GAS DETECTION PAYLOAD & CAPABILITIES

AILF U10 laser methane detection payload

The AILF U10 uses Tunable Diode Laser Absorption Spectroscopy (TDLAS) to detect methane leaks from up to 150m away — delivering real-time gas concentration data from a safe aerial standoff without putting personnel at risk.

UAV LASER METHANE DETECTOR



AILF U10

TDLAS · CH_4 Detection · 150m Range · 25ms Response

AVAILABLE NOW FROM D2 RENTALS — FUNCTION-CHECKED, COMPLETE, FIELD-READY.

CAPABILITIES & APPLICATIONS

One sensor. Pinpoint precision. Methane detected from a safe distance.

Sensor Capabilities

TDLAS · CH_4 · Laser · Aerial Detection

- Tunable Diode Laser Absorption Spectroscopy (TDLAS) — targets methane (CH_4) with high chemical selectivity, minimising false positives from other gases
- Detection range up to 150m — real-time concentration readings from a safe standoff, keeping personnel away from hazardous areas
- Stationary detection limit of 5ppm.m — identifies leaks at very low concentrations before they become a safety risk
- 25ms response time — near-instantaneous gas concentration data for rapid decision-making in the field
- 3-axis stabilised gimbal with adjustable pitch — compensates for airframe vibration and allows the operator to pinpoint leaks on structures at varying heights and angles
- Integrated 720p visual camera — provides aerial context of the suspected leakage site alongside concentration data; managed via AlphaOne iOS application for mission planning, trend monitoring, anomaly flagging, and report generation
- Compatible with DJI Matrice 300 RTK, Matrice 200 Series V1 and V2 — powered by DJI SkyPort

Applications

Built for gas detection professionals

- Oil and gas pipeline surveys — detect methane leaks along buried and above-ground pipelines from the air
- LNG plant and gas storage facility inspection — survey large, complex facilities rapidly without ground-level access
- Offshore and onshore processing platform inspection — monitor flanges, valves, and risers for fugitive emissions
- Gas distribution network surveys — systematic leak detection across urban and rural pipeline networks
- Compressor station and metering point inspection — identify leaks at high-risk equipment points without personnel exposure
- Landfill gas monitoring — map methane emissions across waste sites for environmental compliance reporting
- Hard-to-access terrain surveys — detect leaks in mountainous, riverine, or otherwise inaccessible areas safely
- Emergency response — rapid aerial assessment of suspected gas releases to inform safe evacuation and response decisions

RENTAL BENEFITS

Hiring this payload is more cost-effective than an outright purchase — and lets you access the technology only when you need it.

WHAT DO I NEED TO BOOK A RENTAL?

Provide us with some key documents — then enjoy your hire.

01

Insurance

Insure your rental under a Hired-in (non-owned) equipment cover policy — to the full cost value of the equipment and for the duration of your hire period.

02

Proof of ID

Submit a copy of your passport or driving licence, plus a utility, bank, or council tax statement that matches your name and delivery address.

03

Flyer ID

You need a valid Flyer ID and Operator ID. We don't require proof of drone registration or training (A2 CofC / GVC).

READY WHEN YOU ARE

Available now from D2 Rentals — function-checked, complete, and field-ready.