

## GENERAL PARAMETER

### F12 Plant Protection UAV

#### Basic Parameters

Wheelbase	1680mm	Hovering time	>20min ( Unloaded )
Outline dimension :	1282*1282*528mm ( Unfolded )		>10min ( Loaded )
	691*691*528mm ( Folded )	Operation height	1.5-3m
Width of spray	4.5-6m ( Depending on different crops )	Max. flight speed	10m/s
Medicine box capacity	12L	Hovering accuracy	Horizontal±10cm Vertical±10cm (RTK)
Operational efficiency	60 Ha / day	(GNSS signal good)	Vertical±0.1m ( Radar )
Weight	12.8KG	Accurate altitude hold of radar	0.1m
Max. takeoff weigh	30.6kg	Altitude hold range	1 ~ 20m
Power battery	51.8V / 828.8Wh	Obstacle avoidance detect range	1 ~ 20m
Nozzle type	High-pressure flat fan		
Nozzle number	4 / 8nozzle ( optional )		
Max. system operating flow	2.7L/min / 4.5L/min ( Max. )		
Charger output	2600W ( 4 channels )		

## COMPANY PROFILE

Make all UAVs easy to use all over the world

R&D takes up more than 60% of the 200 employees in our company. TopxGun boasts a team of talents graduated from world-known [aeronautics and astronautic universities](#) such as NUAU and Beihang University, who have rich knowledge and experience in designing UAV, military aircrafts, and large aircrafts.

Since it was founded, TopxGun has been making technological breakthrough, with [300+ intellectual properties](#) and [200+ patents](#) being filed. TopxGun owns qualifications including High Technology Enterprise Certificate, ISO9001, ISO20000, ISO27001, etc. Our UAVs has passed international tests such as CE, FCC, FOHS and KC.

Currently focusing on drones for plant protection, TopxGun has been optimizing products according to agricultural professionals' feedback. Now 20000+ sets of TopxGun flight control for plant protection have been sold to 400+ domestic and 100+ overseas clients, which include Japan, Korea, Thailand, Australia and other countries in East Asia and North America.



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# TopXGun Plant Protection Drone F Series 2020



F12

TopXGun Robotics

The professional provider of UAV flight controller system, UAV and application solution

## 01 High Efficiency with Best Value

- ◆ The drone sprays two tanks on one battery. A charger can charge 4 batteries simultaneously. A battery can be charged from 30% to full in only 30 min. Only 1 charger and 4 batteries are needed to be used in rotation for one day of work (8 hrs).
- ◆ Spray 60 hectares/day, which is 90 times the efficiency of manual spraying.
- ◆ Independent landing lights are provided for safe operation at night.



## 02 Precise and Even spraying with High Efficiency and Good Penetration

- ◆ Double pumps are equipped. The max flow rate for 4 nozzles is 2.7 L/min. Upgrade to 8 nozzles for a max flow rate of 3.5 L/min and upgrade to 8 nozzles and 2 flow meters for a max flow rate of 4.5 L/min.
- ◆ 4 or 8 high-pressure fan-shaped nozzles, providing fine atomization with a mean droplet diameter of 170 - 265  $\mu\text{m}$ .
- ◆ Precise metering system to avoid insufficient spraying/overdose. Real-time display of remaining volume on the RC display.
- ◆ Quadcopters have larger propellers creating stable downward wind, leading to better penetration of chemicals compared with hexacopters and octocopters .



## 03 Precise Positioning; Safe Flight

- ◆ It uses RTK Technology for positioning, supporting Beidou / GPS / GLONASS at the same time, and is equipped with dual anti-interference antenna to ensure centimeter-level accuracy.
- ◆ A magnetic compass is equipped to ensure the drone flies straight in the right direction even when RTK is unavailable.
- ◆ The front and rear obstacle avoidance radars offers  $\pm 10\text{cm}$  accuracy, effectively avoiding obstacles such as utility poles and trees.

## 04 Easy to Operate, Quick to Start

- ◆ 5.5 inch high brightness display for the RC ensures clear outdoor image . Battery lasts for 6-8 hours.
- ◆ Multiple operation modes: A-B point, manual and autonomous. Simple setup to quickly start operation.
- ◆ Comprehensive training is offered to help users independently operate in 3 days and become skillful in 7 days.



## 05 Durable, Foldable and Easy to Transport

- ◆ Foldable design for easy storage and transportation.
- ◆ Tough and durable. Metal frame and carbon fiber boom. Durable folding mechanism.
- ◆ IP67 waterproof body. Shell can be washed with running water after operation.



## 06 Timely After-sales service to protect your interests

- ◆ Online support from the company's technical team.
- ◆ Modular design: users can replace certain damaged modules by themselves instead of returning the drone to manufacturer.

## 07 More Advanced Technology Makes the Drone Smarter

- ◆ Terrain following radar is equipped to adjust the altitude of the drone to ensure flight safety and even spraying.
- ◆ Predict the breakpoint according to the route plan so that users can wisely arrange the timing for refill to improve battery efficiency .
- ◆ FPV (First-person view) enables user to see real-time 720p image of the environment in front of the drone on the RC display.
- ◆ Users can check operation data on the "Agricultural Assistant " APP installed in the RC. Useful functions include route planning, voice broadcast, field management, operation area statistics, etc.

