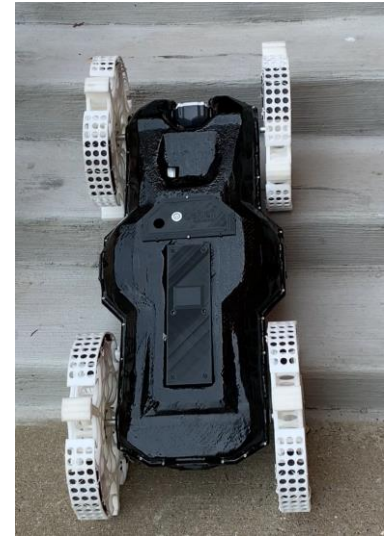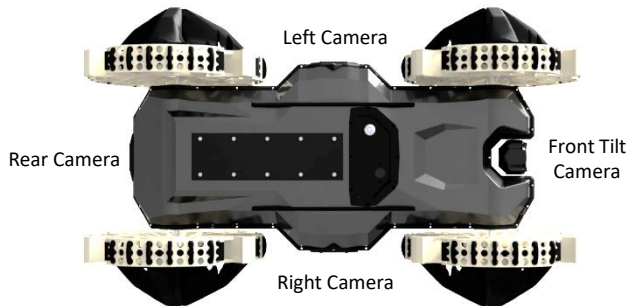## *OceBot™ Surveillance UGV Datasheet*

Overview

The OceBot Surveillance UGV is a mobile Telepresence robot that is designed for surveillance in hard-to-reach areas. The robot is equipped with specialized wheels for exceptional maneuverability including **stair climbing** and is equipped with four high resolution cameras for surveillance and driving. The OceBot is equipped with leading edge sensors and communications that enable remote users to visualize the situation and make informed decisions. The OceBot wheels are designed for easy maneuvering over a wide variety of terrains and can rapidly climb and descend stairs. The wheels are also capable of absorbing forces from up to a 2-meter fall allowing the OceBot to be readily deployed where you need it.

Left Camera

Rear Camera

Front Tilt Camera

Right Camera

Key Features

- 4-Wheel Drive System
- Shock absorbing wheels
- Front and Rear Camera for driving
- Left and right facing cameras
- Field swappable battery
- IR LED lighting with Off, Low, Med, and High Brightness Levels
- Controllable front facing visible white LEDs
- Chassis weight 17lbs

There are multiple ways to control the OceBot and view the cameras. The handheld Android Tablet controller application provides local WiFi control when the operator is within 1000 feet of the robot. The embedded Cellular control system adds the ability to control and view the OceBot's cameras through the Internet using a Cellular connection. This provides an enhanced level of safety and convenience as it allows operator control from a safe distance locally or from a command and control center anywhere.

Capabilities and Benfits

- Stair Climbing without reconfiguring wheels
- Drop into a room through a window for reconnaissance
  - Self righting video – there is no "upside down"
- 360° environment views
- Tilt Front Camera allowing inspection under vehicles or buildings
- Flexible wireless control via Cellular and WiFi
- Field swappable battery pack – takes just 30 seconds
- Light weight carbon fiber chassis allows easy portability
- IP67 rated waterproof chassis allows operation in all weather scenarios
- IR lighting for camera vision without visible illumination
- Up to 9 mph (14.5 kmh) forward or reverse motion allows rapid deployment
- Dimmable front facing white LED lights provide illumination

Version 3.0
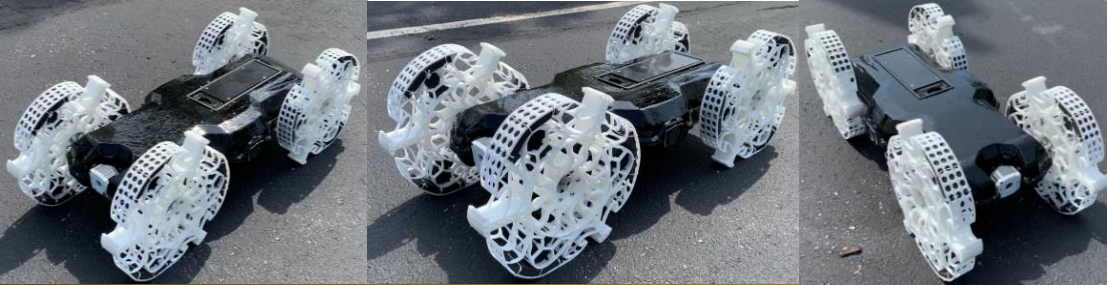
OceBot™ Surveillance UGV Datasheet

OceBot Controller User Interface

The OceBot is remotely controlled over a closed secure private network or the public Internet via a Wireless (WiFi or Cellular) connection. The standalone Android controller application (shown below) provides a full suite of onscreen controls and allows camera viewing from a single device. The OceBot is controlled using the touch screen or by simply tilting the tablet. The Android software application is optimized for tablets and can also be used on other mobile devices.
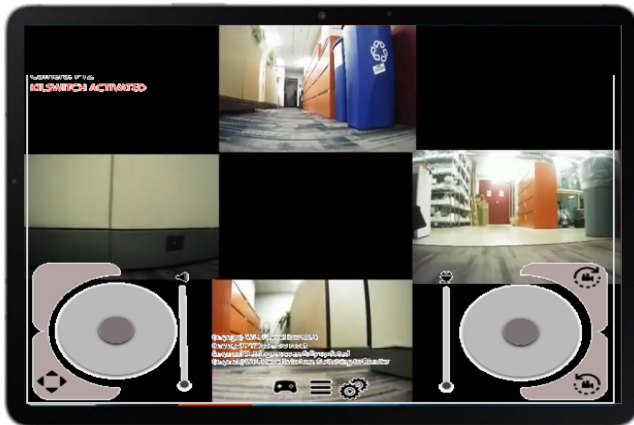
Using a web-based application (OceGo), the user controls the OceBot over a direct socket, or MantaroBot Communications Service link to the OceBot. The OceBot UGV can be controlled from a portable controller, mobile device or a desktop PC. The OceGo web-based controller supports multiple user interfaces including desktop mouse and keyboard, accelerometers and touch screens on mobile devices.
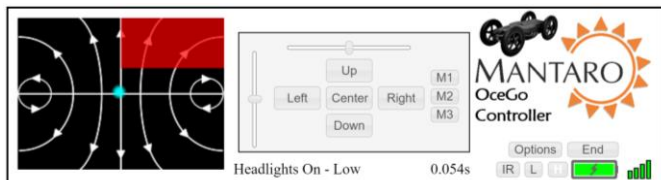
The controller also provides important status information of the OceBot Surveillance UGV including the condition of the communications link, wireless signal strength, and battery charge state of the OceBot.

Hardware Specifications

Physical Dimensions
• Height: 12"; Width: 20"; Length: 35"
• Weight: 17 lbs with battery and wheels

Cameras
• Front $\pm$ 40-degree tilt 720P w/ wide angle lens
• Left, right and rear fixed 720P w/ wide angle lens

Audio
• High Sensitivity Audio Surveillance Microphone

Battery / Power
• One 22.2V 6S 12Ah rechargeable battery pack
• 120/240V AC Adapter battery charger

Illumination
• Two white front facing LEDs (low/med/hi settable)
• Controllable IR LED illumination

Onboard Computer
• Intel i7 Computer
• Video switching software
• Sensor analysis and control software

On Board Cellular Modem
• Up to 60 Mbps data throughput

Optional Pan Tilt Zoom Camera
• Camera that mounts to central Turret
• 10x zoom, 360-degree pan, -10/+90 degree Tilt

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