



AUTOMATED COMPUTERIZED MOBILITY EQUIPMENT

ACME is the company's solution that enables remote driving of any vehicle, day and night. It comprises an integrated set of devices that, once installed, transforms any vehicle into a remotely operated platform. These systems are platform agnostic, since they are not linked to specific platforms. They support vehicles and equipment currently in service. This solution does not require the development of dedicated platforms, reducing logistic support and ensuring operational flexibility.

In extremely difficult theatres of operation, troops are exposed to increasing threats. This is due to the asymmetric nature of conflicts, as well as to the need for continuous control of hostile territory, without complete Situational Awareness.

These conditions represent permanent threats to routine operations like patrolling, transporting people and material along exposed roads, route clearance and logistics support. ACME integrates a suite of devices and sensors that enables vehicles to be driven remotely. ACME's remote functions retain full control and supervision.

ACME provides an innovative answer to demanding requirements of convoy protection in asymmetric operational scenarios, where Improvised Explosive Devices (IED) are widely used.

KEY FEATURES

- Ability to use on any vehicle
- Between 40 minutes and two hours for installation
- Autonomous compressed air security system
- Use with automatic and manual gearboxes
- Easy to carry with reduced size
- Static mode, with speeds up to 40 km/h
- Dynamic mode, with speeds up to 80 km/h
- Vehicle robotic system, reaction time 20msec
- Quick mounting on any type of vehicle, with either manual and automatic gearbox
- Operative military ground vehicle transportation (impact resistance grade and stress resistant in rough terrain)
- Interface with remote control and telemetry monitor supervision
- 12/24 VDC power supply via connection to vehicle batteries.

The key benefit of ACME is its unique characteristic to be fitted in existing vehicles, without requiring the development of dedicated platforms. Its design fits perfectly into the path defined by standard guidelines for the remote guidance and control of vehicles.

Different configurations vary in only a few actuators and control software. The guidance system does not require any modification and can be installed in a short time (between 40 minutes and 2 hours). Vision systems can be installed on temporary supports, while remote turrets can be installed temporarily or permanently, on suitable reaction vehicles.

ACME's main applications are:

- Repeating a predetermined path with control of the trajectory and speed using GPS vehicle through base Real Time Kinematic, with accuracy in positioning of approximately 2cm and in speed of 0.5km/h
- Operator remote control through a wearable OLED display configured with both vision and interface simulation of the cockpit
- Radio coverage LOS up to 5km
- GPS anti-jamming and 3 axis IMU
- Radar Laser Collision Avoidance Capability
- 360° Video Stitching using IP H.264 Technology
- Night and Day vision capability.



STEERING ROBOT

Steering Torque	28Nm
Rotating Speed	18 rpm - 180 rpm
Technology	Electrical (step-motor)
Mounting	Easy to set up and tune
Material	Carbon fiber or steel
Weight	7kg (Carbon Fiber) 12kg (Steel)

Basic functions

- Path mapping to save tracks in real or synthetic mode
- Edit or manual generation of maps for route definition
- Automatic speed control, programmable for different sectors of the track, or manual speed control
- Telemetry of vehicle navigation data, with field station and inputs for external sensors (acceleration, strain and pressure).

INSTALLATION AND USE

ACME is equipped with a self-centering gripper to control the steering wheel. Electrical actuators drive the pedals and gearbox, performing a predefined program. Alternatively, an operator can manage the vehicle manually with remote control navigation.

After drawing a map of the route, the operator can set the speeds to be maintained in various parts of the route.

