








AeroGuard Counter UAS System

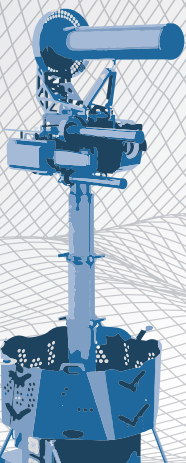
AeroGuard is a scalable Counter Unmanned Aerial System (C-UAS) solution that Detects, Tracks and Defeats UAS engaged in hostile activity or surveillance by a nuisance drone enthusiast, insurgents, state actors or hostile militaries.

AeroGuard provides comprehensive situational awareness and mitigation as a standalone or networked capability, as a multi-layered C-UAS, or as a component of a Ground Based Air Defence (GBAD) system.

Concept of Operations (ConOps)

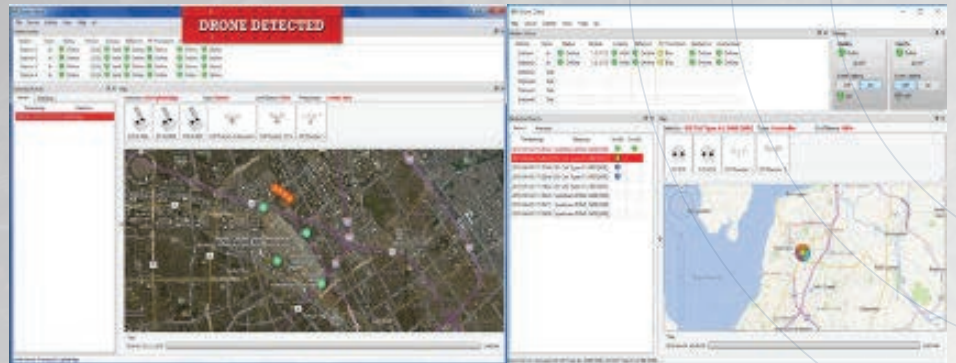
AeroGuard is scalable and flexible to address multiple ConOps, these include, but are not exclusive to:

-  Critical National Infrastructure – High value infrastructure such as nuclear power plants, oil
-  Border protection – National borders where hostile UAS incursions are taking place.
-  Airbase/port protection – Flight path disruption or threats to high value platforms.
-  Forward operational base protection – Surveillance or weaponised drone activity in theatres of operation.
-  Force protection – Protection of deployed personnel from surveillance or weaponised UAS activity.





Solution Options



User Interface



EO Sensor (Camera)



RF Defeat



Advance C-UAS solution





Specifications Overview

RF Sensor Specifications

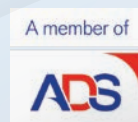
RF Frequency Range(s)	400 MHz to 8.5 GHz; Scan for drones in 433 MHz, 915 MHz, 2.4 GHz and 5.8 GHz ranges
DF Methodology	Dual channel correlative Interferometry using 9-element DF antennas
Geolocation Methodology	AOA, TDOA and Hybrid AOA/TDOA (multiple RF sensors required)
DF Accuracy	2° to 5° (typical) – depending on DF antenna and environment
Deployment Options	Fixed, mobile, transportable, man portable

EO Sensor Specifications

Cameras	Long range color camera (2.3 MP, 20x optical zoom, 12X digital zoom) High sensitivity TI (HD 1280 x 720, 3 - 5µm, hot sensor, 24° to 1.8° FOV, 13.5x continuous zoom)
Positioner	Viper Dynamic
Azimuth	Continuous (no cable wrap)
Elevation	-50° to +60°
Max Speed	60° per second

RF Inhibitor Specifications

Radio Type	Software Defined Radios (SDRs)
RF Frequency Range(s)	GNSS, 433 MHz ISM, 915 MHz ISM, 2.4 GHz ISM and 5.8 GHz ISM/WiFi
Antennas	Four integrated 15 dBiC nom. circular polarized high gain One integrated 17 dBi nom. high gain log periodic
Waveforms	Please inquire, Custom inhibition waveforms specific to the threats
Output Power	GNSS: Variable 100 mW min. 10 W max. 433 MHz ISM: Variable 5 W min. 33 W max*. 915 MHz ISM: Variable 5 W min. 33 W max*. 2.4 GHz ISM: Variable 1 W min. 20 W max.*Note: The combined 433 MHz & 915 MHz ISM 5.8 GHz ISM: Variable 1 W min. 10 W max. RF output power is 33 W max.



Delivering World-class RF Datalinks
and RF Inhibition Capability



AeroGuard can be deployed in a number of configurations to support the individual needs of each user ConOps.

