

CLASS: 1MCT2
NAME: Vandendriessche
FIRSTNAME: Manu
Assembly Name : Self Navigating Vacuum Cleaner
Assembly Revision : 2
Approval Date : _____
Part Count : 14
Total Cost : €193

Part #	Part Name	Description	Revision	Qty
1	Raspberry Pi 4	Raspberry Pi to control the entire system	1	1
2	Breadboard	A breadboard is for prototyping circuits.	1	1
3	Jumper cables	To connect everything	1	2
4	HC-SR04	Measures distances	1	1
5	Car vacuum cleaner	Used for the motor	1	1
6	Furniture casters	Used as front wheel	1	1
7	Zeee 3S LiPo Batterij 11,1 V 25 C 1300 mAh	Used to power HC-SR04, vacuum motor and motors	1	1
8	Push switches	Used to turn Pi on and off	1	1
9	Lipo battery charger	To charge the Lipo battery	1	1
10	Toggle switch	To turn the battery on and off	1	1

11	L298N driver module dual H-bridge stepper motor controller with DC motor and smart car wheel	Motors, Wheels and driver for the vacuum cleaner	1	1
12	DC buck converter	To step down 12v to 5v	1	1
13	HW-201	Infrared module	1	1
Total			14	14

Picture of Assembly



Supplier	also available from	Units	Unit Cost
cpc.com.nl/Raspberry-Pi-4595-Model-4GB/dp/B08HJ5cbDmp8HeNqrd_fR-kd9G3JpHPYcY		1	€ 66,89
cpc.com.nl/400-punt-breadboard-v		1	€ 3,99
cpc.com.nl/40-colored-male-female-jur		2	€ 9,47
cpc.com.nl/dp/B07XF4815H?psc=1&ref=ppx_yo2Nbo00C2tAuesTVEZTGfh3VC		5	€ 8,68
cpc.com.nl/dp/B0BPY4BPZX?psc=1&ref=ppx_yo2draadloos/930000015323426		1	€ 12,98
cpc.com.nl/dp/B0BY5H87QH?psc=1&ref=ppx_yo2pgok70RnSlx3dNk9T2qfFSpAJ		8	€ 10,21
cpc.com.nl/dp/B09JCBCMLF?psc=1&ref=ppx_yo2ducts/zeee-3s-lipo-battery-1300		1	€ 21,00
cpc.com.nl/dp/B09BMRDPTN?ref=ppx_yo2ov_dt_online.com/web/p/push-button-sw		5	€ 6,99
cpc.com.nl/dp/B09ZQPTVB5?ref=ppx_yo2ov_dt_warehouse=CN&createTmp=1		1	€ 16,34
cpc.com.nl/dp/B07ZTJNRXT?ref=ppx_yo2ov_dt_online.com/web/p/toggle-switch		5	€ 7,90

.be/dp/B07ZT5CCFV?psc=1&ref=ppx_yo2ov_dt_b_product_details	4	€	14,99
verters/buck-(step-down)-converters/dc-dc-sb-oplaadmodule-dc-dc-step-d	1	€	3,00
nl/nl/infrarood-obstakel-vermijdingsmodule-hw-140567777.html	1	€	1,50

Max Cost	Real Cost
€ 66,89	
€ 3,99	
€ 18,94	
€ 8,68	
€ 12,98	
€ 10,21	
€ 21,00	
€ 6,99	
€ 16,34	
€ 7,90	

€ 14,99

€ 3,00

€ 1,50

€ 193,41