PRODUCTION-INNOVATIVE COMPANY
DeViRo

LLC PRODUCTION
INNOVATIVE COMPANY

DEVIRO

DESIGN AND PRODUCTION OF UNMANNED AVIATION VEHICLES (UAV)

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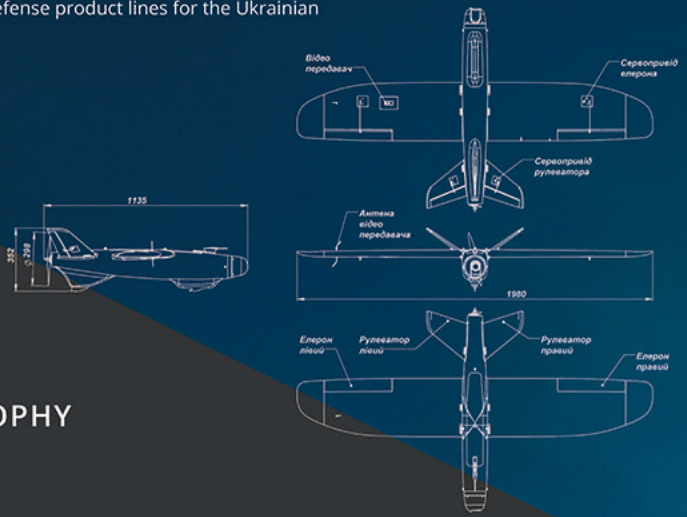
LLC "PRODUCTION-INNOVATIVE COMPANY "DEVIRO"
DEVIROAVIA@GMAIL.COM
+38 (067) 578 96 96
WWW.DEVIRO.UA
WWW.UAV-UA.COM
49005, DNIPRO, SIMFEROPOLSKA STREET, 21, OFFICE 308-A/3

DEVIRO specializes in designing, developing and producing of Unmanned Aviation Vehicles (UAV). DEVIRO is an officially registered supplier of defense product lines for the Ukrainian government.



OUR PHILOSOPHY

QUALITY

DEVIRO strictly adheres to the philosophy of quality and technical innovation first. Our production level and management system adheres to strict requirements of ISO9001:2015.

INNOVATIONS

DEVIRO constantly improves its product line by introducing new technologies and adapting our equipment to clients' individual needs.

SCIENCE APPROACH

Our scientific developments are patented, thoroughly tested and fully certified.

RELIABILITY

Our Unmanned Aviation Complexes were tested under real combat conditions.

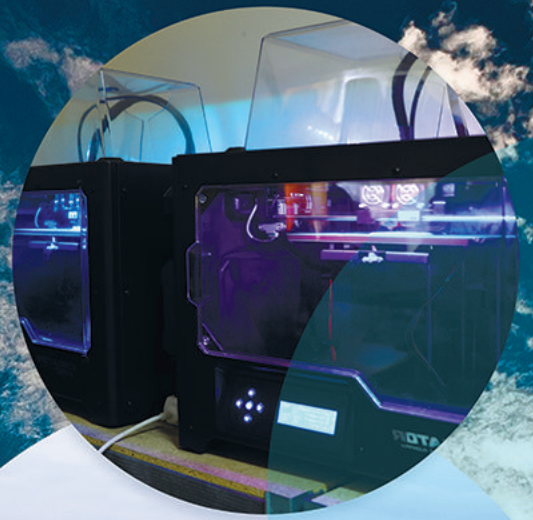
THE COMPANY

DEVIRO is comprised of more than 40 professionals: RnD engineers, programmers, flight instructors and structural engineers with experience in military civil aviation industries.

Applying our colossal practical experience, we produce high-quality Unmanned Aviation Vehicles (UAVs) and our own unique software.

Our long-term employee production experience and implementation of UAVs allows us to complete projects of any magnitude and complexity.

Our production capacity allows us to produce 50 unmanned aviation complexes per year, each of which includes 3 UAVs.



