

**QUALITY CONFIRMED IN
BATTLES IN UKRAINE**



[HUB]

ABOUT MAC HUB

Military Armored Company HUB is a company that develops and manufactures military products.

The main company Military Armored Company HUB has become a platform that unites the Ukrainian developments and Ukrainian manufacturers, companies that achieve serial production.

Our main mission is to revive the military-industrial complex and maintain the combat capability of our defense forces.



CONTENTS

About HUB

SECTION 1: MILITARY GROUND VEHICLES 03

IFV "SHAKAL" 04

Gyurza-02 05

Mac TI 06

SECTION 2: MILITARY GROUND COMPLEX "ZEMLYA" 07

"Zemlya" System 08

SECTION 3: MILITARY NAVAL COMPLEX "VODA" 09

Katran X1 10

Katran X2 11

Katran X3 12

Katran VENOM 13

SECTION 4: ROBOTIC GROUND VEHICLES 14

Reconnaissance and strike tracked complex "Droid TW 12,7" 15

Small tracked robots 16

SECTION 5: UNMANNED AERIAL VEHICLES (UAVS) 17

Kamikaze drone 18

Bomber UAV AIRPL AST V1.0 19

SECTION 6: COMMAND POST AND UNMANNED FIRE SUPPORT SYSTEM CONTROL CENTER 20

Pilot workstation 21

Command Operations Headquarters 22

SECTION 7: ELECTRONIC WARFARE SYSTEMS 23

Electronic warfare systems 24

SECTION 8: SURVEILLANCE, TARGETING, AND STRIKE SYSTEMS 25

KATRAN VIEW cameras 26

Launcher "Osa" 27

FPV boxes 28

Swarm control system 29

CONTACTS

SECTION 1: **MILITARY GROUND VEHICLES**

IFV "SHAKAL"

An armored tracked infantry fighting vehicle is designed to transport infantry troops on the battlefield and provide direct fire support, including against lightly armored vehicles.

The platform can be equipped with various modifications, such as reconnaissance, engineering, medical, rehabilitation, workshop, communications, command and staff, and others.

3+6

CREW

65

KM/H

300 H.P.

ENGINE POWER

ENHANCED ARMOR PROTECTION

Level 2 and above

SIMPLIFIED CONTROL

Semi-automatic transmission and reduced workload for the driver-mechanic

EXPANDED INTERIOR

Improved design and optimized internal layout for enhanced troop accommodation, improved ergonomics, and more efficient embarkation and disembarkation

OPEN ARCHITECTURE

A universal solution for integrating weapon systems, passive and active protection, communication systems, and other military technologies

PLATFORM COMPATIBILITY

Spare parts and other components are largely compatible with BMP-1 and BMP-2 infantry fighting vehicles, particularly in terms of the chassis and mechanical systems



SECTION 1: MILITARY GROUND VEHICLES



GYURZA-02

The vehicle is designed for the transportation of personnel [10+1] of the Armed Forces of Ukraine and other military formations within the national defense and security sector. It also provides fire support, as well as reconnaissance and patrol capabilities.

10+1
CREW

110
KM/H

385 H.P.
ENGINE POWER

ENGINE TYPE

Level 2 protection according to
NATO AEP-55 STANAG 4569

PASSENGER COMPARTMENT

Protected against armor-piercing
incendiary (API) rounds: 7.62×39 mm
[STANAG 4569 Level 2] and 7.62×54
mm [STANAG 4569 Level 3]

OPERATING TEMPERATURE RANGE

for the antenna-feeder system and
the data processing and transmission
unit: from -30°C to +55°C

DETECTION RANGE

not less than 1.5 km

CUSTOM-BUILT CHASSIS

manufactured to order by "UKR
ARMO TECH"

REINFORCED RUNNING GEAR

Provides smooth and controlled
handling during sharp maneuvers





MAC TI

MAC-TI is a multipurpose armored vehicle with B7 protection level.

