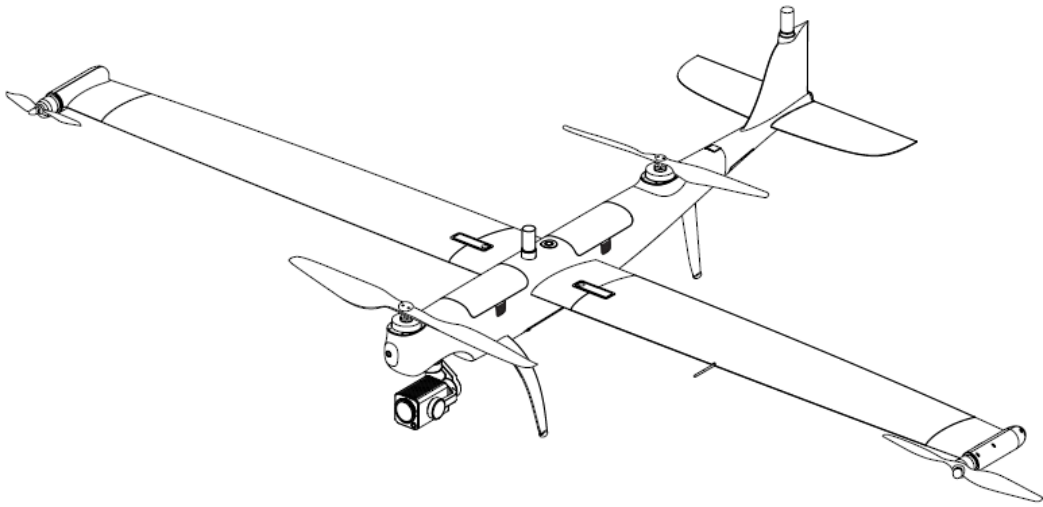
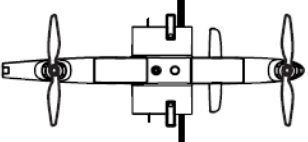




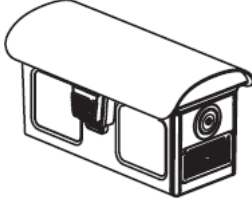
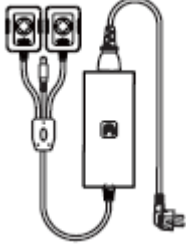
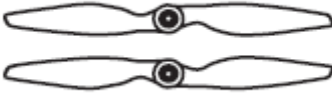

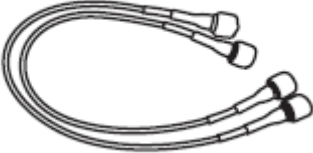
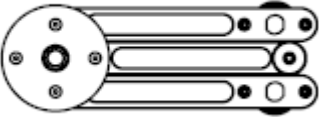



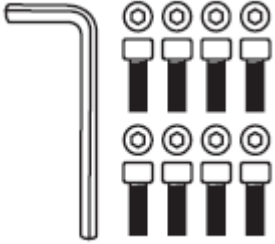
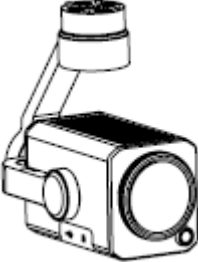
Dragon Fish Quick Guide

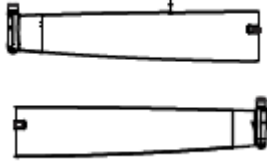

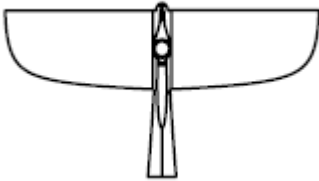
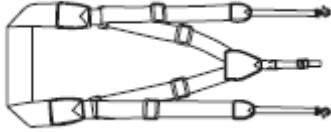


