(https://www.dfrobot.com/product-426.html)

Introduction

4WD MiniQ mobile robot (https://www.dfrobot.com/product-426.html) is especially designed for learning purpose. It comes fully assembled and all your need is a PC with Arduino IDE and 4xAA battery.

This upgraded version of MiniQ 4WD Kit comes with new Arduino Leonardo controller (ATmega32u4) but also integrates such modules as 1 RGB LED, photosensitive diode, 2 infrared trasmitter, 1 infrared receiver, 5 infrared line tracking sensor (https://www.dfrobot.com/category-58.html), two light sensors, 5 buttons and 1 buzzer.

MiniQ 4WD offers 8 lessons for beginners ,from entry to hunting the line,obstacle avoidance, remote control. Users can easily grasp through the tutorial.

Code package (https://github.com/Arduinolibrary/Source/blob/master/Code.rar?raw=true) download, tutorial (https://github.com/Arduinolibrary/Source/blob/master/Tutorial pdf.rar?raw=true) download.

- lesson1.Get you to know Your Robot
- lesson2.Control Buzzer
- lesson3.Light Direction Indication
- lesson4.Line_follow
- lesson5.RGB LED
- lesson6.Obstacle Avoidance
- lesson7.Encoder
- lesson8.IR Remote Control

Specification

- Controller: Atmega32U4(Arduino Leonardo)
- Power Supply: 4x AA batteries or Micro-USB
- Working Voltage: 4.5 to 6V
- Driving Mode: 4WD
- Max Speed: 79cm/s
- Size: 115x110x45mm
- Weight:400g

Layout Introduction
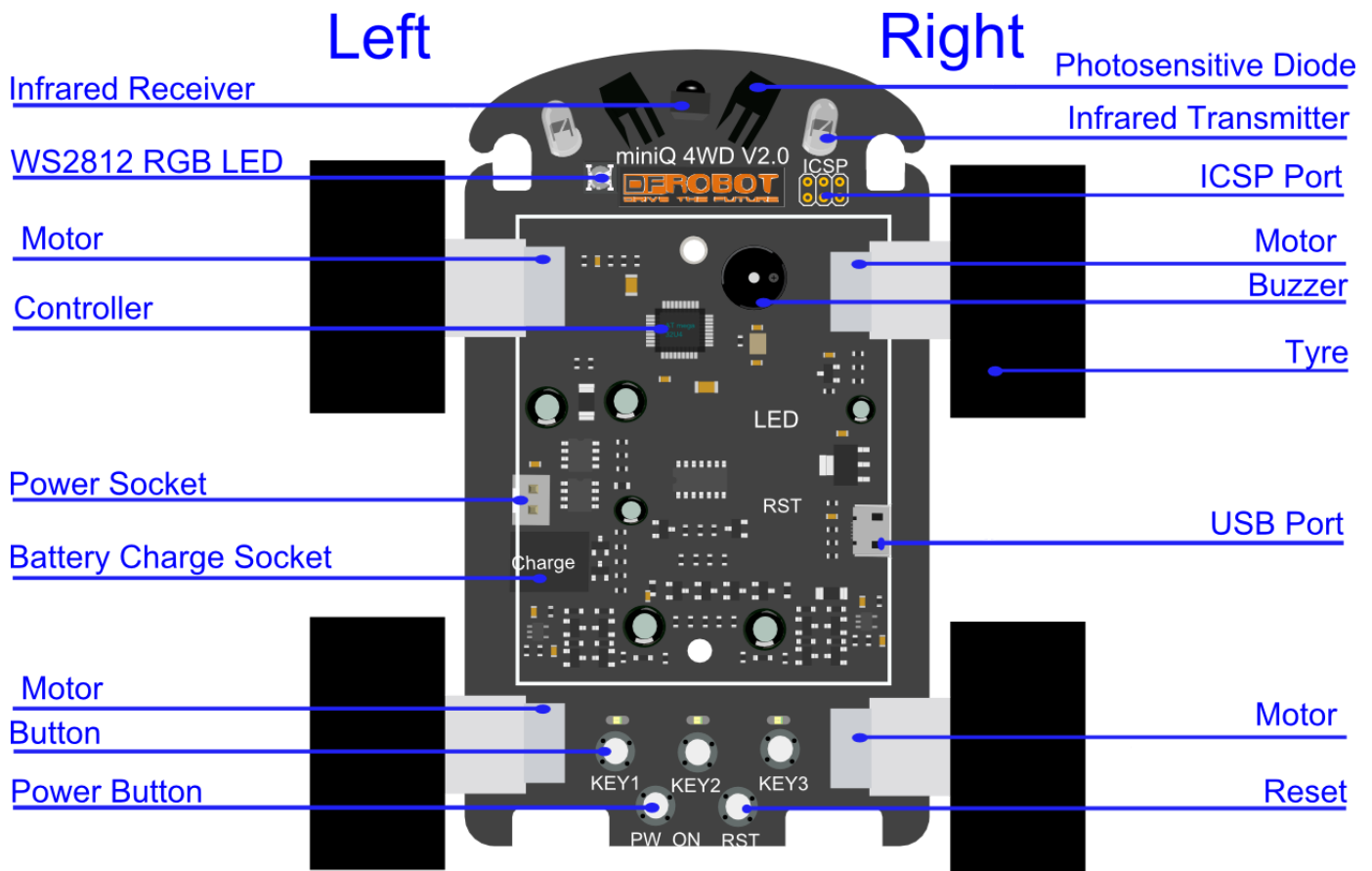
Function about every component：

- Infrared transmitter： transmit the infrared signal, the signal can be used for detecting obstacles

- Infrared receiver： receive infrared signal, the signal can be used for obstacle avoidance

- Photosensitive diode： sensitive with the light, so it can help you get some information about the light

- Button： can be programmed for your idea

- RGB LED： you can change its color use your code, it can show as an alarm and other things you want

- USB port： download your code and let your robot talk to your computer

- Buzzer（passive）： be an alarm bell or sing a simple song

- Controller： runs your code

- Motor： can be controlled to run forward or backward, so that the car can turn left or right freely

- Reset button； Reset the robot, the program in the robot will runs again from its initiation

- Power switch： power switch of the robot

- Power port： power provided from this port

- Charge port: if your batteries can be charged， you can charge them from this port thus

they can be hold in the car

- Infrared line-follow sensor: can be used for detecting for white or black lines

Pin Mapping

- Line follow sensor：

- A0--IR0 （No.1 count from the left） A1--IR1 （No.2 count from the left） A2--IR2 （in middle） A3--IR3 （No.2 count from the right） A4--IR4 （No.1 count from the right）

- Follow light: A5

- Motors

- D5-- PWM control from left motor, D12--EN1 direction control from left motor D6-- PWM control from right motor, D7--EN2 direction control from right motor

- RGB LED : D10

- Infrared obstacle avoidance：

- Transmitter： D13—IRL left transmitter sensor, D8—IRR right transmitter sensor Receiver: D17—IRS receiver sensor

- Button： A6

- Encoder：

- D0--INT2 Right Motor D1--INT3 Left Motor

- Buzzer

- D16(MOSI)— Buzzer

More Documents

- miniQ Sample Code (https://github.com/Arduinolibrary/Source/blob/master/Code.rar?raw=true)

- tutorial (https://github.com/Arduinolibrary/Source/blob/master/Tutorial pdf.rar?raw=true)

  🛒 Shopping online from **4WD MiniQ Arduino Robot V2.0** (https://www.dfrobot.com/product-426.html) or **DFRobot Distributor.** (https://www.dfrobot.com/index.php?route=information/distributorslogo)

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