

Parts list for Leaf Robot Controller board Rev 3 board

Leafproject.org

1/14/10

PART ID	DESCRIPTION	SPECS or PART NUMBER	SOURCE	PRICE EACH	TOTAL
PCB	main printed circuit board		expresspcb.com or Alex Brown rbirac@cox.net	See Note 1 below	\$30.00
ADAPT	processor board	Adapt9S12DP256M0-M-M	technologicalarts.com	1 @ \$99.	\$99.00
USB	USB converter board	626-DLP-USB245M-G	mouser.com	1 @ \$25.	\$25.00
RG	Rate Gyro evaluation board OR Gyro Breakout board	ADXRS150EB ADXRS150	analog.com sparkfun.com	1 @ \$50. 1 @ \$65	\$50.00
ACC	dual accelerometer kit		Plans on website or: Alex Brown rbirac@cox.net	1 @ \$20.00	\$20.00
	modular phone jacks 4P4C		mouser.com 571-555980-1 jameco.com 852836 AMP/Tyco PN 555980-1	4 @ 0.72 20 @ 0.65	\$15.88
	modular phone jacks 6P6C		jameco.com 754902 AMP/Tyco PN 5555165-1	4 @ \$0.80	\$ 3.20
VR1	7808 voltage regulator	8V 1.5A TO-220	digikey.com 296-11109-5	1 @ \$0.81	\$ 0.81
VR2	7806 voltage regulator	6V 1.5A TO-220	digikey.com 497-1445-5-ND	1 @ \$0.65	\$ 0.65
VR3	78L05 voltage regulator	5V 100 ma TO-92	digikey.com 296-1365-1-ND	1 @ \$0.40	\$ 0.40
C2,13	VR input capacitors	0.33 uf 50 v	digikey.com P4599	10 for \$5.34 *	\$ 5.34
C3,4,14	VR output capacitors	0.1 uf 50 v	digikey.com P4593	10for \$1.29 *	\$ 1.29
	Heat Sinks		digikey.com HS104-2	2 @ 0.65	\$ 1.30
	50 pin headers for processor		digikey.com A26470-ND	2 @ 5.17	\$ 10.34
	socket for USB board	24 pin 0.6 inch	digikey.com A9424	1 @ 2.76	\$ 2.76
	socket for Analog gyro OR Header for Sparkfun	20 pin 0.3 inch 7 pin	digikey.com A9420 digikey.com S7005	1 @ 1.53 1 @ 0.61	\$ 1.53
	5 pin header for accel	(no longer used)			
	10 pin header for accel		digikey.com S7008-ND	1 @ 0.46	\$ 0.46
	Terminal block		digikey.com 281-1414-ND	1 @ 1.08	\$ 1.08
	header for SPI port	4 pins	digikey.com WM4202	1 @ 0.51	\$ 0.51
	header reset & Run/Prog	2 pins	digikey.com WM4200	3 @ 0.34	\$ 1.02
	program/run switch	SPDT	digikey.com EG2447-ND	1 @ 3.45	\$ 3.45
R5-12,18	resistors for analog inputs	2.7K 1/4 w	digikey.com OD272J	10 @ 0.42	\$ 4.20
C5-12,15	capacitors for analog inputs	0.012 uf 50 v	digikey.com P4583	10 for 0.75 *	\$ 0.75
R2,13-15	motor brakes & batt mon	47K 1/4 w	digikey.com OD473J	4 @ 0.42	\$ 1.68

R1	battery monitor resistor 1	10K 1/4 w	digikey.com OD103J	1 @ 0.42	\$ 0.42
D1	input blocking diode	5 a.	digikey.com SB520CT	1 @ 0.47	\$ 0.47
D2	battery monitor zener diode	10 v 1 w	digikey.com 1N4740ADICT-ND	1 @ 0.36	\$ 0.36
	Accel period set resistor	1.2M 1/4 w	digikey.com P1.2MBACT	10 @ 0.067	\$ 0.67
R16,17	I2C bus resistors	2.2K 1/4 w	digikey.com 2.2KQBK	5 @ 0.054 *	\$ 0.27
	Ext. power LED	optional. See note (2)	digikey.com L10005-ND	1 @ 1.09	\$ 1.09
R3	Ext. power LED resistor	300 ohm 1/4 w	digikey.com 300QBK	5 @ 0.054 *	\$ 0.27
	RC motor option header	4 pins (optional)	digikey.com WM6504	1 @ 0.43	\$ 0.43
	RC shorting jumpers	9 jumpers	digikey.com 929957-08	10 @ .31 (need 2)	\$ 3.12
	RC port option headers	7 of 3 pin	Digikey.com WM6503-ND	7 @ 0.38	\$ 2.66
				TOTAL (approx)	\$287

- Notes: (1) You need one PC board, but the minimum order from pcbexpress is two. \$56 each for 4. \$56 with solder mask and silk-screen in quantity 6. Or down to \$40 each in quantity 10. They are currently available from imrobotics.com. If not available there, email me to see if any are available (currently US\$30) Alex Brown at rbirac@cox.net
- (2) Indicator is optional. Example is shown (green panel mount unit). Change R3 as required if you choose another LED lamp.
- () Prices are likely to be obsolete but are still in the ballpark (at least as of Jan 2007.)
- () Ask the mail list if you can't find a part in stock.
- () This list should be suitable for any revision board. There should be no more than a few dollars worth of parts not used in any rev.

* minimum quantity includes spares

For info, contact: Alex Brown rbirac@cox.net