

Hayoou Hybird VTOL UAS

Special for Agricultural





Spicial for Agricultural



混合动力无人机
飞行视频

hayoou.com/v474

- Fly Video is hayoou.com/v474



Product Introduction

- 2015 Hybrid VTOL UAS is composed of 2 parts, aircraft platform and control aircraft flight computer system(also known as flight control).Electromechanical integration platform and flight control system are a community.If the plane platform is a body, flight control is the soul of the aircraft platform.Like computer, all equipped have OS operating system.
- 1.Payload increased .
- 2.Low cost.
- Agricultural Unmanned Helicopter is sold by manufacturer, so its price is competitive.
- 3.Easy Operation.
- Agricultural unmanned helicopter can take off vertically which effectively lowers the operation difficulty and the risks. Flying at low altitude of several meters, the spraying effect can be controlled in the active area. It is suitable for all kinds of complex terrain farmlands and the crops and woods of different heights. The spraying operation skills of agriculture unmanned helicopter can be mastered via simple training.

Product Introduction

- 4. Environment-friendly
- The dosage of pesticide is reduced, so it can minimize the pollution of pesticide to the environment and crops. It is not harmful to the operator in the distances when dusting, and the labor intensity is reduced dramatically.
- 5. Excellent Crop Spraying(Agriculture)
- While it utilizes the strong downward rotating airflow to flip and shake the crops when spraying, it comes into being a turbulent area above the crops underneath. The crop spraying is very uniform and partial pesticide is dusted on the back of stem and leaf, the quality of crop spraying of which the manpower and other spraying equipments can not achieve. As the cyclone under the helicopter is concentrated and powerful, it is easier to form a layer of membrane through the fluff surface of the plants to kill the pests uniformly and effectively by utilizing the ultra-fine pulverization dusting.

Main Parameter

- Specification Model:HY-20-2
- Size(L*W*H) 1250*1250*1460mm
- Aircraft folding size 435*435*500mm
- Aircraft weight 16kg
- Maximum takeoff weight 40kg
- Aircraft pesticide load 25kg
- Propeller 15 inch carbon fiber plant protection special propeller
- Spraying task system 1 sets of kit, dispersion spray system, booster pump
- Remote control 2.4G Nine channel
- Power battery High performance lithium polymer lithium battery
- (22.2V/16000mA)
- charger High power lithium battery balance charging equipment
- (can charge 2 pcs at the same time, half an hour full)

Main Parameter

- Hover Arbitrary position direction air hover
- Flight attitude Flying in any direction, can be reversed to fly, emergency brake
- Takeoff / landing time ≤ 1 minute
- Body material Carbon fiber
- Temperature range $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Battery power performance charge-discharge 300-500 times
- Rack life ≥ 5 years
- Maximum efficiency 200-300 acre/day

Main Parameter

- UAV self stabilization system yes
- Spraying system Diffuse atomization nozzle (a group of *6)
- Motor speed 1200rpm/min
- Engin speed 6200rpm/min Auto speed limit and throttle mix
- Aircraft endurance time 40~55min
- Spraying height Field operation 0-2000 M

- **Agriculture:**

Spraying area 4 meters

Control efficiency 1~3 acre/min

Spray flow 0.25-0.75L/min(multi nozzle) adjustable

Flying speed 0 -8meter/second(can be adjusted according to needed speed)

Flying height0~200meter

Arms can folded





Features :

Solved UAV battery life and weight problems

Fusion algorithm for gas engine lift dynamic flight control is more stable:

- 1, plant protection, reducing overall load conditions to avoid manually adjust the throttle and crashing can even automatically reduces engine speed
- 2, keep the motor throttle 20–40% to save power
- 3, engine speed automatically stable dynamic compensation
- 4, can be introduced through remote control quick response and high high measurement data to automatically

Helicopters more streamlined structure than petrol no longer parts life all components of complex surface in the domestic procurement

Mature open source platform (Ardupilot) can dock multiple platforms

Can access the mobile data network to the remote data link

Overall cost for low volume applications

Differences between hybrid and pure electric drone

	Endurance	stability	w i n d resista nce	maintena nce time	shock	price	risk	noise
hybrid	<p>Very long</p> <p>Is more than twice times as compared with pure electric</p> <p>Aerial flight 40-60 mins</p>	stable	Strong	C h e c k every 25 hours of flight time	Strong	twice times a s comp ared with pure electric	High Suitable for field work	strong 60-80db
p u r e electric	short	Relatively stable but e a s i l y under the influence of t h e battery	Weak	Almost no maintenance	small	nomal	low	weak 20-40db

Range of application

- Express takeout;
- Agricultural plant pests, moisture monitoring Shepherd;
- Infrared night vision security patrols day and night wilderness rescue;
- Hand out leaflets publicity banners;
- Aerial filming live coverage of film and television;
- VR virtual reality games racing;
- Rescue fire forest organs in the field, emergency medicine transportation;

Range of application

- Military reconnaissance and transport;
- Formation flying in the air against shows ad love text proposed a large model show in the sky throwing water bombs games;
- Artificial rain to clear smog;
- Communications relay wireless network coverage;
- Quick search for pollution monitoring in marine formation;
- Flying robot purchase

PC ground station software

Mission Planner 1.3.28 build 1.1.5624.13992

飞行数据 飞行计划 初始设置 配置/调试 模拟 终端 帮助 捐赠

COM4 57600 连接

300 西北 330 345 0; 15 30 东北 60

10 5 0 -5 -10

10 5 0 -5 -10

空速 0.0 地速 0.0 Unknown 0>0

GPS: 无GPS

已锁定

快速 动作 仪表 状态 舵机 遥测日志 数据

Altitude (m)	GroundSpeed (m/s)
0.0	0.0
Dist to WP (m)	Yaw (deg)
0.0	0.0
Sonar Range (meters)	Sonar Voltage (Volt)
0.0	0.0

hdop: 0.0
Sats: 0 当前指向 直达当前航点 目标指向 GPS追踪 (黑)

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GPS 0.000000 0.000000 0.00m 调试 自动平移 缩放 13.0

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