



JAGUAR 4x4 WHEEL PLATFORM



Jaguar V4



Jaguar



Jaguar Lite



Jaguar 4x4 Wheel



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Jaguar 4x4 wheel Mobile Robotic Platform is designed for indoor and outdoor operation requiring higher ground clearance and faster maneuverability. Jaguar 4x4 wheel platform is a wheeled version of the Jaguar-Lite platform. Jaguar 4x4 wheel is driven by four powerful (80W) motors, one for each wheel. Jaguar 4x4 wheel platform is rugged, light weight (< 20Kg), fast (max 15km/hr), with high ground clearance (88mm), compact, weather and water resistant. It is designed for tough terrains and capable of running over vertical step up to 155mm and climbing up low rise stairs (up to 110mm step). Jaguar 4x4 wheel is fully wirelessly 802.11N connected. It integrates outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass) for autonomous navigation. The integrated high resolution video/audio and laser scanner (optional) provide remote operator detail information of the surrounding. Besides the ready to use control and navigation software, a full development kit including SDK, data protocol and sample codes, is also available.

Key Features

- ★ Rugged and reliable mobile platform for indoor and outdoor applications with faster maneuverability (max 15Km/hr)
- ★ Indoor and outdoor operation requiring higher ground clearance and on tough terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope and stairs (max 110mm or 4.5")
- ★ Light weight (< 20Kg) and compact design with large payload capacity
- ★ Autonomous navigation with outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
- ★ Managing max 155mm (6") vertical step (obstacle)

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 45°
Maximum vertical step: 155mm (6")
Stair climbing: Max stair step height 110mm (4.5")
Traverse: > 200mm (8")
Speed: 0 – 15Km/hr
Turning radius: 0, min 750mm (29.5") diameter of turning space
Ground clearance: 88mm (3.5")
Operator remote control
Autonomous navigation with GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
Indoor vision landmark GPS (Optional)

Survivability

Sealed weather resistant enclosure
Temperature: -30° to +50°
Shock resistant chassis
Drop to concrete: Max: 1200mm (4ft) Rated: 900mm (3ft)

Electronics

Motion and sensing controller (PWM, Position and Speed Control)
5Hz GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
Laser scanner (5.6m, 4m or 30m) (Optional)
Temperature sensing & Voltage monitoring
Headlights

Video / Audio

Color Camera (640x480, 30fps) with audio

Communication

WiFi802.11N
Ethernet (Optional)

External Auxiliary Ports

Ethernet (Optional)
General purpose communication and power port (Optional)

- ★ Surviving max 1200mm (4ft) drop to concrete
- ★ Integrated Laser scanner (Optional)
- ★ Integrated high resolution video camera with audio
- ★ All 802.11N wirelessly connected
- ★ Head mounted display (optional) and Gamepad controller providing outdoor operation with large and clear view even under direct sunlight
- ★ Ready to use control and navigation software
- ★ Full development kit including SDK, data protocol and sample codes, supporting Microsoft[®] Robotics Studio, Microsoft[®] Visual Studio, ROS, NI LabVIEW[®], MATLAB[®], Java[®]

Operator Control Unit

Gamepad Controller
Head mounted display (dual 640 x 480), equivalent to 60" display viewed in 2.7m (9 feet) (Optional)
Portable computer (Optional)

Power

Rechargeable battery: LiPo 22.2V 10AH
LiPo battery charger
Nominal operation time: 2 hours (Optional 4 hours)

Motor

Wheel Motors (24V): 4 units
Max output (after gear down) (x4): Max 80W, 65Kg.cm/wheel
Rated current: 2.75A, Max current: 16A

Dimensions

Height: 265mm (10.5")
Width: 573mm (22.5")
Length 615mm (24")
Weight: 20.5Kg (Standard Configuration)

Payload

Carrying Payload (on flat surface): max 30Kg
Dragging Payload (on flat surface): max 50Kg

Application Development

Full development kit including SDK, data protocol and sample codes, supporting Microsoft[®] Robotics Studio, Microsoft[®] Visual Studio, ROS, NI LabVIEW[®], MATLAB[®], Java[®]

Microsoft **ROBOTICS STUDIO**

Microsoft **Visual Studio**

NATIONAL INSTRUMENTS **LabVIEW**

Java

ROS
MATLAB
The Language of Technical Computing





Chassis Specification

Jaguar 4x4 wheel Mobile Robotic Platform is designed for indoor and outdoor operation requiring higher ground clearance and faster maneuverability. Jaguar 4x4 wheel platform comes with everything that Jaguar 4x4 wheel robot has except the electronic components. Jaguar 4x4 wheel chassis is driven by four powerful (80W) motors (included), one for each wheel.

Key Features

- ★ Rugged and reliable mobile platform for indoor and outdoor applications with faster maneuverability (max 15Km/hr)
- ★ Indoor and outdoor operation requiring higher ground clearance and on tough terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope or stairs (max 110mm or 4.5")
- ★ Light weight (< 15Kg) and compact design with large payload capacity
- ★ Managing max 155mm (6") vertical step (obstacle)
- ★ Surviving max 1200mm (4ft) drop to concrete
- ★ Four 24V DC motors with integrated encoder (with max output power 80W/motor)

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 45°
Maximum vertical step: 155mm (6")
Stair climbing: Max stair step height 110mm (4.5")
Traverse: > 200mm (8")
Speed: 0 – 15Km/hr
Turning radius: 0, min 750mm (29.5") diameter of turning space
Ground clearance: 88mm (3.5")

Survivability

Sealed weather resistant enclosure
Temperature: -30° to +50°
Shock resistant chassis
Drop to concrete: Max: 1200mm (4ft) Rated: 900mm (3ft)

Motor

Wheel Motors (24V): 4 units
Max output (after gear down) (x4): Max 80W, 65Kg.cm/wheel
Rated current: 2.75A, Max current: 16A

Dimensions

Height: 255mm (10")
Width: 530mm (21")
Length: 570mm (22.5")
Weight: 14.5Kg (Standard Configuration)

Payload

Carrying Payload (on flat surface): max 34Kg
Dragging Payload (on flat surface): max 54Kg



Distributor:



JAGUAR PLATFORM G2