This type of vehicle can be used to equip special units of the Armed Forces for the execution of:

- Reconnaissance operations
- Patrol operations
- Peacekeeping operations [PKO]
- Used as a primary tactical transport vehicle in combat operations

7+1

CREW

195 H.P.

ENGINE POWER

ARMOR PROTECTION

Turret CEN level B7 i 4569
STANAG II

Armored glass CEN level B7 i
4569 STANAG II

Spare tire
CEN level B7 i 4569 STANAG II

ENGINE TYPE

4.5L V8 – Diesel / 1VD-FTV [EGR]

DRIVETRAIN CONFIGURATION

4x4

GROSS VEHICLE WEIGHT (GVW) (WITHOUT PAYLOAD AND CREW)

4,820 kg [with turret]

SEATING CONFIGURATION

2x in the cabin / 2x foldable seats
behind the cabin seats / 4* in the
troop compartment

GUN PORTS

6x on the sides / 2x at the rear

NUMBER OF DOORS

4x side doors / 1x single-leaf rear
door



SECTION 2:

MILITARY GROUND COMPLEX "ZEMLIA"

Synchronized with mobile pilot stations [Section 6]

ZEMLIA SYSTEM

ENEMY REAR

ENEMY MANPOWER

TYPE 1: ASSAULT PICKUP TRUCK

TYPE 2: UNMANNED FPV SUPPORT

TYPE 3: UNMANNED AIRCRAFT-TYPE SUPPORT

USING BASIS IS TOYOTA 79 PICKUP TRUCK

Body type	Two-door Pickup	Engine	4,2 Liters V6
Power	131 hp	Fuel type	Diesel
Fuel capacity	90 Liters	Drive type	All-wheel 4x4
Gear box	Mechanical		

TYPE 1: ASSAULT PICKUP TRUCK

WEAPONS

- Replaceable module (mechanically controlled fighting module / remote-controlled fighting module)
- Replaceable weapons on the module
- Machine gun Browning 12,7 a6o Machine gun PKT 7,62

BENEFITS

- Light armor
- Maneuverability
- Multifunctionality: fire support / evacuation / logistics

USAGE

- assault operations
- intelligence operations

ARMOR

- type: concealed
- variety: PZSA - 4

TYPE 2: UNMANNED FPV SUPPORT PICKUP TRUCK

WEAPONS

FPV boxes per 1 car: 4 pcs.
 FPV drones type: 10-inch "kamikaze"
 FPV drones per 1 box: 5 pcs.
 Total number of FPV drones per 1 car: 20 pcs.

DEPLOYMENT AND LAUNCH TIME

1 FPV box: up to 10 min 4 FPV box: up to 40 min

RELOADING TIME

1 FPV box: up to 15 min 4 FPV box: up to 60 min

RELOADING BETWEEN LAUNCHES TIME

5 min

BENEFITS

- Fast delivery of FPV drones to the war zone, quick deployment and changing location
- Strike support, extermination of armored vehicles, fortifications and manpower
- Stable connection STARLINK High Performance
- Ensure an advantage on the battlefield due to speed, precision and maneuverability

TYPE 3: UNMANNED AIRCRAFT-TYPE SUPPORT PICKUP TRUCK

WEAPONS

- OSA loads per one unit: 4 pcs.
- Launchers per 1 vehicle: 1 pc.
- Deployment and launch from one unit time: up to 20 min
- Reloading one unit time: up to 30 min

СИСТЕМА 38'ЯЗКУ

- Secure communication: FHSS 270-530, 700-1050, 2200-2600 MHz
- Electromagnetic system: 730-5850 MHz

FIGHTING SPECIFICATIONS

Warhead: up to 3 kg

BENEFITS

- Safe control via satellite modem from anywhere in the world.
- The crew is 1 driver. Automatic deployment, launch and return to reloading.
- Fiber optic module improves driving quality, flight range and EW protection.
- AI system sends data to the Command Staff to prioritize targets in real time.
- The Command Staff can operate anywhere thanks to satellite communications.

"SWARM" function

- Control up to 5 drones simultaneously to destroy typical targets (tank, APC, vehicle)
- AI automatically detects, categorizes, follows, and targeting OSA to priority targets.

USAGE

- Unmanned strike support for assault operations
- Independent unmanned work on enemy positions



25 km



60 km

Zemlia System consists of three types rocket launchers designed to work with FPV drones of the "kamikaze" multirotary type, called "Launcher FPV boxes", and rocket launcher for FPV drones of the flying wing type OSA, called "Launcher OSA".

