LASER FALCON

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.
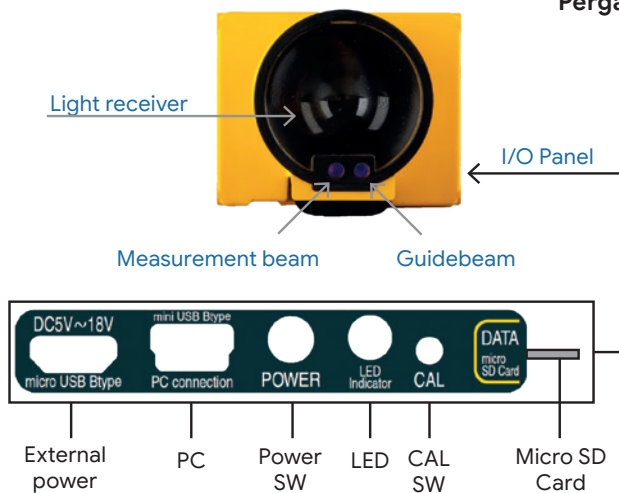
Features and Benefits

- **Track the inspected route** with coordinates and gas concentration

- **Easy data export with removable micro SD card** 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**

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 m
Power Supply	External power (5V–18V)
Operating Temperature Range	−17°C ... +50°C
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	100 × 82.5 × 80 mm
Weight	0.3 kg
LF Viewer	PC software, User manual (Time setting, Storing and referring to measured values, Alarm setting)
Pergam Software	Standard package includes GPS-position of the leak + process software to make a report with Google Maps .

Standard package

Light receiver
I/O Panel
Measurement beam   Guidebeam

DC5V~18V   mini USB Btype   POWER   LED Indicator   CAL   DATA micro SD Card
micro USB Btype   PC connection

External power   PC   Power SW   LED   CAL SW   Micro SD Card

Laser Falcon optical unit

Principle of Remote Gas Detection

Laser Falcon is based on the utilization of laser absorption spectrophoto-meter of methane gas for gas mesurement.

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 lenght (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.