COUNTER-DRONE & ROBOTICS · AUTONOMOUS PATROL

D-DOG

L2 Layer · Observation & patrol

D-DOG Motti is a quadruped robotic dog that takes day-and-night cameras into ground-level blind spots and reports to your control room.



KEY BENEFITS

01 **Covers the blind spots**
Takes a camera where fixed cameras cannot see.

02 **Patrols day and night**
Walks its rounds, tracks targets and streams real-time video.

03 **Part of the system**
The ground layer of D-Fence SPECTRA, reporting to your control room.

HOW IT WORKS

01 **Map**
Optional 3D LiDAR and depth cameras map the site.

02 **Patrol**
It walks its round over stairs, slopes and rough ground at up to 3.7 m/s.

03 **Observe**
The FPV camera and camera payloads stream real-time video, day and night.

04 **Report**
Operators watch the feed and take remote control when needed. On a fault the robot kneels in a soft stop.

SPECIFICATIONS

Platform	Legged quadruped robot
Dimensions, standing	630 × 360 × 415 mm
Dimensions, on ground	670 × 425 × 145 mm
Weight (battery included)	15 kg
Materials	Aluminum alloy and high-strength plastics; 360° body protection
Ingress protection / temperature	IP54 · 0 °C to 40 °C
Degrees of freedom	12
Actuators	Precision joint motors, max. torque 48 N·m
Maximum speed	3.7 m/s (limit up to 5 m/s)
Payload	approx. 8 kg (up to 10 kg limit)
Stairs / slopes / jump	16 cm continuous · 30° standard, up to 40° limit · jump height 35 cm
Range	6 km (no load, 1 m/s)
Battery	Lithium, 43.2 V, 5 Ah nominal (4.6 Ah rated)
Charging time / endurance	approx. 1 hour · 1–2 hours of use
Maximum operating power	3,500 W

Onboard compute	8-core high-performance CPU; optional NVIDIA Jetson Orin NX development kit
Sensing	Integrated IMU; FPV camera (DFOV 122°); optional 3D LiDAR, depth cameras and RTK positioning
Interfaces	Ethernet RJ45 1000 Mbps, USB, SBUS, UART; 12 V output (max. 36 W) and battery-voltage output (43.2 V, max. 100 W)
Expansion	4G modules and long-range video transmission (optional)
Control and development	Native SDK for motion control, video stream and status; development of autonomous navigation algorithms
Smart functions	Target tracking, real-time video streaming, over-the-air (OTA) upgrades
Movements	Stand, lie down, pitch, roll and yaw; advanced movements including jumps and two-legged stand
Safety	Soft-stop emergency shutdown with automatic kneeling on malfunction
Integration	Documented interfaces (SDK, API or interface control document) and technical documentation sufficient for operation, maintenance, repair and training
Open use	The end customer may use, test, develop, operate and support the system, directly or through third parties, throughout its life cycle
Licenses	Software and firmware licenses are perpetual and irrevocable, with no recurring fees; updates and fixes are free of charge during the warranty and support period
Security	No hidden remote access
Documentation and training	English user and maintenance manuals (editable digital format and PDF); two rounds of operator and maintenance training, in Israel or remotely
Spare parts and support	Spare parts, batteries and technical support for at least 6 years; at least 12 months' written notice before the product, batteries or key spares are discontinued
Quality	Quality management certified to ISO 9001:2015; every unit passes factory acceptance testing (FAT) with a report and serial number; batteries use original cells and ship with UN 38.3 test reports and MSDS

Note	Values are based on published manufacturer information. The manufacturer's datasheet issued with each delivery governs; optional sensors and modules are not part of the standard configuration unless listed in the order.

TENDER SPECIFICATION TEXT

1. GENERAL

The system shall be D-DOG by D-FENCE Electronic Fencing and Security Systems Ltd. (ISO 9001:2015 certified quality management), or an approved equivalent that meets every requirement in this section.

2. FUNCTION

D-DOG Motti is a quadruped robotic dog that takes day-and-night cameras into ground-level blind spots and reports to your control room.