APPLICATION AREAS

- Military armor and vehicles
- Sea vessels for military purposes
- Robotic and unmanned vehicles
- Strongpoints and command staff

PURPOSE OF USE

- Protection of facilities / Intelligence
- Targets defining / Targets pointing / Targets retention
- Targeting

INTEGRATION CAPABILITY

- Fast integration of the AI processing system



SECTION 3: **MILITARY NAVAL COMPLEX "VODA"**

Synchronized with mobile pilot stations and the
Command Post [Section 6]

KAT X RAN

ADDITIONAL EQUIPMENT

Starlink, Kymeta, navigation camera, control system, power system, main camera



CONFIGURATION OF WEAPONS

- 4 FPV drones on board
 - Aircraft-type guided munition launch system:
 - range: up to 60 km
 - combat charge: 3 kg
 - onboard capacity: 4 munitions
- Additional feature:
- Additional equipment with aircraft-type guided and reconnaissance ammunition – 2 pcs



SPEED

Maximum speed	105 km/h
Cruising speed	60 km/h
Cruising range	1200 km
Fuel tank capacity	1170 l
Fuel consumption	70 l/hour

DIMENSIONS

Length	8 m
Width	2.3 m
Height	1.2 m

NUMBER OF OPERATORS

- 9 persons:
- 1 board navigator
 - 4 FPV pilots
 - 4 pilots of aircraft-type charge control

KAT X RAN 2

DIMENSIONS

Length	9 m
Width	2.5 m
Height	2.2 m

CONFIGURATION OF WEAPONS

Turret with Browning M2 machine gun

NUMBER OF OPERATORS

6 persons:

- 1 navigating gunner
- 4 FPV pilots
- 1 gunner

SPEED

Maximum speed	95 km/h
Cruising speed	55 km/h
Range	1360 km
Fuel tank capacity	1,300 l
Fuel consumption	65 л/год

ADDITIONAL EQUIPMENT

Starlink, Kymeta, navigation camera, control system, power system, main camera



Basic model
SpeedBot

KAT X RAN 3

SPEED

Maximum speed	75 km/h
Cruising speed	55 km/h

Range	1650 km
Tank capacity	1650 l
Fuel consumption	90 l/h

ARMAMENT CONFIGURATION

- 4 FPV drones on board
- combat reserve 330 kg

Additional feature:

- Additional equipment with aircraft-type guided and reconnaissance ammunition – 2 pcs.

DIMENSIONS

Length	6,5 m
Width	2,2 m
Height	1,1 m

NUMBER OF OPERATORS

5 persons:

- 1 board navigator
- 4 FPV pilots

ADDITIONAL EQUIPMENT

Starlink, Kymeta, navigation camera, control system, power system, main camera



Basic model
Alba

KAT X RAN VENOM

AI SYSTEM

- Determination of laser guidance: automatic threat recognition to protect against enemy targeting systems
- Radioelectronic warfare (EW) + radioelectronic intelligence (ELINT): effective suppression and interception of enemy signals
- Shooting traps: use of smoke and heat traps to evade missiles and artillery shells



NUMBER OF OPERATORS

5 persons:

- 1 board navigator
- 4 FPV pilots



CONFIGURATION OF WEAPONS

- 4 FPV drones on board
- 2 torpedoes
- Unmanned combat module with a 12.7 caliber Browning machine gun
- 2 Piorun man-portable air defense systems
- Minigun forward-facing high-speed machine gun
- Additional feature:
- Additional equipment with aircraft-type guided and reconnaissance ammunition – 2 pcs.

PROTECTION SYSTEM

- EW suppression detection system
- Anti-EW (protection against EW suppression)
- EW (protection against FPV and guided charges)
- System for detecting damage to the board and its components
- Water pumping system in case of damage
- System for firing heat traps
- System for firing smoke screens



SPEED

Maximum speed
Range

up to 130 km/h
up to 1500 km

SECTION 4: **ROBOTIC GROUND VEHICLES**

Robotic ground systems are synchronized with mobile pilot stations and the Command Post [Section 6]

RECONNAISSANCE AND STRIKE TRACKED COMPLEX

«DROID TW 12,7»



PART OF THE "ZEMLIA" SYSTEM

The Droid TW 12.7 is a multi-role reconnaissance and strike unmanned ground system designed to conduct combat operations and intelligence-gathering missions in active war zones.

Equipped with a remotely operated turret chambered for 12.7mm, it delivers high-precision firepower even in complex battlefield environments. The standard Browning M2 [12.7mm] heavy machine gun can be replaced with a PKT machine gun, offering tactical flexibility based on mission requirements. This adaptability significantly enhances combat efficiency, while reducing risks to personnel. The Droid TW 12.7 is highly effective in both offensive and defensive operations. In addition to its firepower, the Droid TW 12.7 is capable of conducting autonomous intelligence missions, providing remote operation capabilities and secure digital communication. This allows military forces to maintain mobility, situational awareness, and operational security even in the most challenging combat conditions.

