



JAGUAR V4 PLATFORM



Jaguar V4



Jaguar



Jaguar Lite



Jaguar 4x4 Wheel



Dr Robot[®]

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**Dr Robot®****JAGUAR V4 PLATFORM****COMPLETE SYSTEM**

Jaguar V4 Mobile Robotic Platform is designed for indoor and outdoor applications requiring robust maneuverability and terrain maneuverability. It comes with four articulated arms and is fully wirelessly 802.11N connected. It integrates outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/ Compass) for autonomous navigation. Jaguar V4 platform is rugged, light weight (< 30Kg), compact, weather and water resistant. It is designed for extreme terrains and capable of stair or vertical climbing up to 300mm with ease. The 4 articulated arms could convert the robot into various optimal navigation configurations to overcome different terrain challenges. The integrated high resolution video/audio and optional laser scanner 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 Four articulated arms that could convert the robot into various navigation configurations to overcome different terrain challenges
- ★ Indoor and outdoor operation for extreme terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 55° slope or stairs (max 300mm or 12")
- ★ Light weight (< 30Kg) and compact design with large payload capacity
- ★ Autonomous navigation with outdoor GPS and 9 DOF IMU (Gyro/Accelerometer/Compass)
- ★ Surviving max 600mm (2ft) drop to concrete
- ★ Managing max 300mm (12") 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®

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
 Slope: > 55°
 Maximum vertical step: 300mm (12")
 Stair climbing: Max stair step height 300mm (12")
 Traverse: > 360mm (14")
 Four articulated arms
 Speed: 0 – 6.5Km/hr
 Turning radius: 0, min 850mm (33.5") diameter of turning space
 Ground clearance: 38mm (1.5"); Max 150mm (6") with Stand-Up Arms
 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: 600mm (2ft) Rated: 300mm (1ft)

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)

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: 1.5 hours (Optional 3 hours)

Motor

Track Motors (24V): 4 units
 Max output (after gear down) (x2): Max 80W, 100Kg.cm/track
 Rated current: 2.75A, Max current 16A
 Arm Motor (24V): 2 units
 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 980mm (32.3") (extended arms) / 640mm (25.2") (folded arms)
 Weight: 30Kg (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****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 Four articulated arms that could convert the robot into various navigation configurations to overcome different terrain challenges
- ★ Indoor and outdoor operation for extreme terrains
- ★ Weather and water resistant enclosure
- ★ Climbing up > 55° slope or stairs (max 300mm or 12")
- ★ Light weight (< 25Kg) and compact design with large payload capacity
- ★ Managing max 300mm (12") vertical step (obstacle)
- ★ Surviving max 600mm (2ft) drop to concrete
- ★ Six 24V DC motors with integrated encoder (with max output power 80W/motor)
- ★ Maximum speed 5.5Km/hr

Mobility

Terrain: Sand, rock, concrete, gravel, grass, soil and others wet and dry
Slope: > 55°
Maximum vertical step: 300mm (12")
Stair climbing: Max stair step height 300mm (12")
Traverse: > 360mm (14")
Four articulated arms
Speed: 0 – 5.5Km/hr
Turning radius: 0, min 850mm (33.5") diameter of turning space
Ground clearance: Min 38mm (1.5"); Max 150mm (6") with Stand-Up Arms

Survivability

Sealed weather resistant enclosure
Temperature: -30° to +50°
Shock resistant chassis
Drop to concrete: Max: 600mm (2ft) Rated: 300mm (1ft)

Motor

Track Motors (24V): 4 units
Max output (after gear down) (x2): Max 80W, 100Kg.cm/track
Rated current: 2.75A, Max current: 16A
Arm Motor (24V): 2 units
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: 980mm (38.5") (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



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Jaguar 4x4 Wheel

Distributor:



JAGUAR PLATFORM G2

