D-FENCE
ELECTRONIC FENCING AND SECURITY SYSTEMS LTD.

COUNTER-DRONE · UAV · UAS
DEFENSE SYSTEM



SYSTEM CATALOG

D-DRONE

DETECT · LOCATE · NEUTRALIZE

MIL-STD Counter-Drone / Quadcopter / UAV / UAS System

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01 OVERVIEW

Total Airspace Awareness

D-DRONE is D-Fence's advanced solution for aerial situational awareness and counter-drone defense. As drones become part of everyday life, the need to counter rogue drones — while managing friendly ones — grows more demanding every day. D-DRONE answers with exceptional accuracy and clarity: highly sensitive detection and precise geolocation to detect, locate and track drones and their operators. Once a drone is detected — manually or fully automatically — the system neutralizes the threat, forcing the drone to land on the spot or return to its operator. It tracks and neutralizes multiple targets at once, including swarm attacks from different directions and at different times.



The system detects drone presence by analysing the RF spectrum — signalling channels and radio transmissions, both uplink and downlink. Using the SIGINT module it decodes the information and displays all relevant data: drone type, communication channel and direction of approach, and in real time the exact location of the drone, its operator and the homing position (for about 75% of drones on the market). Upon detection, an automatic neutralization system (optional) disables the drone.

5 km	97%	1 s	2.5 km
Detection radius, 360°	Detection rate of known threats	Response time after detection	Directional jamming range



DETECT
RF Sensor + SIGINT

COMMAND
C2 Remote Control + SMS Alert

NEUTRALIZE
RF Jamming

02

APPLICATIONS

Protecting the Airspace

Where a perimeter fence protects the ground, D-DRONE protects what flies above it. One system for fixed sites and mobile operations.

Airports & Airfields
Keep runways and approach corridors clear of rogue drones.

Seaports
Cover terminals, quays and cargo yards from the air.

Borders & Perimeters
Detect operators and homing points beyond the fence line.

Critical Infrastructure
Protect energy, water and communications sites.

Government & Sensitive Sites
Controlled airspace around sensitive facilities.

Mobile Operations
Fixed or mobile deployment for convoys, events and temporary sites.





HOW IT WORKS

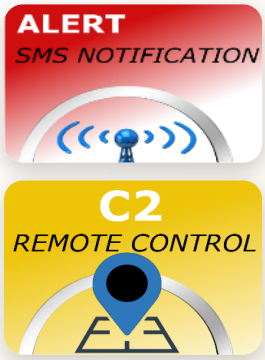
03 Operational Scenarios



01 DETECTION

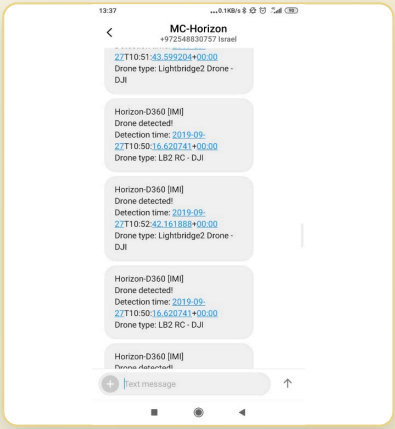
Aerial targets entering the protected perimeter are detected and tracked by the RF sensor, and their signals are analysed and decoded by the SIGINT module.





02 ALERT & COMMAND

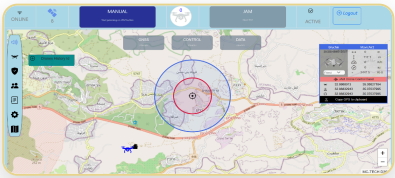
The C2 gives the operator audible and visual alerts on incoming drones. The screen details the drone type, model and operating frequency, plus the drone's location, the operator's location, the homing position, speed, azimuth, distance and classification.





03 NEUTRALIZATION

Once a drone is detected the system activates jamming automatically or manually — a highly effective set of RF countermeasures covering 360° around the protected site. The drone loses its control and GNSS signals and is either grounded at its current location or forced away from the protected area.



