

QuickBot Parts List For Control of Mobile Robots MOOC 2014

Part	Name	Quantity	Price Per Unit	Discount	Discounted Price Per Unit	Total Part Cost	Vender Link	Octopart Link
Jumper Wires M/M	Breadboard jumper wire 75pcs pack	1	\$ 5.29	0%	\$ 5.29	\$ 5.29	Amazon	
Wifi	Compact USB Wi-Fi Adapter with 4" Antenna	1	\$ 12.95	0%	\$ 12.95	\$ 12.95	Logic Supply	
5V Regulator	LDO Voltage Regulators 5.0V 3.0A Positive - LD1085V50	1	\$ 1.55	0%	\$ 1.55	\$ 1.55	Mouser Electronics	http://octopart.com/ld1085v50-stmicroelectronics-526931
Cap 100uF	Electrolytic Capacitors - Leaded 100uF 25V	1	\$ 0.09	0%	\$ 0.09	\$ 0.09	Mouser Electronics	http://octopart.com/uvz1e101med1du-nichicon-20066781
Cap 10uF	Electrolytic Capacitors - Leaded 10uF 16V	1	\$ 0.08	0%	\$ 0.08	\$ 0.08	Mouser Electronics	
Cap 0.1uF	Ceramic Capacitors - Leaded 0.1uF 50V	1	\$ 0.10	0%	\$ 0.10	\$ 0.10	Mouser Electronics	http://octopart.com/sr205e104mar-avx-144385
Diode	Rectifier diode 1N4007	1	\$ 0.14	0%	\$ 0.14	\$ 0.14	Mouser Electronics	http://octopart.com/1n4007-fairchild-semiconductor-13146182
Resistor 20K	Resistors - Through hole 1/4W 20k ohm	7	\$ 0.06	0%	\$ 0.06	\$ 0.42	Mouser Electronics	http://octopart.com/mf1%2F4dct52a1002f-koa+speer-10683051
Resistor 10K	Resistors - Through hole 1/4W 10k ohm	7	\$ 0.06	0%	\$ 0.06	\$ 0.42	Mouser Electronics	http://octopart.com/mf1%2F4dct52a1002f-koa+speer-19664001
Micoprocessor	BeagleBone Black	1	\$ 44.95	10%	\$ 40.46	\$ 40.46	SparkFun	http://octopart.com/bb-bbkl-000-circuitco+electronics-26478322
Power Jack	DC Barrel Jack Adapter - Female	2	\$ 3.00	10%	\$ 2.70	\$ 5.40	SparkFun	http://octopart.com/l5-00015-osepp-30569370
Battery Holder	Battery Holder - 4xAA Square	1	\$ 2.50	10%	\$ 2.25	\$ 2.25	SparkFun	
Chassis Kit	Magician Chassis	1	\$ 14.95	10%	\$ 13.46	\$ 13.46	SparkFun	
Encoder	RedBot Wheel Encoder	1	\$ 10.00	10%	\$ 9.00	\$ 9.00	SparkFun	http://octopart.com/gre1113gr-fairchild-semiconductor-13127886
Mini Breadboard	Breadboard - Mini Modular (White)	1	\$ 3.95	10%	\$ 3.56	\$ 3.56	SparkFun	http://octopart.com/prt_brd_white_j1-mcm+electronics-29384911
Medium Breadboard	Breadboard - Self-Adhesive (White)	1	\$ 4.95	10%	\$ 4.46	\$ 4.46	SparkFun	
Jumper Wires M/F	Jumper Wires Premium 6" M/F Pack of 10	1	\$ 3.95	10%	\$ 3.56	\$ 3.56	SparkFun	
Mounting Screws (long)	Screw - Phillips Head (1/2", 4-40, 10 pack)	2	\$ 1.50	10%	\$ 1.35	\$ 2.70	SparkFun	
Mounting Screws (short)	Screw - Phillips Head (1/4", 4-40, 10 pack)	2	\$ 1.50	10%	\$ 1.35	\$ 2.70	SparkFun	
Mounting Nuts	Nut - Metal (4-40, 10 pack)	2	\$ 1.50	10%	\$ 1.35	\$ 2.70	SparkFun	
Motor Controller	H-Bridge Motor Driver 1A	1	\$ 2.35	10%	\$ 2.12	\$ 2.12	SparkFun	http://octopart.com/sn754410ne-texas+instruments-1320
Heatsink	Heatsink TO-220	1	\$ 0.90	10%	\$ 0.81	\$ 0.81	SparkFun	http://octopart.com/577102b00000g-aavid+thermalloy-120590
Switch	Rocker Switch - SPST (right-angle)	1	\$ 0.95	10%	\$ 0.86	\$ 0.86	SparkFun	
IR Sensor	Infrared Proximity Sensor Short Range	5	\$ 14.00	10%	\$ 12.60	\$ 63.00	SparkFun	http://octopart.com/gp2y0a41sk0f-sharp+microelectronics-8060070
IR Connector	JST Jumper 3 Wire Assembly	5	\$ 1.50	10%	\$ 1.35	\$ 6.75	SparkFun	
IR Brackets	Angle Bracket - 4-40	10	\$ 0.45	10%	\$ 0.41	\$ 4.05	SparkFun	

QuickBot Total (w/ IR Sensors)	20	\$ 188.85
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Batteries

Recharable Batteris	AmazonBasics 8 Pack AA Ni-MH Rechargeable Batteries	1	\$ 18.17	0%	\$ 18.17	\$ 18.17	Amazon	
Recharable Battery Charger	EBL 808A 8 Bay AA AAA Battery Charger for Ni-MH Ni-Cd	1	\$ 9.99	0%	\$ 9.99	\$ 9.99	Amazon	