PRODUCTION PRINCIPLES

DIGITAL SECURITY

The control of our UAV is carried out through an encrypted digital radio channel, which allows us to receive telemetry data in real time mode.
In the event that the radio channel is terminated for any reason, the UAV is able to continue its flight autonomously and successfully complete the initial task.

PHYSICAL SECURITY

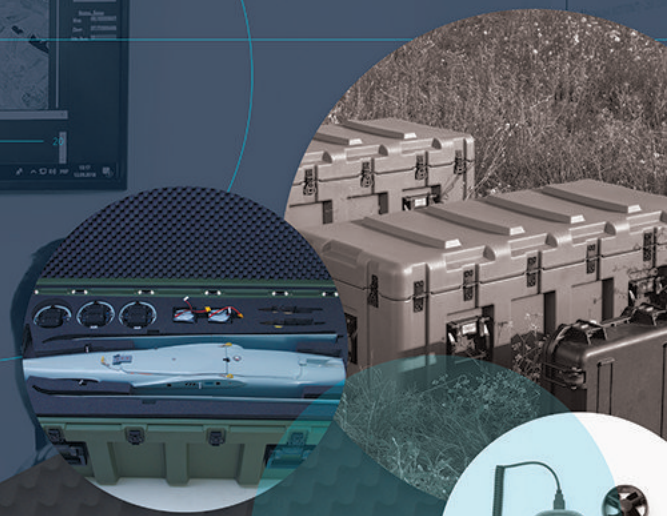
All models are weather proof. Weather protection includes precipitation and wind resistance of up to 20 m/s.

OPERATION IN DIFFICULT SITUATION

Our UAVs are adapted for operation in problematic radio-wave conditions, as in modes of special radio interference installations or GPS/GLONASS satellite navigation blocking and spoofing systems.

PRODUCTION UNIQUENESS

Our military-intelligence-purpose UAVs use unique components. These components are developed according to DEVIRO's special technical tasks and cannot be disabled by means of electronic warfare.



COMPLEX CONTENT

- unmanned aviation vehicles (UAV)
- payload modules
- UAV power supplies (batteries)
- ground control station
- a rubber catapult launcher set
- a set of spare tools and devices to ensure proper operation and repairing activities by the UAV's flight and support crew
- documentation
- transporting case *
- auxiliary equipment *
- transporting vehicle *

* The complex is delivered according to the option pack chosen by the client. The UAV complex configuration is agreed upon with the client and is specified in the supply agreement.

UAV COMPLEX LELEKA-100

Unmanned Aviation Complex - Leleka-100 is a hardware and software suit that consists of an autonomous remote-controlled UAVs, designed for various tasks such as aerial reconnaissance, patrolling, area mapping with the possibility of on-line information transfer and obtaining of accurate geographical coordinates in real-time mode.

OPERATION IN DIFFICULT WEATHER CONDITIONS

The UAV can be utilized in dense cloud conditions and drizzle, in case the time spent in flight does not exceed 20 minutes.

OPERATION IN PROBLEMATIC RADIO-WAVE CONDITIONS

DEVIRO's special anti-electronic warfare system recognizes intentional interference environments (GPS/Glonass blocking, spoofing) as well as automatic overriding of navigational fields.

VARIABLE OPERATION SYSTEM

All complexes include our automated control concept of the UAV throughout the whole flight, which considerably simplifies the operator's job and allows the crew to focus their attention on the analysis of current data inflow, which continuously transfers from the board of the UAV.
Along with the automated control system, there exists a combined control mode that presumes partial operator flight engagement and the ability to point the UAV to a direction not previously specified.
After the operator is finished manually handling the apparatus, it automatically returns to the route set beforehand.

PACKAGE CONTENT

The UAV is supplied in a convenient and durable transport cases, that meet NATO military standards, and accommodate all the components of the complex. They protect it during storage and transportation and eliminate the possibility of damage, if dropped from a height not exceeding 2 meters.
Delivery set can be changed in accordance with client wishes.

AUTONOMOUS FLIGHT

UAV is able to continue autonomous flight and successfully complete the task, in case of radio channel data exchange termination.

