



MESMER® COUNTER DRONE SOLUTION

Detect • Identify • Mitigate

Addresses diverse threat scenarios and drone types

Uses non-kinetic mitigations that pose no additional public hazards

Utilizes open software architecture that integrates with security applications.

Responds and alerts mobile C-UAS operations automatically as a security force multiplier.

Operates in multi-terrain environments (urban, remote, rugged)

Deploys easily to support mobile C-UAS operations

MESMER® is a revolutionary commercial counter-drone platform that was developed by Department 13 (D13).

MESMER utilizes sophisticated detection and mitigation strategies that automatically identify, stop, redirect, land, or take total control of a target drone or other radio-controlled device.

MESMER RF protocol manipulation takes advantage of weaknesses inherent in digital radio protocols.

MESMER's flexibility allows it to operate as a stand-alone system, or to work in tandem with other hardware solutions.

MESMER is designed for both commercial and defense/security organizations to deal with the emerging threat of autonomous systems. The counter-drone solution incorporates D13's innovative technologies and extensive operational experience.

MESMER recognizes unique radio signal features and other communication metadata. This enables MESMER to select and apply strategies that curtail drone threats, unlike other systems that use radio jamming and standard electronic mitigation techniques.

MESMER's protocol manipulation is low-power, operating below 1 watt. Low power operation allows MESMER to only affect targeted radio-controlled devices -- leaving non-targeted communication signals in the vicinity alone, and avoids signal fratricide, making this a key advantage for MESMER over other C-UAS solutions.

At D13, we understand that threats, constraints and user requirements will continuously evolve as drones, and other autonomous devices, are implemented in the real world. That is why, instead of a purpose-built hardware solution approach, D13 has designed MESMER to use protocol manipulation to handle even the most complex scenarios. MESMER provides D13's clients with a powerful and flexible counter-drone solution.

MESMER® Gen 1.5 Configurations



Standard-alone Rack Mountable System



MESMER may be integrated with other platforms

About Department 13, Inc.

Department 13 (D13), headquartered in Columbia, MD, is a transformative networking and communications company publicly traded on the Australian Securities Exchange (ASX), as of 2016, as Department 13 International Ltd (D13).

D13's team includes former military operators, scientists and engineers. D13 has developed cutting-edge software and communication systems, for the public and private sectors, focusing on electronic warfare, wireless systems and mobile devices.

Department 13 has 84 granted or pending patents in fields that include communications, networking, wireless technologies, and security.

D13's intellectual property applications include:

- Drone defense
- Local area and wide area cellular communications
- Enhanced data bandwidth for all digital communications
- Cyber security for mobile devices
- Sophisticated RF technology applications (radiometrics)

Contact Us

For more information about Department 13, access the Contact Page, or email info@department13.com.

MESMER® Gen 1.5 Specifications

GENERAL

Frequency: 2.4 - 2.5 GHz, 5.725 - 5.875 GHz, 430 - 435 MHz, 902 - 928 MHz
 Transmit Power¹: <1W (configurable upon request)
 Antenna: Array of 7 antennae

RANGE

4km line of sight in 2.4GHz band at < 1W transmit power, using omnidirectional antenna. Range varies depending on antenna type, transmit power and terrain.

OPERATION MODES

Detection Only Mode
 Auto-Mitigation Mode
 Manual Mitigation Mode

SUPPORTED DRONE MODELS

Multiple models and manufacturers of commercial drones. Contact Department 13 for an updated list.

EXTERNAL SENSORS

Open architecture and standardized interface for ease of integration with external sensors (e.g. acoustic, radar, and electro-optical)

PHYSICAL (STAND-ALONE SYSTEM)

Dimensions: 19 W x 7 H x 22 D in.

Volume: 1.7 ft³ (0.05 m³)

Weight: 60 lbs. (27.2 kg)

Operating Voltage: 10-32 VDC

Power Consumption: 360W (12A at 30 VDC supply)

TEMPERATURE

Stand-alone: 50° F to 95° F (10° C to 35° C)

In Enclosure: Dependent on enclosure

¹Depending on local laws and client requirements. MESMER's power may be tuned to accommodate desired ranges and capabilities.