

LIAZ MODELÁRNA LIAZ



UAV complex

LIAZ SkySpotter 151CS

Surveying beyond limits

Description of the complex

**MAPPING, SURVEYING, 3D MAPPING,
GEOTAGGING**

COMPLEX FOR SURVEYING

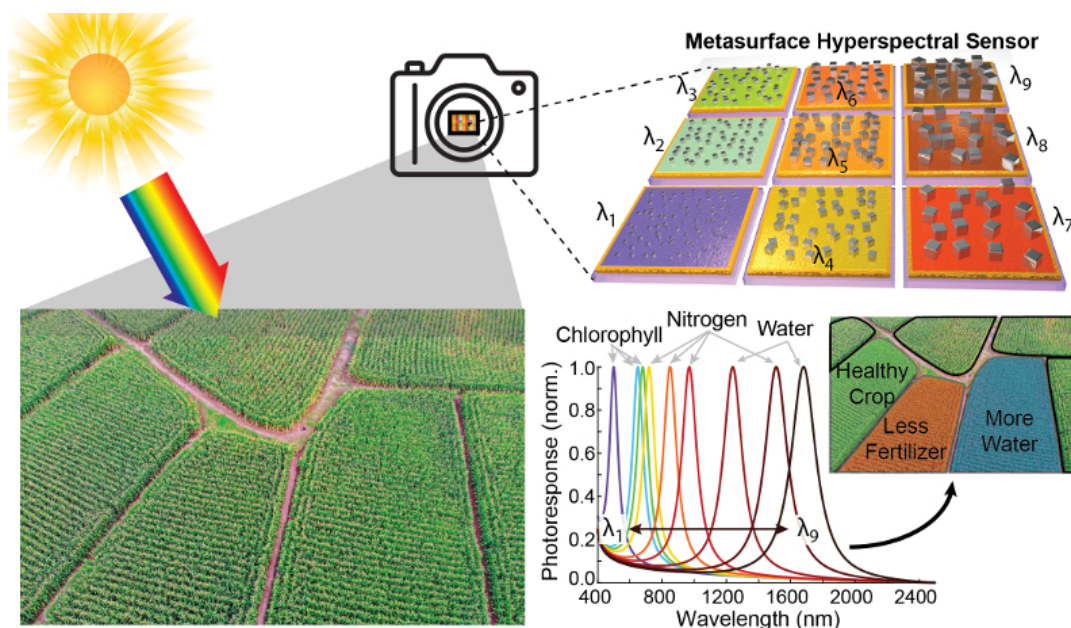
- Copying and rasterization terrain
- Scanning
- Creation 3D data of terrain
- LIDAR imaging camera
- Working in any field

COMPLEX LIAZ UAV SkySpotter 151 PLUS OPTIONAL LOADS

- 42 MP high resolution RGB camera
- Multispectral Camera (red, green, blue, NIR, RGB)
- LIDAR imaging camera
- Gimbal
- FPV camera
- Landing camera
- GCS
- Antenna

METHOD OF USAGE

Because of its features and perfect control, the helicopter provides a number of advantages for reconnaissance work. This is an extensive long-term and detailed monitoring of areas provided in automatic or manual mode performing visual, thermal and hyperspectral control. The data are measured and then processed by special software.





FLIGHT MODES

Flight mode selection is an important and substantial step because all tasks and commands are performed independently. The choice of algorithms for UAV control is based on the selected modes. The flight plan is usually completed by the UAV in four basic modes. The most important modes are:

- Fully autonomous mode – automatic mode allows the pilot to intervene in the programmed flight at any time. This mode includes:
- VTOL (vertical take-off and landing) automatic take-off and landing system
- Flight to point, flight along route, flight around circuit
- Scan the surface in a specific raster



SENSORS:

RGB high resolution camera

Resolution	42MP
Aspect ratio	4:3
Lens size	35 – 300mm
Weight	1200g

Lidar

Maximum distance	550m
Minimum distance	3m
Accuracy	10mm
FOV	360°

Multispectral camera

Wavelength range	400 – 1000nm
Spectral bands	Red, Green, Blue, NIR, RGB
Lens size	8mm
Number of camera	5