04 THE SYSTEM

System Components

1

RF + SIGINT Sensor

The RF sensor analyses drone communication and extracts vital information: drone type and model, operating frequency and unique identity. The SIGINT sensor extracts the drone location, operator location and homing position. All information is displayed on the command-and-control monitor in real time.



2

Directional / Omni-Directional Jammer

A state-of-the-art reactive jammer that blocks drone communication — control (uplink), data (downlink) and GNSS (GPS, GLONASS, BeiDou, Galileo). Effective jamming range of up to 1 km omni-directional (360°), or up to 2.5 km with a directional antenna.



3

Central Control Unit (C2)

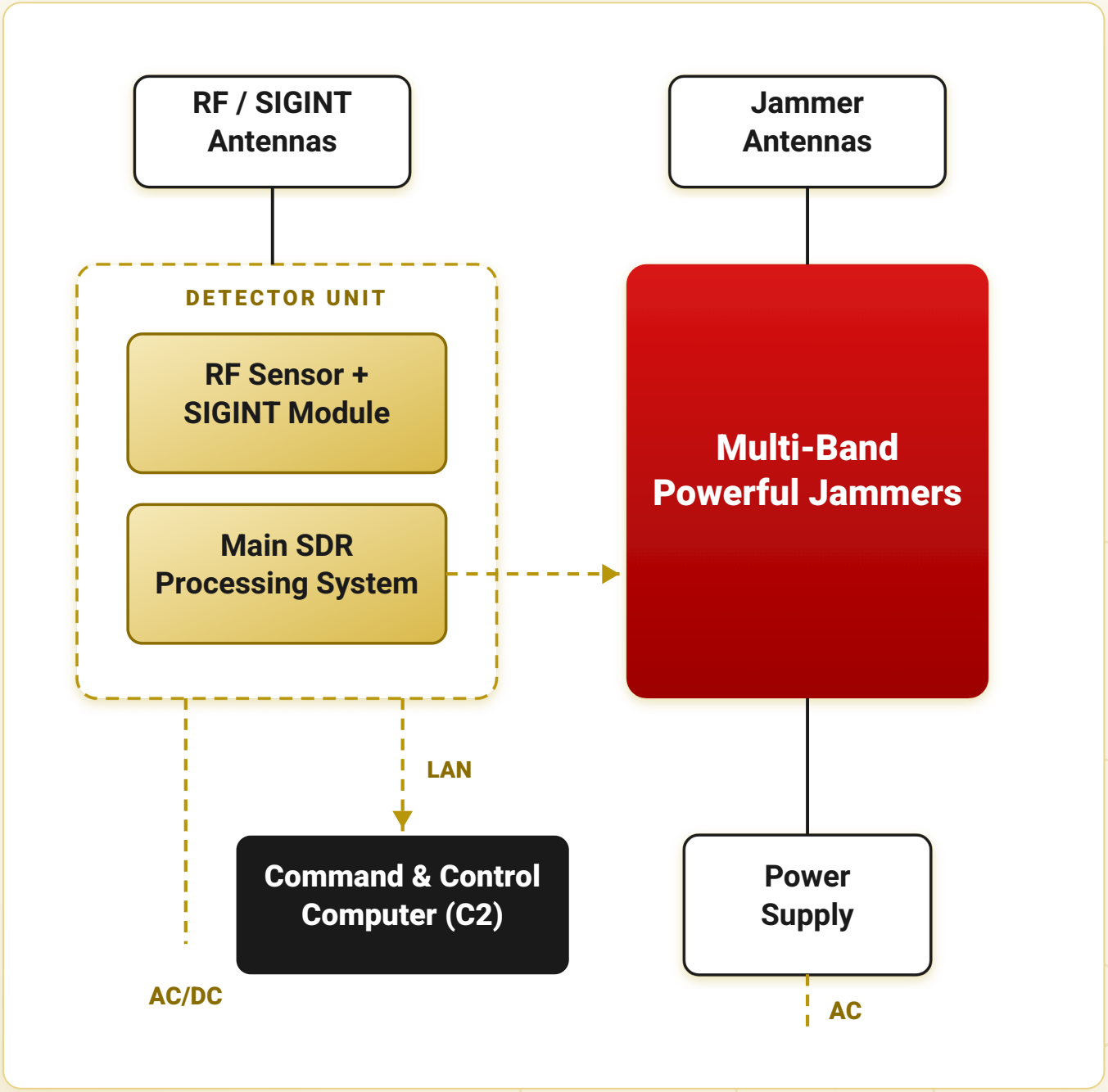
A computerised command & control station that manages all D-DRONE components.



