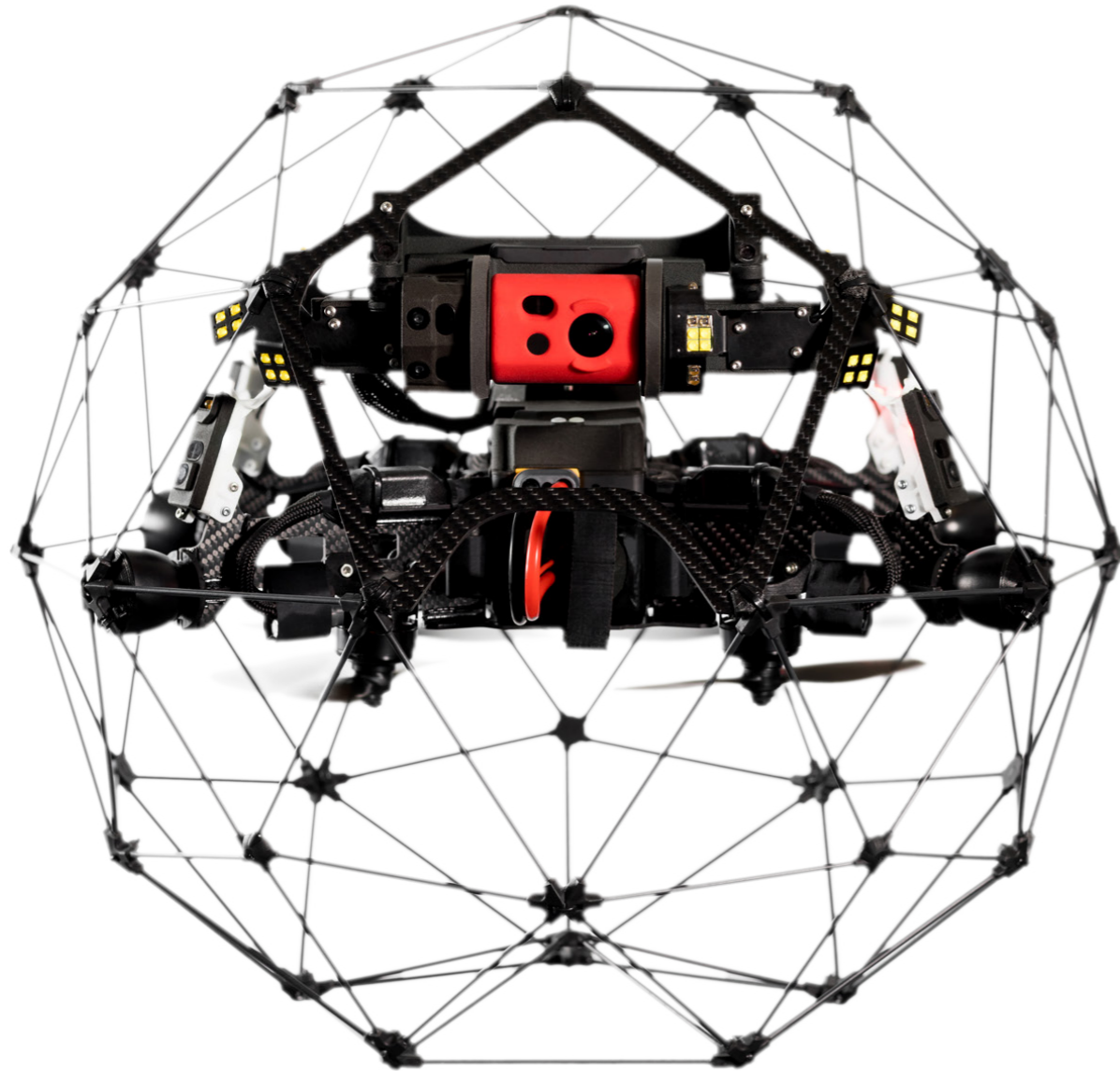


# TECHNICAL SPECIFICATION AIRCRAFT



## AIRCRAFT

<b>CONFIGURATION</b>	Quadcopter	<b>FLIGHT CONTROL SENSORS</b>	IMU, magnetometer, barometer, 7 vision and distance sensors
<b>DIMENSIONS</b>	Fits in a < 400 mm sphere; 15.75 in	<b>MATERIALS</b>	Carbon fiber composites, magnesium alloy, aeronautical grade aluminum, high-quality thermoplastics
<b>MOTORS</b>	4 fast reversing electric brushless motors	<b>OPERATING TEMP.</b>	0 °C to 50 °C* ; 32 °F to 122 °F
<b>PROPELLERS</b>	4 propellers, 5 inches	<b>FLIGHT MODES</b>	OPTI - Optical mode ATTI - Attitude mode SPORT - Sport mode
<b>TAKE-OFF WEIGHT</b>	< 1450 g ; < 3,2 lbs Includes battery, payload & protection	<b>FAIL SAFE</b>	Auto-landing on signal lost
<b>MAX FLIGHT TIME</b>	Up to 10 min	<b>OPERATING FREQUENCY</b>	2404 – 2483 MHz (UAV to RC)
<b>MAX ASCENT SPEED</b>	1.5 m/s ; 5 ft/s	<b>EIRP</b>	2.4 GHz: ≤ 32 dBm (FCC); ≤20 dBm (CE); ≤10 dBm/MHz (MIC)
<b>MAX DESCENT SPEED</b>	1 m/s; 3,3 ft/s	<b>INGRESS PROTECTION</b>	Splash and dust resistant
<b>MAX SPEED</b>	1.3 m/s (Optical mode) ; 4,25 ft/s 4 m/s (Attitude mode) ; 13.12 ft/s 6.5 m/s (Sport mode) ; 19.69 ft/s	<b>NOISE LEVEL</b>	99 dB(A) hover 120 dB(A) max @ 1m
<b>MAX PITCH ANGLE</b>	0.15 rad (Attitude mode) 0.2 rad (Optical mode) 0.3 rad (Sport mode)		
<b>MAX WIND RESISTANCE</b>	3 m/s (Optical mode) ; 9,85 ft/s 5 m/s (Sport mode) ; 16,4 ft/s		

\*additional precaution have to be taken between 0-10°C and 40-50°C. Stability, flight performance and flight time might be reduced

## SMART BATTERY

<b>RATED CAPACITY</b>	5200 mAh
