

Uniqueness of the GPSAR-Sensor

High resolution
Causes masses of data. Automated and AI-based evaluation challenging by natural illumination.

UAVs with Visual Cameras, IR, Multispectral
→ Image Processing, DSMs
AI based Detection

Best for objects on the ground, partly visible or indirect effects.

FM-GPSAR

High-Flying Sensor UAVs

Magnetometer UAVs

Limited to iron objects
Best in wet conditions

UAVs with GPR

Good for deep non-metal IEDs.

UAVs with Metal Detectors

Best for metal fragments.

USP is sensing optically hidden objects from moderate flight altitudes

Low-Flying Sensor UAVs

> 4 m

< 50cm

Area throughput
UAV operation safety

metal

iron

Non(min)-metal

metal-fragments

Pros and cons of GPSAR-Sensors

Advantages

- Detects metal and non-metal objects buried in soil or hidden in vegetation
- Detection strength scales with object size
- High XYZ-resolution and localization accuracy
- Object classifications by reflection signatures
- Safe-flight altitude

LSCAN
-System

Disadvantages

- Many false-alarms by natural objects
- Moisture sensitivity
- Limited soil penetration depth
- Big sensor limited by antenna dimensions
- Huge signal processing
- Radio approval
- Requires multi-looks

Spot Check
with Metal
Detector

Low
transmit
power and
FMCW