Noisebox rev3 materials list Vendor comparison

2016-08-01 John Sullivan

Color key: 1st choice

USD 1.00 = CAD 1.31 1st choice

#	Description	Quantity per inst.	DigiKey	Cost per unit	Cost per instrument	RobotShop	Cost per unit	Cost per instrument	Abra	Cost per unit	Cost per instrument	Adafruit	Cost (USD)	Cost (CAD)	Other	Item	Cost	Quantity in lab	Notes	Use
Processing																				
1	Raspberry Pi 3	1	1690-1000-ND	CAD 67.54		RB-Ras-12	CAD 51.99	CAD 51.99	RASPBERRY F	CAD 62.71		3055	USD 39.95	CAD 52.32				0	Adafruit out of stock	Core processor
2	Teensy 3.2	1	1568-1231-ND	CAD 31.99		RB-Pir-04	CAD 25.38	CAD 25.38	TEENSY-3.2	CAD 29.33		2756	USD 19.95	CAD 26.13				2		Sensor processing and filtering
3	Battery 5V 2.4A	1	n/a			n/a			BAT-PB-01	CAD 39.94	CAD 39.94	n/a			Amazon.ca	RAVPower 6:	CAD 20.79	4	Have at least 4 at IDMIL... enough to start	Wireless power supply
4	Sensor I/O cape	1	n/a			n/a			n/a						Pi Muxi Contilvan			Ivan		Sensor I/O
5	WiFi dongle	1	1528-1439-ND	CAD 16.99		RB-Ada-67	CAD 15.32		PI-WIFI-M	CAD 10.57	CAD 10.57	814	USD 11.95	CAD 15.65				4		Wireless communication
6	microSD card 8gb	1	P17033-ND	CAD 14.72					BBB-8GB-10	CAD 13.93	CAD 13.93	1294	USD 9.95	CAD 13.03				1		RPi storage
Sensors and controls																				
7	Buttons - mom (power)	1	EG1900-ND	CAD 2.73					PBS-33MM-B	CAD 2.09	CAD 2.09							0	DigiKey unit cost: 2.73	RPi soft shutdown
8	LED - Power (Blue)	1							LED-5B	CAD 1.11	CAD 1.11									Power indicator (optional)
9	Switch - Power	1							COM-11155	CAD 2.10	CAD 2.10									Power supply switch (after soft shutdown)
10	Buttons (voice on - grn)	1	EG1930-ND	CAD 5.46		RB-Spa-674	CAD 2.50	CAD 2.50	COM-90341	CAD 2.73		1504	USD 0.95	CAD 1.24				0	Also black and yellow from Adafruit	Voice(s) on
11	Buttons (voice off - red)	1	EG1930-ND	CAD 5.46		RB-Spa-324	CAD 2.50	CAD 2.50	COM-09336	CAD 2.73		1445	USD 0.95	CAD 1.24				0		Voice(s) off
12	Linear SoftPot - 200mm	1	905-1051-ND	CAD 16.66	CAD 16.66				SEN-08679	CAD 30.73								0		Dynamic pitch control
13	Analog accelerometer	1	1568-1044-ND	CAD 21.13		RB-Ite-11	CAD 3.77	CAD 3.77	SENS-33	CAD 11.19		163	USD 14.95	CAD 19.58				0		Motion acquisition
14	Knob (volume)	1	PDB182-E420K-	CAD 2.70	CAD 2.70													4	50K double stack / not currently in stock... check part #.	Volume knob
Sound output																				
15	USB sound card	1							1475-ADA	CAD 6.93	CAD 6.93	1475	USD 4.95	CAD 6.48				4		Audio I/O
	OPTION 1																			
16	Stereo Class-D amp	1	1528-1380-ND	CAD 12.65		RB-Dfr-419	CAD 7.56	CAD 7.56	1552-ADA	CAD 13.93		987	USD 8.95	CAD 11.72				2	Ref: https://goo.gl/4Ec353	Audio amplifier
17	Speaker 4Ω 3W	2	n/a						1314-ADA	CAD 2.73	CAD 5.46	1314	USD 3.90	CAD 5.11	Addison			3	Unit cost: USD 1.95	Audio output
18	3.5mm TRS male	1							867-ADA	CAD 4.13	CAD 4.13	876	USD 2.95	CAD 3.86	Addison			0		Audio cable - sound card to amp
	OPTION 2																			
19	USB powered speakers	1							1363-ADA	CAD 13.93		1363	USD 9.95	CAD 13.03				0		Sound output
Hardware, cables, accessories																				
20	Acrylic housing	1													Ivan			Ivan		Instrument body
21	USB cable panel mount	1	SC1837-ND	CAD 17.61					937-ADA	CAD 5.53	CAD 5.53	937	USD 3.95	CAD 5.17				0		Panel mount battery charging port
22	Ethernet cable panel mount	1	EHRJ45P6S-ND	CAD 14.67					909-ADA	CAD 6.85	CAD 6.85	909	USD 4.95	CAD 6.48				0		Panel mount ethernet port
23	Protoboard (3pk)	1							571-ADA	CAD 5.83	CAD 5.83	571	USD 12.50	CAD 16.37				2/0	*3 pack from Abra 17.50	Wiring hub
24	headers male 1x40 (10pk)	3				RB-Cyt-53	CAD 2.31	CAD 0.69	SH-2	CAD 2.91								0	RS = 10 pack; Abra unit price = .97	Wiring connections
25	headers female 1x40 (1pk)	1				RB-Cyt-58	CAD 0.44	CAD 0.44	FH-1	CAD 0.97								0	1-pack: order multiples	Wiring connections - Teensy
26	headers female 2x20 (1pk)	1				RB-Ada-27	CAD 3.78		1037-POLOLU	CAD 1.75	CAD 1.75							0	RobotShop = 5 pack; Abra = 2x20 block	RPi to cape connector
27	Button quick connect wires (5pk)	1							1152-Ada	CAD 6.93	CAD 6.93	1152	USD 4.95	CAD 6.48						Button wiring connectors
28	JST connectors	4	455-2247-ND	CAD 2.9					PRT-09749	CAD 1.53	CAD 6.12								Unit price (Abra): $1.53	Button wire to protoboard
29	2.5mm standoffs (4pack set)	1							1952P	CAD 1.95	CAD 1.95	2336	USD 1.50	CAD 1.96	optional				***MUST BE 2.5M not 3M	Mounting hardware
30	M2.5 spacers (25pk)	4							1975P	CAD 2.09									multipack	Mounting hardware
31	M2.5 Machine hex nut (25pk)	4							1967P	CAD 1.39									multipack	Mounting hardware
32	M2.5 Machine screw (25pk)	4							1968P	CAD 1.39									multipack	Mounting hardware
33	LED holder	1							LMH-1	CAD 0.15	CAD 0.15								multipack	Mounting hardware

* Should get M2.5 screws 20mm