HF609 Dual-Optical GPS Drone
Technical Parameters

Aircraft

Takeoff Weight	Approximately 780g (including battery)
Maximum Takeoff Weight	Approximately 830g Note: Product weight may vary due to differences in material batches.
Dimensions	Folded (with propellers): 202mm (L) × 124mm (W) × 96mm (H) Unfolded (with propellers): 520mm (L) × 440mm (W) × 96mm (H)
Maximum Horizontal Speed	9 m/s (Sport Mode) 5 m/s (Normal Mode) Measured under ideal conditions; actual performance may vary depending on the environment.
Maximum Ascent Speed	2.5 m/s
Maximum Descent Speed	4 m/s
Maximum Hovering Time	37minutes
Maximum Flight Time	28minutes Measured under ideal conditions; actual performance may vary depending on the environment.
Maximum Range	10 km
Maximum Wind Resistance	12 m/s
Operating Temperature	-10°C to 40°C
Satellite Navigation Systems	GPS+Galileo+BeiDou
Hovering Accuracy	Vertical： ±0.2 m (Vision Mode) ±0.8 m (GPS Mode) Horizontal： ±0.3 m (Vision Mode) ±1.5 m (GPS Mode)
Memory Expansion	Supports up to 256GB TF card

Camera

Image Sensor	Sony IMX586, 48MP effective resolution Resolution：8000 × 6000 Focal Length：8mm Image Format: JPG Video Format: MP4 Video Resolution: 4K 30fps

Thermal Imaging Camera

Thermal Sensor Type	Uncooled Vanadium Oxide (VOx)

	Warning: Do not point the thermal imaging camera lens at strong energy sources such as the sun, lava, or laser beams, as this may burn the sensor and cause irreversible damage.
	Resolution: 640 × 512
	Lens Field of View: 46° × 38°
	Aperture: f/1.0
	Focal Length: 9mm
	Image Format: JPG
	Video Format: MP4
	Focus Distance: 5M ~ ∞
	Thermal Sensitivity: ≤50mK @ F1.0

Gimbal

Stabilization System	3-axis mechanical gimbal (pitch, roll, pan)
	Mechanical Limits:
	Pitch: -10° to 90°
	Roll: -32° to 32°
	Pan: -25° to 25°

Perception

Perception System	Front and rear binocular vision systems, supplemented by an infrared optical flow sensor on the underside
Front Vision	Detection Range: 0.3 to 15 m
	Effective Obstacle Avoidance Speed: ≤4 m/s
	FOV: 60°
Rear Vision	Detection Range: 0.3 to 15 m
	Effective Obstacle Avoidance Speed: ≤4 m/s
	FOV: 60°
Downward Vision	Detection Range: 0.3 to 10.5 m
	Effective Obstacle Avoidance Speed: ≤3 m/s
Effective Operating Conditions	Front / Rear：
	Surfaces with rich textures and sufficient lighting
	Downward：
	Surfaces with rich textures, sufficient lighting, and diffuse reflection properties with reflectivity >20%

Transmission

Transmission System	5G relay digital transmission
Maximum Signal Range	4km
Operating Frequency Bands	5.725 GHz to 5.850 GHz
	5.150 GHz to 5.250 GHz

Transmit Power	5.1 GHz Band:	<23 dBm (CE)
	5.8 GHz Band:	<33 dBm (FCC)
		<30 dBm (SRRC)
		<14 dBm (CE)

Battery

Capacity	4200mAh
Nominal Voltage	11.4V
Charge Limit Voltage	13.2V
Battery Type	Li-ion
Energy	47.88Wh
Weight	260g
Discharge Rate	10C(40A)
Maximum Charging Power	1C(10A)
Cycle Life	200 cycles

Controller

Maximum Battery Life	100 minutes
Operating Temperature	-10°C to 40°C
Charging Time	140 minutes
Battery Capacity	1600mAh
Charging Method	Type-C 5V 2A
Weight	Approximately 280g
Dimensions	150mm (L) × 88mm (W) × 47mm (H)