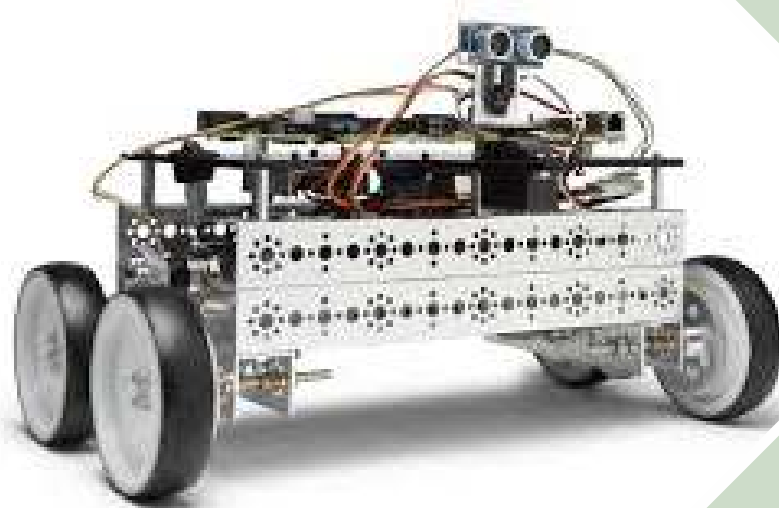


# NI ROBOTIC KIT



The NI LabVIEW Robotics Starter Kit is an out-of-the-box mobile robot platform that features sensors, motors, and NI Single-Board RIO hardware for embedded control. The LabVIEW Robotics software included with the platform includes features for beginners and for those who are more experienced. It is optimum for use for both starters and experts. Starters can use the high-level LabVIEW Robotics Starter Kit API to quickly get started and control the robot in real time. Advanced users, can access the FPGA and perform lower-level customization. It is simple enough and ideal for teaching robotics and mechatronics concepts or for developing a robot prototype with LabVIEW Robotics. The LabVIEW Robotics Starter Kit includes a prebuilt program that executes a vector field histogram (VFH) obstacle avoidance algorithm based on feedback from the included ultrasonic sensors. With the LabVIEW Robotics Module, you can easily change the behaviour of the robot by developing your own algorithms from the ground up or by using algorithms built into LabVIEW Robotics software such as A\* path planning.

## Features

- » 12 VDC motors featuring 152 rpm and 300 oz-in. of torque
- » Optical quadrature encoders with 400 pulses per revolution
- » ultrasonic distance sensor for distance measurements between 2 cm and 3 m
- » mounting bracket for a 180-degree sweep of the environment
- » TETRIX 4 in. wheels and one omni wheel for steering