

The **SHERPA** unmanned ground vehicle (UGV) is the ideal robotic platform for researchers seeking a foundation to test or demonstrate advanced perception and autonomous navigation technologies. The vehicle was developed to provide universities and corporations with a proven UGV platform, allowing them to immediately test the technologies that matter most to them, without having to reinvent the UGV wheel.

The vehicle was originally developed by re<sup>2</sup> for Carnegie Mellon. The platform was used by the university's team participating in DARPA's PerceptOR program. During the program the vehicle endured two years of rigorous testing in a variety of harsh environments, including Yuma Proving Grounds, Fort A.P. Hill, Fort Polk and Pickel Meadows Marine Mountain Warfare Training facility. The program concluded successfully in 2004.

re<sup>2</sup> licensed the robotic controller technology from the university in order to release SHERPA to the research market. This robust platform has been thoroughly tested and is able to withstand the most intense weather conditions and terrain types. The controller unit allows the operator or computer to maneuver the vehicle with ease.

The base SHERPA vehicle contains all of the features and functions needed to test most advanced technologies. However, if additional features are needed, the SHERPA can be modified. Additional components are also available, such as a complete development station (shown in the picture below), an electric start generator, a retractable sensor mast, suspension deflection potentiometers, and a tactile sensor bumper.



### SPECIFICATIONS

Weight:	1280 lbs.
Static tip-over angles	
Roll:	55°
Pitch: Back:	45°
Forward:	55°
Center of Gravity Location	
Height:	22" from ground
Side to Side:	Centered
Front to Back:	40.25"
Minimum turning radius:	10.8'
Ground clearance:	7"
Fording depth:	23"
Speed:	
Maximum in low gear:	10 mph
Potential Maximum:	50 mph
Dimensions:	
Length w/bumper:	101"
Length w/o bumper:	93"
Width at rear tires:	68.5"
Height:	50.5"
Payload capacity:	620 lbs.
Tow capacity:	850 lbs.
Nominal run-time:	6 hours
Operating temperature range:	
	-10° C - 50° C / 14° F - 122° F
Auxiliary power output:	1600 W
Control Interface:	
	RTC or JAUS over Ethernet

For More Information Contact

re<sup>2</sup>, Inc.

at

412.681.6382

info@resquared.com

or visit

[www.resquared.com/SHERPA](http://www.resquared.com/SHERPA)