Key advantages of the system include a 12.7 mm heavy machine gun or a PKT machine gun, a tracked platform for traversing rough terrain, remote operation capabilities, and a secure digital communication system.

TECHNICAL SPECIFICATIONS

Weapon Type and Caliber: M2 Browning 12.7mm heavy machine gun

Maximum Engagement Range: Up to 1 km

Maximum Speed: 7 km/h

Tactical Operational Radius: 1.4 km

Communication Range: 1.5 km

Operational Range: Up to 14 km

Target Detection Range:

- Day Channel: Up to 1.5 km

- Night [Thermal Imaging] Channel: Up to 0.6 km

Targeting System: Autonomous targeting with AI integration

Communication Systems: Starlink, LTE

Continuous Operation Time [Mobility]: 3 hours

Autonomous Operation Time [Stationary]: 72 hours

Deployment Time: Up to 5 minutes

Power System Type: Electric

Crew Requirement: 2 operators

SMALL TRACKED ROBOTS



LEGIT L

- On Hard Surfaces: Operational Range: 15 ± 0.2 km; Speed: 20 km/h
- Off-Road: Operational Range: 10 ± 0.2 km; Speed: 15 km/h
- Tactical Operating Radius: 7 ± 0.2 km
- NRS Camera Field of View: Horizontal: 165° , Vertical: 160°
- Deployment Time: Up to 5 minutes

LEGIT S

- On Hard Surfaces: Operational Range: 12 ± 0.2 km; Speed: 25 km/h
- Off-Road: Operational Range: 10 ± 0.2 km; Speed: 15 km/h
- Tactical Operating Radius: 7 ± 0.2 km
- Deployment Time: Up to 5 minutes



SECTION 5: **UNMANNED AERIAL VEHICLES (UAVS)**

Synchronized with mobile control stations and the Command Post
[Section 6]

KAMIKAZE DRONE

KEY TACTICAL, TECHNICAL, AND OPERATIONAL CHARACTERISTICS



Maximum flight range with a 10 kg payload	700 km
Flight duration with a 10 kg payload	up to 300 min
UAV flight speed: - minimum speed - cruising speed - maximum speed	130 km/h 150 km/h 220 km/h
UAV flight altitude: - minimum horizontal flight altitude - operational altitude - maximum horizontal flight altitude	50 m 100 m 1000 m
UAV deployment time from stowed position	up to 15 min
UAV launch readiness time from deployed position	up to 5 min
UAV circular error probable [CEP] in autonomous mode	up to 10 m
UAV operational range: - Operating temperature - Maximum relative humidity - Precipitation - Wind speed at ground level - Gusts	-20°C to +40°C 95% ±2% up to 5 mm/h up to 10 m/s up to 15 m/s

1895

WINGSPAN

1645

LENGTH

380

HEIGHT

BOMBER UAV

AIRPLAST V1.0

The AIRPLAST V1.0 unmanned aerial system (UAS) is designed for intelligence gathering and combat missions, including the engagement of stationary targets, enemy personnel, and lightly armored vehicles from the air.

Additionally, it is capable of delivering payloads to designated locations day and night, under various meteorological conditions.



3400

WINGSPAN

1690

LENGTH

573

HEIGHT

KEY TACTICAL, TECHNICAL, AND OPERATIONAL CHARACTERISTICS

Maximum flight range	up to 130 km
Number of munitions	from 2 to 10 units
Maximum altitude	up to 2 km
Munition weight	up to 10 kg
Operational altitude	500 m
Launch type	Pneumatic catapult
Cruising speed	90 km/h
Landing type	Parachute-assisted
Maximum speed	120 km/h
Propulsion type	Electric
Payload capacity	up to 10 kg
Warhead type	- High-explosive fragmentation [HE-FRAG] - High-explosive anti-tank [HEAT] - Thermobaric [TBX] - Other specialized warheads
Loaded weight	27 kg
Primary mission	- Bomber – engagement of stationary targets, lightly armored vehicles, and enemy personnel positions - Reconnaissance - Cargo delivery

SECTION 6:

