



INSPIRED FLIGHT TECHNOLOGIES, INC.

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IF800 TOMCAT
PRELIMINARY
INFORMATION SHEET
Version 1.0, May 2023

Specifications

Performance

Max Ascent Speed	5 m/s	16 ft/s
Max Descent Speed	3 m/s	10 ft/s
Max Air Speed	25 m/s	56 mph
Max Wind Resistance	10 m/s, 12 m/s gusts	19 knot, 23 knot gusts
Max Tilt Angle	30°	
Max Angular Velocity	Tilt: 300°/s, Yaw: 120°/s	
Operating Temperature	-10°C ~ 40°C	14°F ~ 104°F
Operating Humidity	10%~95%	
Service Ceiling (with given payload)	4.3 km (14,100 ft) w/ 1.3 kg, 2.8 km (9,200 ft) w/ 3.0 kg	

Physical Features

Diagonal Size (propeller center to center)	935 mm	36.8 inches
Unfolded Size (flight ready, WxLxH)	135 x 116 x 45 cm	53.1 x 45.6 x 17.7 inches
Folded Size (stow, WxLxH)	38 x 48 x 19 cm	18.9 x 15.0 x 7.5 inches
Empty Weight (w/o batteries)	3.5 kg	7.7 lbs
Weight w/ Batteries	7.7 kg	16.9 lbs
Max Gross Takeoff Weight	10.7 kg	23.5 lbs
Max Payload Capacity	3.0 kg	6.6 lbs
Transport Case Size (WxLxH)	52.8 x 80.7 x 31.7 cm	20.8 x 31.8 x 12.5 inches
Transport Case Weight (w/ aircraft & GCS)	18 kg	40 lbs

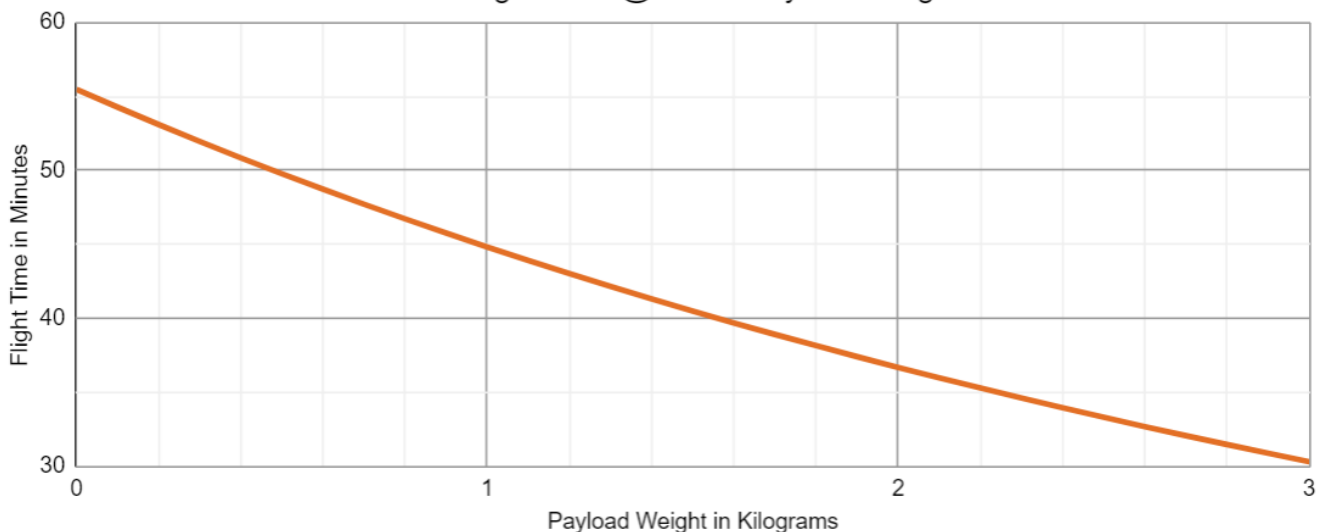
Flight Stack

Flight Controller	CubePilot Cube Blue H7
GNSS / Compass	CubePilot Here4 Blue (2x)
Payload Power Rails	5v, 12v, 18v
Payload Interface	IFT Universal Payload Interface V3
Operating Software	Copter by Ardupilot

Flight Modes

Position Hold	Automatically holds altitude and position, manually change position
Loiter	Holds altitude and position, precision manual movements using GPS
Auto	Executes pre-defined mission
RTL	Auto returns to takeoff location and lands
Land	Auto land while maintaining horizontal position
Altitude Hold	Holds altitude only, failsafe mode if GPS signal lost

IF800A Flight Time @ Given Payload Weight



HereLink Blue Live Video GCS

GCS Interface	NW Blue HereLink Blue v1.1 w/ 5" 1000 Nit Touchscreen
GCS Software	QGroundControl (Android)
Communication Radio	Point to Point LTE
Frequency / Power	2.4 GHz up to 1 W
Signal Range	5.5 KM (3 NM)
Encryption	AES 128
GCS Weight	920 g



Vision 2 Fully NDAA Compliant GCS

GCS Interface	Vantage Robotics Vision 2 w/ 7" 2000 Nit Touchscreen
GCS Software	Inspired Ground Control (Android)
Communication Radio	Doodle Labs Mini-OEM
Frequency / Power	2.4 GHz up to 1 W
Signal Range	9 KM (5 NM)
Encryption	AES 128
GCS Weight	850 g



390 Smart Battery (2x)

Nominal Energy	387.6 Wh
Nominal Voltage	22.8 V
Nominal Capacity	17,000 mAh
Continuous Discharge	255 Amps (15C)
BMS Self Discharge	To 3.8v/Cell after 72 hrs, ~3% per month

Battery Charger

Input Voltage	100v-240v AC 10~30v DC
Max Charge	Up to 4.35v/Cell
Battery Compatibility	6s, 26.1v Max
Typical Fast Charge Time	~70 Minutes (120vAC)
Output Charge Rate	400w x 2 (AC) 600W x2 (DC)

IF800 Payloads

A7R Optical

Sony Alpha 7R V 35mm Full-Frame 61 Mega Pixel Camera
Sony E-Mount 35mm or 50mm Prime Lens Options w/
Gremsy Pixy-S Gimbal with Quick Disconnect and Dampening Plate
Sony E-Mount 85mm Prime or 28-135mm Zoom Lens options w/
Gremsy T3 Gimbal with Quick Disconnect and Dampening Plate



Wiris Enterprise EO/IR

Workswell Wiris Enterprise Camera with Thermal, 30x Optical Zoom, Wide Angle Optical, and Range Finder
& Interchangeable IR Lenses, 640PX
Optional Storage capacity, refresh rate, & FOV
Gremsy Pixy-WE Gimbal with Quick Disconnect and Dampening Plate