AUTEL
ROBOTICS

Item List

	Fuselage x 1		9.7-inch ground station x 1
-------------------------------------------------------------------------------------	-----------------	--------------------------------------------------------------------------------------	-----------------------------------

	<p>base station x 1</p>		<p>battery x 4 pieces (the actual quantity is to the subject purchased kit)</p>
	<p>Charger + AC line x 1</p>		<p>wingtip propeller x 2</p>
	<p>base station antennas x2roots</p>		<p>Feeder base x2 article</p>
	<p>station tray base x 1</p>		<p>station tripod x1base</p>
	<p>charger station x1a</p>		<p>TYPE C cable x1root</p>
	<p>repair tool set x1 sets</p>		<p>head x1a(head models to the actual suit purchase date)</p>

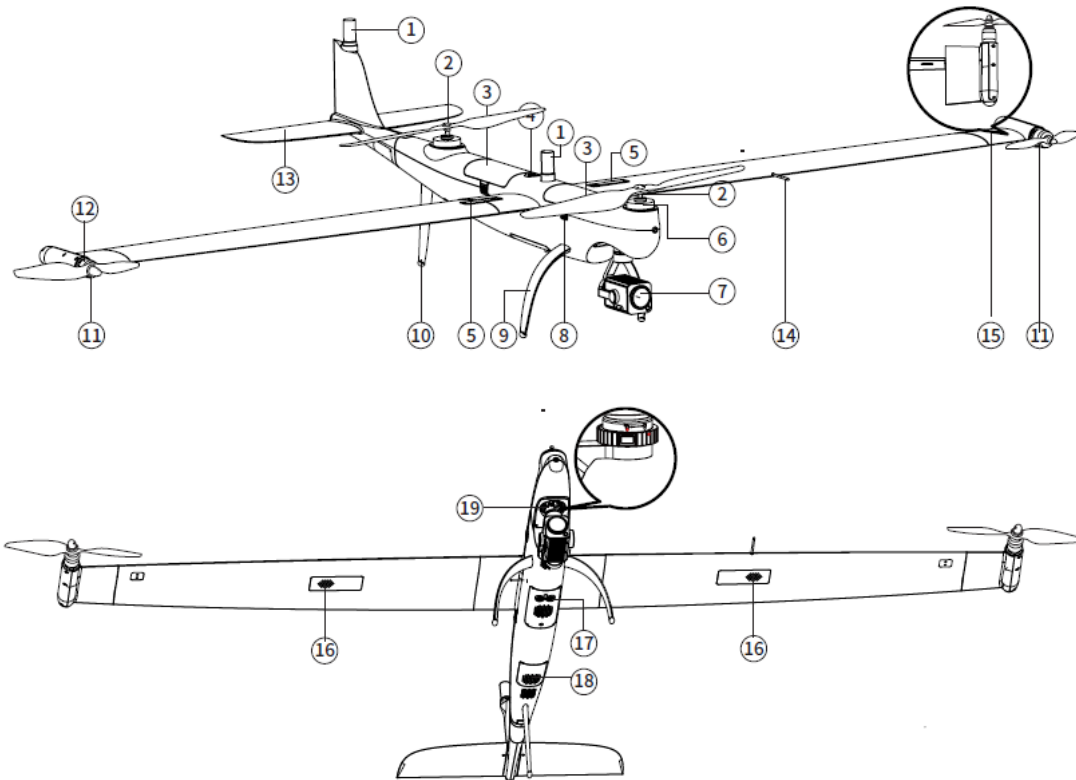
	wing x1		document x1parts (Dragon Fish, the base station, the ground station, the charger, battery fast guidelines disclaimer)
	tail x1		Strap ground stations x1a

