DroneWatcher RF DR

RF Drone detector

DroneWatcher RF DR is a Standard Frequency (DR) Radiofrequency (RF) scanner-detector with a directional antenna that is able to detect over 98% of the commercially-available, consumer and prosumer drones on the market out to 2+ miles providing detailed information including drone type, ID, bearing (8 directions), range and other data.

The DroneWatcher RF DR is a compact, unit that is available in both fixed, mobile, marine and avionics-grade designs with industrial and military (MILSPEC) configurations that can be installed in multiple configurations with only nominal power and network requirements (self-contained solar and cellular versions are available).

Model: DroneWatcher RF DR

Once a drone is detected by a RF DR sensor, the system will provide a bearing and range (*based on signal strength*). New drone signatures are continually being added to DeTect's DroneWatcher RF DR identification database.

DroneWatcher RF DR also includes DeTect's proprietary drone interdiction and inception functionality (*usage varies limited by country and jurisdiction*).

- DroneWatcher uses advanced signals intelligence technology to detect non-encrypted and encrypted RF and WiFi controlled drones and/or controllers

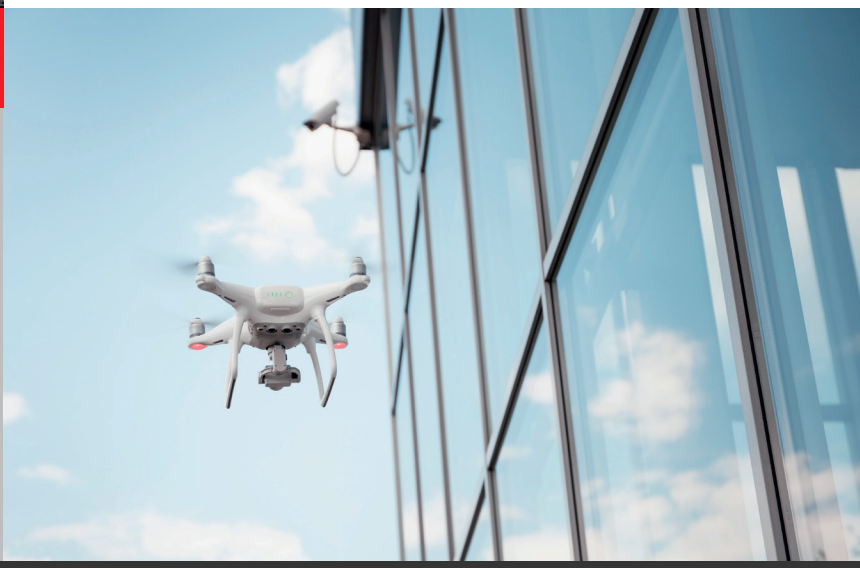
- Applications include personal privacy and industrial/business/facility security and military security

- The unit detects, tracks and alerts (audible and visual) presence of most commercially-available, nonencrypted consumer and prosumer drones and records related data including the drone type and ID which can be used to document incursions and support apprehension and prosecution

- The unit will not detect non-signal emitting drones (*e.g. GPS waypoint flight programmed*) and some military frequencies

Operation:

DroneWatcher RF DR uses advanced signals intelligence (high speed processors and software defined radio scanners) to continually scan covered frequency ranges to identify signals and SSIDs consistent with drone control systems. Once a signal is detected, it is compared to the database of known drone IDs and known non-drone RF sources (*a Whitelist*) in the DroneWatcher C2 SQL database and if a 'match' occurs, the system returns the drone type (manufacturer and model), unique ID number, signal strength, location and other information to the user.



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Specifications

Detection range: 2-3 miles / 3 to 5 kilometers

OS: Microsoft Windows

Interfaces: Gigabit Ethernet, wireless and HDMI

Display: Visual display to third party monitors and DeTect or 3rd party C2 systems via secure web display.

Construction:

- Plug-and-Play ready requiring only limited remote configuration support (*included in web service subscription*)
- Self-contained unit with integrated NEMA 4/IP 65 waterproof power and ethernet inputs
- Air transportable, meets most airline shipping and carry-on size requirements
- Unobtrusive, urban camouflage exterior option (*no brand labeling*)
- Suitable for ground, rooftop, tower/monopole or structure mount operation
- Available with optional cyber interdiction module (*subject to country-of-use regulatory & US ITARs restrictions*)

Technical

Covered Frequency Ranges*:
- 900 – 990 MHz
- 2400 – 2480 MHz
- 5500 – 6000 MHz

Drone Protocols Included*:
- DJI Lightbridge
- DJI Lightbridge 2
- DJI OcuSync
- Graupner
- Futaba
- High-Tech
- Spectrum
- WiFi Drone Network and MavLink

Power: 110/220 vAC, 20/10 amps, 60 and 50 Mhz options, standard US outlet with international plug or direct-wire options

Network: TCP/IP with high speed internet access and fiber recommended for access to the DroneWatcher C2 cloud-based datasystem and current drone signature database. Secure on-site DroneWatcher C2 data system option is available.

- **Ethernet:**
  — Fiber or copper
  — Fast Ethernet, 1000 Mbps recommended
  — P2P (Point-to-Point)

- **Wireless:**
  — 50 MBps, 2.4 GHz or 5 GHz
  — Radwin, Ubiquiti Picostation, or equivalent

- **Cellular:**
  — LTE recommended, 4G minimum
  — Provided by customer: LTE/4G service or local WWAN
  — Provided by DeTect (with each radar unit): Network or Digi Cellular Router; provides data uplink to local WWAN or cellular network

- **Environmental:** NEMA 4/IP65, -30 to +50 degrees C

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