**COMMAND POST AND
UNMANNED FIRE
SUPPORT SYSTEM
CONTROL CENTER**

PILOT WORKSTATION

PILOT WORKSTATION	DESCRIPTION	USED BY
	- Global control Provides the ability to control from anywhere in the world with an Internet connection or own communication system, such as STARLINK. - Power autonomy Must be powered by an autonomous power source or be compatible with a portable power station EcoFlow. - User-friendly interface Intuitive end-user interface, quick customization of controls for a particular pilot. The ability to adapt the screen in the headset for each combat mission. - Versatility Provides control of any type of sea-drone without the need for additional equipment. - Individual workplace Adjustment of the working area according to the pilot's anthropometry. - Ergonomics and mobility Fast deployment, easy to transport and operate. - Multifunctionality With minimal changes to the interface and equipment, it is possible to control both rotary and flying wing type FPV drones.	• Pilots of various KATRAN system aircraft • Gunners (remote weapon station / guided aerial munitions operators) • Pilots of strike FPV drones • Pilots of fixed-wing reconnaissance drones
		INCLUDED COMPONENTS • Pilot seat • All mounting hardware and mechanisms • Electronics • Monitor or laptop • Joystick for course, weapon, and camera control • Joystick for engine and defense system control • Keyboard • 3D augmented reality goggles • All power cables and charging connectors • All charging indicators • All wiring and HDMI/USB connectors • Integrated shockproof backpack-case

COMMAND OPERATIONS HEADQUARTERS



COMBAT OPERATION COMMANDER

Exercises general command, managing the operational map based on the current combat situation



COMMANDER ASSISTANT

Provides support to the commander, displays information from various devices and duplicates commands



INTELLIGENCE ANALYST

Analyzes information, determines target priority, and identifies high-priority objects



X1 Group Commander

Manages their group of drones and modules



X2 Group Commander

Manages their group of drones and modules



X3 Group Commander

Manages their group of drones and modules



Venom Group Commander

Manages their group of drones and modules



Commander of Technical Performance Analysis

Diagnoses logs of all units, eliminates technical malfunctions



Commander of Aerial Reconnaissance Units

Supports the commander by consolidating information from various devices and duplicating commands



Commander of Unmanned Aerial Reconnaissance Units

Supports the commander by consolidating information from various devices and duplicating commands

Up to 30 boats of different types



Up to 30 cars of different types



Up to 10 persons



Up to 200 persons



Up to 50 persons



SECTION 7: **ELECTRONIC WARFARE** **SYSTEMS**

SECTION 7: ELECTRONIC WARFARE SYSTEMS

THOR



Protection system designed for use by small tactical units as a personnel shielding device for up to 15 individuals, as well as for installation on stationary military facilities.

Frequency range:
730 MHz – 1020 MHz
Power output: up to 300 W
Jamming range: up to 900 m
Operating temperature:
-40°C to +50°C

Countermeasure against UAVs, FPV drones, and other communication systems. A protection system designed for use by small tactical units as a personnel shielding device for up to 15 individuals. It can also be deployed on stationary military facilities, including: tactical-level unit locations, checkpoints, observation and command posts, command centers, lightly armored combat vehicles and military transport vehicles.

MOLOT



Countermeasure against UAVs, FPV drones, and other communication systems. A protection system designed for use by small tactical units as a personnel shielding device for up to 15 individuals. It can also be deployed on stationary military facilities.

Frequency range:
730 MHz – 1020 MHz
Power output: up to 550 W
Jamming range: up to 900 m
Operating temperature:
-40°C to +50°C

Protection system designed for use by small tactical units as a personnel shielding device for up to 15 individuals, as well as for installation on stationary military facilities: including: tactical-level unit locations, checkpoints, observation and command posts, command centers, lightly armored combat vehicles and military transport vehicles.

MOROK 3



Three-channel jamming transmitter operating in the 730 MHz – 1020 MHz range [optional additional jamming channels can be installed based on mission requirements, operating in the 200 MHz – 6000 MHz range].

Frequency range:
730 MHz – 1020 MHz
Power output: up to 300 W
Jamming range: up to 900 m
Operating temperature:
-40°C to +50°C

Countermeasure against UAVs and FPV drones [control frequency bands] and other communication systems. A protection system for armored and lightly armored vehicles, as well as for personnel in forward combat positions.

MOROK 4



Three-channel jamming transmitter operating in the 820 MHz – 1020 MHz range, 2.4 GHz and 5.8 GHz [optional additional jamming channels can be installed based on mission requirements, operating in the 200 MHz – 6000 MHz range].

Frequency range:
800 MHz – 1020 MHz
Power output: 200 W
Jamming range: up to 900 m
Operating temperature:
-40°C to +50°C

Countermeasure against UAVs and FPV drones [control frequency bands] and other communication systems. A protection system for armored and lightly armored vehicles, as well as for personnel in forward combat positions.

