

INSPECTION AND MAPPING INDOOR DRONE

Elios 3



Insights beyond human reach

Improved safety

Keep workers from dangerous conditions using remote surveying and inspection capabilities.

Reliable data

Get highly accurate data in the most confined spaces and provide fast operational insights.

Unprecedented access

Complete surveying and inspection tasks in areas that are unsafe or inaccessible to humans.

Cost efficiency

Maximize uptimes and save on equipment & labor costs with remote data collection by drone.

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Technical specifications

DESIGNED FOR INDOORS

- Collision-resilient
- Confined space access
- GPS-denied flights

INTUITIVE TO FLY

- LiDAR-based stabilization
- Live situational awareness
- Location-tagged data

UNMATCHED VERSATILITY

- Built-in: Visual inspection payload
- Add-Ons: UT, Surveying, RAD, Flammable Gas Sensor

BUILT FOR SUCCESS

- Easy maintenance
- 1-day training to onboard
- Dedicated support team



AIRCRAFT

Dimensions (W x H)	48x38 cm (18.9 x 13.8 in)
Weight (incl. battery)	Aircraft: 1960 g +/-15 g (< 4,32 lbs) Aircraft and LiDAR: 2412 g +/-15 g (< 5,2 lbs)
Max. flight time	11.5 min (Elios 3 base), 9.1 min (Elios 3 + LiDAR)
Ingress protection	Splash and dust resistant design, LiDAR Payload IP68
Max. horizontal speed	Assist mode: 1.5 m/s (4.9 ft/s), Assist-Sport mode: 2 m/s (6.6 ft/s), Attitude mode: 5 m/s (16.4 ft/s), Sport mode: 7 m/s (23 ft/s)
Max. wind resistance	Assist mode: 5 m/s (16.4 ft/s), Sport mode: 7 m/s (23 ft/s)
Operating altitude	W/o payload: -3000 m and +5000 m AMSL W/ payload: -3000 m to +3000 m AMSL
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) ¹
Outdoor compliance	✓ Remote ID ✓ Pilot ID, Geo-Awareness, Altitude fence for EU, CH, N, IS & LIE

1. Valid for batteries pre-condition between 10 °C and 40 °C; 50 °F to 104 °F

OPERATIONAL SAFETY & CRASHWORTHINESS

Safety factors	Collision-resilient patented technology, protective cage in carbon
Impact resistance from falling objects	Impact resistant for a falling rock of 2 cm diameter falling from 1 m high on the drone
Max. safe collision speed	2 m/s (< 6.6 ft/s) in frontal collisions, 2.4 m/s (< 7.9 ft/s) in all spherical directions
Fail safe	Automatic return to signal on signal or video loss
Stabilization system	SLAM Based LiDAR and VIO Cameras

LiDAR PAYLOAD (BASE OPTION)

SLAM based mapping	✓
Handheld functionality	✓
Max. range	45 m
Precision	+/- 1.8 cm
Max. accuracy	0.5% drift

SMART BATTERY

Type	LiPo 6S HV Smart Battery
Nominal voltage	22.8 V
Charging time	1 h
Capacity	99.2 Wh
Operating temperature	10 - 40 °C (50 - 104 °F)

REMOTE CONTROLLER

Max. transmission distance	500 m (1640 ft) in direct visual line of sight
Max. operating time	5 h
Output port	USB-C
Weight	1760 g without tablet (< 3.9 lbs), 2260 g with tablet (< 4.9 lbs)
Tablet model	Samsung Galaxy Tab S7 or S8

SHIPPING CASE

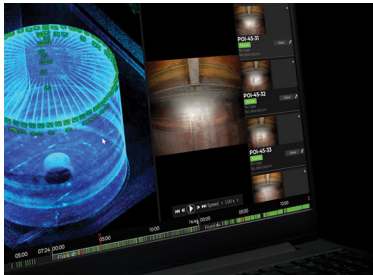
Dimensions (HxWxL)	65 x 45 x 55 cm
Shipping weight	24 kg (< 52.9 lbs)

