

Gen7 Arm 2.0 Bill of Material

Designations	quantity	part #	Buy Source	description	each	extended	Remarks
ATX Power supply	1	generic	Amazon or ?	450 watt power supply	\$26.00	\$26.00	check 12V pin configuraton
stepper drivers	4	DRV8825 or A4988	Amazon or ?	stepper driver	\$4.00	\$16.00	adjust jumper M7581-05 count for steps desired, Heatsinks recommended
PCB Board	1	509	MG Chemicals	152 x 152 single sided	\$5.99	\$5.99	buy a pre-made PCB
Etch solution	1	415-1L	MG Chemicals	Ferric Chloride	\$14.00	\$14.00	observe safety practices
U7	1	MCP2200-I/SO	Mouser Electronics	USB-TTL adapter chip	\$2.12	\$2.12	
Bridge Wire	1	generic	find-salvage	60cm 0.56mm od wire	\$0.01	\$0.01	
R11, R12	2	OD100JE	Mouser Electronics	10 ohm resistors 1/4w	\$0.70	\$1.40	
R14,R19,R22	3	OD561JE	Mouser Electronics	560 ohm resistor 1/4w	\$0.70	\$2.10	
R2,R4,R6,R8,R10,R16,RT1	7	OD102JE	Mouser Electronics	1K ohm resistor 1/4w	\$0.61	\$4.27	
RT2	1	OD472JD	Mouser Electronics	4.7K ohm resistor 1/4w	\$0.70	\$0.70	
R1,R3,R30	3	OD103JE	Mouser Electronics	10K ohm resistor 1/4w	\$0.70	\$2.10	
R5,R7	2	OD105JE	Mouser Electronics	1M ohm resistor 1/4w	\$0.70	\$1.40	
D1,D2	2	1N4004	Mouser Electronics	Diode	\$0.18	\$0.36	
L1	1	77F100K-TR-RC	Mouser Electronics	Coil 10uH	\$0.24	\$0.24	
U6	1	ECS-120-32-4X	Mouser Electronics	Crystal 12 MHz	\$0.69	\$0.69	
C8,C9,C10,C11,C12, C13,C14,C16,C17,C19	10	FG16C0G1H104JNT06	Mouser Electronics	0.1uF Ceramic capacitor	\$0.83	\$8.30	
C3, C4	2	RCE5C1H220J0A20H03B	Mouser Electronics	22pF Ceramic capacitor	\$0.43	\$0.86	
LED2,LED5,LED6	3	WP710A10GD	Mouser Electronics	LED 3mm green	\$0.14	\$0.42	
LED3	1	WP710A10YD	Mouser Electronics	LED 3mm yellow	\$0.15	\$0.15	
RESET	1	MJTP1109	Mouser Electronics	Rest switch	\$0.71	\$0.71	
C2,C5,CT1,CT2	4	ECA-1EM100	Mouser Electronics	10uF Electrolytic Capacitor	\$0.20	\$0.80	these are 25VDC but can be up to 45VDC
C1,C6,C7	3	ECA-1EM101	Mouser Electronics	100uF Electrolytic Capacitor	\$0.25	\$0.75	
J20	1	M7581-05	Mouser Electronics	Jumper	\$0.11	\$0.11	
Fan Jumper	2	M7581-05	Mouser Electronics	Jumper	\$0.11	\$0.22	
J1...J12	6	M7581-05	Mouser Electronics	Jumper	\$0.11	\$0.67	
U2,U3,U4,U5	8	M20-7820842	Mouser Electronics	Pololu Headers	\$1.10	\$8.80	you want 8X8 pins
Q3	1	LP2950-33LPRE3	Mouser Electronics	3.3V voltage regulator	\$0.43	\$0.43	

Q4	1	2N7000	Mouser Electronics	60V Mosfet	\$0.37	\$0.37	
U1	1	DILB28P-223TLF	Mouser Electronics	28P DIP socket	\$0.92	\$0.92	300 mil wide version
main MCU	1	LPC1114FN28/102,12	Mouser Electronics	ARM Microcontroller	\$5.25	\$5.25	nearing end of life, buy a spare
Q1,Q2	2	IRLB8743PBF	Mouser Electronics	30V , 78A, Mosfet	\$1.14	\$2.28	buy a spare
Z_MIN, Y_MIN, X_MIN, TEMP_EXT, TEMP_BED, EXT_RESET	6	26-48-1025	Mouser Electronics	2 Pin male header	\$0.40	\$2.40	
Z_MIN, Y_MIN, X_MIN, TEMP_EXT, TEMP_BED, EXT_RESET	6	09-50-3021	Mouser Electronics	female 2 pin receptacle	\$0.11	\$0.66	
Z_MIN, Y_MIN, X_MIN, TEMP_EXT, TEMP_BED, EXT_RESET	12	08-50-0106	Mouser Electronics	crimp contacts for recept.	\$0.14	\$1.68	
X_MOT, Y_MOT, Z_MOT, E_MOT	4	22-23-2041	Mouser Electronics	4 Pin male header	\$0.23	\$0.92	
X_MOT, Y_MOT, Z_MOT, E_MOT	4	22-01-2041	Mouser Electronics	female 4 pin receptacle	\$0.20	\$0.80	may not need if supplied with motors
X_MOT, Y_MOT, Z_MOT, E_MOT	16	08-50-0030	Mouser Electronics	crimp contacts for recept.	\$0.03	\$0.48	may not need if supplied with motors
SPI1,SPI2	2	22-23-2061	Mouser Electronics	6 Pin male header	\$0.34	\$0.68	
SPI1,SPI2	2	22-01-2061	Mouser Electronics	female 6 pin receptacle	\$0.24	\$0.48	
SPI1,SPI2	12	08-50-0030	Mouser Electronics	crimp contacts for recept.	\$0.03	\$0.36	
CONN4	1	67068-7041	Mouser Electronics	USB-B connector	\$1.47	\$1.47	
HEATER_EXT	1	26-48-1025	Mouser Electronics	2 Pin male header	\$0.40	\$0.40	
HEATER_EXT	1	09-50-3021	Mouser Electronics	female 2 pin receptacle	\$0.11	\$0.11	
HEATER_EXT	2	08-50-0106	Mouser Electronics	crimp contacts for recept.	\$0.14	\$0.28	
HEATER_BED	1	691212710002	Mouser Electronics	Screw terminal 2 pin	\$1.28	\$1.28	
CONN2	1	15-24-4449	Mouser Electronics	Disk power header	\$0.72	\$0.72	
CONN3	1	39-28-8080	Mouser Electronics	ATX12V header 8 pin	\$1.42	\$1.42	power supply pin counts differ, check 12V pin config.
CONN1	1	39-28-1243	Mouser Electronics	ATX24 header	\$3.18	\$3.18	power supply pin counts differ

Complete total \$125.74