Batteries Total	2	\$ 28.16
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Tools

Needlenose pillars	Stanley 84-096 5-Inch Needle Nose Plier	1	\$ 4.00	0%	\$ 4.00	\$ 4.00	Amazon	
Soldering Iron	Dr. Meter™ 60 Watts High-performance Soldering Iron	1	\$ 9.00	0%	\$ 9.00	\$ 9.00	Amazon	
Solder	Lead-Free Solder 5" Roll - LF-99	1	\$ 4.00	0%	\$ 4.00	\$ 4.00	Amazon	
Wire cutters	Feibao tools Wire Cutter Plier Yellow 4.5 Inch 125 Mm	1	\$ 6.50	0%	\$ 6.50	\$ 6.50	Amazon	
Eletrical tape	Eletrical tape	1	\$ 0.95	10%	\$ 0.86	\$ 0.86	SparkFun	

Tools Total	5	\$ 24.36
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Misc.

SD card	Sandisk 4GB MicroSDHC Memory Card with SD Adapter	1	\$ 6.50	0%	\$ 6.50	\$ 6.50	Amazon	http://octopart.com/102-adafruit+industries-28107416
DC Power Supply	Wall Adapter Power Supply - 5V DC 1A	1	\$ 5.95	10%	\$ 5.36	\$ 5.36	SparkFun	http://octopart.com/276-adafruit+industries-29094024
Micro-HDMI Cable	Micro-HDMI to HDMI Socket Adapter Cable	1	\$ 6.95	0%	\$ 6.95	\$ 6.95	Adafruit	http://octopart.com/1358-adafruit+industries-32978384
Ethernet Cable	CAT5 3 ft	1	\$ 1.55	0%	\$ 1.55	\$ 1.55	Amazon	
DC Barrel Jack Plug	DC Barrel Jack Plug - Male	1	\$ 0.76	10%	\$ 0.68	\$ 0.68	SparkFun	http://octopart.com/1328-adafruit+industries-32978357
DC Wall Power Supply	Wall Adapter Power Supply - 12VDC 1A	1	\$ 1.46	0%	\$ 1.46	\$ 1.46	Amazon	
Multimeter	Digital Multimeter	1	\$ 11.46	10%	\$ 10.31	\$ 10.31	SparkFun	

Misc Total	7	\$ 32.81
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Substitutions

Chassis Kit	Magician Chassis	1	\$ 14.95	0%	\$ 14.95	\$ 14.95	Zagros Robotics	
Micoprocessor	BeagleBone Black	1	\$ 45.00	0%	\$ 45.00	\$ 45.00	Adafruit	http://octopart.com/bb-bbkl-000-circuitco+electronics-26478322
DC Power Supply	5V 2A (2000mA) switching power supply	1	\$ 9.95	0%	\$ 9.95	\$ 9.95	Adafruit	http://octopart.com/276-adafruit+industries-29094024
DC Barrel Jack	2.1mm DC Barrel Jack to Alligator Clips	2	\$ 1.95	0%	\$ 1.95	\$ 3.90	Adafruit	http://octopart.com/1328-adafruit+industries-32978357
Breadboard	Tiny breadboard	2	\$ 4.00	0%	\$ 4.00	\$ 8.00	Adafruit	http://octopart.com/65-adafruit+industries-25729769
Jumper Wires M/F	Phantom YoYo 40P dupont cable 200mm male to female	1	\$ 5.69	0%	\$ 5.69	\$ 5.69	Amazon	
Diode	Diode rectifier 1N4001	1	\$ 0.15	10%	\$ 0.14	\$ 0.14	SparkFun	http://octopart.com/1n4001-tg-micro+commercial-730241
Capacitor	Capacitor Ceramic 0.1uF	1	\$ 0.25	10%	\$ 0.23	\$ 0.23	SparkFun	http://octopart.com/c320c104m5u5ta-kemet-97644
Capacitor	Capacitor Electrolytic 10uF	1	\$ 0.45	10%	\$ 0.41	\$ 0.41	SparkFun	http://octopart.com/ece-a1eks100-panasonic+-+ecg-210015
Capacitor	Capacitor Electrolytic 100uF	1	\$ 0.35	10%	\$ 0.32	\$ 0.32	SparkFun	http://octopart.com/eeu-fc1e101s-panasonic+-+ecg-207794
Jumper wires M/M	Jumper Wires Premium 6" M/M Pack of 10	2	\$ 3.95	10%	\$ 3.56	\$ 7.11	SparkFun	
Jumper Wires M/M	Jumper Wires Standard 7" M/M Pack of 30	1	\$ 4.95	10%	\$ 4.46	\$ 4.46	SparkFun	
Batteris	1500 mAh Alkaline Battery - AA	8	\$ 0.50	10%	\$ 0.45	\$ 3.60	SparkFun	
Lipo Battery	Turnigy 1000mAh 3S 25C Lipoly Battery	1	\$ 6.16	0%	\$ 6.16	\$ 6.16	HobbyKing	
Battery Connector	JST connector	1	\$ 0.46	0%	\$ 0.46	\$ 0.46	Amazon	
Lipo Charger	iMAX B4 Compact 35W 4A Auto Balance Charger 2~4S Lip	1	\$ 11.25	0%	\$ 11.25	\$ 11.25	HobbyKing	
Lipo Charger Power Supply	12v 6a Adapter Power Supply	1	\$ 8.00	0%	\$ 8.00	\$ 8.00	Amazon	
SD card	SD/MicroSD Memory Card (4 GB SDHC)	1	\$ 7.95	0%	\$ 7.95	\$ 7.95	Adafruit	http://octopart.com/102-adafruit+industries-28107416