Recognize vehicle

Dragon Fish DANGON FISH (hereinafter referred Dragon Fish) intelligent integrated channel excellence Flight control technology, gimbal technology, imaging technology, using a unique tilt-rotor design, quick release and efficient aerodynamic design of the whole machine, combines the dual advantages of multi-rotor take-off and landing flexibility and fixed-wing long endurance. It can realize one-key automatic take-off and landing, intelligent tracking, pointing flight, terrain following and fast mission flight functions. The protection level of the fuselage structure can reach IP43 during flight (refer to IEC60529 standard). The Dragon Fish takes up to 120 minutes to sail, the high-definition dual-frequency image transmission distance is as far as 30KM, the whole system is self-checked in 5 seconds, and it is quickly assembled in 3 minutes. The high-performance camera has a 240 times hybrid optical variable, a 2000-meter infrared detection capability, combined with Autel's advanced intelligent software and hardware technology, redefines productivity tools and empowers industry applications.

Dragon Fish can be adapted to dual-optical, triple-optical, multi-

spectral and third-party mounting, and supports PSDK to meet the needs of different customers. With Dragon Fish base station, high precision and accurate positioning can be achieved. Dragon Fish battery, IMU, barometer, compass, positioning system are all backed up, multiple redundancy, safe and reliable.

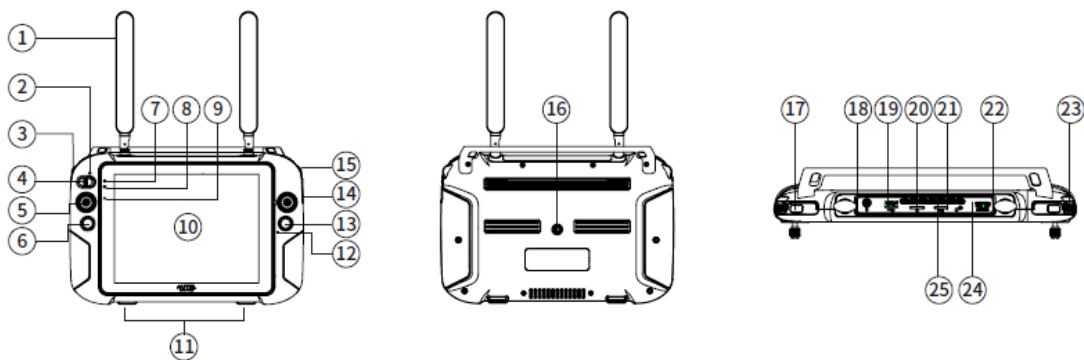


1. RTK antenna
2. Body paddle
3. Smart battery
4. Power button/indicator
5. Wing lock
6. Body motor
7. PTZ camera
8. Battery removal button
9. Front foot stand
10. Rear foot Frame
11. Wing tip propeller blade
12. Wing motor
13. Flat tail

14. Airspeed tube
15. Tilting wing tip
16. GPS
17. Ultrasonic ranging
18. Dust net
19. PTZ installation interface

Understanding portable ground station

Dragon fish is equipped with a 9.7-inch TFT-LCD capacitive touch screen, which is sensitive to the touch, and has a 2048*1536 ultra-high-definition resolution. The highest brightness reaches 1000 cd/m², which is about twice that of ordinary mobile devices. The bright screen can still display images clearly under strong light. Built-in 128G memory is convenient for storing aerial footage in time. The portable ground station has undergone careful signal modulation and innovative antenna design, and the image transmission distance is up to 30 kilometers. The ground station has a battery life of up to 3 hours, which solves the problem of insufficient battery life using mobile devices to monitor.

