



JAGUAR PLATFORM



Jaguar V4



Jaguar



Jaguar Lite



Jaguar 4x4 Wheel



Dr Robot[®]

www.DrRobot.com

25 Valleywood Dr. Unit 20, Markham Ontario L3R 5L9 CANADA



Jaguar Mobile Robotic Platform is designed for indoor and outdoor applications requiring robust maneuverability. It comes with two articulated arms and is fully wirelessly 802.11N connected. It integrates outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass) for autonomous navigation. Jaguar platform is rugged, light weight (< 25Kg), compact, weather and water resistant. It is designed for extreme terrains and capable of climbing up stairs (up to 200mm 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 requiring robust maneuverability
- ★ With two synchronized (or optional independently controlled) articulated arms
- ★ Indoor and outdoor operation for extreme terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope or stairs (max 200mm or 8")
- ★ Light weight (< 25Kg) and compact design with large payload capacity
- ★ Autonomous navigation with outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
- ★ Surviving max 900mm (3ft) drop to concrete

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 45°
Maximum vertical step: 200mm (8")
Stair climbing: Max stair step height 200mm (8")
Traverse: > 260mm (10")
Two articulated arms (Standard: synchronized motion; Optional: independent controlled)
Speed: 0 – 5.5Km/hr
Turning radius: 0, min 850mm (33.5") 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)
Self-correction from flip-over with articulated arms

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)

- ★ Managing max 200mm (8") vertical step (obstacle)
- ★ 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

Track Motors (24V): 2 units
Max output (after gear down) (x2): Max 80W, 100Kg.cm/track
Rated current: 2.75A, Max current 16A
Arm Motor (24V): 1 unit
Max output (after gear down): Max 80W, 450Kg.cm
Rated current: 2.75A, Max current 16A

Dimensions

Height: 176mm (7")
Width: 700mm (27.6")
Length 820mm (32.3") (extended arms) / 640mm (25.2") (folded arms)
Weight: 25Kg (Standard Configuration)

Payload

Carrying Payload (on flat surface): max 15Kg
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



ROS
MATLAB





Chassis Specification

Jaguar Mobile Robotic Platform is designed for indoor and outdoor applications requiring robust maneuverability. Jaguar chassis comes with everything that Jaguar robot has except the electronic components. Articulated arms and all motors are included.

Key Features

- ★ Rugged and reliable mobile platform for indoor and outdoor applications with robust maneuverability
- ★ With two synchronized (or optional independently controlled) articulated arms
- ★ Indoor and outdoor operation for extreme terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 45° slope or stairs (max 200mm or 8")

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 45°
Maximum vertical step: 200mm (8")
Stair climbing: Max stair step height 200mm (8")
Traverse: > 260mm (10")
Two articulated arms (Standard: synchronized motion; Optional: independent controlled)
Speed: 0 – 5.5Km/hr
Turning radius: 0, min 850mm (33.5") 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)
Self-correction from flip-over with articulated arms

- ★ Light weight (< 15Kg) and compact design with large payload capacity
- ★ Managing max 200mm (8") vertical step (obstacle)
- ★ Surviving max 900mm (3ft) drop to concrete
- ★ Three 24V DC motors with integrated encoder (with max output power 80W/motor)
- ★ Maximum speed 7Km/hr
- ★ Self-correction from flip-over using articulated arms

Motor

Track Motors (24V): 2 units
Max output (after gear down) (x2): Max 80W, 100Kg.cm/track
Rated current: 2.75A, Max current: 16A
Arm Motor (24V): 1 unit
Max output (after gear down): Max 80W, 450Kg.cm
Rated current: 2.75A, Max current: 16A

Dimensions

Height: 176mm (7")
Width: 700mm (27.6")
Length 820mm (32.3") (extended arms) / 640mm (25.2") (folded arms)
Weight: 14.5Kg (Standard Configuration)

Payload

Carrying Payload (on flat surface): max 20Kg
Dragging Payload (on flat surface): max 50Kg



Jaguar V4



Jaguar



Jaguar Lite



Jaguar 4x4 Wheel

Distributor:



JAGUAR PLATFORM G2

