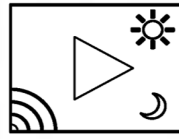
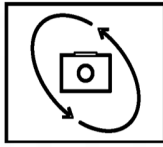


### Aircraft Details

Drone Type	Quadrotor for Indoor Inspections
Drone Model	DS-1 Minotaur™
Dimensions	36cm by 44cm, props off
Weight with Sensors	~2.65kg
Flight Controller Stack	PX4
Maximum Height (Above Ground Level)	15m
Maximum Communication Distance	2km in clear air / 25m - 200m indoors
Gust Tolerance	30km/hr
Controllable Range	Maximum communication distance depending on environment plus autonomous flight beyond control link
Operating Temperature	-5°C to 50°C
Body Material   Propeller Material	PA12 for 3D printed airframe   fiberglass reinforced composite propeller
Flight Time (Single battery)	14 min
Flight Specs	<p>User selectable</p> <ul style="list-style-type: none"> <li>Horizontal velocity: 0.2 m/s - 1 m/s</li> <li>Yaw rate: 5 deg/s - 30 deg/s</li> <li>User cutoff: 0.7m - 2.5m</li> <li>Magnetic repulsion: 0.46m - 0.7m</li> </ul> <p>Rate of climb: 1m/s Rate of descent: 1m/s</p>
Fail Safe Modes	<p>Low battery modes:</p> <ul style="list-style-type: none"> <li>Auto land</li> <li>Auto return to home</li> <li>Standby</li> </ul> <p>Loss of communication modes:</p> <ul style="list-style-type: none"> <li>Auto land</li> <li>Auto return to home</li> <li>Auto complete mission and return to home</li> <li>Auto complete mission and land</li> <li>Auto complete mission and return to point of last communication</li> <li>Standby</li> </ul>
Operating Frequency	2.4 GHz
Ingress Protection	IP 42
Navigational Sensors	360° 2D lidar, downward facing 1D lidar, downward facing optical flow
Feature Requirements	Must have objects within 50m that the 360° 2D lidar can use for navigation

## Main Camera



	E-Con AR1335 Dual Camera DigiGIMBAL	*Xavier IR Ribbon	*Flir Blackfly	*IDS Imaging	*Sierra Olympic LWIR
Connector	Ribbon/USB	Ribbon	USB	USB	USB
FPV Resolution	1080p (1920×1080)	720p (1280×720 px)	720p (1280×720 px)	--	480p (640×512)
Frame Rate	65	30	20	--	60
Recorded Resolution	1080p (1920×1080)	720p (1280×720 px)	12MegaPixel (4,000 x 3,000) Picture	18MegaPixel (4,912 x 3,684)	480p (640×512)
Frame Rate (On-Board)	65	30	1 capture per 1 sec	1 capture per 2 sec	30
FOV	220x105	132x118	85x66	60x47	49x40

*\*Available Upon Request*

## Smart Battery

Capacity	8,500 mAhr
Nominal Voltage	4S (14.8V)
Battery Type	Lithium Polymer
Energy	126 Whr
Charging Time	User selected: Max 13A (34 min), Recommended 8.5A (50min)
Travel Compliance	Carry case under 50lbs, LiPo can safely travel in carry on luggage
Weight	710 grams
Charging Temperature	15°C to 25°C recommended

## Main Camera

Sensor	13Mp AR1335 CMOS Image Sensor
Photo Formats	.jpg
Video Formats	.mp4
Video Recording Resolutions	4192x3120 10fps (13Mp), 3840x2160 15fps (4k), 1920x1080 20fps (Full HD), 1280x720 20fps (HD)
Video Streaming Resolutions	1920x1080 20fps (Full HD), 1280x720 20fps (HD)
Video FOV w/ DigiGimbal	110° x 210°
File Storage	500GB SSD (Expandable to 1TB)

## Lighting System & Operational Safety

Placement	Forward facing for DigiGimbal and downward facing for Optical Flow
Control	On/Off toggle from Handheld Controller
Brightness	300 lm
Collision Prevention	Numerous on-board algorithms prevent collision, but prop guards may be put on if the user prefers

## Controller

Operating Frequency	2.4 GHz
Maximum Communication Distance	2km in clear air / 25m - 200m indoors
Weight	3kg
Operating Temperature	-5°C to 50°C
Battery	Lithium Ion
Model	Nyx with Dell Latitude 7220 Built In
Charging Time	Tablet: 2hr, Comms Battery: 50min