

# LASER FALCON

+ Sky Hub 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 on a micro sd card. Power supply through the external power connector enables continuous operation of the device.

## Features and Benefits

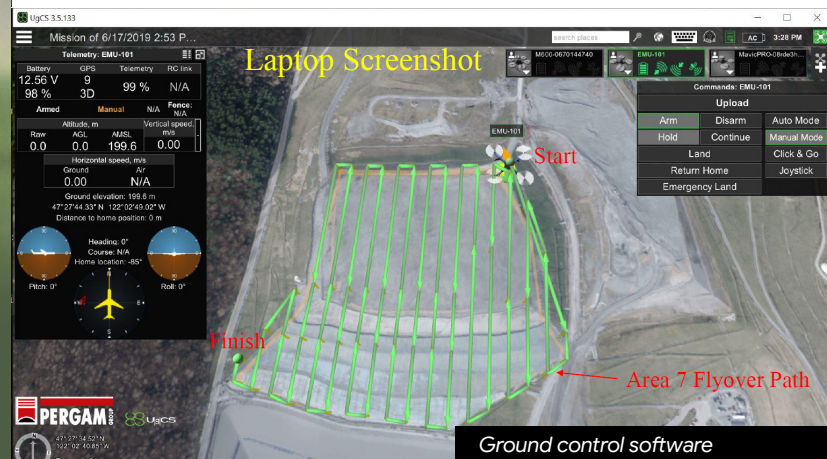
- **Track the inspected route** with coordinates and gas concentration
- **On-line (in-flight) data transmission to the drone operator's console** — through the standard UAV communication line
- **Easy data export** for reporting
- **Eye-safe Class 2 laser**
- **Automatic time synchronization by GPS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



FREELY

## Ultimate Tool for Methane Detection

Pergam Technical Services and two American companies: Inspired Flight and FreeFly Systems, have created the US made UAV integrated for waste management applications. With unparalleled ruggedness, the IF1200, Astro (as the DJI M300), is configured with Pergam's Laser Falcon to create a powerful solution for methane gas detection applications.



 **PERGAM TECHNICAL SERVICES**

We Invent to Prevent

# Laser Falcon Technical Specifications

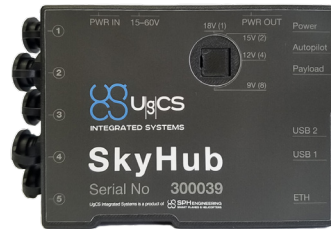
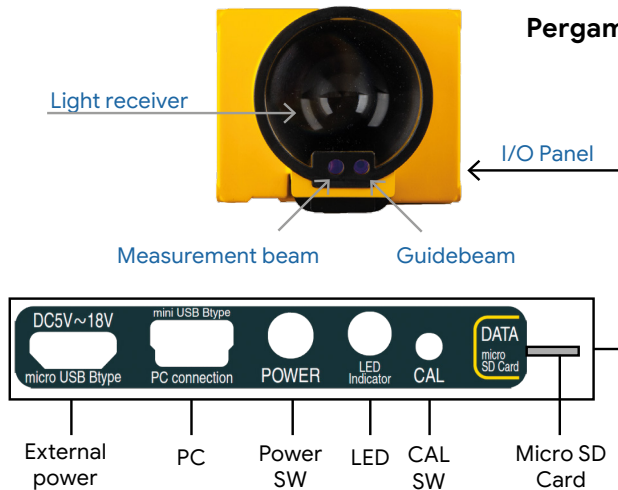


Standard package

<b>Target Gas</b>	Methane (CH <sub>4</sub> ) and methane-containing gases (natural gas and similar)
<b>Detection Limits</b>	1 — 50,000 ppm×m
<b>Detection Speed</b>	0.1 seconds
<b>Distance</b>	up to 328 ft
<b>Power Supply</b>	External power (5V–18V)
<b>Operating Temperature Range</b>	1.4°F ... 122°F
<b>Laser Safety Class</b>	Guide light (green laser light) : Class 2 Measurement light (infrared laser light) : Class 1
<b>Calibration</b>	Self-calibrating with integrated reference cell
<b>Sampling Rate</b>	measured at 10 Hz (recorded at 2 Hz)
<b>Dimensions</b>	3.94 × 3.23 × 3.15 inches
<b>Weight</b>	0.66 lbs

## Pergam Software

Standard package includes: UgCS Sky Hub to store data with GPS linked methane readings and process software to create reports with visualizations on Google Maps.



Sky Hub 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.



## PERGAM TECHNICAL SERVICES

**Home Office:**  
285 SW 41st St  
Renton, WA 98057  
Ph: 425-251-1483

**Central Region:**  
Johan Wictor  
M: 425-503-8127

**East Coast:**  
Leighton King  
M: 432-889-4948

**UAV/UAS Specialist:**  
Hoyt Thomas  
M: 206-889-9472

[www.pergamusa.com](http://www.pergamusa.com)  
[info@pergamusa.com](mailto:info@pergamusa.com)

*Call and ask us about a demo!*