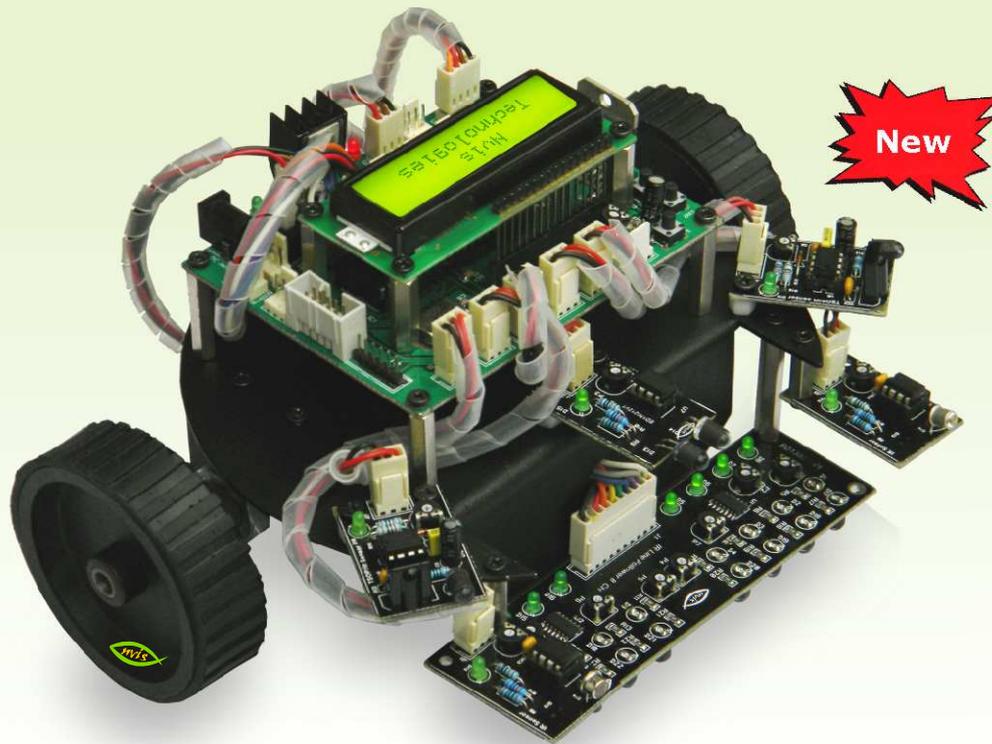# RoboCar
Nvis 3302A

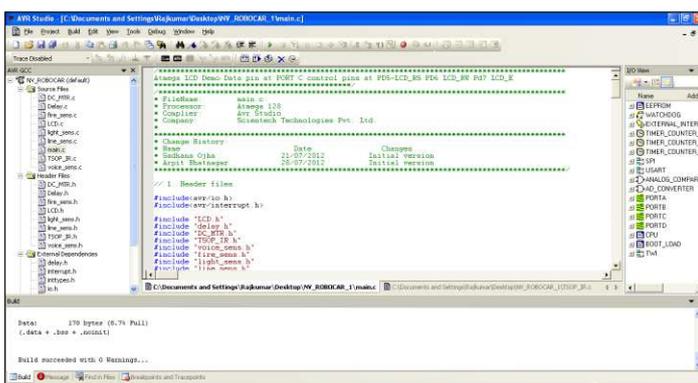**New**

Nvis 3302A RoboCar is another variant of Nvis RoboCar. This RoboCar is capable of sensing environment using various sensor modules and acts accordingly. Nvis 3302A is a ready assembled unit consisting of metallic chassis, L-clamps and wheels with different Sensor modules mounted on it. The machine is driven by DC motors which are powered by rechargeable batteries. This Nvis ATmega32 Microcontroller based RoboCar, is designed for users to start developing smart robot which is capable of fire sensing, clap sensing, light detecting, obstacle detecting, obstacle avoiding, wall following, path detecting, and many more.

Features

- **8-Channel IR Sensor module interface**
- **IR Sensor module interface**
- **TSOP-IR Sensor module interface**
- **Fire Sensor module interface**
- **Clap Sensor module interface**
- **Light Sensor module interface**
- **16 x 2 character LCD interface**
- **DC motor interface & control**
- **Switch interface**
- **Expansion connectors**
- **Onboard battery charger**
- **PC based programming**

Program Window

Scope of Learning

- Learn to interface various Sensor modules
- Learn to interface LCD with ATmega32 microcontroller
- Learn to interface DC motor with ATmega32 microcontroller
- Gaining enough knowledge about Robotics and Atmega32 microcontroller that proves to be useful in further studies
- **Learn to implement various robots like:**
  - Line Follower Robot
  - Object Follower Robot
  - Obstacle Avoider Robot
  - Fire Detecting Robot
  - Wall Follower Robot
  - Photophobic Robot
  - Phototrophic Robot
  - Boomerang Robot
  - Sound Controlled Robot

Included Accessories

Fire Sensor module	1 no.
Clap Sensor module	1 no.
Light Sensor module	1 no.
TSOP-IR Sensor module	2 nos.
8-Channel IR Sensor module	1 no.
IR Sensor module	1 no.
Battery	1 no.
CBK 3-pin cable	13 nos.
CBK 4-pin cable	1 no.
CBK 10-pin cable	2 nos.
Software CD	1 no.
DC adapter 9V	1 no.

Optional Accessories

- Compact AVR USB Programmer (Nvis 5003P)
- RF Module (Nvis MC15S09)

Compact AVR USB Programer

Technical Specifications

MCU	: ATmega32
Crystal Frequency	: 16 MHz
DC Power Supplies	: +8.4 V & +5 V
Charger Supply	: 9 V

Motor

Rated Voltage	: +12 V DC
Rated Speed	: 100 rpm
Rated Torque	: 2 Kgcm
Rated Current	: 600 mAH
Lithium Polymer battery	: 8.4 V
Interconnection for modules	: CBK female connector

General

Dimension (mm)	: W220 x D170 x H125
Weight	: 1.5 kg approximately

Sensors

Fire Sensor module

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

Clap Sensor module

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

Light Sensor module

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

TSOP-IR Sensor module

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

IR Sensor module

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

8-Channel IR Sensor module

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

Subject to Change

MAKE IN INDIA