MOROK 5

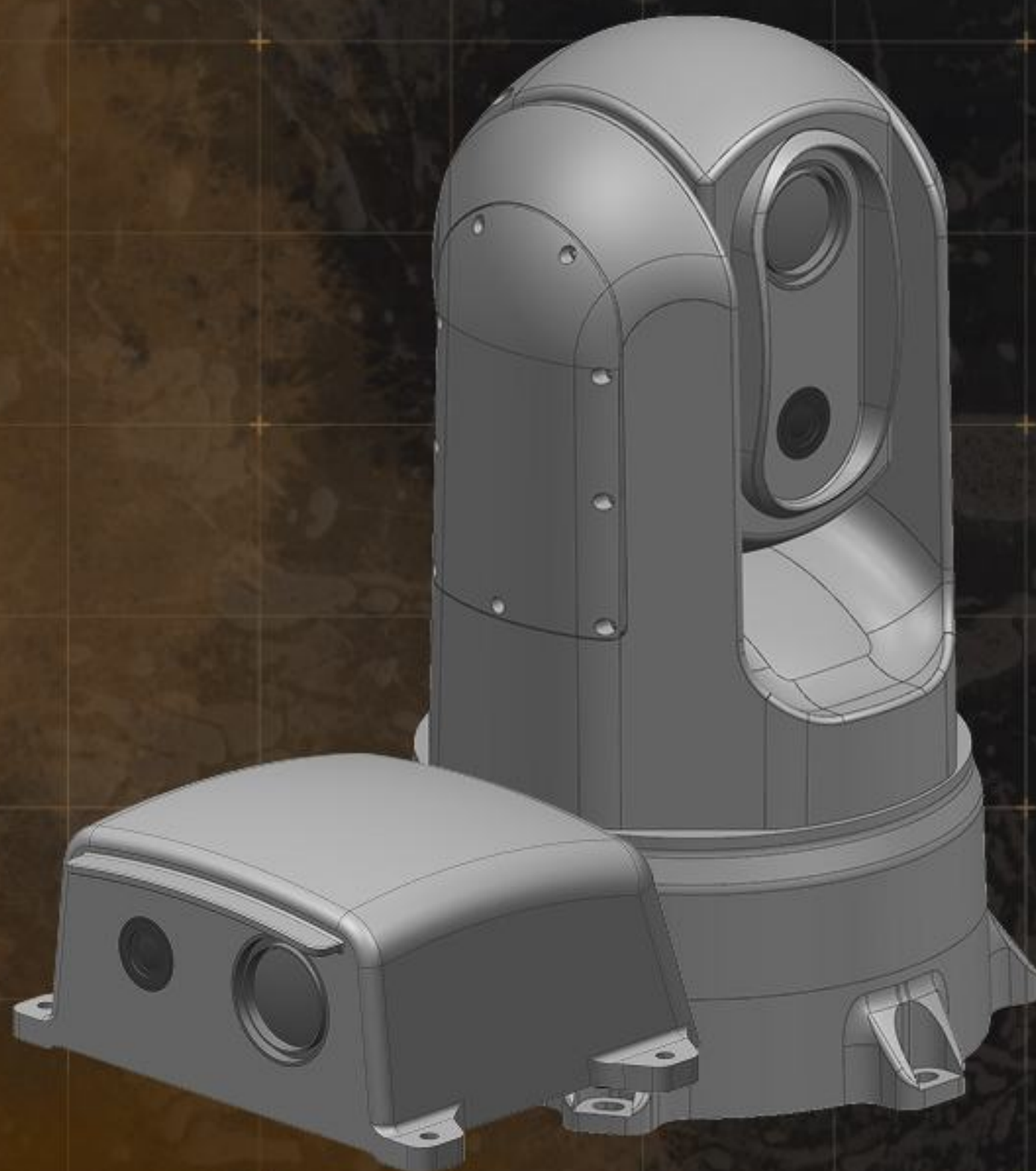


Five-channel jamming transmitter operating in the 730 MHz – 1020 MHz range, 2.4 GHz and 5.8 GHz [optional additional jamming channels can be installed based on mission requirements, operating in the 200 MHz – 6000 MHz range].

Frequency range:
730 MHz – 1020 MHz
Power output: up to 300 W
Jamming range: up to 900 m
Operating temperature:
-40°C to +50°C

Countermeasure against UAVs and FPV drones [control frequency bands] and other communication systems. A protection system for armored and lightly armored vehicles, as well as for personnel in forward combat positions.