<b>NOMINAL VOLTAGE</b>	19 V
<b>BATTERY TYPE</b>	LiPo 5S HV Smart Battery: - Improved safety (protection for: overcharge, overcurrent, over/under-temperature) - Plug-and-play charging - Self-balancing - Storage self-discharge - State-of-Charge estimation - Cycle counter - Battery ID
<b>ENERGY</b>	98.8 Wh
<b>CHARGING TIME</b>	1.5 h
<b>BATTERY CHANGE TIME</b>	< 1 min
<b>COMPLIANCE</b>	Approved for carry-on luggage. Complies with IATA Dangerous Good Regulation.
<b>NET WEIGHT</b>	550 g ; 1,2 lbs
<b>OPERATING TEMPERATURE</b>	0-50°C *
<b>CHARGING TEMPERATURE</b>	10 - 45°C ; 50°F - 113°F
<b>MAX CHARGING POWER</b>	150 VA AC power
<b>CHARGER</b>	Elios 2's Smart Battery Charger

\*additional precaution have to be taken between 0-10°C and 40-50°C. Stability, flight performance and flight time might be reduced.

## PAYLOAD CHASSIS

<b>PAYLOAD HEAD</b>	Damped for vibrations
<b>CAMERA POD UPWARD TILT</b>	+90 degrees
<b>CAMERA POD DOWNWARD TILT</b>	-90 degrees
<b>PAYLOAD PROTECTION</b>	Load limiting mechanism to protect the payload in the case of a frontal shock.

## MAIN CAMERA

<b>SENSOR</b>	1/2.3" CMOS Effective Pixels: 12.3 M Sensitivity: Optimized for low light performance
<b>PHOTO FORMATS</b>	JPG
<b>VIDEO FORMATS</b>	MOV
<b>VIDEO RECORDING RESOLUTIONS</b>	4k Ultra HD: 3840 x 2160 at 30 fps FHD: 1920 x 1080 at 30 fps
<b>VIDEO STREAMING RESOLUTION</b>	FHD: 1920 x 1080 at 30 fps
<b>MOVIE FOV</b>	114° horizontal, 130.8° diagonal
<b>PHOTO FOV</b>	118.8° horizontal, 148.6° diagonal
<b>TOTAL VERTICAL FOV</b>	approximately 260° including camera tilt

