



PROTECT YOUR ASSETS FROM THE THREAT OF DRONES



M.A.D.S BUYERS GUIDE



01 | HOW SAFE ARE OUR SKIES?

SAFEGUARD YOUR SKIES WITH A PURPOSE-BUILT DRONE DETECTION AND DEFEAT SYSTEM

As drone technology continues to adapt and improve, the possibilities for drone capacity is ever expanding. Providing on-going risk to your assets and the people around them.

Recent years have seen a massive advance in drone endurance, range and payload capacity whilst the price has dropped. When considering security, the threat of drones should be taken seriously, but what can you do to protect your privacy and the safety of those around you?

The growth of counter-drone technology is in direct response to the use of drones being used for invasive and illegal means.

Stay one step ahead, install security measures today to deal with the drone threats of tomorrow.



02 | PURPOSE BUILT DRONE DETECTION AND DEFEAT SYSTEM

M.A.D.S. Martek Anti-Drone System has been designed to detect and defeat drones, protecting your assets from aerial attack and invasion of privacy.



DETECT

M.A.D.S. has been designed to detect and identify commercial drones within a 5km range, providing GPS positioning of both the drone and pilot (optional configuration), along with the drones altitude, speed and heading.



IDENTIFY

M.A.D.S. Martek Anti-Drone System is able to identify simultaneous drones and drone types. It can also identify the make, model and serial number of the drone.



TRACK

M.A.D.S. Martek Anti-Drone System can be left on continuously to provide 24/7 protection. The system configures in real time to allow the threat level to be assessed, generating alerts if necessary so that appropriate defence actions can be made. This means that it does not require continuous monitoring, saving time and money on security personnel.



DEFEAT

Once a threat has been established, the system enables an 'exclusion zone' on a 1 to one ratio (pilot to POI) to be created, covering 360x180 degrees. The drones fail-safe mode will be initiated, forcing it to return to its sender.



03 | DETECT, IDENTIFY AND MITIGATE DRONES

DETECT AND IDENTIFY

Detect and identify threats with 5km Identify exact location of operator
Monitor GPS position and flight path View historical drone detection data
Specialist marine design.

Able to display:

- Latitude and longitude
- Altitude
- Speed
- Range (within 200m single on sensor setup)
- Direction
- Drone type
- Flight path history
- Alert & warning



DEFEAT AND MITIGATE

M.A.D.S™ offers three types of defeat sensors. A unique mitigation sensor and two variants of Jammer.

Available with:

- Unique mitigation defeat sensor (2.4Ghz and 5.8Ghz)
- Range: 1 to 1 ratio (pilot to POI)
- 360x180 degrees

or

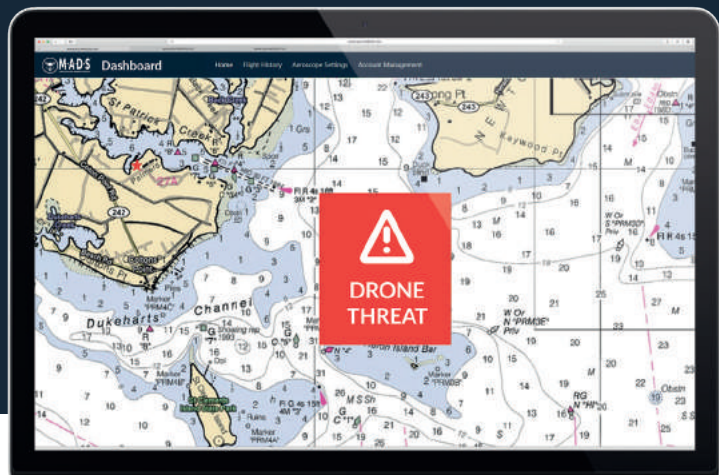
- Jammer defeat sensor alternative (2.4Ghz and 5.8Ghz + optional 1.5 Ghz)
- Jamming range: >1 to 1 ratio (pilot to POI)
- 360x180 degrees



Full specification details available on page 6.



Pending



04 | INSTALLATION



A large scale project will need approximately 5 days for installation, calibration, testing, training, and handover. Standard installation time take approximately 2-3 days.



The installation will be subject to the preparation of cabling, mounting plates, brackets, and onboard access.



As a software-controlled radio digital signal protocol, the detection system frequency detects everything on the 2.4Ghz and 5.8Ghz frequencies including all drone protocols. It has continuous deployment for omnidirectional passive detection.



The defeat system provides geofencing of 360x180 degrees around the POI.



The M.A.D.S. Martek Anti-Drone System is able to work in temperature ranges of -20 and +55, meaning that it will work whatever the weather.



The system will require space for the two antennas, which are 70cm x 75cm in diameter each.



Weighing 30kg for the detection radome and 27kg for the defeat radome, the design of them ensures a robust and marinated capability.



The M.A.D.S. Martek Anti-Drone System is a passive sensor, therefore it causes no interference with any other equipment. It can be seamlessly integrated and displayed on any existing interface on the bridge layout and control rooms or can sit on a stand-alone independent screen.



The M.A.D.S. Martek Anti-Drone System has been specially marinised with integrated IP66 protection, providing a fully sealed enclosure which is rain, sand and dust proof. The addresses the unique challenges of the maritime environment, but is also perfect for land-based operations.



The purchase of The M.A.D.S. Martek Anti-Drone System comes with a 1 year warranty, this can be extended at an additional cost. There is an annual software licence that needs to be purchased every year, but this is the only ongoing cost. Software upgrades within the year are included in your licence.



The M.A.D.S. Martek Anti-Drone System has engineers and a strategic partners distribution network worldwide. Depending on your location, engineers will be with you within days should you have any problems.

05 | TECHNICAL SPECIFICATION

FIXED SYSTEM	DETECTION*	DEFEAT	
		OPTION 1	OPTION 2
Range	5km line of sight, 360 x 180 degrees coverage**	Range: 1 to 1 ratio (Pilot to POI) at 360x180 degrees	Range: > 1 to 1 ratio (Pilot to POI) at 360x180 degrees
Operating Principle	Software controlled radio, digital signal protocol demodulation	Modular antenna demodulation	Three High Power RF Jamming directional
Frequency Band	Frequency hopping – 2.4Ghz, 5.8Ghz	2.4 Ghz, 5.8Ghz	1.5Ghz (optional) 2.4Ghz, 5.8Ghz
Frequency Protocol	Omnidirectional and directional	Mitigation 2.4Ghz, 5.8Ghz and WiFi	Jamming 2.4Ghz, 5.8Ghz, WiFi
Deployment	Continuous	Manual	Manual
User Interface	LAN based/ Screen stand alone or on exsiting interface	Non-selectable manual 1 push 30 sec push and hold	Non-selectable manual 1 push 30 sec push and hold
Power Supply	100-240V AC, 70W	24-28V DC, 70W	28VDC 1.5 Ah
Temperature Range	-20C to +55C	-20C to +55C	-20C - +55C
Ingress Protection	IP66	IP66	IP66
Weight	30kg	27kg	< 20kg
Dimensions	70cm x 75cm diameter radome	70cm x 75cm diameter radome	50cm x 54cm or 43cm x 44cm diameter radome

*Specifications only apply in stationary mode.

**Up to 5km line of sight, sea states, radome positioning, geopositioning and ship surroundings can impact range effectiveness. Subject to adjustments and software updates.



06 | ADVANCE YOUR SECURITY

Drones are becoming faster, smaller, more technologically sophisticated and cheaper. Recent years have seen a massive advance in drone endurance, range and payload capacity, leading to widespread usage.

By 2020, there will be over 22 million drones globally, so this issue is only going to continue.

The M.A.D.S. defeat sensor is a return system which causes no damage to the drone. This is a friendly way to defeat the threat, causing the UAV/UAS to return to its destination undamaged.

Protect your yacht now from the 21st-century aerial threat of terrorist attack, espionage, and delivery of contraband. M.A.D.S. can be used on yachts in port or at anchor as well as those on the move.

It's our mission to protect your assets, including but not limited to yachts, land-based infrastructure and residences from all threats, and to keep your activity private, safe and secure through the use of M.A.D.S.

ADVANCE YOUR SECURITY MEASURES TODAY TO DEAL WITH THE DRONE THREATS OF TOMORROW

OPTIONAL RADAR SYSTEM DETECT

For ship and land-based applications

OPTIONAL BEAM DISRUPTOR SYSTEM DEFEAT

For ship and land-based applications

OPTIONAL SPOOFING SYSTEM DEFEAT

For ship and land-based applications

OPTIONAL CAMERA SYSTEM DETECT

For ship and land-based applications

OPTIONAL EXTRA RF SENSORS (GEO-FENCING) DETECT

For ship and land-based applications





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Martek Counter UAS



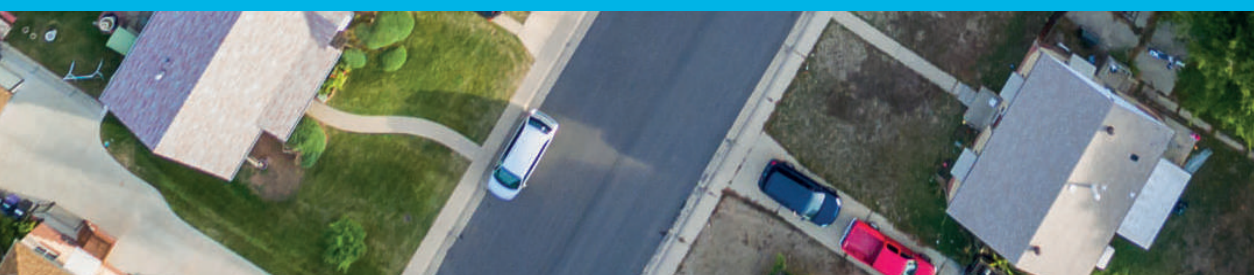
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