3. THE SYSTEM SHALL PROVIDE

- **Quadruped mobility:** 12 degrees of freedom; stairs of 16 cm, slopes of 30° (limit up to 40°), jumps of 35 cm.
- **Target tracking:** Follows targets and streams video in real time.
- **Open SDK:** Native SDK for motion control, video stream and status.
- **Optional sensing:** 3D LiDAR, depth cameras and RTK positioning.
- **Modular payloads:** About 8 kg payload (limit up to 10 kg), with Ethernet, USB, SBUS, UART, 12 V and 43.2 V outputs and optional 4G.
- **Rugged build:** IP54, 0 °C to 40 °C and 360° body protection.
- **Safe stop:** Soft-stop emergency shutdown with automatic kneeling on malfunction.

4. TECHNICAL REQUIREMENTS

- **Platform:** Legged quadruped robot
- **Dimensions, standing:** 630 × 360 × 415 mm
- **Dimensions, on ground:** 670 × 425 × 145 mm
- **Weight (battery included):** 15 kg
- **Materials:** Aluminum alloy and high-strength plastics; 360° body protection
- **Ingress protection / temperature:** IP54 · 0 °C to 40 °C
- **Degrees of freedom:** 12
- **Actuators:** Precision joint motors, max. torque 48 N·m
- **Maximum speed:** 3.7 m/s (limit up to 5 m/s)
- **Payload:** approx. 8 kg (up to 10 kg limit)
- **Stairs / slopes / jump:** 16 cm continuous · 30° standard, up to 40° limit · jump height 35 cm
- **Range:** 6 km (no load, 1 m/s)
- **Battery:** Lithium, 43.2 V, 5 Ah nominal (4.6 Ah rated)
- **Charging time / endurance:** approx. 1 hour · 1–2 hours of use
- **Maximum operating power:** 3,500 W
- **Onboard compute:** 8-core high-performance CPU; optional NVIDIA Jetson Orin NX development kit
- **Sensing:** Integrated IMU; FPV camera (DFOV 122°); optional 3D LiDAR, depth cameras and RTK positioning
- **Interfaces:** Ethernet RJ45 1000 Mbps, USB, SBUS, UART; 12 V output (max. 36 W) and battery-voltage output (43.2 V, max. 100 W)
- **Expansion:** 4G modules and long-range video transmission (optional)
- **Control and development:** Native SDK for motion control, video stream and status; development of autonomous navigation algorithms
- **Smart functions:** Target tracking, real-time video streaming, over-the-air (OTA) upgrades
- **Movements:** Stand, lie down, pitch, roll and yaw; advanced movements including jumps and two-legged stand

- **Safety:** Soft-stop emergency shutdown with automatic kneeling on malfunction
- **Integration:** Documented interfaces (SDK, API or interface control document) and technical documentation sufficient for operation, maintenance, repair and training
- **Open use:** The end customer may use, test, develop, operate and support the system, directly or through third parties, throughout its life cycle
- **Licenses:** Software and firmware licenses are perpetual and irrevocable, with no recurring fees; updates and fixes are free of charge during the warranty and support period
- **Security:** No hidden remote access
- **Documentation and training:** English user and maintenance manuals (editable digital format and PDF); two rounds of operator and maintenance training, in Israel or remotely
- **Spare parts and support:** Spare parts, batteries and technical support for at least 6 years; at least 12 months' written notice before the product, batteries or key spares are discontinued
- **Quality:** Quality management certified to ISO 9001:2015; every unit passes factory acceptance testing (FAT) with a report and serial number; batteries use original cells and ship with UN 38.3 test reports and MSDS
- **Note:** Values are based on published manufacturer information. The manufacturer's datasheet issued with each delivery governs; optional sensors and modules are not part of the standard configuration unless listed in the order.

5. DETECTION SEQUENCE

1. **Map:** Optional 3D LiDAR and depth cameras map the site.
2. **Patrol:** It walks its round over stairs, slopes and rough ground at up to 3.7 m/s.
3. **Observe:** The FPV camera and camera payloads stream real-time video, day and night.
4. **Report:** Operators watch the feed and take remote control when needed. On a fault the robot kneels in a soft stop.

6. SUBMITTALS

Before installation, the contractor shall submit the manufacturer's datasheet, the installation instructions and the zone layout for approval.