

## URDP (Universal Robotics Development Platform)

It's a versatile development platform designed for beginners to implement their ideas at speed. With perforated side walls, incorporation of various sensors, actuators, mechanical assemblies is a simple task.

It comes with 8051 based microcontroller development board equipped with many features. It also includes IR proximity sensors and Line sensors to implement projects like Obstacle avoider, Line following robot and more..

This kit comes unassembled, after assembling it can be easily reprogrammed through a simple desktop computer.



### Features of chassis:

- Die cut high quality aluminum
- High Quality anti rust powder coating
- Innovative prototyping area
- Easy implementation of wide variety of robots

### Features of Robot Controller:

- 8051 Core NXP P89V51RD2
- On-board motor drivers, for driving 4 DC motors or 2 stepper motors
- On board level converter for serial communication
- On board power regulator
- 16X2 LCD screen
- Terminal block for easy connection of motors
- Protection against noise and back EMF
- Protection against wrong polarity wiring of battery/power supply
- On-board LEDs for debugging and testing
- Berg expansion slots

### Features of IR Sensors:

- Range: 20 cm
- Ambient light protection
- Easy interface with microcontroller
- On board LED to indicate logic signals

### Features of Line Sensors:

- Array of 5 sensors
- 5 TTL compatible outputs for interfacing with microcontroller
- Immunity against ambient light
- 5 LEDs to indicate logic levels
- 5 individual presets to control ref voltage of each pair

Note: Specifications are subject to change.

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### Package Includes:

- Microcontroller: NXP 89V51RD2
- Pack of essential electronic components and ICs
- Robot Controller PCB:1
- IR Sensor PCB:2
- Line Sensor assembled and tested PCB: 1
- Powder coated Aluminum chassis:1
- 100rpm, 12VDC Geared Motors :1
- Plastic wheels:2
- Front castor wheel :1
- DPDT switches with holder plate:2
- Power supply components: 1 set
- Pack of Nuts and bolts:1
- Manual in CD

### Application Examples

- Manually controlled robot
- Automated guided vehicle
- Obstacle avoiding robot
- Edge avoiding Robot
- Micro mouse
- Wall hugging Robot
- Line following robot
- Grid following robot
- Wired Computer Controlled Robot

### Other Modules Worth Buying(NOT included in kit):

1. Cellphone Control Module: To control your machine through cell phone.
2. Wireless control: To control your machine wirelessly through computer and through voice commands also



URDP as Line Follower