

# M410 agricultural drone

User Manual V1.4

2021.05

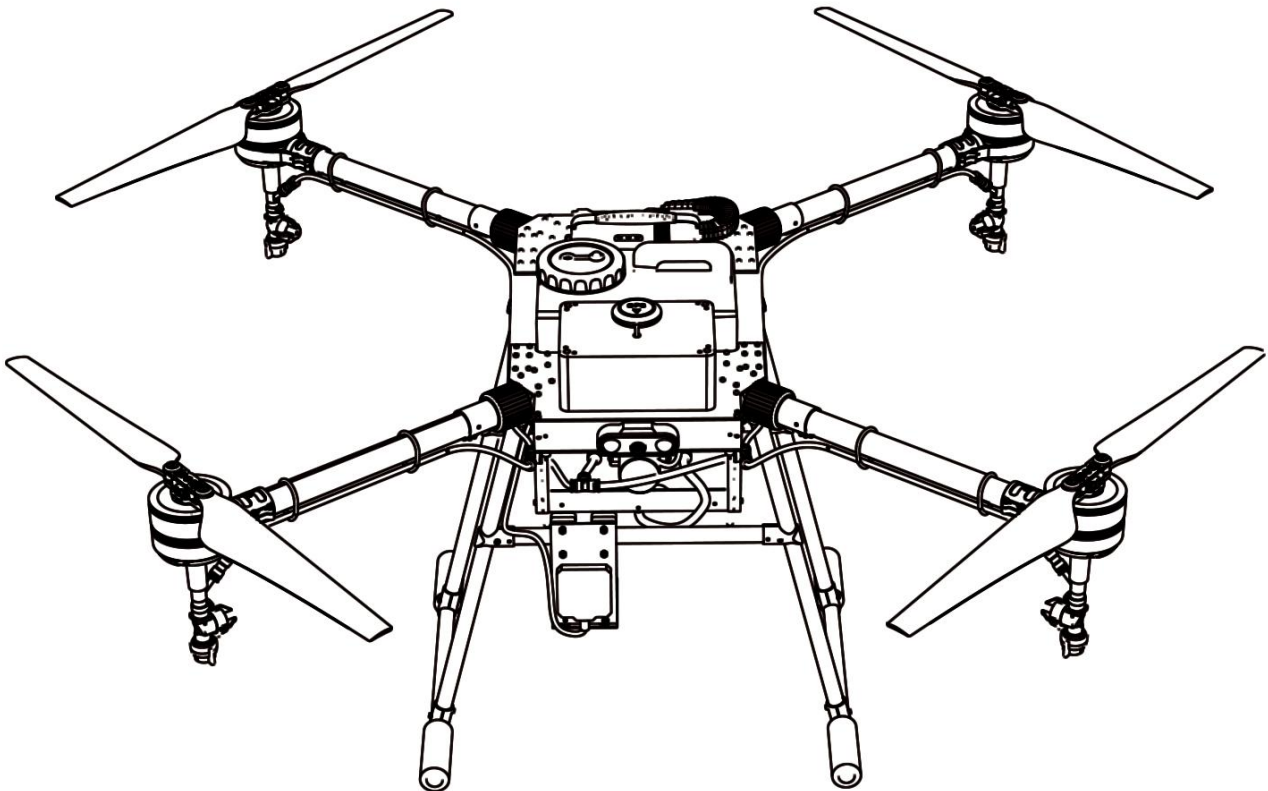
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## • M410 Airplane Introduction



