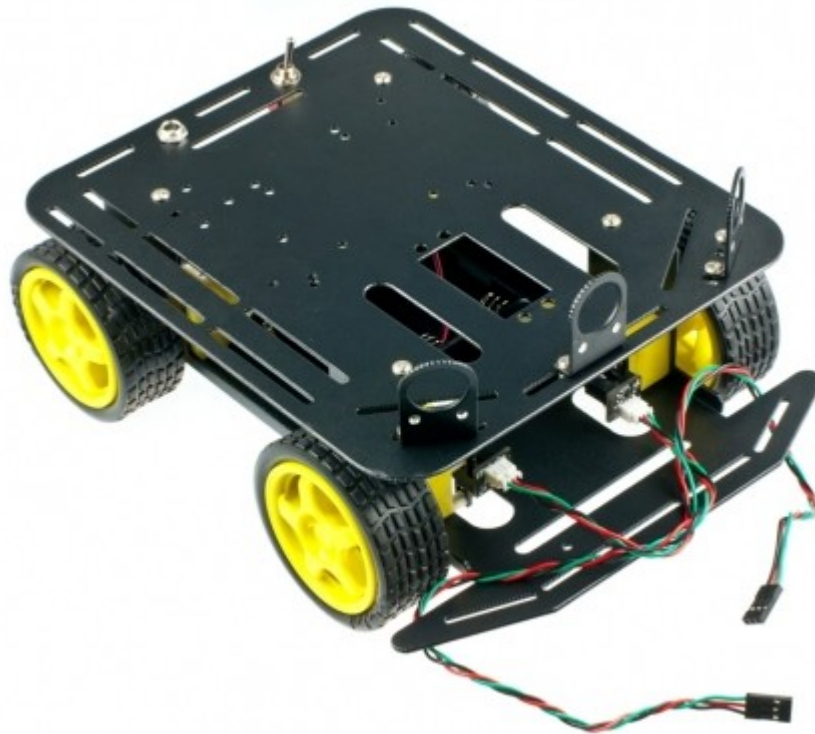


RB-Dfr-67

DFRobot 4WD Arduino-Compatible Platform w/Encoders



Introduction

The DFRobot 4WD Arduino-Compatible Platform w/Encoders is widely used on the world's self-developed control panel platform. This drive method has a strong obstacle and climbing ability with high strength aluminum alloy body. It features thick acrylic material to eliminate the heavy, fragile thin acrylic material defects. The powerful motor performance, flexible and rapid movement is especially suitable for outdoor grass, gravel, sand, or slope pavement.

It is very useful for robot competitions and other research projects. Its car mounting holes is compatible with a variety of sensors. There is enough space within the car to install the battery. It is made with the consideration to facilitate the future expansion of PTZ cameras or more degrees of freedom manipulator. This platform comes with two sets of encoder can be precise control of the car trip, and the closed-loop PID control.

Features

- Compatible with Hitec 311,422 servo and Pan/Tile Kit
- Compatible GP2D12 sensor installation
- Infrared sensors switch installed
- Look for line sensor installation
- URM37 ultrasonic sensor
- Compatible with standard sensor bracket on the HCR and standard head bracket

Specification

- Voltage: +4.5 to 6V
- Current: 1200mA load
- Motor type: 130
- Rotational Speed: 10000 r / min
- Gearbox reduction ratio: 1:120
- Maximum speed: 68cm / s
- Wheel diameter: 65mm
- Dimensions: Length 230mm Width 185mm high 110mm
- Weight: 614 grams (without batteries)
- Maximum load: 800g

Shipping List

- Body structural parts - 1 set
- High-quality rubber wheels - 4
- Micro Gear Motor - 4
- Encoder Kit - 1 set
- Power Switch - 1
- Charging port - 1
- Installation Line 1 above
- Cylinders - 4
- Mounting screw - 1 bag
- Infrared proximity switch mounting bracket – 3

Tutorial

Introduction

Robot Kit Review Score						
Quality	Features	Usability	Scalability	Support	Skill Level	Overall
5	5	5	3	4	3	4.17
(5 excellent, 4 above average, 3 average, 2 below average, 1 poor)						
(5 custom, 4 advanced, 3 intermediate, 2 beginner, 1 introductory)						

We initially looked into the DFRobot 4WD Arduino Mobile Platform because of its low cost and feature set. Ultimately we chose another product instead. However, after doing an extensive review of this product we realized that we made the wrong choice!

Once we received the DF Robot 4WD Arduino Mobile Platform we quickly opened up and began the review process. What we noticed right away when we opened the the kit that it had NO INSTRUCTIONS. We were a bit thrown back because every kit we have ever used came with instructions. Needless to say - we found that the reason why was because the the kit was so straight forward one could do without them.

Yet another thing we noticed is how much this platform resembled another platform we have worked on (Lynxmotion). The kit is comes with solid components and is easy to put together.

Overview

The DFRobot 4WD Arduino Mobile Platform provides a 4 wheel drive system complete with 4 DC Motors. The DC Motors are not your typical robotic actuators. Rather, they are basic DC motors that can be picked up at your local Radio Shack for a few bucks a pop!

DFRobot 4WD Arduino Mobile Platform Features

- 4WD Arduino mobile robot development platform
- 4 high-quality micro-speed motor
- Electrical supply voltage: 3 ~ 12V
- Complete chassis with mounting hardware
- Variety of sensors can be added

DFRobot 4WD Arduino Mobile Platform Specification

- 4WD Mobile platform Motors: 3-12V DC
- Speed: 90cm/s
- Dimensions: 200mm x 170mm x 105mm

DFRobot 4WD Arduino Mobile Platform Motor Specification

- Gear Ratio 1:120
- No-load speed(3V):100RPM
- No-load speed(6V):200RPM
- No-load current(3V):60mA
- No-load current(6V):71mA
- Stall current(3V):260mA
- Stall current(6V):470mA
- Torque (3V): 1.2Kgcm
- Torque (6V): 1.92Kgcm
- Size: 55mm x 48.3mm x 23mm
- Weight:45g

Assembly and Construction

To make this part as easy and straight forward as possible we have recorded a multi-part step by step video of how to assembly and work with the DFRobot 4WD Arduino Mobile Platform.

Support

We gave DFRobot a 4 for support. One of the main reasons is because we have never needed any with their products. Imagine that. A product that does not require support. We would have given them a 5 but we did not have the instructions included in the kit. Even though the kit was easy to build - we think it would have been a good idea to have the assembly instructions included. More specifically when it came time to wire up the unit to the DFRobot Arduino Romeo microcontroller. It was straight forward for us to assembly - but may not be to the typical consumer.

Conclusion

Overall this is a great kit to get started with. This kit can be used by beginners to advanced users. We truly thought the quality of the construction of the kit was superb. Especially for the price. You just can't beat it! We have yet to find any other robotic platform on the market that is as good and broad as this one for the money.

There are some some snags along the way you may encounter. Here is just a few of the "snafoos" we found:

- Missing Assembly Guide
- Wiring the DC Motors
- Wiring the DC Motors to the DFRobot Arduino Romeo
- Mounting the DFRobot Arduino Romeo to the chassis

Thats about it. We recommend this kit as a good all around kit to be used indoors only.