Microcontroller

Thermistors

Stepper Drivers

Endstops

MOSFET Outputs

I2C Encoders

Auxiliary IO

Power

USB Interface

Aus3D

$Vout = 1.23 \times (1 + R2/R1)$

Designator	Description	Comment	Value	Quantity	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
5V, 12V, FAN0_1, FAN1_1, PS_ON, PWR	Header, 2-Pin	Header 2		6	Loading...	Loading...	Digi-Key	3M9447-ND
5V_SEL, VFA0_sel, VFA1_sel, VHE2_sel, X+, X-, Y+, Y-, Z+, Z-	Header, 3-Pin	Header 3		10	Loading...	Loading...	Digi-Key	3M9448-ND
C1	Polarized Capacitor (Surface Mount)	CapE-6.3-47uF-50V	47uF 50V	1	Loading...	Loading...	Digi-Key	565-2251-1-ND
C2	Polarized Capacitor (Surface Mount)	CapE-6.3-100uF-16V	100uF 16V	1	Loading...	Loading...	Digi-Key	565-2204-1-ND
C3, C4, C5, C6, C7, C11, C13, C16, C18, C33	Capacitor (Semiconductor SIM Model)	CapC-0603-100nF	100nF	10	Loading...	Loading...	Digi-Key	311-1344-1-ND
C8, C14, C15, C19, C20	Capacitor (Semiconductor SIM Model)	CapC-0603-22pF	22pF	5	Loading...	Loading...	Digi-Key	478-6204-1-ND
C9, C12, C26, C27, C28, C29	Capacitor SMD Cer 1uF 10% 16V X7R 0603	approved sub OK	1µ	6	TDK Corporation	C1608X7R1C105K	Digi-Key	445-1604-1-ND
C21, C22, C23, C24, C25, C30, C31, C32	Polarized Capacitor (Surface Mount)	CapE-6.3-100uF-35V	100uF 35V	8	Loading...	Loading...	Digi-Key	PCES016CT-ND
D1, D6, D7	Default Diode	M4		3	Loading...	Loading...	Digi-Key	S1GFSCT-ND
D2, D3, D4	Default Diode			3	Loading...	Loading...	Digi-Key	CD1206-S01575CT-ND
D5	Default Diode	Diode MBRM140	MBRM140	1	Loading...	Loading...	Digi-Key	MBRM140T3GOSCT-ND
D8	Default Diode	Diode MURS320	MURS320	1	Loading...	Loading...	Digi-Key	MURS320-13FDICT-ND
D9, D10, D11, D12, D13, D14	Diode SMD 100V 1.5A SMA	100V: 1.5A	Vf = 1.15V @ 1.5A (Max)	6	Diodes Inc	S2BA-13-F	Digi-Key	S2BAFDICT-ND
E0, E1, E2, X, Y, Z		A4988BREAKOUT		6	Loading...	Loading...	Digi-Key	S7006-ND
E0_MOT, E1_MOT, E2_MOT, X_MOT, Y_MOT, Z_MOT	Screw Terminal 3.5mm 4-Way	ScrewTerminal-3.5mm-4Way		6	Loading...	Loading...	Digi-Key	277-5744-ND
E0_MOT_A, E1_MOT_A, E2_MOT_A, ENC_1, ENC_2, ENC_3, ENC_4, USB_H, X_MOT_A, Y_MOT_A, Z_MOT_A	Header, 4-Pin	Header 4		11	Loading...	Loading...	Digi-Key	3M9449-ND
E0_MS, E1_MS, E2_MS, X_MS, Y_MS, Z_MS	DIP Switch	SW DIP-3		6	Loading...	Loading...	Digi-Key	732-3853-1-ND
EXP1, EXP2	Header, 5-Pin, Dual row	Header 5X2		2	Loading...	Loading...	Digi-Key	3M9460-ND
EXP3	Header, 7-Pin, Dual row	Header 7X2		1	Loading...	Loading...	Digi-Key	3M15450-ND
F1, F2		Fuseholder - Mini ATC ATO 15A		2	Loading...	Loading...	Digi-Key	BK-6013-ND
FAN0, FAN1, HE0, HE1, HE2	Screw Terminal 3.5mm 2-Way	Screw Terminal 3.5mm 2-Way		5	Loading...	Loading...	Digi-Key	277-5719-ND