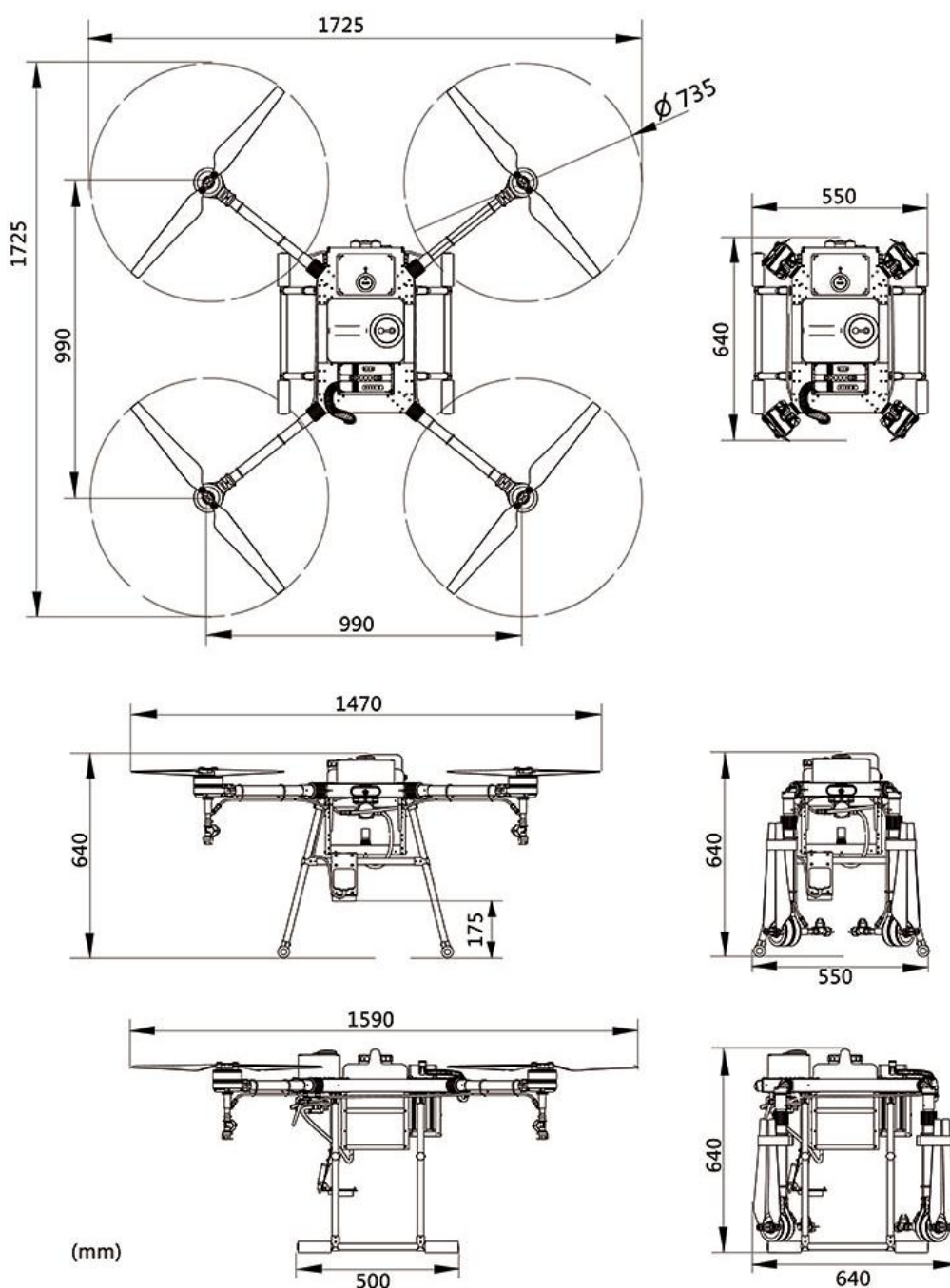
95% of the whole machine is made of carbon fiber and magnesium-aluminum alloy material, modular design, durable and anti-fall, and the simple design is also convenient for later maintenance.



The medicine barrel and battery are quickly disassembled, and there are 2 quick disassembly water tanks as standard, and the next bucket of medicine can be changed in 10 seconds.



Folding the arm, the size is smaller after folding, and the empty weight does not include batteries and potions of 10KG, which is convenient for transit transportation.





