



## Gas Detection by DJI

September 2019

### U10 UAV Based Laser Methane Leakage Detector

The U10 is light-weight, high-sensitivity gas detector based on Tunable Diode Laser Absorption Spectroscopy (TDLAS), which enables rapid identification of methane from up to 100m away, or at a concentration as low as 5 ppm.m. Powered by DJI SkyPort, the U10 can be seamlessly integrated with DJI Matrice 200 Series V1 and V2 platforms.



### **Accurate Results from Afar**

Get real-time readings on the concentration of methane from up to 100 m away, adjust the pitch of the gimbal to pinpoint gas leaks in dangerous or hard-to-reach areas while keeping personnel safe.

### **Visualize the Detection**

The high sensitivity allows detection at a concentration as low as 5ppm.m. Receive concentration data in just 25ms, so you can make decisions quickly. Gain an aerial overview of the suspected leakage site through the 720p visual camera.

### **Automated Workflows**

Plan flight missions and view flight paths, monitor gas concentration levels and historical trends in real-time, and flag specific points along the flight route for abnormalities, and generate inspection reports - all through the a-ONE iOS application.

### Critical Facility Inspection

Use DJI's leading drone platforms equipped with the UIO to inspect and maintain facilities like Liquid Natural Gas plants, gas storage tanks, and gas pipelines in areas such that are difficult for human operators to access, such as mountains or rivers. With the U10, users can detect and monitor methane leakages accurately to make informed response decisions quickly.



<b>U10 UAV Based Laser Methane Leakage Detector</b>			
Method of Detection	TDLAS	Detection target	Methane(CH <sub>4</sub> )
Stationary Detection Limit	5 ppm·m	Detection Laser	Class IIIR
Response Time	25 ms (0.025s)	Operating Temperature	-20 ~ 50°C
Sampling Rate	500KHz	Operating Humidity	<90%RH, no condensation

Detection Concentration Range	0~50,000 ppm·m	Size	155 x 90 x 100 mm
Max Detection Distance	100 m	Weight	534g
Camera	Video at 720 p	Supported Aircraft	DJI Matrice 200 Series, Matrice 200 Series V2

# UAV Platform

<b>Model</b>	Matrice 210 RTK
<b>Package Dimension</b>	31.1x15.4x11.4inch (790x390x290mm)
<b>Dimension (unfolded)</b>	34.9x34.6x16.1 inch (Unfolded, 887x880x408 mm)
<b>Dimension (folded)</b>	28.2x9.5x9.3 inch (Folded, 716x242x236 mm)
<b>Folding Method</b>	Folded Inward
<b>Diagonal Wheelbase</b>	25.3 inch (643 mm)
<b>Number of Batteries</b>	Two (TB50s and TB55s)
<b>Weight (TB50)</b>	Approx. 4.27 kg
<b>Weight (TB55)</b>	Approx. 5 kg
<b>Max Takeoff Weight</b>	6.14 kg
<b>Max Payload (2 TB50)</b>	Approx.1.87 kg (with two standard batteries )
<b>Max Payload (2 TB55)</b>	Approx.1.14 kg (with two optional batteries)
<b>Hovering Accuracy (P-mode with GPS)</b>	Vertical: ±1.64 feet (0.5 m) or ±0.33 feet (0.1 m, Downward Vision System enabled) Horizontal: ±4.92 feet (1.5 m) or ±0.98 feet (0.3 m, Downward Vision System enabled)
<b>Max Angular Velocity</b>	Pitch: 300°/s, Yaw: 150°/s
<b>Max Pitch Angle</b>	P Mode: 35° (Forward Vision System enabled: 25°) ; A Mode: 35° ; S Mode: 35°
<b>P Mode: 35° (Forward Vision System enabled: 25°) ; A Mode: 35° ; S Mode: 35°</b>	16.4 ft/s (5 m/s)
<b>Max Descent Speed</b>	Vertical: 9.8 ft/s (3 m/s)
<b>Max Speed</b>	P-mode: 61 kph (17 m/s); S-mode/A-mode: 83 kph (23 m/s)
<b>Max Service Ceiling Above Sea Level</b>	1.55 miles (2500 m)
<b>Max Wind Resistance</b>	32.8 ft/s (10 m/s)
<b>Max Flight Time(No Payload, with TB50)</b>	23min
<b>Max Flight Time(No Payload, with TB55)</b>	32min
<b>Max Flight Time(Full Payload, with TB50)</b>	13min
<b>Max Flight Time(Full Payload, with TB55)</b>	24min
<b>Motor Model</b>	DJI 3515
<b>Propeller Model</b>	1760S
<b>Retractable Landing Gear</b>	Standard
<b>Operating Temperature</b>	-4° to 113° F (-20° to 45° C)
<b>IP Rating</b>	IP 43



**If you are interested to get more details, feel free to contact us**

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