SECTION 8:
**SURVEILLANCE,
TARGETING, AND STRIKE
SYSTEMS**



CAMERAS

KATRAN "VIEW" camera is an advanced surveillance system that combines daylight and thermal imaging cameras to provide maximum awareness in maritime environments. Combining optical and thermal imaging technology, this camera provides clear images in both good light and low-light conditions (night, fog, smoke).

KATRAN "VIEW" integrates with vessel's management systems to provide real-time data for rapid decision-making. This camera is becoming an important tool for performing complex combat missions and maintaining security in critical maritime missions.

KATRAN "VIEW mini" camera is a surveillance system that combines daytime and thermal cameras for monitoring in any environment. Thanks to the use of optical and thermal imaging technologies, camera provides a clear image.

KATRAN "VIEW mini" integrates with navigation systems, which allows to receive data in real time and quickly respond to changes in the situation. This makes it an indispensable element for performing complex operations and improving safety in critical conditions.

Peculiarity of KATRAN "VIEW mini" is the absence of a rotary mechanism - it is designed to be installed in one direction, which makes it the best choice for tasks that require constant monitoring in a fixed area.

Remarks

1. Color palettes, polarity, and image mirroring are not available for LVCMOS.
2. Description of the power supply and interfaces applies only to the factory defaults without extended components.
3. Work requires a standard company's extension module.

Operating conditions

- Operating temperature range: -40°C ~ +80°C [-20°C ~ +60°C for the radiometric function]
- Storage temperature range: -45°C ~ +85°C
- Humidity: 5% ~ 95% non-condensing
- Vibration: 6.06 g, vibration in all axes
- Shock loads: 80 g, 4 ms, dust-like final shock wave, 6 directions

360 degree system

- Rotatable main camera [1 pc]
- Tracking camera with thermal imager [1 pc]
- Tracking camera [without thermal imager] [3 pcs]

Application areas

- Military armor and vehicles
- Sea vessels for military purposes
- Robotic and unmanned vehicles
- Strongpoints and command staff

Integration capability

- Fast integration of the AI processing system

Purpose of use

- Protection of facilities / Intelligence
- Targets defining / Targets pointing / Targets retention
- Targeting

Daylight base			
Sensor	IMX415	Lens	5-95 mm
Optical zoom	18X	Megapixels	8 MP
Video resolution		1280*720, 1024*768, 640*480	
Video format	MJPEG	Supply voltage	DC 12V
Power consumption	<10W	Sensor	CMOS
Connection		IP/Wired network	
Sensor resolution		8.0 megapixels	
Tracking daylight and 360°			
Sensor		IMX415	
Lens		2.8 mm	
Megapixels		8 MP	
Video resolution		1280*720, 1024*768, 640*480	
Video format		MJPEG	
Supply voltage		DC 12V	
Power consumption		<10W	
Sensor		CMOS	
Connection		IP/Wired network	
Sensor resolution		8.0 megapixels	
Xcore Microlite Lite Series Uncooled Thermal Imaging Module			
Sensor resolution		8.0 megapixels	
Typical power consumption		≤0.50W / ≤0.40W	
Digital video		· 14Bit LVCMOS · Line-by-line BT.656/BT.1120 · 2-lane MIPI (Raw8) · CDS2	
Serial communication interfaces		UART (1.8V)	
Temperature measuring range		-20°C ~ +150°C 100°C ~ +650°C	
Precision		+3°C or +3% of the indicators (priority to the larger number) at -20°C	
Ambient temperature		60°C	
Weight		8 g	
Size		21 mm x 21 mm	



Launcher "OSA with retransmitter drone"

Drone's type:	flying wing OSA drone, pushing screw and 10 inch quadcopter "retransmitter"
Launchers per 1 vehicle:	1 pc
Boxes for FPV drones "retransmitter"	1 pc
Number of OSAs per 1 launcher	4 pcs
Number of FPV drones "relays" in one box	1 pc
Connection with launcher:	STARLINK High Performance satellite modem
Time for reloading 1 launcher with OSAs	up to 30 min
Time for deployment and launch OSAs per 1 launcher	up to 20 min
FPV drone "retransmitter" operating time	up to 60 min
Electronic warfare system	MOROK-5 [730 MHz - 5850 MHz]

