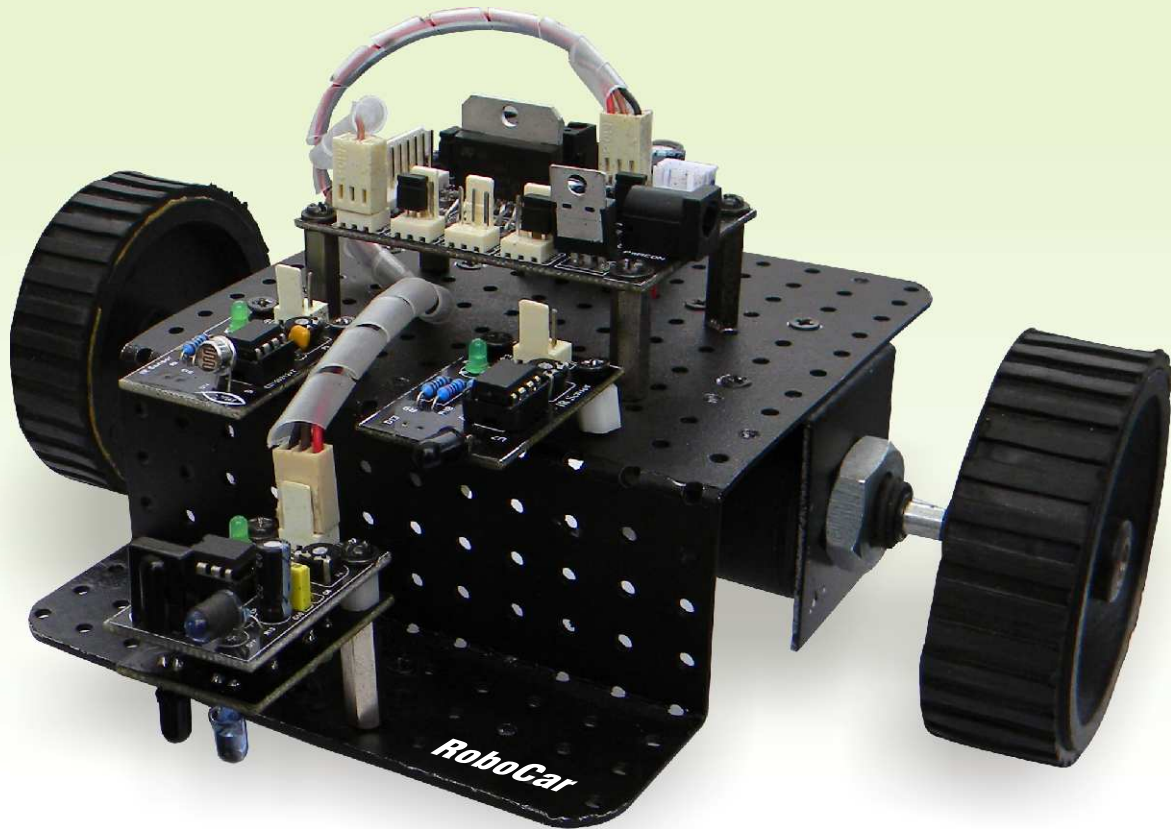




Basic RoboCar

Nvis 3302W



Nvis 3302W RoboCar is another variant of Nvis RoboCar Series which does not need any microcontroller interface for its functionality. This RoboCar specially assembled for electronics students and is capable of sensing environment using various sensor modules and acts accordingly. Nvis 3302W consists of metallic chasis, L-clamps and wheels, with different sensor modules and motor driver circuit mounted on it. The machine is driven by DC motors which are powered by rechargeable battery. This RoboCar is used for various applications like fire sensing, clap sensing, light detecting, object following, obstacle avoiding, wall following, path detecting and many more. Apart from all these features, the control unit and all the Sensors can be interfaced with any microcontroller board.

Features

- IR Sensor module interface
- TSOP-IR Sensor module interface
- Fire Sensor module interface
- Clap Sensor module interface
- Light Sensor module interface
- DC motor interface & control
- Expansion connectors
- Onboard battery charger

Scope of Learning

- Learn to implement Robots from basic to high level
- Learn to drive DC motors with H bridge motor driver based on L298 IC
- Learn to interface various Sensor modules like:
 - Fire Sensor module
 - Clap Sensor module
 - Light Sensor module
 - TSOP-IR Sensor module
 - IR Sensor module



Basic RoboCar

Nvis 3302W

Technical Specifications

Controlling Unit : L298D Motor Driver

Lithium Polymer battery : 8.4V

DC Power Supplies : +8.4V & +5V

Charger Supply : 9V

Motor

- Rated Voltage : +4 to +12V DC
- Rated Speed : 100 rpm at +12V
- Rated Torque : 5KgcM
- Rated Current : 600mA

General

- Dimension : 20 x 22cm
- Weight : 1kg (approx)
- Interconnection for modules : CBK female connector

Sensor

Fire Sensor module

- Operating voltage : 4.5V – 5.5V
- Output : TTL Output

Clap Sensor module

- Operating voltage : 4.5V – 5.5V
- Output : TTL Output

TSOP-IR Sensor module

- Operating voltage : 4.5V – 5.5V
- Output : TTL Output

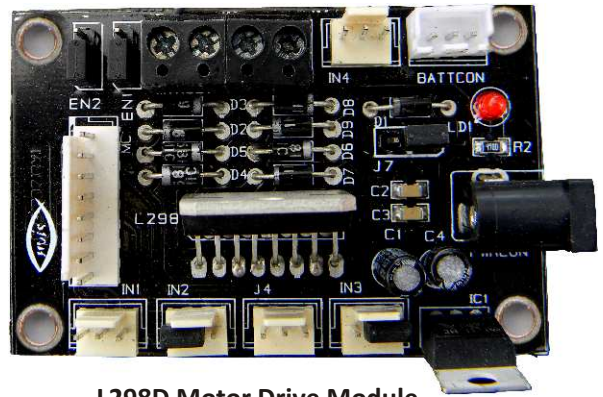
IR Sensor module

- Operating voltage : 4.5V – 5.5V
- Output : TTL Output

Light Sensor module

- Operating voltage : 4.5V – 5.5V
- Output : TTL Output

Main Board



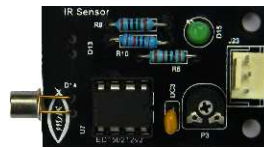
L298D Motor Drive Module
Nvis MCS08



Infrared Sensor
Nvis MCS02



TSOP-IR Sensor
Nvis MCS03



Fire Sensor
Nvis MCS04



Light Sensor
Nvis MCS05



Clap Sensor
Nvis MCS06

Included Accessories

- Fire Sensor module : 1 no.
- Clap Sensor module : 1 no.
- Light Sensor module : 1 no.
- TSOP-IR Sensor module : 1 no.
- IR Sensor module : 1 no.
- Battery (8.4V) : 1 no.
- CBK 3-pin cable : 1 no.
- CBK 3-pin cable (Double Ended) : 1 no.
- Jumpers : 10 nos.
- Software CD + Learning Material CD : 1 no.
- DC Adapter 9V : 1 no.

