***SpectroDrone by LDS  
Drone-Operated, Laser-Based Explosive Detection System***

*SpectroDrone is the world’s first sensor system capable of detecting explosives, Improvised Explosive Devices (IEDs) and other chemical compounds from a safe, standoff distance.*

Following extensive testing in the laboratory and in the field, Laser Detect System (LDS) Ltd. is unveiling SpectroDrone – the world’s first drone-based explosive detection sensor.

Utilizing LDS’ laser-based explosive detection system, SpectroDrone detects explosives and other hazardous materials, in gas, liquid, powder or bulk form, at a distance of several meters from the threat. SpectroDrone can perform such missions over an operational radius of up to 3 Km. In addition to the detection of dangerous materials, SpectroDrone can remotely analyze different materials in real time, fulfilling essential role in mining and other industrial operations.

LDS is unveiling the SpectroDrone this week at Israel’s HLS & Cyber Expo in Tel Aviv (15/16 November 2016). At the exhibition, SpectroDrone is displayed integrated on the Airobotics Optimus drone – a high capacity multi-mission multi-rotor drone. In this new configuration SpectroDrone automatically detects and analyzes explosives materials and IEDs, hazardous compounds, and narcotics from a distance, in addition to its surveillance role, thus enhancing situational understanding and real-time response to emergency situations. The SpectroDrone payload can also be mounted on ground robots and in fixed operation such as LDS’ SPHERE vehicle inspection systems.

“We are very excited to unveil this innovative solution for security and anti-terror applications at Israel’s HLS & Cyber, “said Eli Venezia, LDS founder, and President, “We are also encouraged by the great promise our technology offers for commercial applications.”

“When running security, emergency or surveillance missions in an industrial environment, the ability to dynamically and swiftly replace payloads, as well as introduce new innovative ones, is a real step forward,” says Ran Krauss, CEO, and Co-Founder of Airbotics. “The next generation of security lies in introducing unique technological capabilities, which I believe LDS and Airbotics bring jointly to market.”

About LDS Laser-Based Explosive Detection Technology:

SpectroDrone implements LDS’ patented, laser-based detection technology. The payload comprises multiple electro-optical assemblies comprising a laser source emitting several wavelengths, laser range finder and high-resolution camera - all integrated with state of the art spectrometers which that operates LDS’s software package and proprietary algorithms.

This algorithm enables to achieve the sensitivity required for remote operation, increasing the probability of accurate detection while reducing false negative and false positive detection rates, bringing detection performance level to that of laboratory equipment.

About LDS:

Laser Detect Systems (LDS) is a world-leading developer of laser-based detection technology, based on advanced laser spectrometry techniques including Raman, fluorescence, and LIBS. Utilizing this technology, LDS has patented and commercialized ground-breaking systems for homeland security, law enforcement, military and environmental safety. These systems enable real-time sensing of a variety of materials which have a distinct spectral signature even in remote operation. These include explosives, narcotics, chemicals, biological substances, and other hazardous materials as well as different mineral materials.

About Airobotics:

Airobotics has developed an unmanned drone solution, the first of its kind in the global market. Airobotics provides an end-to-end, fully automatic solution for collecting aerial data and gaining invaluable insights. The industrial grade platform is available on-site and on-demand, enabling industrial facilities to access premium aerial data in a faster, safer, more efficient way. The team at Airobotics fuses expertise in aerospace hardware design, robust electronic systems, leading software engineering, and years of experience in commercial drone operations. This varied experience has allowed them to design a solution suited to address the needs of the world’s most complex industrial environments.

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Notes to Editors:

1. SpectroDrone employs LDS’s latest development in remote, laser-based detection, packed into a payload system designed for Airobotics’ Optimus autonomous drone system. The SpectroDrone payload enables remote detection from a height or distance of few meters from the target, expanding the operational capability of unmanned, explosive detection missions using the Optimus operational radius of three kilometers.
2. The SpectroDrone payload operates autonomously, by aiming and activating the sensor via remote control. Scan results are displayed within few seconds on the operator control unit or at the control center, thus increasing user safety and providing higher efficiency when scanning large areas with remotely operated or autonomous systems.
3. Until now, detection techniques required the user to bring the sensor within few millimeters of the inspected material. SpectroDrone employs LDS’s patented standoff gated laser spectroscopy techniques, using in several laser wavelengths illumination, mainly via ultraviolet (UV) laser. This approach offers advantages in the detection of explosives not available by any other means. The new development has proved to detect a wide range of materials at distances of several meters.