

Intelligent autonomous transport vehicle is a fully autonomous vehicle used for transporting personals autonomously inside the campus. It is also used for advance research in mobile robotics. It is based on 4-seater electric-powered vehicle retrofitted with sensors and actuators to make it fully autonomous. It can maneuver autonomously around the campus based on the fixed waypoints as well as it can be driven manually.

For autonomous navigation this vehicle primarily uses Laser range finders, GPS, Inertial guidance and fluxgate magnetometers. On-board computer estimates vehicle's lateral and longitudinal position with the help of sensors. Any undesired deviation from the path is corrected in real time by steer by wire control system system.

The vehicle can be switched between auto and manual mode by pressing a button on the control panel. For the safety considerations, the top speed of the vehicle is limited to 20Km/ hour in the autonomous mode.

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