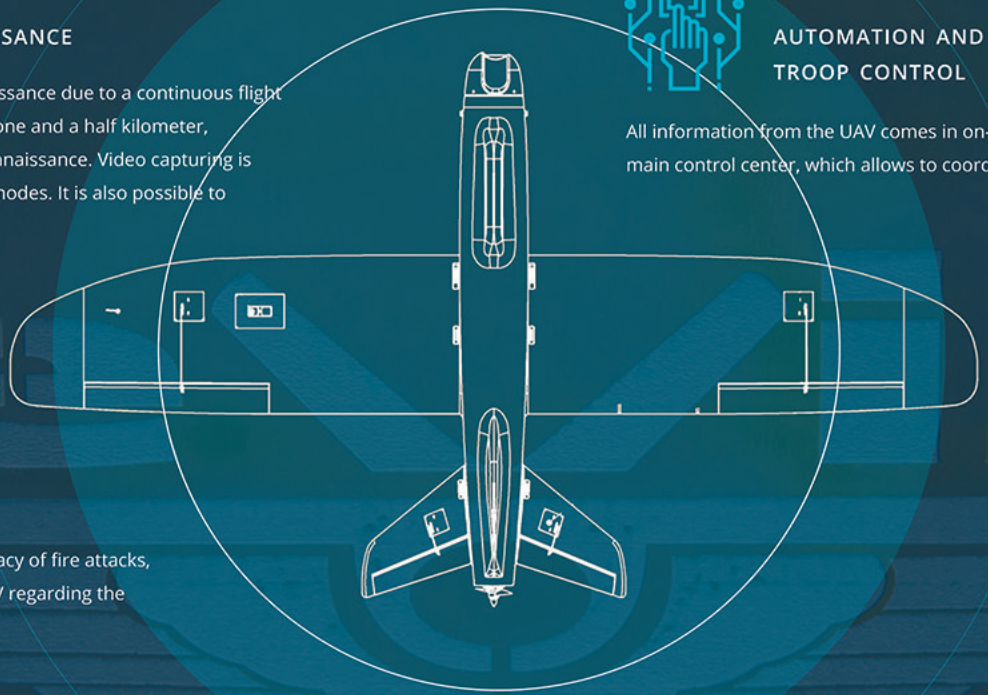
SECURITY IN OPERATION

Operation of the UAV is carried out via an encrypted digital channel, which allows the possibility to receive telemetry data throughout the whole flight.

EASINESS OF OPERATION

Operator can track the location of the UAV on satellite maps, adjust routes and provide emergency return commands back to the take-off point or, if necessary, set another landing point. Great attention was paid to the operator's convenience as per reducing the time it takes to bring the UAV to readiness to complete the task.

AREA OF APPLICATION



AERIAL RECONNAISSANCE

Leleka-100 can be used for aerial reconnaissance due to a continuous flight time of up to 2 hours at altitudes of up to one and a half kilometer, "Leleka-100" is an effective means of reconnaissance. Video capturing is carried out both in on-line and recording modes. It is also possible to operate the UAV in full radio silence.

AUTOMATION AND TROOP CONTROL

All information from the UAV comes in on-line mode to the ground control station and to the main control center, which allows to coordinate the actions of ground forces quickly.

ADJUSTMENT OF ARTILLERY FIRE

Artillery fire effectiveness is ensured by timeliness and accuracy of fire attacks, based on complete and accurate data obtained from the UAV regarding the position, size and nature of targets in real time mode.

MAPPING

Additional equipment allows obtaining high-quality images with references to geographic coordinates. This permits the creation of high-precision topographic maps.

BORDER SURVEILLANCE

Our UAVs possess excellent tactical and technical characteristics that allow fortified control of state borders and private territories even in the most remote and hard-to-reach grounds.

