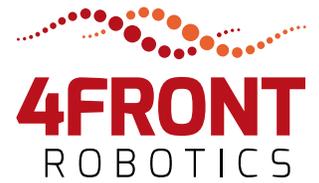


Loc8™

Unmanned Ground Vehicle



**High Speed Omni-directional UGV
for Outdoor Rough Terrains**

SYSTEM DESCRIPTION:

The Loc8 Unmanned Ground Vehicle (UGV) from 4Front Robotics is the only omni-directional vehicle capable of traversing rough outdoor terrains. The Loc8 UGV can perform maneuvers that other robots cannot perform. It can move precisely sideways and rotate on the spot on hard and soft rough terrains including grass, sand, clay, and various size rocks including gravel, river rocks, and large boulders at different speeds. By using proprietary terrain sensing tools and control algorithms the robot estimates its wheel and vehicle state to determine how to move to achieve the desired maneuver. It can move with ease in challenging terrains where other omni-directional robots find it difficult to maneuver and sometimes move.

This robot can traverse over small and large obstacles. Depending on the type of 4Front Robotics proprietary wheels used, semi-circular or semi-elliptical Mecanum wheels, the vehicle can overcome obstacles up to 75% of the wheel diameter when traversing sideways or diagonally. This is possible using a patent pending butterfly Mecanum wheel motion/design. The wheel design is combined with proprietary wheel control algorithms used to position the wheels at specific rotation angles allowing the vehicle to effortlessly translate and rotate among and over obstacles in any given direction.

4Front Robotics provides the only omni-directional ground vehicle for outdoor rough terrains. See our videos at www.4frontrobotics.com
OUTBOUND INNOVATION!



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TECHNICAL SPECIFICATIONS:

Dimensions: 989 x 702 x 396 mm (Electric unit)
L x W x H 38.9 x 27.6 x 15.6 in

Chassis Weight: 21 kg (46 lbs)

Payload: 20 Kg (44 lbs) (Electric)
45 Kg (100 lbs) (Gas)

Max speed: 11 km/hr (7.8 mph) (Electric)
30 km/hr (18.6 mph) (gas)

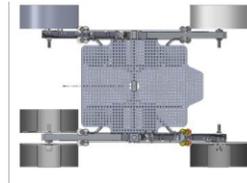
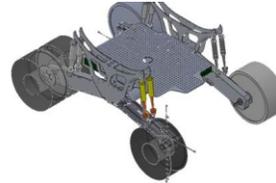
Control Modes: Manual, Semi-Autonomous,
Fully Autonomous

Endurance: 60 min (electric)
depends on power supply 120 min (gas option available)

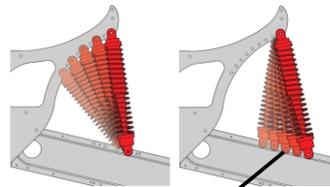
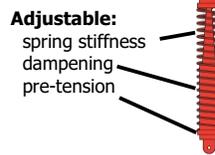
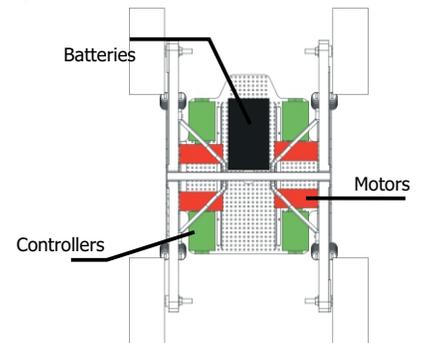
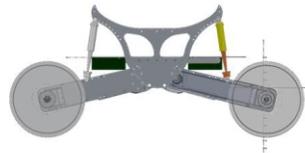
Electrical: Voltage: 36 VDC
Discharge: 60 A max)
Battery Type: 5000 mAh NIMH

Sensors: Day & IR cameras, LiDAR,
Navigation & Mission GPS, etc.

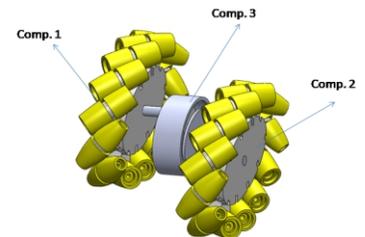
Suspension: Type: Independent
Max travel: 200 mm (8 in)



Wheels can be placed in different configurations



Adjustable Spring (suspension) geometry



Semi-circular or Elliptical Mecanum wheels

CAPABILITIES & APPLICATIONS:

The Loc8 UGV is a portable vehicle that can be scaled up and down by simply changing the dimensions of 4Front Robotics' proprietary semi-circular or semi-elliptical Mecanum wheels and using the corresponding suspension system for the particular size vehicle. The Loc8™ UGV can be equipped with all standard UVS payloads (e.g., IR and day cameras, LIDAR, etc.) as well as mission specific sensors. Our wheels and corresponding maneuvering & control algorithms can be used in other electric, gas or hybrid 4-wheel suspension vehicles (where wheels can be independently controlled) without mayor modifications. The control system consists of proprietary algorithms for wheel control based on proper 3D terrain sensing and mapping.

AREAS OF USAGE:

Search & rescue, Security & monitoring of critical infrastructure, Pipeline monitoring & leak detection, forestry, agriculture, conduit inspection, etc. [Contact us for custom configurations for your specific application.](#)

CONTACT INFO: