Overview
The Polaris Ranger is AutonomouStuff’s off-road platform of choice because of its potential for low-cost integration for our customers. It provides a safe, reliable and robust solution for enabling the development and deployment of automated driving applications. The Ranger not only provides the same cost effective solutions as to comparable automated NEV’s, its rugged frame and suspension and gas engine allows it to go into environments that would be unsuitable for its electric counterparts.

Key Features
Major features on the Ranger are:
- Mode status indication
- Visually-audible advanced fault detection interface
- Joystick control interface
- Speed and steering controller available
- ROS node available
- Full DBC file available

Feedback and control
AutonomouStuff’s Ranger installed with the latest firmware has the following capabilities:

Feedback capabilities
- Throttle
- Vehicle speed
- Steering angle
- Shift status
- Shift button press status
- Brake light status
- Current gear

Control capabilities
- Accelerator
- Brake
- Steering
- Shifting
**Safety first**

Safety is a top priority for AutonomouStuff. Our Polaris Ranger automated research and development platform has been designed to allow operators to easily regain control of the vehicle at any time, as well as alert operators of numerous faults.

While in autonomous mode, operators can at any time regain manual control of the vehicle by:

- pressing the emergency stop button
- actuating the brake pedal
- actuating the accelerator
- turning the steering wheel

This PACMod 3.0 system has been designed to detect certain faults in the vehicle control modules. The current fault detections on the latest firmware release for the Ranger are:

- Braking
- Acceleration
- Shifting
- Steering

**What is the PACMod 3.0 system?**

AutonomouStuff's Platform Actuation and Control Module (PACMod) 3.0 system allows for drive-by-wire control and can be installed into virtually any vehicle. At a minimum PACMod will always provide control of acceleration, braking, steering, shifting, and turn signals. It is highly customizable to fit into any research and development platform.