Gimbal

Daylight camera	Sony full HD
Optical zoom	30x
Infrared camera	640x480px
Lens	13, 19, 35mm

Flashlight

Source	CREE XHP70.2 LED
Max power	100 000 Lumens

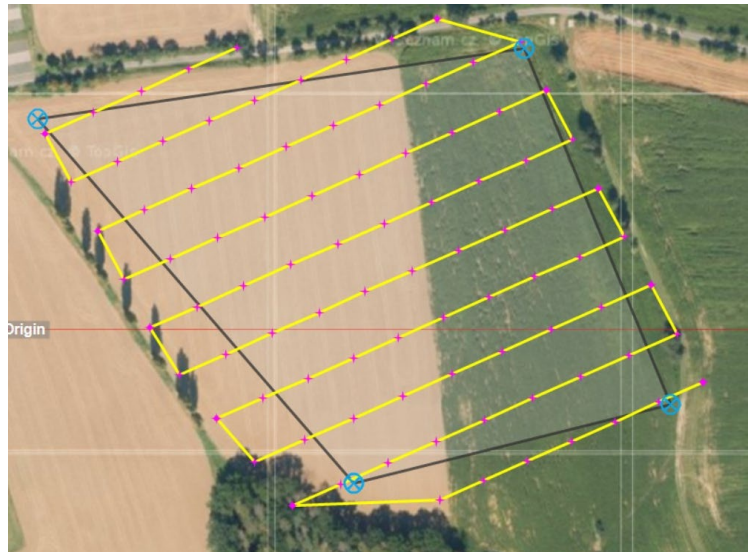
TECHNICAL PARAMETERS OF UAV

Max. speed	35 m/s	Engine unit	Liaz two-stroke engine
Operation speed	0 – 35 m/s		Twin-spark system
Wind resistance	15 m/s		Electronic injection
Flight time	Up to 190min		Gasoline 95
Max. altitude	3 500m ASL	Fuel tank	Up to 70l
Operating temperature	-10 to 40°C	Generator power	2 kW
Control range	Up to 60km	Hover precision	0.3 m
Flight range	Up to 300km		

GCS and SOFTWARE

The **LIAZ PORTABLE GCS** remotely controls the aircraft and provides control and data communication with attached equipment (payloads).

It is equipped with the antenna system used for long-distance communication with UAV. It provides communication for flight control, positioning via GPS.



The system also provides data transmission. It transmits following data – video from the FPV camera, landing camera or data from payloads.

- Rigid enclosure design
- Dust and water resistant IP 65
- Multi touch 17" display
- Including laptop
- LIAZ surveying software
 - Mapping and Surveying
 - 3D mapping
 - Navigator and Geotagging
 - Mosaicking redundancy
 - Geometric correction
 - Masking
 - Extraction of image derived statistics
- Compatible with Android, IOS, Windows
- Datalink up to 10 km range real time video transmission
- Spread spectrum FHSS and DSSS
- Integrated RTK
- Storage 128 GB
- 6GB RAM
- 2 x joystick for manual control
- Lithium –lion battery (2pcs)
- Rigid foldable stand
- AC/DC adapter 110-240V AC /24V DC
- Over voltage protection
- Reverse polarity protection
- Radio compatible with external antenna configuration
- 8 channel transmitter

MODELÁRNA LIAZ spol. s r.o. is a reliable supplier of unmanned helicopter complexes and a provider of specialized systems. LIAZ provides other specific services (including a whole range of payloads and software) as well as technical tools associated with the use of the helicopter **Skyspotter 151** simplified specialty versions. Extensive technical and manufacturing experience enables LIAZ specialists to introduce innovative technical features during the R&D phase and implement ambitious concepts. With the **LIAZ UAV Skyspotter 151** complex, every customer receives a ready-made solution tailored to his own specific needs.

MODELÁRNA LIAZ spol. s r.o.

Your right choice

MODELÁRNA LIAZ spol. s r.o. is a company engaged in the development and production of unmanned helicopters. This line of business is a continuation of the long tradition of LIAZ vehicle production founded in 1951. It used to have 10 manufacturing plants with 11,000 employees and produced up to 13,600 trucks a year.

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