## • Features

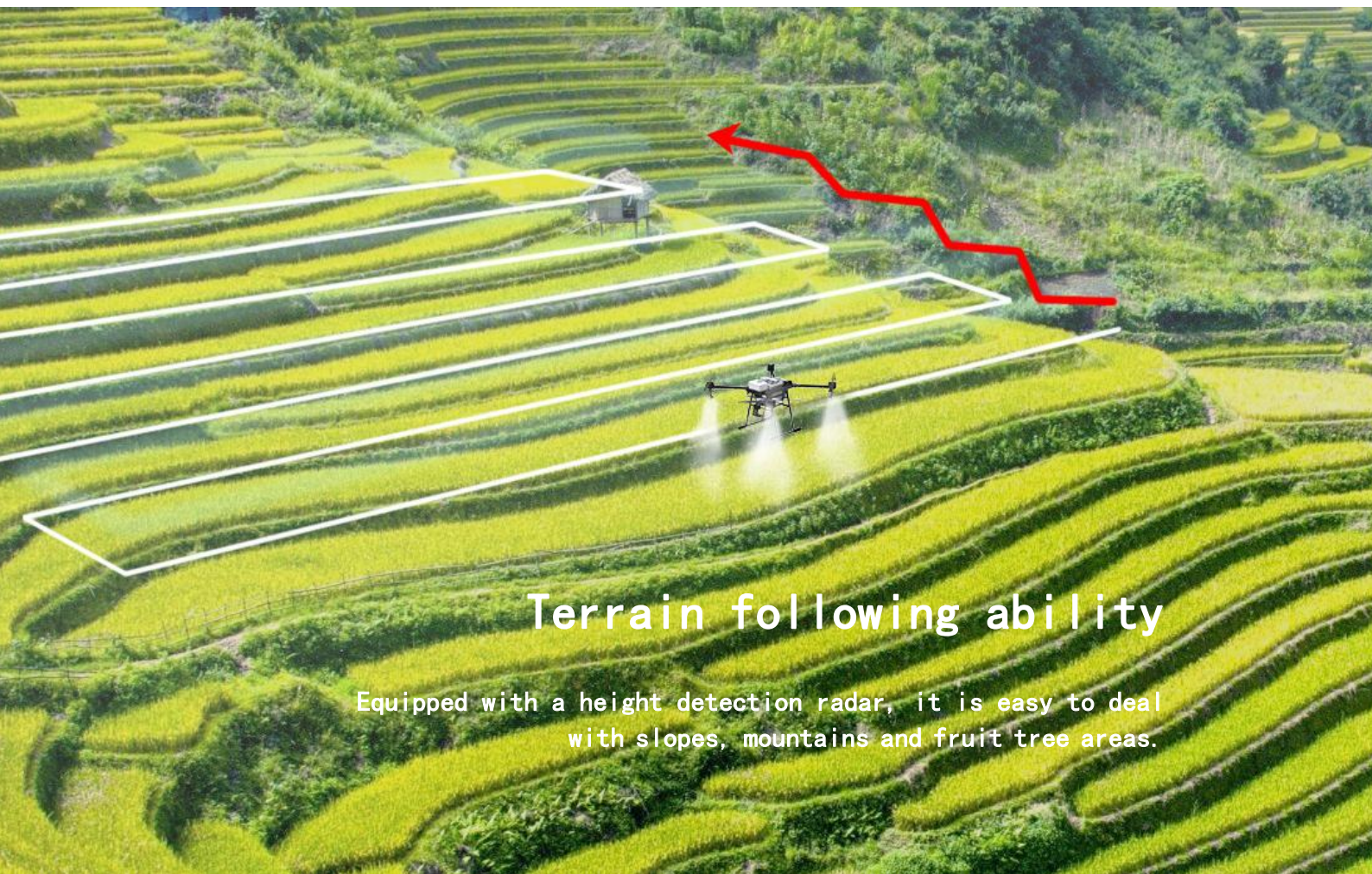


## Safety Obstacle Avoidance System

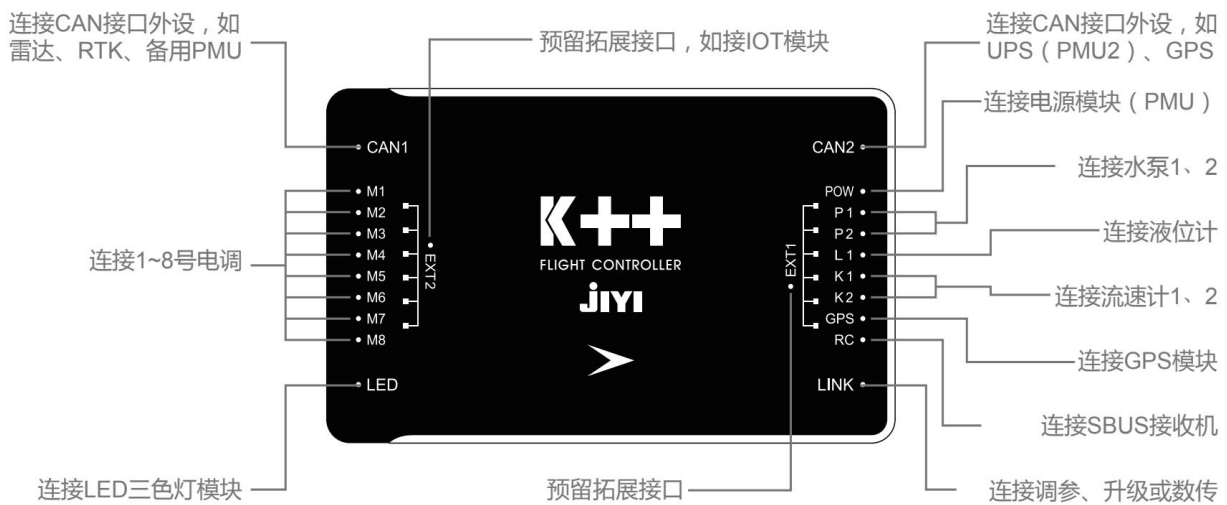