<b>LENS</b>	2.71 mm focal length Fixed focal
<b>CONTROL MODES</b>	Auto mode with manual EV compensation
<b>FILE STORAGE</b>	MicroSD card (onboard the aircraft) Max capacity: 128 GB Recommended model: Sandisk Extreme micro SDXC UHS-I V30
<b>SUPPORTED FILE SYSTEM</b>	FAT32 for cards up to 32 GB, exFAT for cards bigger than 32 GB

## THERMAL CAMERA

<b>SENSOR</b>	Lepton 3.5 FLIR
<b>VIDEO RECORDING RESOLUTION</b>	160 x 120 at 9 fps
<b>LENS</b>	FOV 56° x 42°, Depth of field 15cm to infinity
<b>SENSITIVITY (NETD)</b>	<50 mK
<b>WAVELENGTH (LWIR)</b>	8-14 μm

## LIGHTING SYSTEM

<b>TYPE</b>	High-efficiency LEDs for even lighting in front, top and bottom, optimized for low impact of dust on picture quality. IR light used for stabilization system.
<b>CONTROL</b>	From remote controller, adaptive light beam controlled by camera pitch
<b>MODES</b>	Indirect/dustproof lighting Close up lighting Selective/oblique lighting
<b>LIGHT OUTPUT</b>	10k lumens

## OPERATIONAL SAFETY & CRASHWORTHINESS

<b>NAVIGATION LIGHTS</b>	Green (starboard) and red (port) lights.
<b>PROTECTION CAGE</b>	Carbon fiber cage with soft coating, modular subcomponents for maintenance ease, thermoplastic elastomer suspensions, front opening dimensioned for easy battery access.
<b>COLLISION TOLERANCE</b>	Uniform all around the drone, up to 3 m/s on flat objects, up to 1.5 m/s on sharp objects

# TECHNICAL SPECIFICATION GROUND CONTROL STATION



## REMOTE CONTROLLER

<b>OPERATING FREQUENCIES</b>	2404 - 2483 MHz (RC to UAV) 5738 - 5808 MHz (RC to RC) 920.6 - 928 MHz (RC to RC, Japan only)
<b>MAX TRANSMISSION DISTANCE</b>	Up to 500 m in direct line of sight
<b>EIRP</b>	2.4 Ghz $\leq 20$ dBm, 5.8 GHz $\leq 13$ dBm, 920 MHz $\leq 10$ dBm
<b>WEIGHT</b>	810 g (924 g with tablet holder)
<b>OPERATING TEMP.</b>	0 °C to 40 °C
<b>OUTPUT PORT</b>	HDMI, SDI, USB
<b>BATTERY</b>	6000 mAh 2S
<b>CONTROLS</b>	Aircraft control and payload settings
<b>OPTIONS</b>	Optional remote controller (camera operator) with video stream reception on a secondary screen, and dual control of camera settings.
<b>BATTERY CHARGER</b>	17.4 V / 57 W

## TABLET

<b>MODEL</b>	Samsung Galaxy Tab Active 2
<b>BATTERY CHARGER</b>	USB Charger 5V
<b>OPERATING TEMP.</b>	-15 °C to 40 °C
<b>CHARGING TEMP.</b>	-15 °C to 40 °C
<b>CHARGING TIME</b>	5 hours
<b>WORKING TIME</b>	5 hours (when receiving video stream) to 76 hours (idle)
<b>WEIGHT</b>	415 g

# TECHNICAL SPECIFICATION ACCESSORIES & SOFTWARE



## TRANSPORT CASE

<b>DIMENSIONS</b>	61 x 44 x 53 cm
<b>WEIGHT</b>	11.5 kg
<b>COMPLIANCE</b>	IATA compliant for checked-in luggage.

## COCKPIT SOFTWARE

<b>FEATURES</b>	Real time video and UAV telemetry, status visualization (remaining battery, payload settings, warnings, etc. ), control payload settings and various configurations.
<b>OPERATING SYSTEM</b>	Android. Optimized for tablet provided with UAV system

## INSPECTOR SOFTWARE

<b>FEATURES</b>	Video and thermal video viewer (frame by frame), flight log analysis including point of interests recorded during flight, screenshots and flight data export.
<b>OPERATING SYSTEM</b>	Windows 7, 8 and 10 (32 and 64 bits)