

Actor

System

Output

Bdd [package] Line-obstacle Arduino project

User Input

Operations
Provides the controlling code

Values
Communication:
Programming languages
(C, C++, Python)

Power Supply

Values
Type: LiPo
Nominal Voltage:
11.1V
Capacity: 3200 mAH

Arduino Uno

Operations
Inputs: Power & Code
Output: Controls the system

Values
Microcontroller: ATmega328P
Clock Speed: 16 MHz
Operating Voltage: 5V
Input Voltage: 7 to 12V
Digital I/O Pins: 14
Analog Pins: 6
Dimensions: 68.6×53.5mm
Weight: 25g

Motor Driver

Operations
Enables the controlling
& power supply of DC
motors

Values
Driver: L298N
Logic Voltage: 5V
Weight: 24g

Ultrasonic Sensor

Operations
Scences & measures objects

Values
Module: HC-SR04
Operating Voltage: 5V DC
Measuring Angle: 30 degree

Line Sensor(2)

Operations
Detection of black line by emitting IR light
& detecting the light levels that return to
the sensor

Values
Module: ST1140
Voltage: 3.3 to 5V
Operating Current: 20mA
Black for Low output
White for High output
Size: 28×10mm
Weight: 3.5g

DC Motor(2)

Operations
Converts DC electrical
energy into mechanical
energy

Values
Type: RB 35 gearmotor
Dimensions: 37×72mm
Gear Reduction: 1:30
Operating Voltage: 12V
Load Speed: 174rpm
Weight: 9.07g