# IR based intelligent Autonomous self Guided Vehicle Robot for defense applications.

## Technical Specifications:

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|---|---|---|
| Title of the project | : | IR based intelligent Autonomous self Guided Vehicle Robot for defense applications. |
| Domain | : | Robotics, Wireless Communication |
| Software | : | Embedded C, Keil, Proload |
| Microcontroller | : | AT89S52 |
| Power Supply | : | +9V, 500mA Regulated Power Supply |
| Crystal | : | 11.0592MHz |
| Communication Device | : | RF Module |
| Transmitter | : | IR |
| Receiver | : | IR |
| Applications | : | Industries, Process Control, Domestic and Automotives |
| Developed By | : | M/S Wine Yard Technologies |
| Phone | : | 040-64646363 |
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## ABSTRACT:

Autonomous Guided Vehicle is new and innovative concept. These vehicles help the visually disable and physically challenged. This robot works with IR transmission – reception principle. This vehicle can be moved using geared motors of 60RPM without anybody's control. Also this robot can take sharp turnings whenever an obstacle is detected. This project uses AT89S52 MCU as its controller.

This project has an IR transmitter and a receiver. Whenever an obstacle is detected, the IR light will be reflected, and received by the IR receiver. This sends a signal to microcontroller and the direction of the robot will be changed to avoid collision with the obstacle.

In this project, L293D H-Bridge is used to drive the geared DC motor. The Device is a monolithic integrated high voltage, high current four channel driver designed to accept standard DTL or TTL logic levels and drive inductive loads (such as relays solenoids, DC and stepping motors) and switching power transistors. To simplify use as two bridges each pair of channels is equipped with an enable input. A separate supply input is provided for the logic, allowing operation at a lower voltage and internal clamp diodes are included.

This project uses 9V battery. This project is much useful for the blind and physically challenged.

## BLOCK DIAGRAM: