



THE WORLD'S FIRST MARINISED CUAS SYSTEM



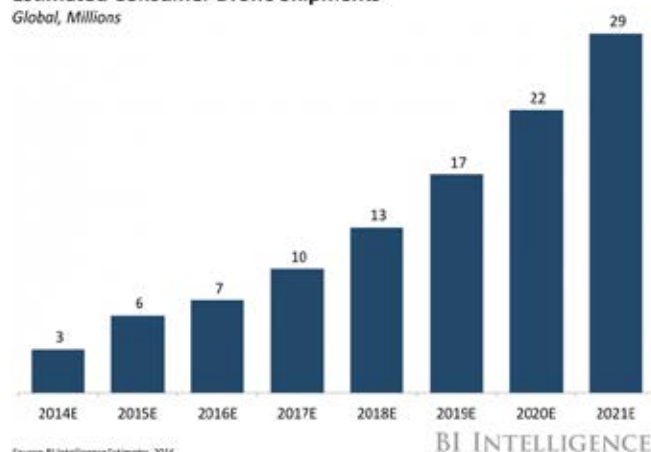


The Threat From Above

Are you waking up to the growing threat that drones pose to the privacy, safety and security on-board your yachts? Recent years have seen a massive advance in drone endurance, range and payload capacity whilst the price has also plummeted, leading to a proliferation of drones expected to reach 22 million by 2020.

Terrorist use of drones deploying explosives and poison gas attacks are well documented and the potential for a drone to deliver an explosive charge, or even payloads such as nerve-gas on-board a superyacht is a stark reality. Paparazzi intrusion using drones approaching superyachts is already a recognised and growing problem. Yachts in port, at anchor or on coastal transits are simply 'sitting ducks' and currently powerless to know if/when they're going to be attacked, let alone be in a position to defend against the threat. To put the emerging threat into perspective, the USA proposed a \$1 billion counter drone budget for 2019!

Estimated Consumer Drone Shipments
Global, Millions



The Threats

Invasion of Privacy

Zoom Lens Video
Surveillance

Covert Listening
Technology

Airborne Attack

Remote Aerial Hacking



How Safe Are Your Skies?

To combat this emerging threat, Martek Marine have developed the M.A.D.S™ superyacht drone detection and defeat system. M.A.D.S™ is a modular system which detects and identifies drones within a 5km range, providing GPS positioning of both drone and pilot together with the drone's speed and heading. Configurable and escalating stage alarms in real time allow the threat level to be assessed in good time to decide on appropriate defence actions.

Once a real drone threat has been established, the system enables a 1000m electronic 'exclusion zone' to be created around the yacht. Should the drone approach this exclusion zone, its' control/video signal will be blocked, initiating its' fail-safe mode forcing it to land or return to its' operator.

Advance your security measures today to deal with the drone threats of tomorrow



DETECT



IDENTIFY



TRACK



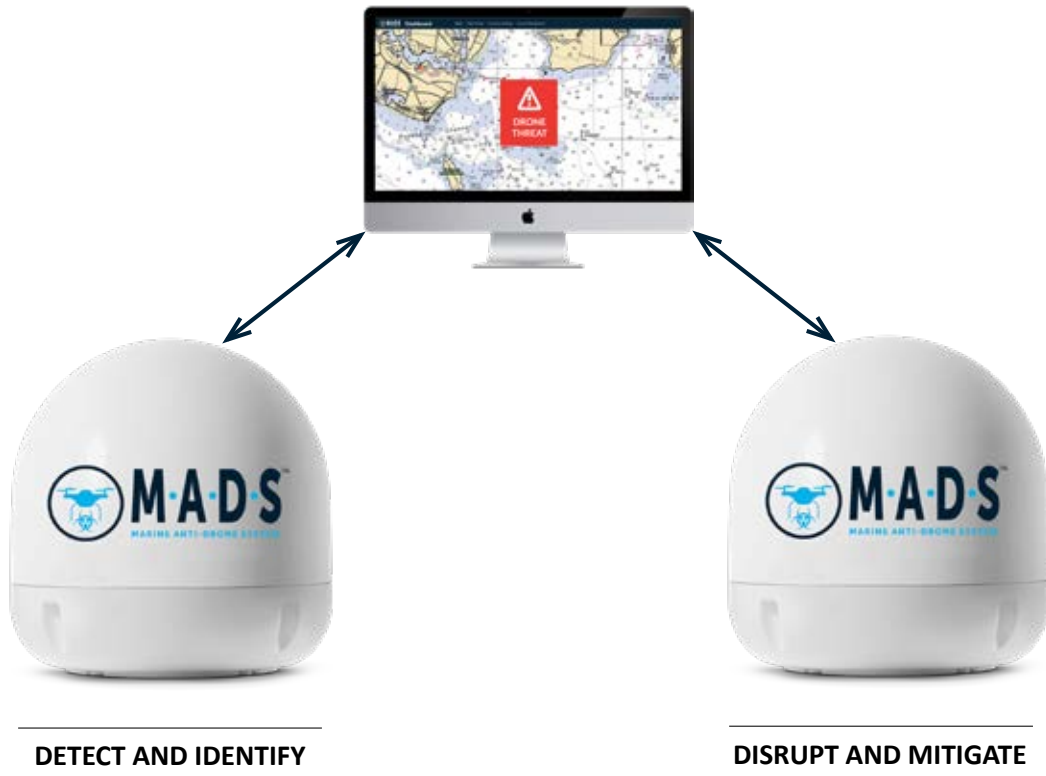
DEFEAT



DNV GL maritime Type Approval certification pending



M.A.D.S™ - Detect, Identify and Mitigate Drones



- Detect and identify threats within 5km
- Identify exact location of operator
- Monitor GPS position and flight path
- Modular system allowing easy add-ons
- View historical drone detection data
- Specialist superyacht design

- M.A.D.S™ drone disruptor
- Selectable momentary disruption duration from 5s
- Disrupts control signals between drone and operator
- Selectable operation frequency bands
- Long-range disruption ability
- Commands drone to land or return to sender





Technical Specifications

DETECTION - Fixed System	
Range*	>5km line of sight, 360° x 180° coverage
Operating Principle	Software controlled radio, digital signal protocol demodulation
Frequency Band	Frequency hopping - 2400-2483MHz, 5725-5850MHz
Frequency Protocol	Omnidirectional passive detection, classification, and Direction finding. Lightbridge, oculusync & wifi
Deployment	Continuous
User Interface	Web browser or LAN / Up to 21.5" TFT touch-screen
Power Supply	100-240V AC, 70W
Temperature Range	-20C to +50C
Ingress Protection	Specially marinised with integrated IP66 protection
Weight	30kg
Dimensions	70cm diameter radome

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



Technical Specifications

DEFEAT - Fixed System	
Range	>1km line of sight, 360° x 180° beam coverage
Operating Principle	RF signal disrupting / geofencing up to 1km*
Frequency Range	Full band frequency - 2.4GHz, 5.8GHz & 1.575GHz
Deployment	Manual
User Interface	Selectable operating frequency bands
Power Supply	24-28V DC, 70W
Temperature Range	-20C to +50C
Ingress Protection	Specially marinised with integrated IP66 protection
Weight	27kg
Dimensions	70cm diameter radome

*Certification live from October 2018







Why M.A.D.S™

M.A.D.S™ is unique in its design, functionality and application. It is capable of detecting all drones within a 5km range while providing you with accurate GPS positioning of both drone and pilot and the option to defeat a drone should it be deemed a threat. M.A.D.S™ is a flexible marinised system with great benefits for the maritime market and can be used for any application related to water; yachts, ships, ports, sea platforms, coastguard vessels, navy vessels and much more. With a standard solution for both the detection and the defeat of drones this system can be expanded with other modular sensors if needed. The threat from above is real and needs to be dealt with accordingly; M.A.D.S™ will prove this and more.

- Paul Luen, CEO of Martek Group

M.A.D.S™ Customer Testimonial

"We chose the M.A.D.S™ system from Martek for our clients because it was overwhelmingly the most proven and best value product on the market designed specifically to withstand the rigours of maritime application. Their package offered unique value compared to everything else. With 18-years of maritime pedigree, a global service presence and exceptional financial strength, we know Martek will be there when we need them."

- Harvey Sutton, Yacht Manager



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M.A.D.S™ Modular Options



M.A.D.S™ Portables

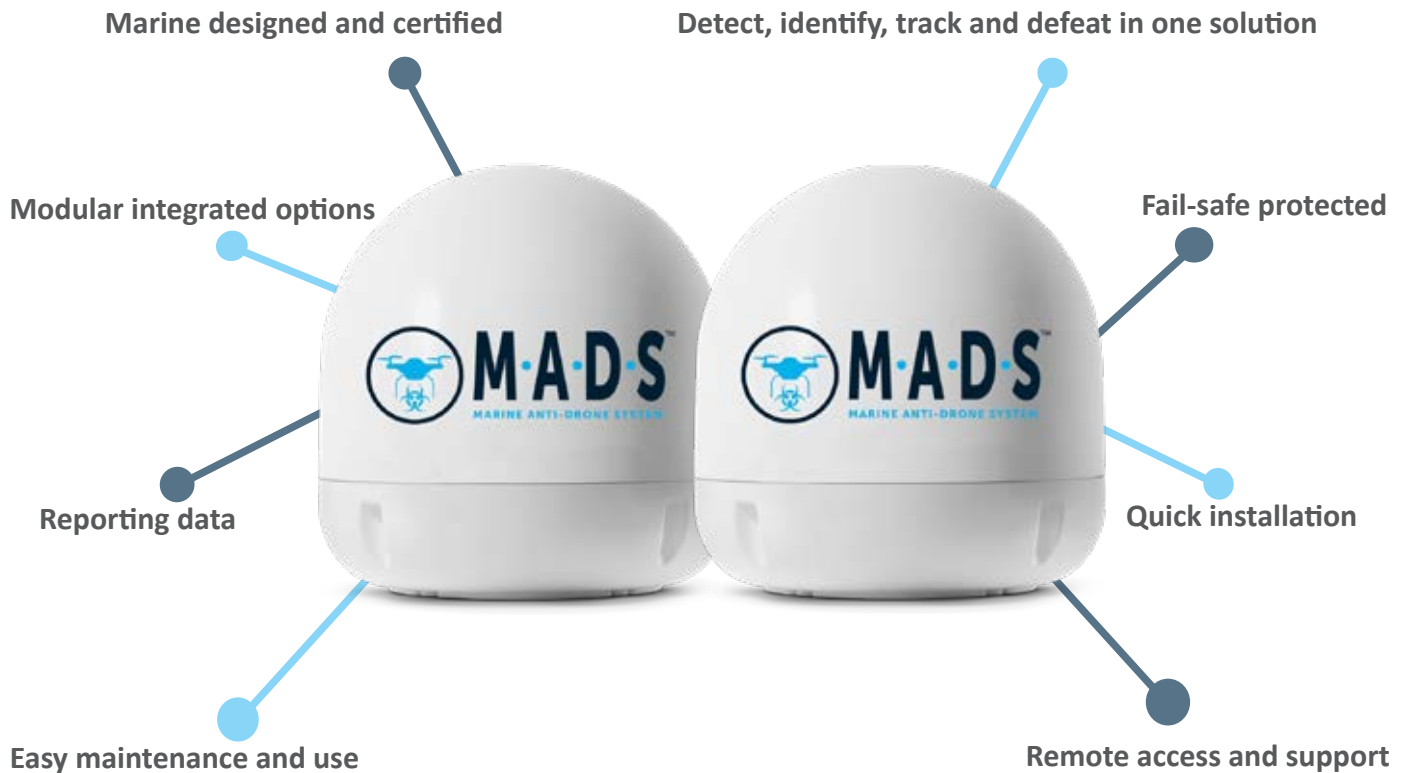
DETECT - Portable M.A.D.S™ System



DEFEAT - Drone Disruptor Gun



M.A.D.S™ USP'S



THE WORLD'S FIRST MARINISED CUAS SYSTEM





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***Safeguard Your Skies
With M.A.D.STM***