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## FIRE-FLY DRONE BASED FLARE INSPECTIONS



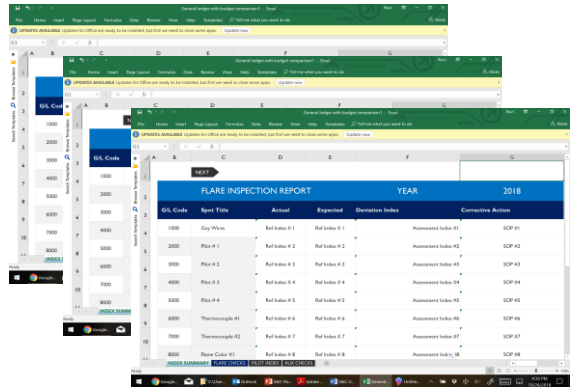
- We have more than 25 years of experience in combustion technology, service and installation for all major Oil and Gas companies around the world.
- We send a Flare expert on every job to instantly analyze what is being seen and inspect and redirect the camera to take more pictures of suspect areas.
- All our drone surveys are interactive with the customer. The customer can watch as we fly the drone and get immediate feedback on what the flare looks like and any issues. Others just take pictures and send them to a flare expert like S&C to analyze.
- We understand when to take videos (to look at flame patterns, analyze a process issue), when to take stills (so we can zoom in later and look at detail – with videos, you cannot zoom in) and when to do IR pictures (to see hotspots, prove flames).
- We can also offer a wide variety of inspections and drone surveys on other equipment including anything at height, stacks, heaters, etc.
- We can offer training, commissioning and startup of units



Web Apps for analytics & deployment

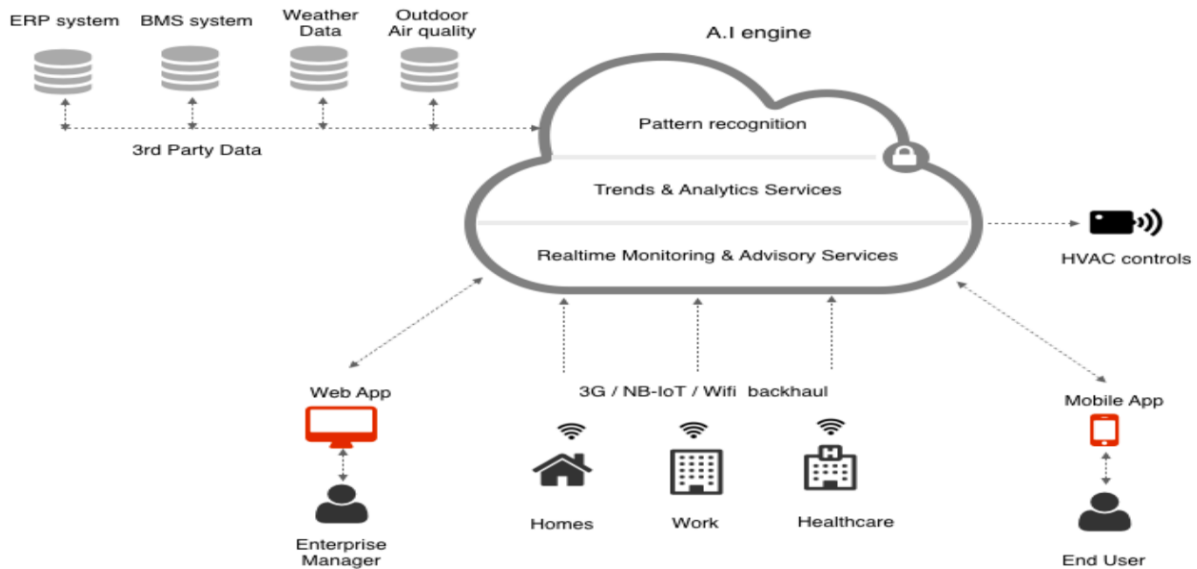


White label iOS & Android App available

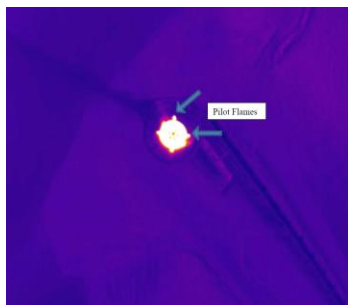


Fire-Fly connects to a fully managed cloud solution to harvest data, run analytics and interconnect to various algorithms. The solution is truly plug'n'play - you just need to setup the hardware on location, connect a custom algorithm and then login via your credentials to instantly start build your services.

Fire-Fly is designed as a scalable OEM solution for variety of use cases in mind including, indoor climate, security, work safety, insurance, presence detection and tele health - with full inbound and outbound integration to various data sources, use cases automation, advanced rule engine and data integration via a REST-API.



