

HD2-S MASTIFF

HEAVY-DUTY SUPPORT TACTICAL ROBOT

Overview

The Mastiff features a tracked design that allows it to climb over most obstacles including stairs. It features a 20x zoom camera with 360-degree pan and -15/+90 degree tilt. It also has IR capability so you can see in any lighting condition. With all the features of the HD2-S Doberman, the addition of a multi-axis arm makes this robot even more versatile.

The multi-axis arm allows the operator to open doors, provides assistance in scaling obstacles, moving debris, inspecting suspicious items, and Explosive Ordnance Disposal (EOD) at a safe distance. The strong arm is capable of lifting 20 pounds fully extended. The Mastiff can be equipped with an available 5th axis allowing the base to rotate 400 degrees, and the optional 6th axis allows the wrist to tilt 160 degrees. With this very agile and strong arm, this robot makes for a very powerful tool.

Applications

EOD DISPOSAL

Our HD2 Mastiff is an excellent choice to keep people out of harm's way when it comes to bomb diffusing and removal. The HD2 Arm can be equipped with a mount for a Carbon Fire 10 Disruptor. A disruptor can also be supplied to qualified EOD Departments.

HOSTAGE & HAZARD SURVEILLANCE

Survey hostile/hazardous situations while staying out of harm's way.

OPENING DOORS

With the multi-axis arm, things like doors will no longer stop you from surveying potentially dangerous locations.

CLEARING ROOMS REMOTELY

Clear rooms and buildings remotely with audio and video surveillance.



Features

Rear Stabilizer Arm

Removable actuated rear stabilizer arm. Acts as a stabilizer to help prevent roll over.

Easily Removable Batteries

Battery Charging

Fully automatic smart chargers. 115VAC plug charges batteries simultaneously. 230 VAC also available upon request.

NIST Qualified Design

Outperformed competition at National Institute of Standards and Technology event.

EOD Ready

Mounting for Carbon Fire 10 Disruptor included.

Ethernet Jacks

Ethernet jacks are included in OCU and Robot for connection of 4G routers or ethernet tether.

Store and Protect

Reusable foam lined transport case.

Unlimited Technical Support

Training Video and PDF Operation Manual

Technical Specifications

Weight	147lbs / 66.7kg
Length	45in / 114cm
Width	22in / 56cm
Height	26in / 66cm
Ground Clearance	2.5in / 6.4cm
Water Resistance	Weather Resistant
Speed	110 ft/min / 1.25 mph / 2kph
Runtime	Up to 8 hours
Battery Type (Main)	Two (2) LiFePO4 25.6V 11.1Ah
Battery Type (Internal Controls)	One (1) Li-Ion 11.1V 10Ah
Audio Communication	2-Way Audio
Stair Climbing	✓
Cameras	4

Multi-Axis Arm

SPECIFICATIONS	
Reach (Vertical)	69in / 175.3cm
Reach (Horizontal)	35in / 88.9cm
Arm Payload (Fully Extended)	25lbs / 11.34kg
Grip Strength (Parallel Finger)	65lbs / 29.5kg
Gripper Opening	4.5in / 11.4cm
AXIS ROTATION	
Base Rotation	400° degrees
Shoulder Rotation	180° degrees
Elbow Rotation	270° degrees
Wrist Rotation	360° continuous rotation
Wrist Tilt	160° degrees



Operator Control Unit (OCU)

- Rugged Pelican case style enclosure with 12" HD touch screen monitor.
- Graphical User Interface (GUI) – Displays live camera feed(s) from the robot, battery levels, HAZMAT readings (if applicable), and touchscreen controls.
- High-Performance CPU – 1.1 - 3.4Ghz Dual-Core processor w/ 8GB RAM.
- MIMO 2.4GHz high power digital radios.
- Lithium-ion battery, 11.1V 10Ah.
- 2-way audio control.
- Quad view camera display (switch between cameras, split screen, or all cameras in quad view).
- Two modes of control (cartesian and joint) for easy manipulator control with preset positions.
- Video recording and image snapshots.
- Advanced kinematic modeling and collision detection – see a 3D model of the robot with the current position of the arm with warnings when arm is nearing a collision with the robot.
- Integrated joysticks and toggle switches to independently control every function:
 - Drive Control
 - PTZ Camera control
 - Multi-axis shoulder movement
 - Multi-axis arm movement
 - Wrist tilt and rotation
 - Camera toggle and zoom
 - Stabilizer control
 - Tether / Wireless switch

Camera System

Multiple cameras for ease of use and effective operation. The IR cameras and LED lights allow for low light operation.

- Primary 20x Optical Zoom and 360° Pan/Tilt camera mounted on the base of the arm.
- Gripper IR camera
- Fixed front IR camera
- Fixed rear mast IR camera

Additional Features

DIGITAL REPEATERS & MONITORING STATIONS

Need to increase your operating range? Want to provide “eyes and ears” for more operators? Our repeaters and secondary monitoring stations help expand your operation! These compact systems are compatible with all SuperDroid Tactical Digital Radio systems. Our secondary monitoring station displays the camera feed for other teams to view. They also double as signal repeaters. These are excellent if you have several entry teams or for investigating extensive areas. Custom repeaters are available on request.



MULTI-AXIS ARM ATTACHMENTS

Multiple arm-attachment tools for different scenarios. Window piercing tools, Hook/Object pullers, Wire cutters, and more.



CARBON FIRE DISRUPTOR

Complete Carbon Fire 10 Disruptor kit with CFI Initiator for direct mounting to multi-axis arm. For EOD capable/qualified departments.



HAZMAT SENSORS

Survey hostile/hazardous situations staying out of harm's way. Use our robots for situations that are too difficult, dangerous, hazardous, lethal, toxic or just too hostile for humans to enter. Our robots can interface directly with MultiRAE HAZMAT sensors and display the information directly on your screen! No need to aim your camera at the sensor! It can also be installed and removed quickly and easily.



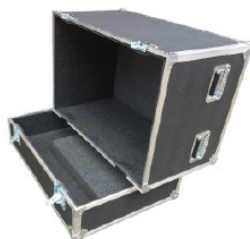
BACKUP BATTERY SYSTEM

Additional LiFePO batteries & 11.1V 10Ah control battery system



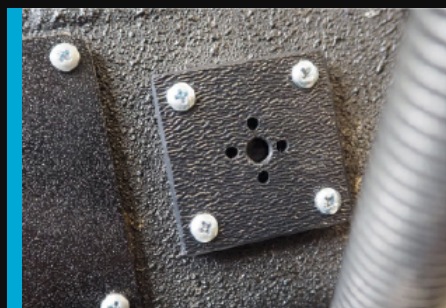
TRANSPORT CASE

Foam lined transportation case to protect your robot in storage and transit.



SWITCH GUARD

Prevent external tampering with the robots power button in the field.



HIGH GAIN ANTENNA WITH MAGNETIC BASE

Operate your robot from the safety of your vehicle. Attach this antenna on the exterior to provide a clear signal.

HDMI VIDEO SPLITTER FOR OCU/REPEATER

Display video feed on an external monitor via HDMI.

TACTICAL SPOTLIGHT & LASER

Remotely activated spotlight to improve visibility in your field of view. The laser allows for easy indication and focusing.