

LASER FALCON

+ SkyHUB

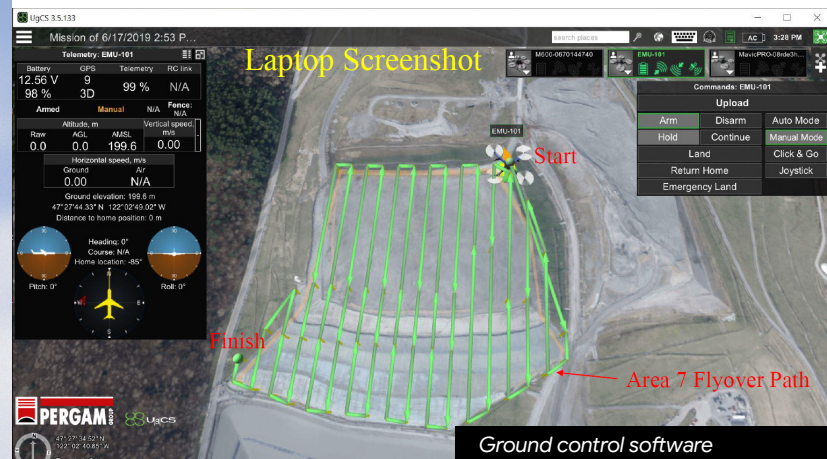
by  UgCS



Laser Falcon is a very lightweight laser-type methane gas detector which uses the same measurement principle as the popular LaserMethane mini. The dramatically reduced weight of the product allows a variety of new applications of the device including airborne methane monitoring and robotic instrumentation. Measurement data is sent through a communication port and is backed up in a USB stick. Power supply through the external power connector enables continuous operation of the device.

Features and Benefits

- **Track the inspected route** with coordinates and gas concentration
- **On-line (in-flight) data transmission to the drone operator's console** — through the standard DJI communication line
- **Easy data export** for reporting
- **Eye-safe Class 2 laser**
- **Automatic time synchronization by GPS / GLONASS**. Report created with **all necessary information** (time, leak concentration, GPS coordinates, maps)
- **Maximum flexibility to install on any type of UAV**



 **PERGAM TECHNICAL SERVICES**

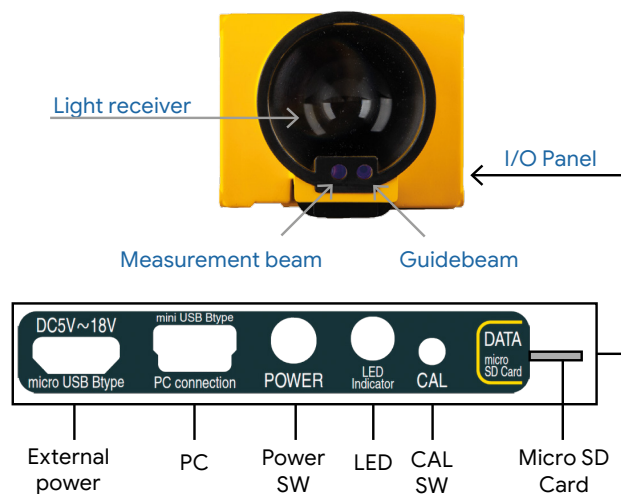
We Invent to Prevent

Laser Falcon Technical Specifications



Standard package

Target Gas	Methane (CH ₄) and methane-containing gases (natural gas and similar)
Detection Limits	1 — 50,000 ppm×m
Detection Speed	0.1 seconds
Distance	up to 100 ft
Power Supply	External power (5V–18V)
Operating Temperature Range	1.4°F ... 122°F
Laser Safety Class	Guide light (Red laser light) : Class 2 Measurement light (infrared laser light) : Class 1
Calibration	Self-calibrating with integrated reference cell
Sampling Rate	measurement per second
Dimensions	3.94 × 3.23 × 3.15 inches
Weight	0.66 lbs
Pergam Software	Standard package includes GPS receiver and SkyHUB UgCS to storage data and GPS-position of the leak + process software to make a report with Google Maps.



SkyHUB UgCS



Laser Falcon optical unit

Principle of Remote Gas Detection

Laser Falcon is based on the utilization of laser absorption spectrophotometer of methane gas for gas measurement.

The system detects natural gas leaks by emitting a laser at a particular wavelength and analyzing the light reflection from an object to determine how much was absorbed by the methane in the natural gas.

The measured gas volume is expressed by methane column density (ppm × m): methane density (ppm) multiplied by length (m).

The Optical Unit (OU) of the **Laser Falcon** detector could be installed on a gyro stabilized platform so that the laser beam is continuously directed towards pipelines and other natural gas facilities.

