



# NAUDI

National Association of  
Ukrainian Defense Industries

**UKRAINIAN  
ARMOR**

Design and  
Manufacturing  
Company



# RAM II

## Loitering Munition

**RAM II UAS** is a high-precision combat loitering unmanned aerial system. It is designed to execute precise effective strikes on enemy forces and to minimize collateral damage when used in the urban area.

## OBJECT RECOGNITION AND TRACKING

**The aim of object recognition is to bring the visual perception capabilities of the human being into machines and computers.**

Our tracking system allows the operator to use a gimbal with a camera to select static and dynamic objects in the field of view of the camera using a computer mouse and tracking them.

For post-processing, there is a function to save a screenshot or video fragment. We developed an onboard mini-computer to implement computer vision algorithms in real-time.

## QUIET AND INCONSPICUOUS

Due to the electric motor in the propulsion system, the RAM II UAS has a low acoustic signature.

## OPERATION ASSISTANCE

In order to minimize errors associated with the human factor during the operation of the unmanned aerial system, we have automated the maximum number of procedures.



Target tracking



Low acoustic signature



Coordinates location



Anti-jamming features



Swarm technology



Low radar visibility



Signal detection



AES-128 encryption

## COMMUNICATIONS

### Channels, frequencies, and encryption:

- C2 & telemetry channel - 902-928 MHz (AES-128 encryption);
- RC-channel 2400 MHz;
- video channel - 5470-5850 MHz (AES-128 encryption);
- C2 signal to drone uses FHSS 902-928 MHz channel with AES-128 encryption.

**Easily swap frequencies if the operational environment changes.**

**Ground control station power requirements: 24V 3A DC.**

## NAVIGATION



GPS



BeiDou



GLONASS



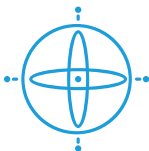
Galileo GNSS



Compass



Gyroscopes



3-axis accelerometers



Barometric pressure sensors

## TECHNICAL SPECIFICATIONS

Range	30 km	Cruise speed	70 km/h
Warhead	3 kg	MTOW	10 kg
Optical zoom	10x		

## ENVIRONMENTAL RESISTANCE

### READY FOR ANY MISSION. ANYWHERE.

Temperature range -20°C +45°C

Humidity 5-75%

Protection IP65

## WARHEAD

We offer a list of different and interchangeable warheads. Quickly and easily change warheads depending on what a mission requires. Just simply remove one type and install the other one.

## CREW

Minimum quantity of crew members: 2

- UAV operator/warhead operator;
- UAV launching system operator/mechanical technician.

Recommended quantity of crew members: 4

- crew commander;
- pilot;
- UAV operator/warhead operator;
- UAV launching system operator/mechanical technician.

In case of an emergency like loss of communications in all stages, loss of navigation, visibility, or airworthiness, the mission operator can choose one of the following options:

- failsafe return to home;
- continue the mission and return to home;
- landing in a safe place;
- loiter and wait for a command.

## TAKEOFF & LANDING

Using a UAV launching system the RAM II can takeoff from anywhere.

- Catapult type: bungee;
- Catapult dimensions: 5790x2050x1270 mm;
- Launch speed: 17 m/s;
- Power source: 12 V battery.

Parachute landing method for recovery.

## TRANSPORTATION, MAINTENANCE AND STORAGE

Dimensions and weight of the ground control station:

- \* Spread out telescopic mast with assembled antenna tracker: 3800x3800x5800 mm;
- \* Spread out quadropod with assembled antenna tracker: 2605x2605x2800 mm;
- \* Transportation cases: 1720x570x920 mm, 1720x570x500 mm, 1720x570x260 mm;
- \* Weight of the telescopic mast with installed antenna tracker: 178.2 kg;
- \* Weight of the quadropod with installed antenna tracker: 31.4 kg;
- \* Weight with transport cases: 318 kg.

All components of the RAM II UAS come in rugged cases for safe and secure transportation.



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