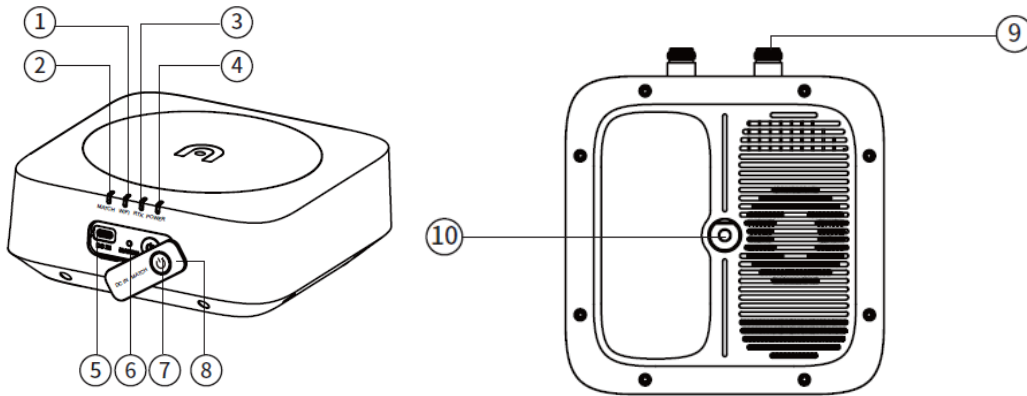


1. Antenna
2. Mode switch indicator
3. Gimbal pitch control wave wheel
4. Manual/auto mode switch key
5. Joystick
6. Home button
7. Power status indicator

8. Flight status indicator
9. Light sensor
10. Touch screen
11. Hook
12. Microphone
13. Photo/video button
14. Zoom button
15. PTZ horizontal control wave
16. Tripod mounting interface
17. Power button
18. Charging interface
19. USB interface
20. SD card slot
21. SIM card slot
22. HDMI interface
23. Custom buttons
24. Headphone jack
25. Air outlet to

know the base station

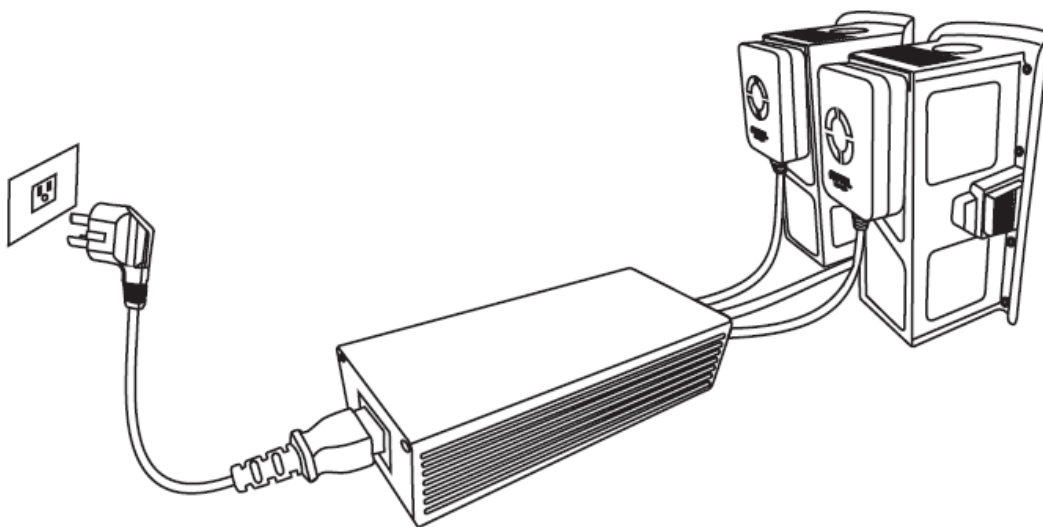
Dragon Fish GNSS base station is a high-precision satellite signal receiver, support GPS, Beidou, Galileo and Glonass navigation System 11 channels [see specifications] satellite signal reception, at the same time built-in carefully adjusted data transmission system, convenient for users to use in different application environments. The Dragon Fish GNSS base station can be used as an RTK base station, which improves the positioning accuracy of aircraft equipped with Autel's intelligent RTK positioning system from meter to centimeter level, and provides strong anti-magnetic interference capability in high-voltage lines, metal buildings and other strong magnetic interference environments Ensure reliable operation flight. Dragon Fish GNSS base station can achieve more precise fixed-point flight.