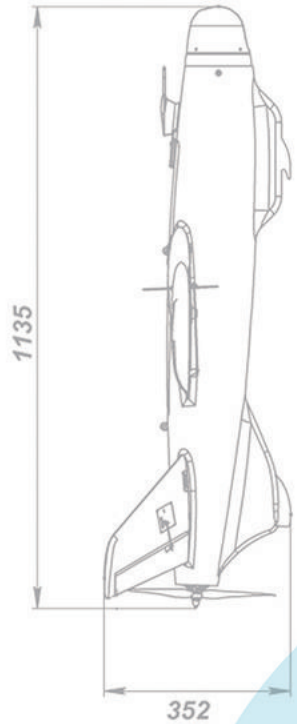
AGITATION

The UAV is used for delivering and dispersal of certain campaign materials over a designated area, or other goods, with total weight not exceeding 1 kg (2.2 lb).

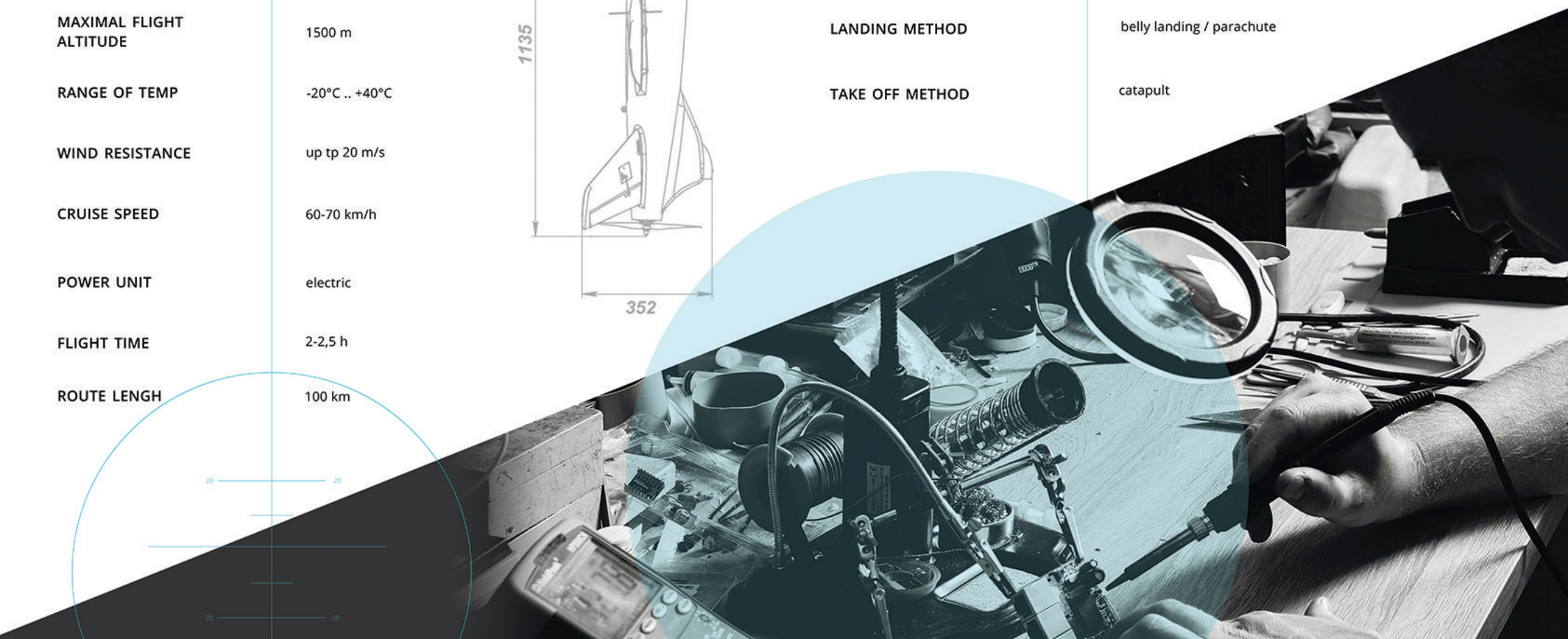
TECHNICAL CHARACTERISTICS

DIMENSIONS AND OPERATING CONDITIONS

SIZE	1980 mm / 1135 mm / 352 mm
TAKE OFF WEIGHT	5,5 ± 0,3 kg
MATERIAL	composite: kevlar, glass-carbon fiber
MAXIMAL FLIGHT ALTITUDE	1500 m
RANGE OF TEMP	-20°C .. +40°C
WIND RESISTANCE	up tp 20 m/s
CRUISE SPEED	60-70 km/h
POWER UNIT	electric
FLIGHT TIME	2-2,5 h
ROUTE LENGH	100 km