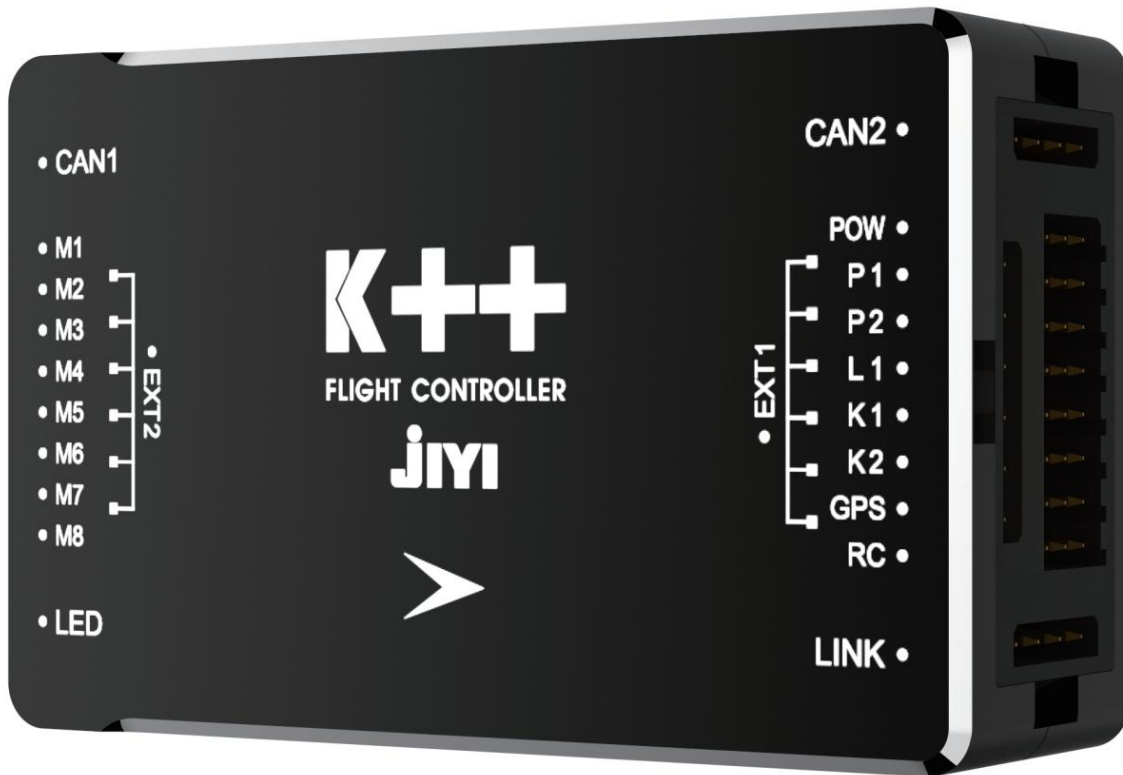
The forward obstacle avoidance radar is installed, and the flight safety is upgraded again.







