IF750 QUADCOPTER
Information Sheet

Version 1.7, updated September 2022

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: 220°/s, Yaw: 140°/s	
Operating Temperature	-10°C ~ 45°C	14°F ~ 113°F
Operating Humidity	10%~95%	
Service Ceiling (with given payload)	3.1 km (10,100 ft) w/ 900 g , 1.9 km (6,200 ft) w/ 1.8 kg	

Physical Features

Diagonal Size (propeller center to center)	750 mm	29.5 inches
Unfolded Size (flight ready, WxLxH)	96.5 x 96.5 x 54.5 cm	38.0 x 38.0 x 21.5 inches
Folded Size (stow, WxLxH)	40.5 x 37.5 x 320 cm	18.7 x 19.5 x 18.5 inches
Empty Weight (w/o batteries)	3.3 kg	7.3 lbs
Weight w/ Batteries	5.0 kg	11.0 lbs
Max Gross Takeoff Weight	6.8 kg	15.0 lbs
Max Payload Capacity	1.8 kg	4.0 lbs
Transport Case Size (WxLxH)	52.5 x 67.6 x 37.8 cm	20.6 x 26.6 x 14.9 inches
Transport Case Weight (w/ aircraft)	13.6 kg	30.0 lbs

Flight Stack

Flight Controller	ModalAI Flight Core
GNSS / Compass	Mro GPS U-Blox Neo-M9N
Payload Power Rails	5v, 12v/15v, 22.2v (battery voltage)
Payload Interface	IFT Payload Interface V1.0
Operating Software	PX4 Autopilot by Dronecode

Flight Modes

Position	Holds altitude and position, manual positional acceleration
Mission	Executes pre-defined autonomous mission
Return	Auto return to home position and land
Land	Land at the location at which the mode was engaged
Altitude	Holds altitude only, failsafe mode if GPS signal lost

IF750 Flight Time @ Given Payload Weight

HereLink Blue
All in One Live Video GCS

GCS Interface	NW Blue HereLink Blue w/ 5.46" Touchscreen
GSC Software	QGroundControl V3.X (Android)
Frequency	2.4 GHz
Signal Range	5.5 KM (3 NM)
Radio Certifications	FCC 20 KM, CE 12 KM
Encryption	AES 128
GCS Weight	920 g

Radio & Telemetry
BlueUAS Certified GCS

GSC Interface	User Provided (PC or tablet compatible with QGC)
GCS Software	QGroundControl V3.X (Linux, Windows, Android)
Telemetry Radio	RFD 900X-US (Air/Ground)
Frequency / Power	902-928 MHz up to 1 W
Signal Range	Up to 40 KM (25 Miles)
Encryption	AES 128
Remote Control	Jeti DS-12 Transmitter
Frequency / Power	2.4 GHz @ 100 mW
RC Signal Range	3 KM (1.5 NM)
RC Weight	725 g

155Wh Battery (2x)

Nominal Energy	155.4 Wh
Nominal Voltage	22.2 V
Nominal Capacity	7,000 mAh
Continuous Discharge	175 Amps (25C)
Self Discharge	<5% per month

Camera Payloads From IFT

RX1R Optical

SONY CYBER-SHOT DSC-RX1 RII, 35MM F2.0 ZEISS
Sonnar T Lens with Macro Capability
Gremsy S1 v3 Gimbal with Quick Disconnect and Gremsy
Dampening Plate

A6600 Optical

Sony Alpha 6600 Premium E-mount APS-C Camera w/
Sony E-mount Prime & Zoom Lense options
Gremsy S1 v3 Gimbal with Quick Disconnect and Gremsy
Dampening Plate

Wiris Pro EO/IR

Workswell Wiris Pro, Wiris ProSC, or Wiris Agro R w/ 10x
Optical Zoom & Interchangeable IR Lenses, 640PX
Optional Storage capacity, refresh rate, & FOV
Gremsy Pixy-WP Gimbal with Quick Disconnect and
Gremsy Dampening Plate

Wiris Enterprise EO/IR

Workswell Wiris Enterprise or Wiris EnterpriseSC with 30x
Optical Zoom & Interchangeable IR Lenses, 640PX
Optional Storage capacity, refresh rate, & FOV
Gremsy Pixy or S1 v3 Gimbal with Quick Disconnect and
Gremsy Dampening Plate

NDAA & BlueUAS

The IF750-LRT configuration is compliant with FY20 NDAA Sec. 848 and Executive Order 13981. The Defense Innovation Unit has granted BlueUAS 2.0 Authority To Operate this configuration, certifying that it is pre-approved for use within the Department of Defense.