

Development of a system for remote detection of explosive objects and mines



ЦЕНТР ВПРОВАДЖЕННЯ ІНДУСТРІЇ 4.0
ПОЛТАВСЬКИЙ ДЕРЖАВНИЙ АГРАРНИЙ УНІВЕРСИТЕТ

The essence of the system is the use of a non-linear radar (Non Linear Junction Detector, NLJD), which is installed on a drone (DJI Agras T30) and controlled remotely. The principle of operation of NLJD is based on the irradiation of objects with short radio frequency pulses and reception of echo signals at other frequencies (second and third harmonics). At the same time, the nonlinear radar can be used not only as a separate sensor, but also in combination with a certified mine detector.



A drone with a useful load (standardized value) of 10 kg or more is required



Non Linear Junction Detector ORION® 2.4 HX



Scope of application:

Military: "Clearing the area of hostilities from explosive objects and mines."

Civil: "Cleaning the area of the agricultural sector and the area of placement of critical infrastructure facilities."

Advantages:

1. Use of manual certified devices.
2. Maximum use of components manufactured by industry.
3. Maximum unification and versatility of components of control channels and communications.