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Payload menu

VISUAL INSPECTION PAYLOAD (BUILT-IN)  Data output 4K video, 12MP photos, Thermal imagery	4K CAMERA Sensor 12.3 MP 1/2.3" CMOS Video resolution 4K / 30 fps GSD resolution Up 0.18mm/pix Focal lens 2.71 mm FOV 180° tilttable camera pod	THERMAL RADIOMETRIC CAMERA Sensor Lepton 3.5 FLIR Resolution 160 x 120 Accuracy From ±5°C or ±5% Frame rate 9 fps Thermal sensitivity ≤50 mK	LIGHTING SYSTEM Light output 16000 Lumens Modes Normal, dustproof lighting, oblique lighting
UT PAYLOAD (ADD-ON)  Data output UT Spot Measurements	PROBE Manufacturer Cygnus Instruments Probe type Dual element transducer Measuring mode Mode 2 (Single Echo) and Mode 3 (Echo-to-Echo)	PROBE Gain and gate control Automatic or manual gain and gate control Accuracy ±0.1 mm (±0.004") Resolution display Display 0.1 mm (0.005") or 0.01 mm (0.0005")	IN FLIGHT ✓ Live A-scans data ✓ Real-time A-scan refinement IN POST-PROCESSING ✓ Location-tagged UT measurements ✓ A-scan review and refining
SURVEYING PAYLOAD (ADD-ON)  Data output Point clouds	SENSOR Configuration Ouster OS0 128 beams REV 7 sensor Accuracy From 0.1% drift Precision 1σ +/- 6 mm, 2σ +/- 12 mm Range Up to 100 m	SENSOR Scanning rate 1.3 M pts / sec Photon sensitivity 10x Handheld functionality	IN POST-PROCESSING Software FARO Connect (partner solution) Features ✓ Data alignment, ✓ Georeferencing, ✓ Point cloud filtering Export formats LAZ, LAS, E57
FLAMMABLE GAS SENSOR (ADD-ON)  Data output Real-time warning	SENSOR Configuration NevadaNano Flammable Gas Sensor 5.0 Type Molecular Property Spectrometer™ Calibration No calibration required (factory calibrated)	SENSOR Response time < 20 seconds Humidity range 0% to 95% Pressure range 80 to 120 kPa	IN FLIGHT ✓ Real-time warning of flammable gases ✓ 14+ flammable gases detected, including Hydrogen ✓ Comprehensive reading: live LEL % values and gas class
RAD PAYLOAD (ADD-ON)  Data output Radiation levels	DETECTOR Configuration Mirion RDS-32TM WR Dose rate measurement range 0.05 µSv/h to 10 Sv/h IEC dose rate measurement range 0.3 µSv/h to 10 Sv/h	IN FLIGHT ✓ Comprehensive radiation reading: current and cumulative dose rate along with max recorded value	IN POST-PROCESSING ✓ Precise localization of radiation sources on a 3D map of the asset ✓ Easy reporting

1. Depending on probe and configuration, material, temperature.



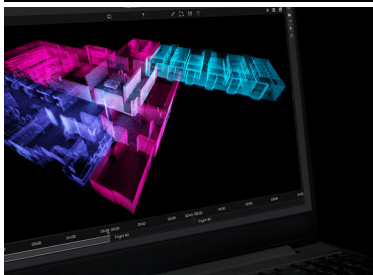
Inspector

Inspector, the companion software for Elios, lets you effortlessly visualize and analyze Elios 3 inspection data within a 3D model of your asset. With advanced tools for real-time analysis, 3D mapping, and reporting, it turns inspection data into actionable insights, making it easy to organize and interpret.



Flyability Cloud

Centralise, sync and easily share all your Elios 3 data on the Cloud, accessible from any device without file transfers or installations. Review inspection footage with an online viewer that displays annotations and points of interest on a digital twin of your asset.



Asset Management

Automatically merges data from subsequent inspection flights into a single view of your asset, integrating real-time spatial alignment and point cloud visualization for a comprehensive digital twin that simplifies analysis and enhances decision-making.



Training simulator

The Flyability Training Simulator recreates the Elios 3 flying experience, enabling pilots to safely practice navigation and refine skills in realistic industrial scenarios—all without additional hardware. This free tool supports on-demand learning, helping users master inspections efficiently.

TRAINING

80+

Global training facilities

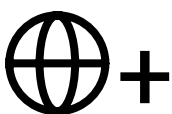
2500+

Certified Elios drone pilots



Complete training programs to master our drones and payloads.

SUPPORT



Global Support & Services



Knowledge base available online with how-to guides, videos and technical help for your drones.