DESIGN

05 System Architecture

D-DRONE combines multiple sensors — a directional RF sensor and a SIGINT detector — to deliver a real-time aerial situation picture. Directional and omni-directional RF neutralization, fully synchronised between all system components, enables effective detection, classification, identification and neutralization of targets.



06

RF SENSOR + SIGINT

Detection Subsystem

1. Detects drone presence and direction of approach by analysing signalling channels and radio transmissions (uplink and downlink)
2. Passive, invisible detection dome — radius of up to 5 km, 360°
3. Pinpoints the drone, the operator and the homing position in real time (about 75% of drones on the market)
4. Detects remote-controlled drones and UAVs before take-off within a 1 km radius
5. 97% detection rate of known threats
6. Continuously updated threat library
7. Detects multiple drones from different directions simultaneously



DETECTION SYSTEM — RF SENSING	
Frequency bands	2400–2500 MHz · 5100–6000 MHz · 400 MHz · 868 MHz · 1200 MHz · 1400 MHz
Wi-Fi	2.4 / 5.8 GHz
Optional additional frequencies	20–6000 MHz
Antennas	4 omni high-gain antennas
Gain	7 dBi
Operational power	90–260 VAC / 24 VDC internal power supply
Synthesizer setting time	Better than 1.5 ms
Antenna input	50 Ω · VSWR 2:1
Sensitivity / noise figure	−90 dBm typ. for SNR 10 dB
Detection alerts	On-screen sound & visual · Optional SMS notification (language & template defined by the customer)
Response time	1 second after detection
Software	Dedicated Windows 11 software · Online updates

07

RF JAMMING

Neutralization Subsystem

1. Blocks common civilian drone / quadcopter / UAV bands (more bands can be added upon request)
2. Antennas: multi-directional (omni)
3. Jamming range: omni antennas up to 1 km radius, 360° · directional up to 2.5 km
4. No interference to nearby frequency bands
5. VSWR protection — antenna disconnect / short
6. Overheat protection: operation ceases at 75 °C, resumes at 71 °C
7. Operational power: 90–260 VAC



FREQUENCY BANDS & OUTPUT POWER

415–445 MHz 50 W / 47 dBm ±1.5 dB	**850–930 MHz** 50 W / 47 dBm ±1.5 dB	**1560–1610 MHz** 50 W / 47 dBm ±1.5 dB
2400–2500 MHz 50 W / 47 dBm ±1.5 dB	**5150–5350 MHz** 50 W / 47 dBm ±1.5 dB	**5500–5900 MHz** 50 W / 47 dBm ±1.5 dB

