



INSPIRED FLIGHT



IF1200 Hexacopter

Specification Sheet

INSPIRED FLIGHT TECHNOLOGIES, Inc.



AIRCRAFT PERFORMANCE

Diagonal Size (propeller center to center)	995 mm (39.2 inches)
Dimensions (unfolded w/ propellers) (WxLxH)	1445 x 1315 x 705 mm (56.9 x 51.8 x 27.8 inches)
Dimensions (folded) (WxLxH)	600 x 550 x 610 mm (23.6 x 21.7 x 24.0 inches)
Aircraft weight w/o batteries	7.6 kg (16.7 lbs)
Aircraft Weight w/ 977 Wh Battery	13.4 kg (29.5 lbs)
Max Recommended Takeoff Weight	20.0 kg (44.0 lbs)
Max Payload Weight	8.0 kg (17.6 lbs)
Max Angular Velocity	Tilt: 300°/s, Yaw: 120°/s
Max Tilt Angle	35°
Wind Resistance	10 m/s (19.4 knots) continuous, 12 m/s (23.3 knots) gusts
Max Ascent Speed	5 m/s (16 ft/s)
Max Descent Speed	3 m/s (10 ft/s)
Max Ground Speed	22 m/s (49 mph)
Operating Temperature Range	-10°C ~ 40°C (14°F ~ 104°F)
Max Flight Time	See Figure 2 (page 2)
Max Altitude	See Figure 3 (page 6)

IF1200 Estimated Flight Times @ Given Payload w/ 10% Reserve

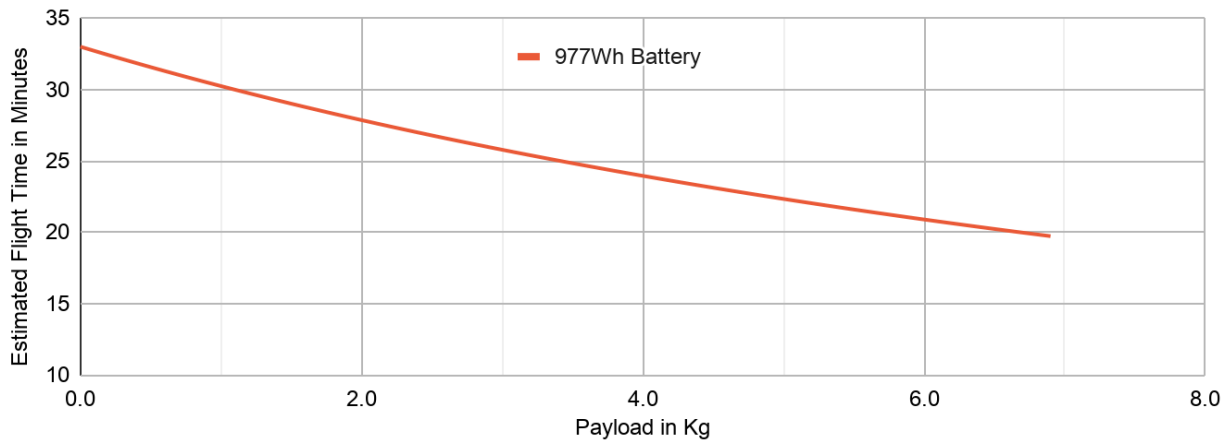


Figure 2



FLIGHT HARDWARE

Flight Controller	Flight Controller	Modal AI Flight Core
	Operating Software	PX4 (Modified Hexarotor 6001)
	Barometer Accuracy	+/-1.5 mbar
Global Positioning	GPS	mRo Ublox Neo-M8N GPS
	Positioning Accuracy	2.5 m Horizontal
Ground Sensor	Optical Distance Measurement Sensor	Garmin LIDAR-Lite v3
	Range	5 cm to 40 m, 1 cm resolution
	Laser	905 nm CLASS 1, EN/EIC 60825-1 2014
Power Distribution Board	Power Distribution	IF-PDB-100407
	Total Motor Outputs	6x - 50A Continuous
	Auxiliary Power Rails	5v, 12/15/18v, 44v
Propulsion	Motor	6x - KDE 5215XF 220Kv
	Propeller	18" x 5.9" (458 x 150 mm)
	Max Thrust per Motor	7.1 kg (15.7 lbs) @ 48v
Default Navigation Light Color Pattern > if preference not specified		Front Left & Middle Left: Red-ON Front Right & Middle Right: Green-ON Rear Left & Rear Right: White-ON