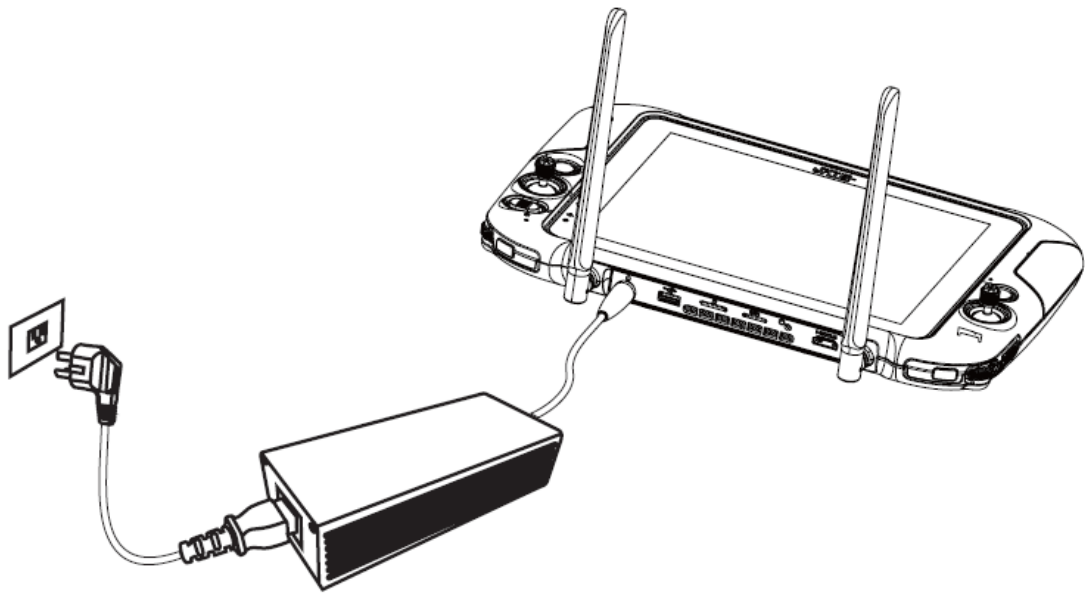
1. WiFi indicator
2. Linking indicator
3. RTK indicator
4. Power indicator
5. Charging port
6. Linking button
7. Power button
8. Port cover
9. Antenna interface
10. Turntable mounting hole

