



JAGUAR LITE PLATFORM



Jaguar V4



Jaguar



Jaguar Lite



Jaguar 4x4 Wheel



Dr Robot[®]

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Jaguar-Lite Mobile Robotic Platform is designed for indoor and outdoor operation requiring faster maneuverability. Jaguar-Lite is simply the Jaguar platform without the two articulated arms. Jaguar-Lite is fully wirelessly 802.11N connected. It integrates outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass) for autonomous navigation. Jaguar-Lite platform is rugged, light weight (< 14Kg), compact, weather and water resistant. It is designed for tough terrains and capable of climbing up stairs (up to 180mm step). 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 8.5Km/hr)
- ★ Indoor and outdoor operation on tough terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope or stairs (max 180mm or 7")
- ★ Light weight (< 14Kg) and compact design with large payload capacity
- ★ Autonomous navigation with outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
- ★ Managing max 180mm (7") vertical step (obstacle)

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 45°
Maximum vertical step: 180 mm (7")
Stair climbing: Max stair step height 180 mm (7")
Traverse: > 200mm (8")
Speed: 0 – 8.5Km/hr
Turning radius: 0, min 800mm (31.5") diameter of turning space
Ground clearance: 38mm (1.5")
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: 900mm (3ft) Rated: 600mm (2ft)

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 900mm (3ft) 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: 3 hours (Optional 6 hours)

Motor

Track Motors (24V): 2 units
Max output (after gear down) (x2): Max 80W, 65Kg.cm/track
Rated current: 2.75A, Max current: 16A

Dimensions

Height: 176mm (7")
Width: 470mm (18.5")
Length 640mm (25.2")
Weight: 13.5Kg (Standard Configuration)

Payload

Carrying Payload (on flat surface): max 13Kg
Dragging Payload (on flat surface): max 30Kg

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





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JAGUAR LITE PLATFORM

CHASSIS



Chassis Specification

Jaguar-Lite Mobile Robotic Platform is designed for indoor and outdoor operation requiring faster maneuverability. Jaguar-Lite chassis comes with everything that Jaguar-Lite robot has except the electronic components. All motors are included.

Key Features

- ★ Rugged and reliable mobile platform for indoor and outdoor applications with faster maneuverability (max 8.5Km/hr)
- ★ Indoor and outdoor operation on tough terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope or stairs (max 180mm or 7")
- ★ Light weight (< 10Kg) and compact design with large payload capacity
- ★ Managing max 180mm (7") vertical step (obstacle)
- ★ Surviving max 900mm (3ft) drop to concrete
- ★ Two 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: 180mm (7")
 Stair climbing: Max stair step height 180mm (7")
 Traverse: > 200mm (8")
 Speed: 0 – 8.5Km/hr
 Turning radius: 0, min 800mm (31.5") diameter of turning space
 Ground clearance: 38mm (1.5")

Survivability

Sealed weather resistant enclosure
 Temperature: -30° to +50°
 Shock resistant chassis
 Drop to concrete: Max: 900mm (3ft) Rated: 600mm (2ft)

Motor

Track Motors (24V): 2 units
 Max output (after gear down) (x2): Max 80W, 65Kg.cm/track
 Rated current: 2.75A, Max current: 16A

Dimensions

Height: 176mm (7")
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Distributor:



JAGUAR PLATFORM G2

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