HB-OUT, HB-PWR, MAIN-PWR	Screw Terminal 5mm 2-Way	Screw Terminal 5mm 2-Way		3	Loading...	Loading...	Digi-Key	277-6405-ND
IC1	The high-performance, low-power Atmel 8-bit AVR RISC-based microcontroller	ATMEGA2560		1	Loading...	Loading...	Digi-Key	ATMEGA2560-16AUND
IC2	High Performance, Low Power USB2.0 AVR® 8-Bit Microcontroller	ATMEGA16U2-AU		1	Loading...	Loading...	Digi-Key	ATMEGA16U2-AU-ND
IC4	600mA, 500kHz Step-Down Switching Regulator in SOT-23	LT1933ES6		1	Loading...	Loading...	Digi-Key	LT1933ES6#TRPBFCT-ND
IC5	3.0 A, Step-Down Switching Regulator	LM2596		1	Loading...	Loading...	Digi-Key	296-35399-1-ND
ISP1, ISP2	Header, 3-Pin, Dual row	Header 3X2		2	Loading...	Loading...	Digi-Key	3M9459-ND
J2		USB conector		1	Loading...	Loading...	Digi-Key	151-1206-1-ND
JTAG, Thermistors	Header, 5-Pin, Dual row	Header 5X2		2	Loading...	Loading...	Digi-Key	3M9460-ND
L1	MagneticCore Inductor with Winding Polarity Marking	Ferrite Bead SMD 0805	WE-CBF_0805 (WE-CBF)	1	Loading...	Loading...	Digi-Key	490-1054-1-ND
L3	MagneticCore Inductor with Winding Polarity Marking	Inductor SMD 33uH 1.2A	33uH	1	COILCRAFT	MSS6122-123MLB	Farnell	####
L4	MagneticCore Inductor with Winding Polarity Marking	Inductor SMD 47uH 1.8A	47uH	1	COILCRAFT	DO3316P-473MLD	Farnell	####
LD2, LD3, LD4, LD5, LD6, LD7, Power	Hyper-Bright Low Current LED OSRAM	GREEN		7	Loading...	Loading...	Digi-Key	475-1410-1-ND
LED1, RX, TX	Hyper-Bright Low Current LED OSRAM	YELLOW		3	Loading...	Loading...	Digi-Key	475-2560-1-ND
Q1, Q2, Q3, Q4, Q5, Q6		PSMN1R8-40YLC		6	Loading...	Loading...	Digi-Key	568-10156-1-ND
R1, R9	Resistor	Res-0603-1M	1M	2	Loading...	Loading...	Digi-Key	311-1.00MHRDKR-ND
R2, R3, R6, R11, R12, R21, R23, R25, R27, R29, R45	Resistor	Res-0603-10K	10K	11	Loading...	Loading...	Digi-Key	311-10.0KHRCTND
R4, R13, R14, R15, R16, R17, R18, R33, R36, R39, R50, R53, R55, R56	Resistor	Res-0603-1K	1K	14	Loading...	Loading...	Digi-Key	311-1.00KHRCTND
R5	Resistor	Res-0603-30K	30K	1	Loading...	Loading...	Digi-Key	311-30.0KHRCTND
R7, R8	Resistor	Res-0603-22R	22R	2	Loading...	Loading...	Digi-Key	311-22.0HRCT-ND
R22, R24, R26, R28, R30, R32, R35, R38, R44, R47, R49, R52	Resistor	Res-0603-100K	100K	12	Loading...	Loading...	Digi-Key	311-100KHRCTND
R31, R34, R37, R46, R48, R51	Resistor	Res-0603-10R	10R	6	Loading...	Loading...	Digi-Key	311-10.0HRCT-ND
R40, R41, R42, R43, R54	Resistor	Res-0603-4K7	4.7K	5	Loading...	Loading...	Digi-Key	311-4.7KGRCT-ND
R57	Resistor	Res-0603-8K66	8.66K	1	Loading...	Loading...	Digi-Key	311-8.66KHRCTND
Reset		SW-PB		1	Loading...	Loading...	Digi-Key	679-2396-1-ND
Y1, Y2	Crystal Oscillator	16MHz		2	Loading...	Loading...	Digi-Key	535-9041-ND
Z1, Z2	VARISTOR_CN0603 (VARISTOR)	VARISTOR	CG0603MLC-05E	2	Loading...	Loading...	Digi-Key	CG060