+ optional additional band

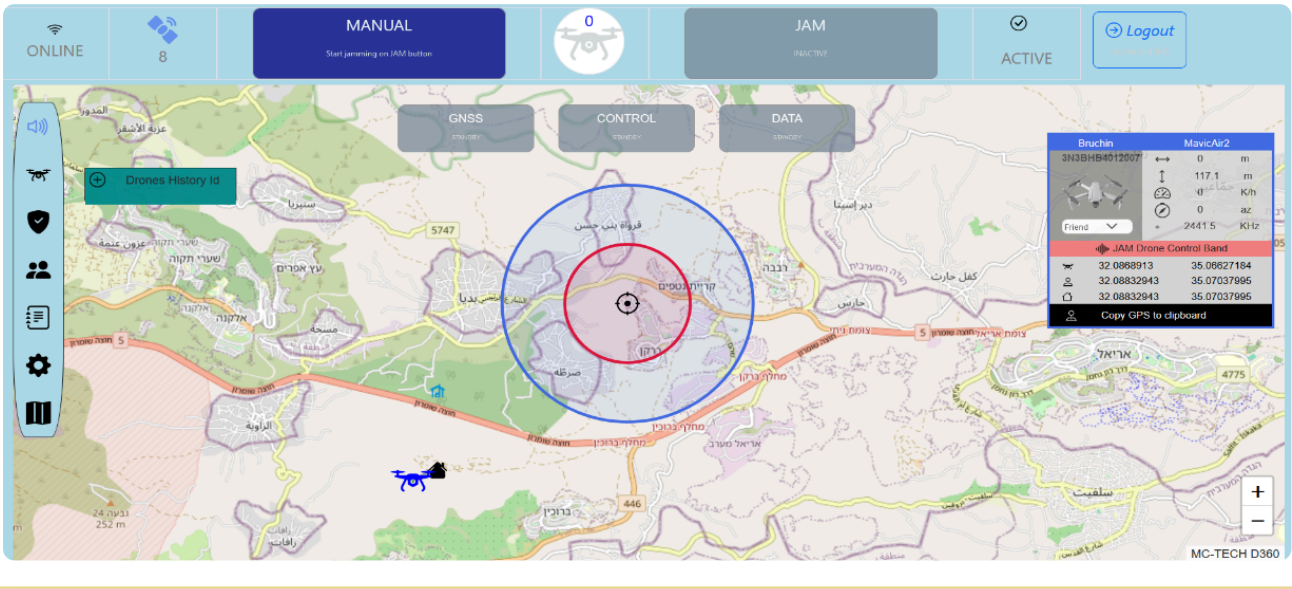
Total power output	Up to 350 W
Modulation	FM
Spectral noise	Less than 40 dBc at 2.5%
Antennas	5–6 dBi high-gain antennas
Spectral coverage	Bluetooth · 2.4 / 5.8 GHz · UHF · VHF · Wi-Fi

Final spectral bands and power outputs are finalised upon order.

C2 SOFTWARE

08 Command & Control

One screen. Complete control over detection, classification and neutralization.



1. Displays the system's location and status on a map
2. Shows the protected area with detection and neutralization coverage
3. Presents the locations of drones, operators and homing positions
4. Categorises detected targets by brand, with identification numbers when available
5. Visualises drone speed, altitude and azimuth relative to the system
6. Visual and audible alerts upon detection
7. Activates jamming bands automatically on detection, or manually
8. Independent activation of each jamming band
9. User management with administrative and standard privileges
10. Internal log and report system, including a database of UAV flight paths
11. Blacklist / whitelist for automatic classification: owned, friendly, hostile or unknown
12. Remote access
13. Detection library updates

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09 SYSTEM

Technical Specifications

ELECTRICAL	
Protection	VSWR protection · Overheat protection: 75 °C cut-off, 71 °C resume
Operational power	90–260 VAC / 24 VDC
Cooling	Forced air cooling
Controls & indicators	On/Off switch & indicator · Central computerised remote control
Connectivity	3 Ethernet connectors
Power consumption	~800 W
Remote control	PC / tablet via LAN cable
Optional	Backup battery
MECHANICAL	
Deployment	Fixed stationary / mobile
Casing	Enclosed aluminium casing, fitted within an outdoor-standard case
Weight	~25 kg jammer · ~10 kg detector
Dimensions (mm)	350 × 300 × 150 jammer · 250 × 200 × 150 detector
ENVIRONMENTAL	
Operating temperature	−20 °C to +50 °C (monitored by internal heater)
Standards	IP-65 · MIL-STD-810G · MIL-STD-461G · MIL-STD-1275E
MTBCF	> 60,000 hours





10

WHAT'S IN THE BOX

Package Contents



D-DRONE detector unit

QTY 1



D-DRONE jammer unit — counter civilian drones / UAS / UAV

QTY 1



Utility box

QTY 1



Detection omni antenna

QTY 4



High-power jamming antenna

QTY 6



Power supply AC/DC

QTY 1



System rugged tripod

QTY 2



Power supply MIL-STD cable

QTY 2



RJ45 MIL-STD cable

QTY 1



Rugged carrying case

QTY 2



C2 software + remote control tablet

QTY 1

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Detect. Locate. Neutralize.

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Specifications are subject to change without notice. Supply and export are subject to applicable regulatory approvals and licensing.