FIRE-FLY DRONE SAMPLE IMAGES



IR Picture of Lit Pilots



IR Picture of Flare Main Flame



Side View Of Flare Tip



Top-Side View of Flare Tip



Top View of Flare Tip



Pilot #1 and #3 Manifold/Conduit



View of Pilot Gas Mixer #1 (45 Degrees)  
(immediate left facing utility piping)



View of Pilot Gas Mixer #3 (225 Degrees)  
(1" Pilot on the left of the ladder)



Pilot #1 (45 Degrees)



Pilot #3



Pilot #4



Gas wire Stack Connection #1 (90 Degrees)  
(Closest to Ladder)



**AIRCRAFT**

Weight (Battery & Propellers Included)	1216 g
Diagonal Size (Propellers Excluded)	350 mm
Max Ascent Speed	5 m/s
Max Descent Speed	3 m/s
Max Speed	16 m/s (ATTI mode)
Max Tilt Angle	35°
Max Angular Speed	150°/s
Max Service Ceiling Above Sea Level	19685 feet (6000 m)
Max Flight Time	Approx. 25 minutes
Operating Temperature Range	32° to 104°F (0° to 40°C)
Satellite Positioning Systems	GPS
Hover Accuracy Range	Vertical: ±0.5 m Horizontal: ±1.5 m



**REMOTE CONTROLLER**

Operating Frequency	5.725 - 5.825 GHz, 922.7 - 927.7 MHz (Japan)
Max Transmission Distance	FCC: 1000 m CE: 500 m (outdoors and unobstructed, aircraft's altitude at 400 feet (120 m))
Operating Temperature Range	32° to 104°F (0° to 40°C)
Battery	2600 mAh LiPo 18650
Transmitter Power (EIRP)	<ul style="list-style-type: none"> <li>• FCC: 19 dBm</li> <li>• CE: 14 dBm</li> <li>• MIC: 10 dBm</li> </ul>
Operating Current/Voltage	600 mA@3.7V
Mobile Device Holder	Tablets and smart phones
Charging Port	Micro USB

**GIMBAL**

Stabilization	3-axis (pitch, roll, yaw)
Controllable Range	Pitch: -90° to +30°
Max Controllable Angular Speed	Pitch: 90°/s
Angular Vibration Range	±0.02°

**CHARGER**

Voltage	17.4 V
Rated Power	57 W

**APP / LIVE VIEW**

Mobile App	DJI GO
Live View Working Frequency	2.4 GHz ISM
Live View Quality	720P @ 30fps
Latency	Low Latency Video (depending on conditions and mobile device)
Required Operating Systems	<ul style="list-style-type: none"> <li>• iOS 8.0 or later</li> <li>• Android 4.1.2 or later</li> </ul>
Recommended Devices	<ul style="list-style-type: none"> <li>• ios: iPhone 5s, iPhone 6, iPhone 6 Plus, iPhone 6s, iPhone 6s Plus, iPod touch 6, iPad Pro, iPad Air, iPad Air Wi-Fi + Cellular, iPad mini 2, iPad mini 2 Wi-Fi + Cellular, iPad Air 2, iPad Air 2 Wi-Fi + Cellular, iPad mini 3, iPad mini 3 Wi-Fi + Cellular, iPad mini 4, and iPad mini 4 Wi-Fi + Cellular. This app is optimized for iPhone 5s, iPhone 6, iPhone 6 Plus, iPhone 6s and iPhone 6s Plus.</li> <li>• Android: Samsung tabs 705c, Samsung S6, Samsung S5, Samsung NOTE4, Samsung NOTE3, Google Nexus 9, Google Nexus 7 II, Ascend Mate7, Huawei Mate 8, Nubia Z7 mini, SONY Xperia Z3, MI 3, MI PAD</li> </ul> <p>*Support for additional Android devices available as testing and development continues.</p>

**INTELLIGENT FLIGHT BATTERY**

Capacity	4480 mAh
Voltage	15.2 V
Battery Type	LiPo 4S
Energy	68 Wh
Net Weight	365 g
Charging Temperature Range	41° to 104°F (5° to 40°C)
Max Charging Power	100 W

**CAMERA**

Sensor	1/2.3" CMOS Effective pixels:12 M
Lens	FOV 94° 20 mm (35 mm format equivalent) f/2.8
ISO Range	<ul style="list-style-type: none"> <li>• 100-3200 (video)</li> <li>• 100-1600 (photo)</li> </ul>
Electronic Shutter Speed	8 - 1/8000 s
Image Size	4000x3000
Still Photography Modes	<ul style="list-style-type: none"> <li>• Single Shot</li> <li>• Burst Shooting: 3/5/7 frames</li> <li>• Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7 EV Bias</li> <li>• Timelapse</li> </ul>
Video Recording Modes	<ul style="list-style-type: none"> <li>• 2.7K: 2704 x1520p 24/25/30 (29.97)</li> <li>• FHD: 1920x1080p 24/25/30</li> <li>• HD: 1280x720p 24/25/30/48/50/60</li> </ul>
Max Video Bitrate	40 Mbps
Supported File Systems	FAT32 (≤32 GB); exFAT (>32 GB)
Photo	JPEG, DNG (RAW)
Video	MP4, MOV (MPEG-4 AVC/H.264)
Supported SD Cards	Micro SD Card 8 GB included
Operating Temperature Range	32° to 104°F (0° to 40°C)