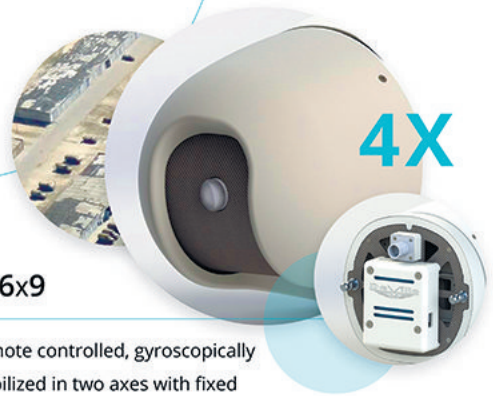
CONTROL SYSTEM	45 km two-way digital data channel with encryption
FLIGHT OPERATION SYSTEM	Autopilot with the full auto and navigation mode
ANTI ELECTRONIC WARFARE SYSTEM	DEVIRO's special anti-electronic warfare system recognizes intentional interference environments (GPS/Glonass blocking,spoofing) and overriding of navigation fields.
PROGRAMMING	Visual mode with satellite maps
PAYLOAD	Modular variable: "F16x9" / "Z 10x32" / thermal vision "T25x25"
VIDEO DATA FORMAT	digital data link 720p HD with encryption, stable transmission up to 45km LOS
LANDING METHOD	belly landing / parachute
TAKE OFF METHOD	catapult



PAYLOADS

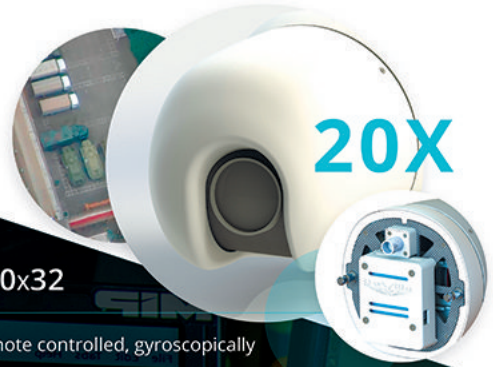
Payloads for the UAV are comprised of a quickly detachable modular system with a single unified connection interface, which allows you to install all necessary modules in accordance with the current needs of the operator.

Double-axes payload modules are gyro-stabilized and are remotely controlled in directions of right to left and top to bottom.



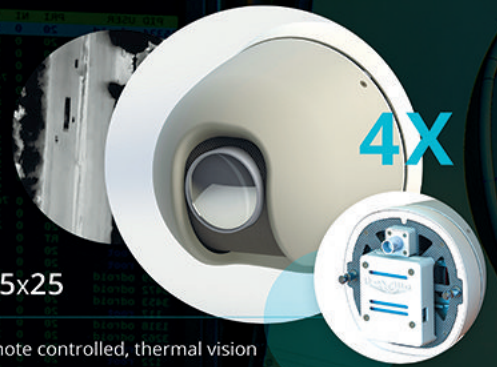
F16x9

Remote controlled, gyroscopically stabilized in two axes with fixed **4x optical zoom.**



Z10x32

Remote controlled, gyroscopically stabilized in two axes with changeable **20x optical zoom.**



T25x25

Remote controlled, thermal vision module, gyroscopically stabilized in two axes with fixed **4x optical zoom.**