Portable Solution

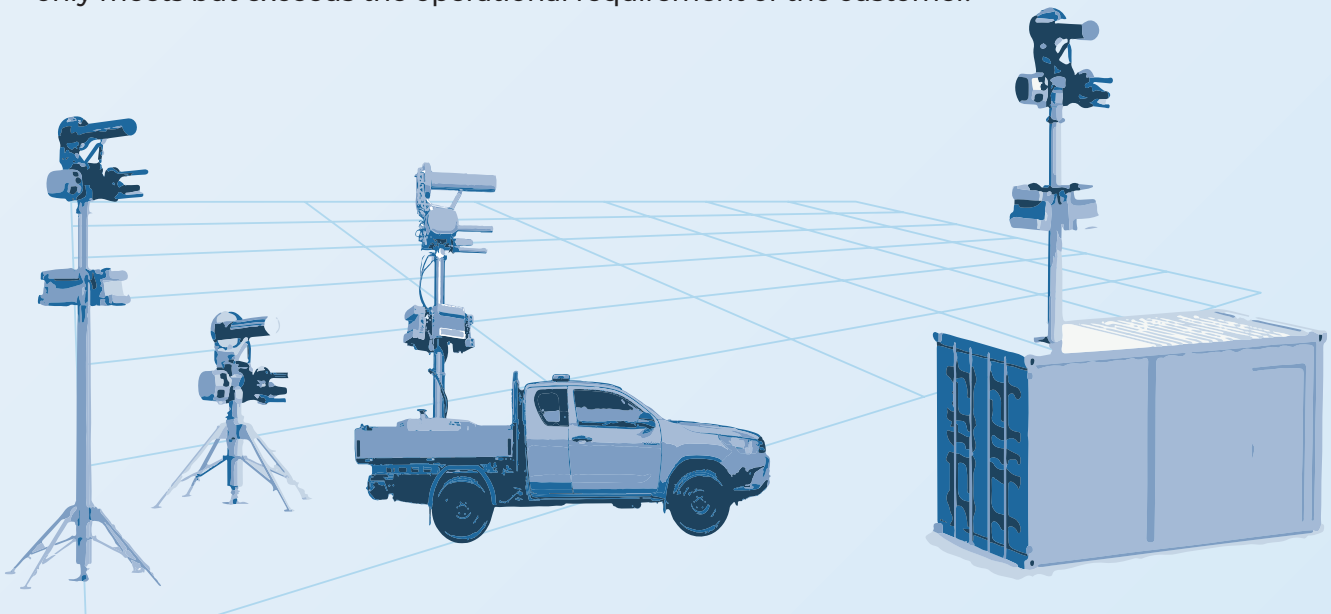
This is a combined quad mast and/or quadpod based system (depending on configuration) which can be temporarily deployed on the ground or positioned on building rooftops by a two-person team. The system components are stored in cases which are manoeuvrable and highly portable, allowing for installation in areas which are commonly accessed through tight doorways or hatches, and up staircases or ladders. The system is powered from a single mains or DC power socket and set-up time is typically less than one hour.

Mobile Solution

The mast can be mounted on a client's mobile platform. The platform can range from commercial all-terrain vehicles to fully armoured wheeled or tracked military vehicles. The system components can be integrated onto a single platform or split across two platforms depending on the ConOps. The mobile solution allows for rapid set up and tear down maintaining manoeuvrability and increasing survivability across a large Operational Area (OA). Each mobile solution will require an integration study to ensure that the AeroGuard solution is seamlessly integrated both physically and electronically, ensuring safe operation of the platform and optimising the configuration of the AeroGuard .

Fixed Solution

For applications where AeroGuard is a permanent installation, it can be supplied in a fully containerised unit, with an air-conditioned workspace, and an integrated power supply from mains power or a generator. It can also be installed onto a building of the client's choice. A full site survey is conducted to ensure the correct location is selected to maximise system performance within the ConOps and the selected building is structurally sound with appropriate power to support the deployment of AeroGuard In addition to the building survey the site and location will also be surveyed to ensure that the siting of the system not only meets but exceeds the operational requirement of the customer.



A Multi-Functional and Light Weight Tactical Anti-Drone Gun

A portable drone control device is a software handheld jammer. The equipment can output multi-channel interference signals at the same time, effectively deal with all kinds of conventional / non-standard flying UAV targets, enabling the UAV can have a return, crash landing and displacement effect. The whole equipment is small in size, light in weight, and has good mobility, which is suitable for low-altitude protection requirements such as important meetings, large-scale activities, and daily patrol in fixed places.



TECHNICAL DATA

Investigation system	: Radio-based passive detection
Detect signal type	: Uav digital transmission signal, uav remote control signal, WIFI system uav signal
Detection of the drone type	: The vast majority of conventional consumer drones, some unconventional drones, some fixed-wing drones,
	some crossing aircraft
Detect coverage frequency band	: 800MHz-1.4GHz, 2.4GHz, 5.8GHz
Detect distance	: 1 km (open environment)
Antenna type	: Directional antenna
Antenna emission angle	: $\geq 30^\circ$
Transmitting power	: 10W per frequency band
Operating time	: - 30 minutes (full band on), - 6 hours (typical working condition), - 12 hours (standby time, single battery)
The weight of the machine	: ≤ 6 Kg
Working temperature	: -10° - 70°