REMOTE CONTROL

Remote Control Radio	Jeti DS-12 Transmitter (NDAA Compliant)
Remote Control Software	Jeti Proprietary, 3rd Party Extensions Available
Radio Battery	Lithium Ion, 1S2P, 6200 mAh
Transmission Power	100 mW
Operating Frequency	2.4 GHz or 900 MHz
Aircraft Receiver (RX)	Duplex R3L EX
Signal Range (line of sight)	2 KM (1 NM)
Operating Temperature Range	-10-85°C (14-185°F)



TELEMETRY & GROUND STATION

Compatible Ground Station Software		QGroundControl V3.X (Linux, Windows, Android)
Telemetry Software Standard		Mavlink, AT Modem Command
Telemetry Radio to Ground Station Interface		USB 2.0
Operating Temperature Range		-40-85°C (40-185°F)
Microhard Telemetry & Video Radio	Radio Model	Microhard pMDDL2450
	Data Rate	25 Mbps
	Encryption	AES 256 Bit Hardware Accelerated Encryption
	Transmission Power	Up to 1 W (+30 dBm)
	Operating Frequency	2.4 GHz
	Signal Range (line of sight)	Up to 10 km (5 NM)
	Certifications	FCC, Industry Canada, Japan MIC
RFD Telemetry Radio	Radio Model	RFD 900x-US (Air/Ground Pair)
	Data Rate	250 kbit/s
	Encryption	AES 128 Bit Hardware Accelerated Encryption
	Transmission Power	Up to 1 W (+30 dBm)
	Operating Frequency	902 - 928 MHz
	Signal Range (line of sight)	Up to 40 km (25 miles)
	Certifications	FCC Compliant: CFR15.247, FCC ID: 2ADLE-900X

977Wh BATTERY

Max Energy at Nominal Voltage		976.8 Wh
Nominal Voltage		44.4 V
Nominal Capacity		22,000 mAh
Classification		Lithium Polymer 12S1P
Net Weight		5,800 g (12.8 lbs)
Charging	Max Current	22.0 Amps (1C)
	Max Voltage	50.4 Volts
Discharge	Max Continuous Current	550 Amps (25C)



	Max Burst Current	1100 Amps (50C)
	Minimum Voltage Cut-off	36.0 Volts (40.0v recommended)
Self - Discharge		<5% per month
Operating Temperature Range		-10°C ~ 50°C (14°F ~ 122°F)
Max Payload with one 977 Wh Battery		6.6 kg (14.5 lbs)

Standard Battery Charger

Charger	TA1200
Input Voltage	100v - 240v AC
Output Charge Capacity	750w x 2 Channels , Up to 1200w (240v)
Lithium Battery Compatibility	Up to 4.2v/cell, 12s 50.4v max
Typical Charge Time (977Wh Battery)	~110 Minutes

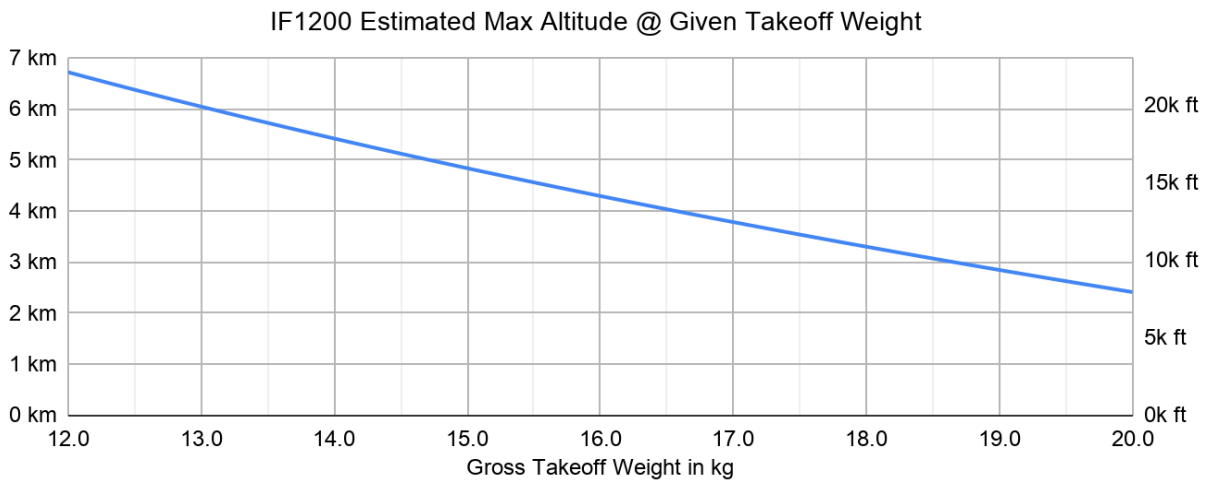


Figure 3