**TOPCON**

## Innovative design delivering top-quality data

The Intel® Falcon™ 8+ Drone – Topcon Edition is a rotary-wing UAS designed for inspection and monitoring or survey and mapping, with multiple optimized camera payloads available for each application.

Offering flexibility in tight spaces and challenging environments, the Intel Falcon 8+ Drone – Topcon Edition uses best-in-class sensors, active vibration damping and an actively compensating camera mount. The Intel Falcon 8+ Drone – Topcon Edition Inspection Package can be used for multiple types of inspection projects that require high-resolution imaging. The Mapping Package is well-suited for multi-hectare (multi-acre) projects.

- Configurable for inspection or mapping
- Use multiple sensors simultaneously
- Resistant to magnetic interference
- Operational in windy areas
- Low noise, emission-free operation

| General | |
|---|---|
| Type | V-Form Octocopter |
| Size (w x l x h) | 768 x 817 x 160 mm (30.24 x 32.17 x 6.30 in.) |
| Engines | 8 electrical, brushless (sensorless) motors with 125 W max. power each |
| Rotor diameter | 20.32 cm (8 in.) |
| Number of rotors | 8 |
| Rotor weight | 6 g (0.21 oz.) |
| Empty weight | 1.2 kg (2.65 lbs.) |
| Max. payload weight (camera and gimbal) | 0.8 kg (1.76 lbs.) |
| Max. take off weight | 2.8 kg (6.17 lbs.) |
| Max. flight time without payload* | 26 min |
| Max. flight time with max. payload weight* | 16 min |
| Max. flight time with A7R | 16 min |
| Max. flight time with inspection payload ZS50 | 18 min |
| Max. range data link** | 1 km (FCC version) (3,281 feet) 850 m (CE version) (2,788 feet) |
| Max. service ceiling** | 4,000 m MSL (13,123 feet) |
| Max. altitude above ground level** | Varies by country in which you operate the UAV and requires you to check the regulations that apply for your country of operation. |
| Max. range video link** | 500 m (FCC and CE version) (1,640 feet) |
| Max. tolerable wind speed | 12 m/s (26 mph) (GPS Mode) 16 m/s (35 mph) (Height Mode, Manual Mode) |
| Max. precipitation | Not recommended to operate in any form of precipitation |
| Operating temperature | -5°C to 45°C (23°F to 113°F) |
| Short term storage temperature (up to 1 month) | -5°C to 40°C (23°F to 104°F) |
| Long term storage temperature (above 1 month) | -5°C to 25°C (23°F to 77°F) |
| Power supply | 2 x Intel Powerpack 4000 (redundant setup) |

| Navigation Sensors | |
|---|---|
| AscTec Trinity Control Unit | Triple redundant Inertial Measurement Unit (IMU: barometer, compass, accelerometers, gyroscopes) |
| Global Navigation Satellite System (GNSS) | GPS and GLONASS |

| Max. Airspeed | |
|---|---|
| Manual Mode | 18 m/s (40 mph) |
| Height Mode | 18 m/s (40 mph) |
| GPS Mode | 4.5 m/s (10 mph) standard up to 10 m/s (22 mph) in mapping flights |
| **Max. climb/sink rate** Manual Mode Height Mode GPS Mode | 6 to 10 m/s (13 to 22 mph) 3 m/s (6 mph) 3 m/s (6 mph) |
| **Max. turn rate** Manual Mode/Height Mode GPS Mode | 115°/s 75°/s |
| **Max. pitch and roll angles** Manual Mode/Height Mode GPS Mode | 50° 45° |

| Wireless Communication | |
|---|---|
| 2 independent (diversity) command and control links | 2.4 GHz adaptive FHSS link up to 100 mW |
| Digital video link | Low Latency digital link. 5.1 GHz to 5.8 GHz with up to 24 dBM / 250 mW (FCC compliant version). 5.1 GHz to 5.8 GHz with up to 20 dBM / 100 mW (CE compliant version). Resolution depending on payload up to 1080p Full HD. |

| Intel Powerpack battery | |
|---|---|
| Type | LiPo 4S |
| Capacity | 4000 mAh |
| Voltage (nominal) | 14.8 V |
| Energy | 59.2 Wh |
| Operating temperature | -5°C to 40°C (14°F to 104°F) |
| Charge temperature | Recommended: 10°C to 30°C (50°F to 86°F) Max.: 5°C to 40°C (41°F to 104°F) |
| Short term storage temperature (up to 1 month) | -5°C to 40°C (23°F to 104°F) |
| Long term storage temperature (above 1 month) | 18°C to 28°C (64°F to 82°F) |
| Recommended storage voltage | 3.7 V per cell |
| Max Charging Power | 80 W |
| Typical cycle life | 150 cycles |
| Weight | 398 g (14 oz) (tolerance +/- 5%) |

| AC Adapter (charger for Powerpack PP4000) | |
|---|---|
| Input voltage | 100-240 V, 50/60 Hz |
| Maximum input current | 1.5 A |
| Maximum output current | 4.74 A |
| Output voltage | 19.0 V |

| Intel Cockpit GCS | |
|---|---|
| Dimension (w x l x h) | 320 x 380 x 135 mm (12.60 x 14.96 x 5.31 in) |
| Weight | 2.7 kg (5.95 lbs.) (w/o battery) / 3.1 kg (6.83 lbs.) (with battery) |
| Power supply | 1 x Intel Powerpack battery |
| Operating time* | Up to 2 hours |
| Operating temperature | -5°C to 45°C (23°F to 113°F) |
| Short term storage temperature (up to 1 month) | -5°C to 40°C (23°F to 104°F) |
| Long term storage temperature (above 1 month) | -5°C to 25°C (23°F to 77°F) |
| Touchscreen | 8.3", resolution 1980 x 1200 px |
| Connections | 4 x USB, 1 x HDMI |

\* New batteries, fully charged and at room temperature. Flights performed at approximately 0 m (0 feet) above sea level at outside temperature of approximately 15°C (59°F), no wind, slow and steady flight maneuvers, no hovering. All measurements done at International Standard Atmosphere (ISA). Other factors may also influence the results.

\*\*The pilot is responsible for knowing and complying with all laws and regulations applicable to the airspace in which the Intel Falcon 8+ System is operated. Jurisdictions have different safety rules such as: authorization for flying unmanned aircraft; flying near airports, manned aircraft, or people; operation within visual line of sight; altitude limits and others. Flights performed at approximately 120 m (393 feet) above ground in GPS Mode, drone facing away from pilot, Cockpit antenna oriented exactly towards drone, no obstacles in-between line of sight to drone and 400 m radius around drone and pilot, no external disturbance of the 2.4 Ghz and 5.8 GHz bands. All measurements done at International Standard Atmosphere (ISA). Other factors may also influence the results.

**TOPCON**

For more information: **topconpositioning.com/falcon8plus**