual row	Header 7X2		1	BM	2314-4121-1G	Digi-Key
F1, F2		Fuseholder - Mini ATC ATD 15A		2	MPD (Memory Protection Devices)	WK-6013	Digi-Key
FAN0, FAN1, HE0, HE1, HE2	Screw Terminal 3.5mm 2-Way	Screw Terminal 3.5mm 2-Way		5	Phoenix Contact	1751248	Digi-Key
HB-OUT, HB-PWR, MAIN-PWR	Screw Terminal 5mm 2-Way	Screw Terminal 5mm 2-Way		3	Phoenix Contact	1935776	Digi-Key
IC1	The high-performance, low-power Atmel 8-bit AVR RISC-based microcontroller	ATMEGA2560		1	Atmel	ATMEGA2560-16AU	Digi-Key
IC2	High Performance, Low Power USB2.0 AVR® 8-Bit Microcontroller	ATMEGA16U2-AU		1	Atmel	ATMEGA16U2-AU	Digi-Key
IC4		AOZ1282CI		1	Alpha & Omega Semiconductor Inc.	AOZ1282CI	Digi-Key
IC5	3.0 A, Step-Down Switching Regulator	LM2596		1	Texas Instruments	LM2596SE-ADJNCPB	Digi-Key
ISP1, ISP2	Header, 3-Pin, Dual row	Header 3X2		2	BM	W61206-4404-AB	Digi-Key
I2		USB connector		1	EDAC Inc.	4W0-005-299-043	Digi-Key
JAC, Thermistors	Header, 5-Pin, Dual row	Header 5X2		2	BM	W61210-4404-AB	Digi-Key
L1	MagneticCore Inductor with Winding Polarity Marking	Ferrite Bead SMD 0805	WE-CBF_0805 (WE-CBF)	1	Murata Electronics North America	BLM21PG2215N1D	Digi-Key
L3	MagneticCore Inductor with Winding Polarity Marking	Inductor SMD 33uH 1.2A	13uH	1	COILCRAFT	MSSA122-123MJB	Farnell
L4	MagneticCore Inductor with Winding Polarity Marking	Inductor SMD 47uH 1.8A	47uH	1	COILCRAFT	DD3314P-473MJD	Farnell
LD2, LD3, LD4, LD5, LD6, LD7, Power	Higher Bright Low Current LED OSRAM	GREEN		7	OSRAM Opto Semiconductors Inc.	LG R971-KN-1	Digi-Key
LED1, WX, TX	Higher Bright Low Current LED OSRAM	YELLOW		3	OSRAM Opto Semiconductors Inc.	LY R976-PS-36	Digi-Key
O1, O2, O3, O4, O5, O6		PSMN1RB-401LC		6	NXP Semiconductors	PSMN1RB-401LC_115	Digi-Key
R1, R9	Resistor	Res-0603-1M	1M	2	Tyago	RC0603FR-071MEL	Digi-Key
R2, R3, R6, R11, R12, R21, R23, R25, R27, R29, R45	Resistor	Res-0603-10K	10K	11	Tyago	RC0603FR-0710KL	Digi-Key
R4, R13, R14, R15, R16, R17, R18, R33, R36, R39, R50, R53, R55, R56	Resistor	Res-0603-1K	1K	14	Tyago	RC0603FR-071KL	Digi-Key
R5	Resistor	Res-0603-53.6K	53.6K	1	Tyago	RC0603FR-0753K6L	Digi-Key
R7, R8	Resistor	Res-0603-22R	22R	2	Tyago	RC0603FR-0722RL	Digi-Key
R22, R24, R26, R28, R30, R32, R35, R38, R44, R47, R49, R52	Resistor	Res-0603-100K	100K	12	Tyago	RC0603FR-07100KL	Digi-Key
R31, R34, R37, R46, R48, R51	Resistor	Res-0603-10R	10R	6	Tyago	RC0603FR-0710RL	Digi-Key
R40, R41, R42, R43, R54	Resistor	Res-0603-4K7	4.7K	5	Tyago	RC0603BR-074K7L	Digi-Key
R57	Resistor	Res-0603-BK66	6.66K	1	Tyago	RC0603FR-078K66L	Digi-Key
Reset		SW PB		1	Apem Inc.	WJTP11065A18	Digi-Key
V1, V2	Crystal Oscillator	16MHz		2	Abracore LLC	ABL-16.000BHZ-B2	Digi-Key
V1, F2	VARIABLE, CH0603 (VARIABLE)	VARIABLE	CC0603M/C-05E	2	Bourns Inc.	CC0603M/C-05E	Digi-Key