use your Dragon Fish

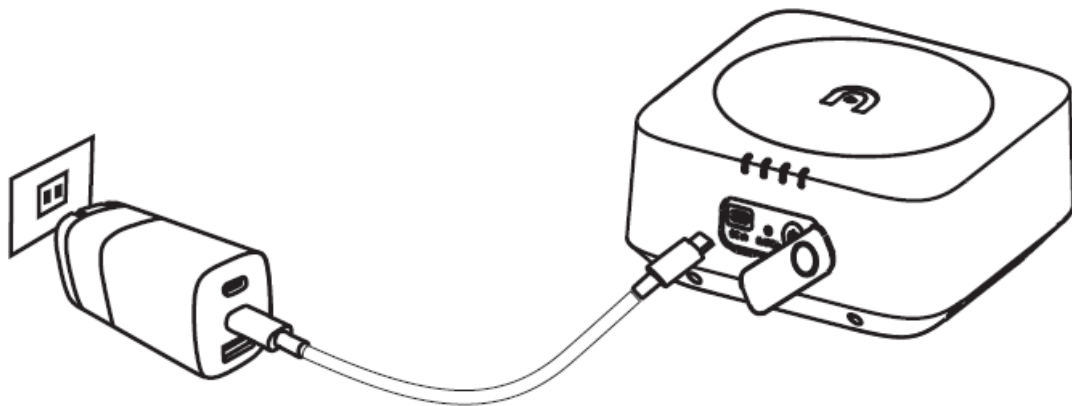
- 1 Intelligent Flight Battery Charging



- 2 Ground Station Charging

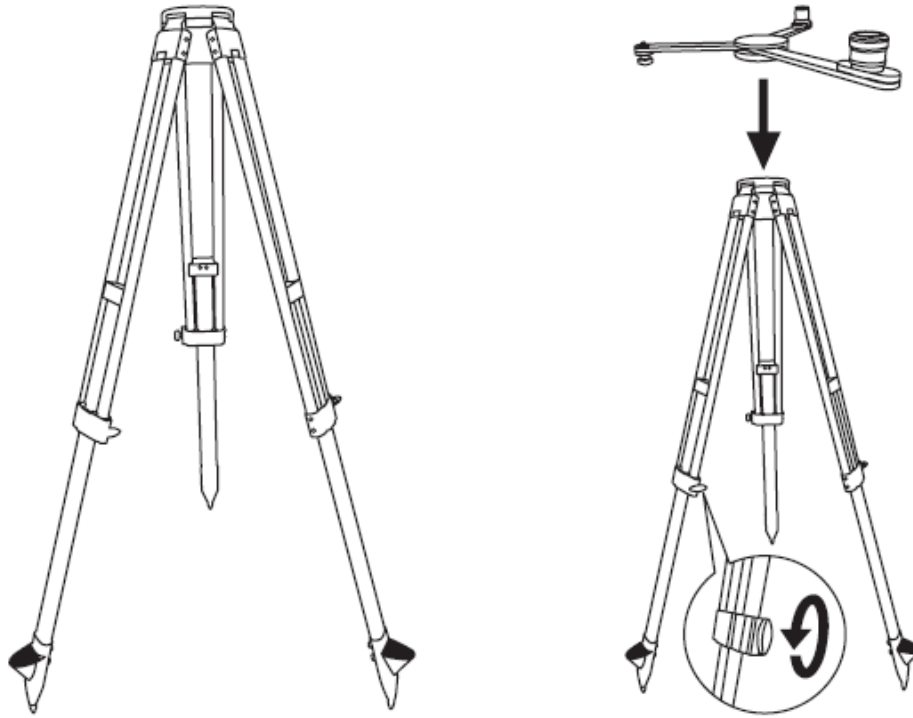


3 Base Station Charging

