



IMPOSSIBLE®

Impossible Aerospace US-1 Performance Aircraft

The US-1 is a long-duration unmanned aircraft engineered for the demanding first responder mission. The patent pending design integrates the power cells into the airframe, delivering nearly 3X the flight time of most imported drones. The aircraft is certified to carry the FLIR DUO PRO or a higher performance WIRIS thermal and lowlight 30X optical zoom payload. The aircraft is engineered, manufactured, and supported in Santa Clara CA.

US-1 AIRCRAFT

70 +minute continuous flight with standard payload
External Dimensions 26" x 26"
Weight 18.5 lbs. Shipping Case 30" x 30" x 18"
Max Speed: 45mph Wind Gusts: Up to 30mph
Foldable Shock Absorbing Landing Gear
Battery Type: Lithium Ion
Fast Charge: 0-75% 46 minutes
Real time 4GLTE health monitoring
Full 1 Year tip-to-tip warranty



GROUND CONTROL STATION

Professional grade, carbon fiber design
Direct access to key functions
10.5" Samsung Galaxy S5E Tablet display
Super AMOLED daylight screen
HDMI output for distributed video
No geofencing restrictions in IAGS Software
Multiple autonomous mission modes
Auto take off and land

CAMERA PAYLOAD OPTIONS

Camera Manufacturer & Model	FLIR DUO PRO R	Workswell WIRIS Security
Visible Camera Zoom	Digital Zoom Only	30X Optical Zoom
Visible Camera Field of View	56° x 45°	wide 63.7° - Ultra zoom 2.3°
Resolution & Zoom	N/A	4.3 mm - 129.0 mm
Visible Camera Sensitivity	N/A	0.0008 lux (EXMOR R CMOS)
Visible Camera Resolution	4k	1920 x 1080
Thermal Camera Resolution	640 x 512	800 x 600
Thermal field of view	25 mm: (FOV = 25° x 20°)	35 mm: (FOV = 21.2° x 16.2°)
Thermal sensitivity (lower is better)	0.05°C (50mK)	0.04°C (40mK)
Gremsy Gimbal	Pixy F 0.8lbs	Pixy Custom 1.0lbs
Camera weight	325g, 0.72lbs	780g, 1.7lbs



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US-1 Aircraft Specifications

Airframe Weight (No Payload)	18.5 lbs.
Airframe Size (Props Folded, Legs Deployed)	26" x 26" x 14.5"
Flight time (FLIR Duo Pro R and Gimbal Payload)	70+ Minutes good conditions
Flight time (WIRIS 30x and thermal)	60+ Minutes good conditions
Charge time (25A Standard Charger) 0-75%	91 Minutes
Charge time (25A Standard Charger) 0-100%	144 Minutes
Max Airspeed	48 Mph
Radio Range	1 Mile City, 3 Mile Max
Warranty	250 Hours or 1 Year "Tip to Tip"
Maximum Payload	6.2 lbs.
Connectivity	System Diagnostics & Flight History
Battery Type	Lithium Ion
Battery Capacity	54,000 mAh
Position holding Accuracy (X/Y, Z)	+-.6m, +- 30cm
Waterproofing	IPX4
Thermal Environment	32-122 degrees F
Max Wind Speed	25 Gusting to 30 Mph
Deployment Time (From Packed)	4.5 minutes
FCC Compliance	Yes
Collision Avoidance	Downward - Facing Lidar
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