Launcher OSA

Drone's type	flying wing OSA drone, pushing screw
Launchers per 1 vehicle	1 pc
Connection with launcher	STARLINK High Performance satellite modem
Time for deployment and launch OSAs per 1 launcher	up to 20 min
Time for reloading 1 launcher with OSAs	up to 30 min
Electronic warfare system	MOROK-5 [730 MHz - 5850 MHz]
Secure communication	with FHSS 270-530, 700-1050, 2200-2600 MHz
Analog video in range	4.9-6.0 GHz
Target load	1200 to 2000 g
Battery	4s4p MoliceL P45B

Flying wing type OSA fpv drone

Wingspan	1153 mm
Fuselage length	880 mm
Maximum takeoff weight	up to 5000 g
Speeds	Top 175 km/h, Cruise 90 km/h, Dumping 60 km/h
Flight height	Top - 4000 m, Operating - 100 m
Intended purpose	one-time use for detection and destruction of specific targets in real time - "kamikaze wing"
Connection	fiber optic system or STARLINK satellite modem in combination with a ground station or drone retransmitter
Top flight range	up to 70 km depending on the selected fiber optic module or communication via retransmitter
Target load weight	from 500 to 2000 g depending on the selected fiber optic module or communication via retransmitter
Battery	Samsung 50S 6S3P 15000 mAh



TACTICAL AND TECHNICAL SPECIFICATIONS

Launcher OSA

TACTICAL AND TECHNICAL SPECIFICATIONS

FPV BOXES

INTENDED PURPOSE

One-time use for detecting and defeating designated targets in real time

APPLICATION PLACES

- Setup on pickup track
- Setup on a trailer
- Setup on the perimeter of staffs and positions
- Setup on sea-based complexes

BOX MATERIAL

- Plastic (polyamide) - lightweight, sturdy, resistant to external factors
- Aluminum frame - provides structural rigidity with minimal weight

WEAPONS

- FPV boxes per 1 car: 4 pcs
- FPV drones type: 10-inch "kamikaze"
- FPV drones per 1 box: 5 pcs
- Total number of FPV drones per 1 car: 20 pcs

DEPLOYMENT AND LAUNCH TIME

1 FPV box: up to 10 min 4 FPV box: up to 40 min

RELOADING TIME

1 FPV box: up to 15 min 4 FPV box: up to 60 min

RELOADING BETWEEN LAUNCHES TIME

5 min

BENEFITS

- Fast delivery of FPV drones to the war zone, quick deployment and changing location
- Strike support, extermination of armored vehicles, fortifications and manpower
- Stable connection STARLINK High Performance
- Ensure an advantage on the battlefield due to speed, precision and maneuverability

10-INCH KATRAN DEATH FLIGHT FPV QUADCOPTER

Frame size	297x297x35 mm
Engines	900 KV
Flight control stack	F405 - 60 A
Video frequency	from 4.9 to 6.0 GHz
Video transmitter power	3 W
Control frequency	850 MHz and 2.4 GHz ELRS with the ability to change frequency
Battery	6S3P Samsung 50S 15000 mAh
Quadcopter speed in flight	
top - 140 km/h	
cruise - 70 km/h	
Deployment and flight preparation time	no more than 3 minutes
Payload	up to 3000 g
Top flight height	at least 1000 m
Top flight range	at least 18000 m
Flight time	at least 15 min
Target recognition range	at least 200 m
Payload initiator	stand-alone initiation board
Controlling the quadcopter and transmitting video is possible via fiber optics with a coil length of up to 15000 m	



SWARM CONTROL SYSTEM

Software and technical complex that is applicable to any unmanned vehicles. The "SWARM" system allows one pilot to control up to 10 UAV simultaneously.

"SWARM" provides operator with the ability to dynamically switch control between 5 UAVs in the air, allowing to adapt tactics in accordance with changes on the battlefield. Optoelectronic system's data of the first drone is transmitted to the Command Center, where a priority list of targets is formed. All of the launched drones serve as both intelligence and strike platforms. They transmit up-to-date information in real time, detecting the enemy, and after confirming the targets, they are re-targeted to hit selected objects.

This tactic allows effective destruction of armored vehicles, including: tanks, armored personnel carriers and convoys of vehicles, inflicting maximum damage with rapid tactical changes.

Type: switching chain.

The devices fly behind the first control drone, after its loss, the control goes along the chain to the next one, and so on, until the whole group will be lost.

AI has the functions of automatically detecting and determining the type of target, tracking and bringing the UAV in line with the priorities.



info@vpk-mac.com



vpk-mac.com



[HUB]