

Component List: IoT based robot cleaner.

1. **Wires (Various Colors):** For connecting all the electronic components.
2. **Switch (On/Off):** A small red rocker switch for power control.
3. **IR Sensor (x1):** An infrared sensor module, likely used for obstacle detection or edge detection.
4. **IRFZ44 Motor Speed Controller:** An IRFZ44N MOSFET likely used in a motor speed control circuit.
5. **ESC/Servo Tester:** Electronic Speed Controller (ESC) for the BLDC motor. The "Servo Tester" part of the label might indicate it's also capable of testing servos, but its primary use here is likely for controlling the BLDC motor.
6. **3s2p Battery Pack (11.20 Volt):** A lithium-ion or lithium-polymer battery pack, providing power to the robot.
7. **LM2596 Buck Converter:** A DC-DC step-down converter to regulate voltage for certain components.
8. **HC-05 Bluetooth Module:** For wireless communication and control via a smartphone app.
9. **10K Potentiometer:** Likely used for adjusting sensitivity or other parameters.
10. **Ultrasonic Sensor (x3):** HC-SR04 ultrasonic distance sensors, used for obstacle detection (left, right, and front).
11. **DC Mini Voltmeter:** A small digital voltmeter to display battery voltage.
12. **1N4007 Diode (x1):** A general-purpose rectifier diode, often used for reverse polarity protection or flyback suppression.
13. **Circular Base Plates (2):** One for the bottom chassis and one for the top cover.
14. **Central Cylindrical Housing:** A black cylindrical piece, likely a PVC pipe or 3D printed part, used to house the fan and motor.
15. **Bo Motor and Wheel (x2):** Yellow wheels with black rubber tires attached to small yellow gear motors (often called BO motors or geared DC motors).
16. **Castor Wheel (x1):** A small, omnidirectional wheel, possibly a ball castor, used for stability and smooth movement.

17. **DC Motor (x2):** Smaller silver-colored DC motors, likely for the side brushes.
18. **Small Plastic Container (Dustbin):** A clear plastic container with a yellow lid, modified to act as a dust collection bin.
19. **PC Cooling Fan:** A standard computer cooling fan.
20. **BLDC Motor (A2212/6T 2200KV):** A brushless DC motor, mounted inside the fan housing for suction.
21. **Fan Blades:** The blades from the PC cooling fan (re-used or new).
22. **Side Brushes (x2):** Red plastic hubs with blue bristles, resembling typical robot vacuum side brushes.
23. **Buzzer:** A small black cylindrical component for audible alerts.
24. **Red and Green LEDs:** For status indication.