CONTROL SYSTEM AND PACKAGING

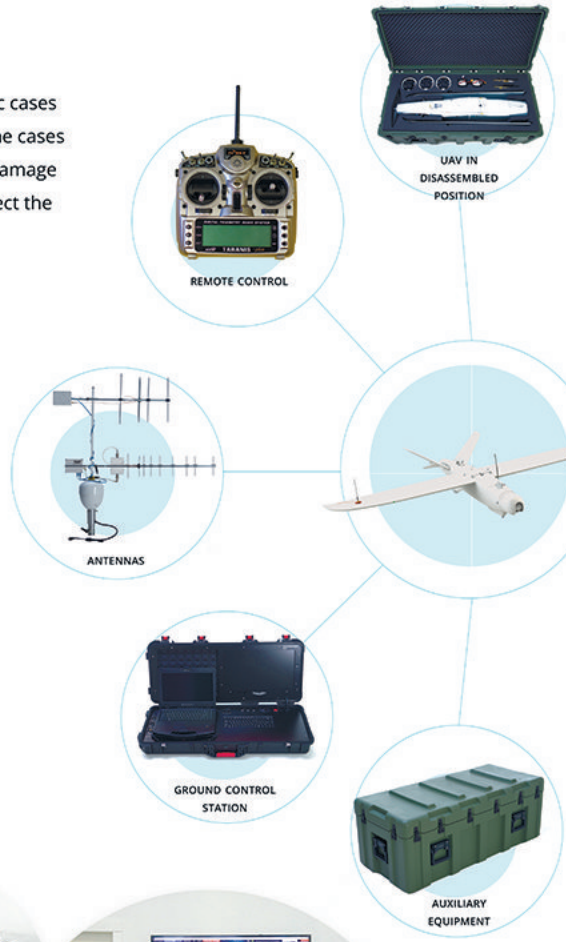
Our UAV is supplied in light and impact-resistant plastic cases that contain all the necessary complex components. The cases protect the complex during transportation, eliminate damage in the event of drops of up to 2 meters, as well as protect the units from dust and water penetration.

The complex small dimensions and low weight make it possible to transport it in a van.

The control system consists of a ground control station, antennas and manual remote control unit.

UAV is controlled via an encrypted digital radio channel. This allows for reception of video and telemetry data throughout the entire flight of up to 45 km.

UAV control is fully automated. This allows the operator to focus on the analysis of on-line information coming from the UAV.



PILOT TRAINING

Training center for unmanned aviation complex operators.
The training plan is designed as a fourteen-day program and includes: the basics of aerodynamics, UAV design and software set, practical pilotage, post-flight procedures and maintenance, emergency and non-standard situations, analysis of data obtained from UAV.
A 2 to 3 people flight crew is required to operate the flight complex.

SERVICE

The company provides clients with a full range of services as per maintenance and repair of the UAV over its entire lifespan.

Special equipment for diagnostics allows us to quickly identify problems, the causes of their occurrences, which in turn allows us to suggest ways of eliminating complications.

Every UAV is subjected to tests by fly-overs after their repairs to check for full functionality of all UAV systems.

Precise diagnostics and fast high-quality repair are the result of longstanding practical experience of our specialists.

Our service center operates in two directions: technical maintenance of UAVs and technical support for the UAV crew.

TECHNICAL MAINTENANCE OF UAV

The company provides customers with warranty and post-warranty service within the shortest possible time, which includes

- diagnostics of all systems
- repair, replacement of equipment
- software updates
- replacing of parts with exhausted lifespans, updating of spare parts and materials

INFORMATIONAL SUPPORT OF THE UAV CREWS

The company operates its own training center, which carries out both educational activities and the subsequent informational support for all crews using our UAVs.

We provide:

- training courses for UAV crews
- advanced training courses for UAV crews
- online video conferencing and consulting

We also provide:

- printed and electronic learning and teaching as well as supporting materials
- technician visits to the UAV deployment site
- a closed online chat for live communication for UAV pilots with company specialists

WARRANTIES AND CERTIFICATES

A twelve-month or 100 take off/landing cycle warranty period is applied to every UAV of the complex after it is handed off to the client.
The client has the possibility to include Unconditional Warranty Service Package in the price of the UAV.
This service package includes free replacement and repair of the UAV for 12 months, regardless of the cause and condition of the issue.