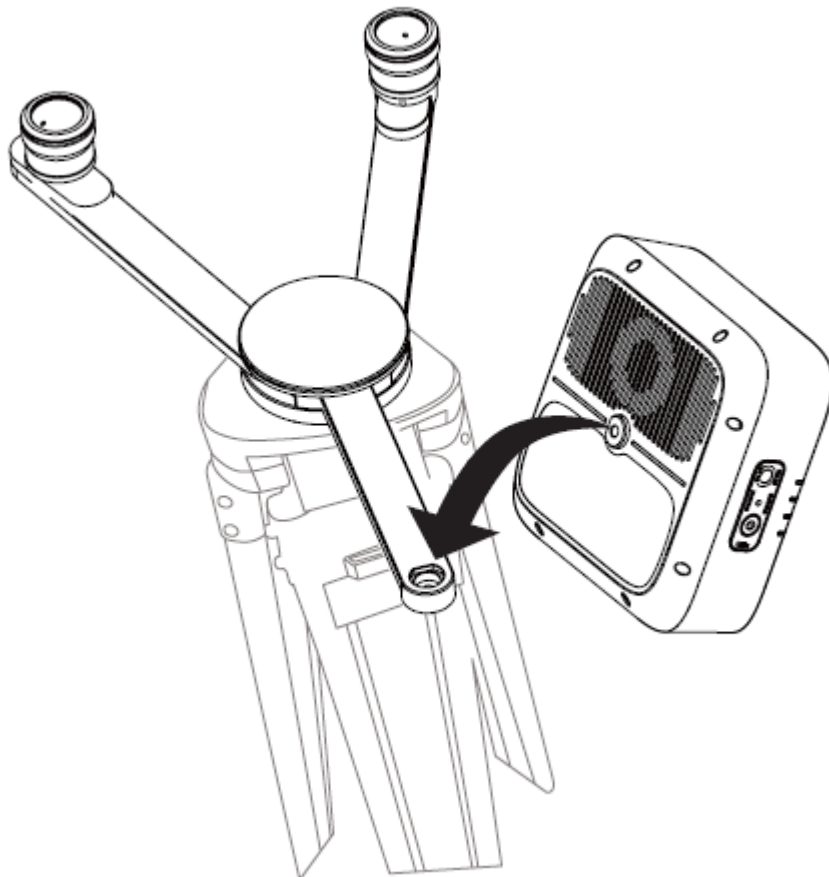


Set up the base station

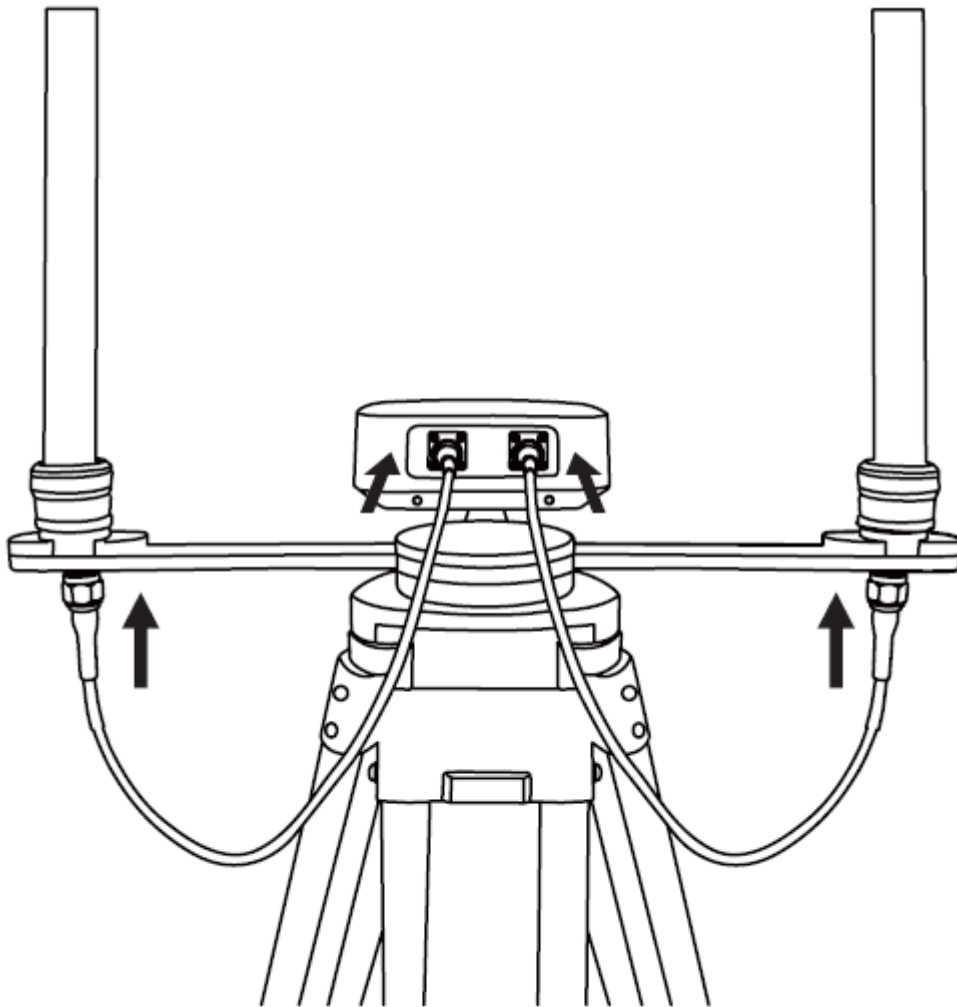
- 1 Unfold the tripod, install the base station tray, and lock the tray.