The standard H12 long-distance digital image control integrates an Android remote control. Equipped with a 5.5-inch high-brightness screen, you can see the picture clearly under the hot sun and operate easily. The remote control has a built-in 1000mAh battery with a battery life of 20 hours, which meets the needs of long-term high-intensity operations. There are LED lights on both sides of the high-definition camera, which is convenient for night work.



## Airplane Modes and Features

Atti Star protection function, motor sequence detection function, direction detection function, dual water pump mode, drug break protection.





自動休眠功能

低壓智能報警

軟件升級功能

充電智能報警

智能均衡功能

數據通訊功能

智能電量指示

電池日誌記錄

飛控數據交互

The battery has a built-in safety supervision system. The safety system will supervise the battery itself 24 hours a day. Once the voltage difference is too large, over-discharge, high temperature and other abnormal phenomena, the battery itself will sound an alarm, and the indicator light will flash in different forms. The abnormal state of the battery can be judged according to the abnormal state of the indicator light in the manual.



## • work efficiency



Medicine chest capacity 10L

Each sortie can complete 0.6 hectares,

1 battery can complete 2 sorties, i.e. 1.2 hectares,

It can complete 7–8 sorties per hour and complete 4.5 hectares of land,

8 hours a day, about 35 hectares of land can be completed

4 sets of batteries are used in turn and can be recycled, and

the charging time of each battery is about 18 minutes.



- **configuration kit**



- M410 Plant Protection Drone Rack \*1
- 10L water tank\*2
- JIYI flight controller\*1
- Altitude Radar \*1
- Forward Obstacle Avoidance Radar \*1
- Flowmeter \*1
- HD image transmission system\*1
- 5.5 inch remote control \*1
- X8 motor\*4
- 30-inch propeller\*4
- Spray system \*1
- 2400W dual channel charger\*1
- 12S 16AH intelligent lithium battery\*4
- Spare parts kit\*1



