Mine Kafon Manta

Detection and detonation drone

Manta

MK

A new Mine Kafon drone

When entering areas affected by landmines and other remnants of war, deminers constantly put their own lives at risk in locating and deactivating or detonating individual UXOs. In the past decades, many have been seriously injured or killed while practicing their profession, with deminers making up to 2% of total landmine victims. In addition to the inherent risk of these remnants of war, clearing efforts across numerous countries are also often affected by difficult climate conditions and/or challenging terrain, posing even greater complications. These risks and difficulties that come with manual demining, along with the required reliability of the process make the detection and deactivation of landmines time consuming, expensive and hard to standardize.

How it works

The Manta Drone is specially designed for the demining purpose. It is an autonomously-flying detection and detonation system, operated by a specialized deminer from a safe distance. This ensures that deminers do not need to approach the danger zone themselves, but can instead remotely monitor the clearing process using systematic scanning and identification techniques. Manta offers a safer and faster demining process than traditional techniques. It operates in two steps:

Step 1: Based on 3D maps created by the Destiny Drone, the Manta systematically moves across the hazardous area. It is capable of carrying a variety of mine detection sensors including a metal detector, ground-penetrating radar and a sample collection device for chemical analysis. Data from the detection sensors is processed using data fusion algorithms to obtain precise position information.

Step 2: Depending on the surroundings and identification data, the UXOs are either detonated using a remotely positioned explosive charge, or disarmed by a human deminer.

Manta's eight powerful motors and 30-inch propellers in coaxial configuration enable the heavy-lifting drone to carry demining robots and sensors of up to 30kg overall weight. It is powered by eight 6s batteries, giving it an impressive maximum flight time of 60 minutes. Manta is a flexible platform designed to be compatible with all MKD demining robotics, which can be switched in seconds - thus allowing Manta to be used for a variety of operations.

For a full brochure and further enquiries, please send an email at sales@minekafon.org