

## ProtoBot parts list:

- 2 x <u>N20 Gear motors</u> (300RPM, 12V)
- Plastic Wheels (39mm dia, for D type axle Enough for 5 robots)
- <u>Tactile Switches</u> (Bump Sensors, Enough for 5 robots)
- <u>L293D Motor Driver IC</u> (Enough for 10 robots)
- Wires (Female to female jumper wires Enough for 4 robots)
- Headers (For use with the jumper wires)
- <u>9V battery Clips</u> (Enough for 10 robots)
- <u>10K resistors</u> (Enough for 25 robots)
- <u>220 Ohm resistors</u> (enough for 50 robots)
- Arduino Nano (ATEMGA328P module, *not* interface base module)
- Reflective IR optical sensor (Enough for 5 robots)
- <u>Female header pins</u> (Not entirely necessary, but nice for battery connections + to make the Arduino Nano removeable)
- PCBs Gerber, SVG, and PDF available on the GitHub
- 3D printed parts Base and Antenna, available on the Github

## Notes:

- Quantities listed above are for a total of 1 complete ProtoBot. You will have extra parts left over, though.
- Most of the items on eBay are from China, free EPacket shipping, which will take as much as 2 months to get to people in the USA (3 months, in extreme cases)
- For my PCBs, I use a PCB prototyping service, <u>PCBway.com</u>. So far, they seem to produce decent PCBs at a very low cost.

From the ProtoBots Github: <a href="https://github.com/Bobcatmodder/ProtoBots">https://github.com/Bobcatmodder/ProtoBots</a>



This work is licensed under a Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <a href="http://creativecommons.org/licenses/by/4.0/">http://creativecommons.org/licenses/by/4.0/</a> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.