## Spare Parts Kit Contains the following items::



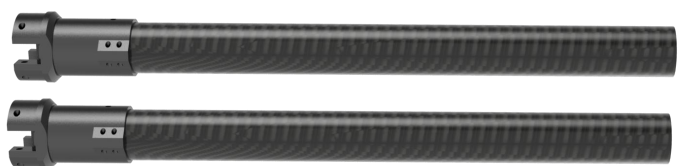
30 inch CW \* 4 pieces



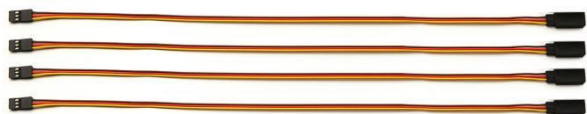
30 inch CCW \* 4 pieces



Nozzle assembly \* 4 sets



Arm \* 2



Signal line \* 4



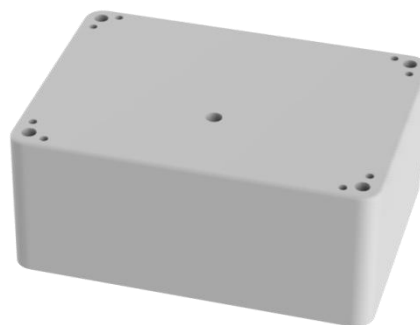
Support frame assembly \*1 set



XT 60 female \* 2



XT 60 male head \* 2



front shell \* 1

No matter how fast after-sales maintenance is, it is not as fast as the spare parts we donate by your side. Do it yourself and say goodbye to the long wait for aftermarket repairs.



## technical parameter

### •frame

maximum wheelbase 990mm  
 Dimensions 1725mm x 1725mm x 640mm(Arms unfolded, propellers unfolded )  
 640mm x 550mm x 640mm ( Arm folded, paddle folded )

### •power system

Motor size 21\*20mm  
 KV value 100 KV  
 maximum pulling force 15.3kg/rotor  
 Motor assembly weight 1044g  
 Maximum allowable voltage of ESC 52.2V  
 ESC maximum allowable current (continuous) 80A  
 Propeller Diameter\*Pitch 30\*90 inch

### •Sprinkler system

Medicine box volume rating: 10 L, full load: 10 L  
 Spray width 4-5 m (4 sprinklers, about 1.5-3 m from crops)  
 Atomized particles are 110-230  $\mu$  m

### •Forward Obstacle Avoidance Radar System

Center frequency 24.125 GHz  
 Product weight 80g  
 Modulation mode FMCW  
 The ranging range is 1 ~ 25m  
 Ranging accuracy 0.1 m  
 Ranging resolution 0.6 m  
 The output frequency is 40Hz  
 Power consumption 3.0 W  
 Operating voltage 9 ~ 28V  
 Operating temperature -20 ° C ~ + 85 ° C  
 Protection level IP67  
 Output interface CAN

### •Anti-ground/fixed altitude radar system

Center frequency 24.125 GHz  
 Product weight < 50g  
 Modulation mode FMCW  
 There is no shelter under the use environment, and try to stay away from water mist  
 Height measurement range is 0.3 ~ 15m (to the earth)  
 Accuracy of height measurement is 0.05 m  
 Output frequency 50Hz  
 Power consumption 1.5 W @ 25 ° C  
 Operating voltage 6 ~ 28V  
 Operating temperature -20 ° C ~ + 85 ° C



Protection level	IP67
Output interface	CAN

\* The effective working range of the radar module will vary depending on the data, position, shape, etc. of the target object.

#### ●Flight parameters

The weight of the whole machine (excluding batteries and potions) is	14.5 KG
Standard takeoff weight	24.5 kg
Maximum takeoff weight	29kg
Hovering accuracy	± 0.6 m horizontally and ± 0.3 m vertically
Smart battery	12S/16000mah
Hovering time	25 min (16000 mAh takeoff weight 24.5 kg) 14 min (16000 mAh takeoff weight 24.5 kg)
Maximum pitch angle	15
Maximum operating flight speed	7 m/s
Maximum horizontal flight speed	10 m/s (good signal)
Maximum withstand wind speed	8 m/s
The maximum take-off altitude is	3500 m
Recommended working environment humidity	< 93%
The recommended working environment temperature is	0 °C to 45 °C

#### ●Remote control

Operating frequency from	2.4000 GHz to 2.4833 GHz
The effective distance of signal is	20KM (no interference, no blocking)
Display device	5.5 inch liquid crystal display screen
Operating voltage	3.7 V
Charging interface	MICRO-USB

\* Please comply with local regulations.

\*\* The hovering time is measured near sea level with wind speed less than 3 m/s for reference only.

For detailed information of products, please visit the contact merchant \* If the content is updated, it will not be notified separately.