

Tactical Autonomous Combat-Chassis (TAC-C)

Robotic Transformer Delivers High Performance

A Multi-function Tactical Robot

General Dynamics Robotic Systems' newest robotic vehicle, the Tactical Autonomous Combat-Chassis (TAC-C), was developed to test advances in autonomous mobility being developed by the U.S. Army Research Laboratory (ARL) and General Dynamics Robotic Systems (GDRS) and to explore new missions for tactical class robotic vehicles.

Anticipated uses for unmanned vehicles in the military include supply and logistics, UAV transport and launcher, command and control station, and reconnaissance and surveillance. TAC-C can also be

used to test Soldier use of an autonomous medical transport or as a refueling station. With a steering column and driver's seat that can be stowed away or deployed in a matter of seconds, TAC-C may also be Soldier-driven and used as a troop transporter.

Form and Function

GDRS took a new approach to the design of a custom autonomous/man-drivable vehicle. The TAC-C has the speed and stamina of a high performance off-road vehicle, the room of a small truck, is easy to configure for different missions, and is light and small enough to drive over any terrain with agility and speed.

The TAC-C uses a high performance turbo-charged diesel motor that allows fast acceleration, high speeds and large loads. Its state-of-the-art Continuously Variable Transmission makes power transfer smooth, efficient and shift free and it has traction controlled 4-wheel drive. Its adjustable semi-active suspension system allows maximum ground clearance when needed or low ground-hugging stability. In manual drive, the driveline also allows the Soldier to shift

into 4WD on the fly, or gear down into an ultra low

range for the most rugged terrain. The TAC-C also has a payload area that is large, easy to access from three sides, and center balanced to support a 2000-pound payload.



Manned, TAC-C can reach speeds up to 80 mph and move across rough terrain at high speeds easily. If the Soldier dismounts and activates the autonomous system, it can operate at speeds of 35 mph cross-country, and 55 mph on the road. Protected by distance, the modern Soldier can send the vehicle autonomously into harm's way, while maintaining seclusion and still bringing the battle to the enemy. And the Soldier can easily mount back up and take control of the machine.

TAC-C Medical Evacuation Vehicle

GDRS is taking TAC-C's manned/unmanned capabilities one step further by adding medical evacuation to

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the vehicle's growing list of applications. Equipped with up to two litters, an IV hookup, oxygen, an EKG monitor, and other standard medical supplies, the TAC-C can be transformed into an onsite medical evacuation vehicle. The TAC-C can be quickly converted into an autonomous vehicle, or it can be Soldier-driven and still have room to transport two wounded Soldiers. Designed to provide emergency medical response in combat situations, the TAC-C enhances Soldier effectiveness by aiding casualties, alleviating excess weight, and allowing able Soldiers to continue focusing on their combat missions.

Highlights

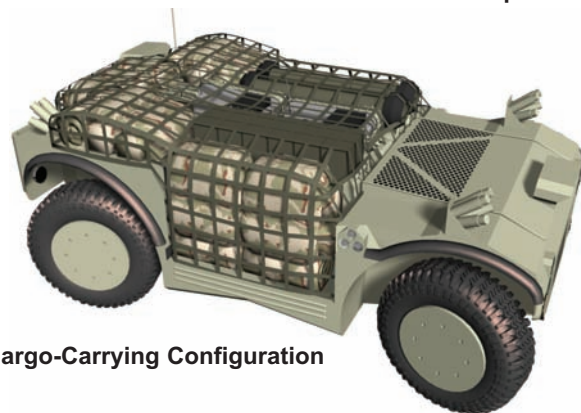
- Troop transporter
- Supply and logistics
- UAV transport and launcher
- Command and Control station
- Reconnaissance and surveillance
- Autonomous or man-drivable
- Optionally equipped for medical usage
- Powerful off-road performance
- Facilitates Soldiers' combat-effectiveness



TAC-C Medical Evacuation Configuration



TAC-C Assault equipped with telescoping RSTA Mast, Auto-load 60mm Mortar, and Automatic OCSW Turret. Driver's compartment shown stowed for autonomous operations.



TAC-C Cargo-Carrying Configuration

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