2 Install the base station body to the tray, and tighten the lock on the tray nut. Ensure that the base station is level and stable.

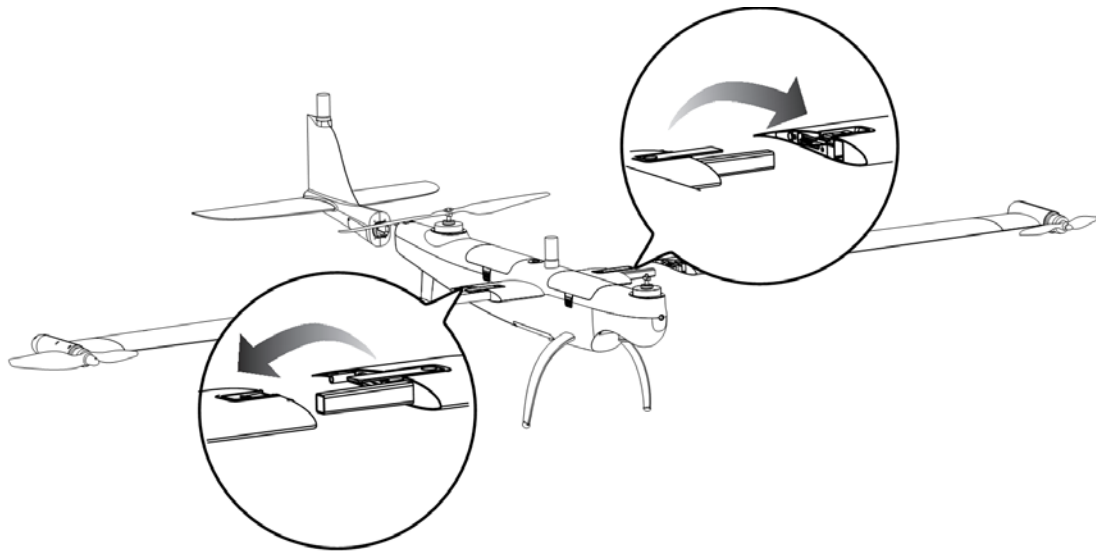


3 Install the antenna on the tripod, and connect the antenna feeder to the base station antenna port.

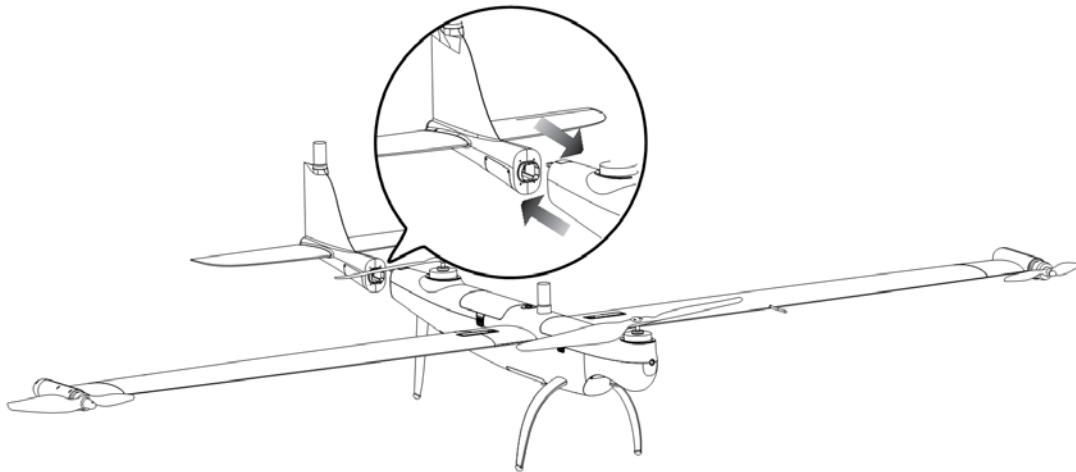


Assemble the aircraft

1 Install the left and right wings

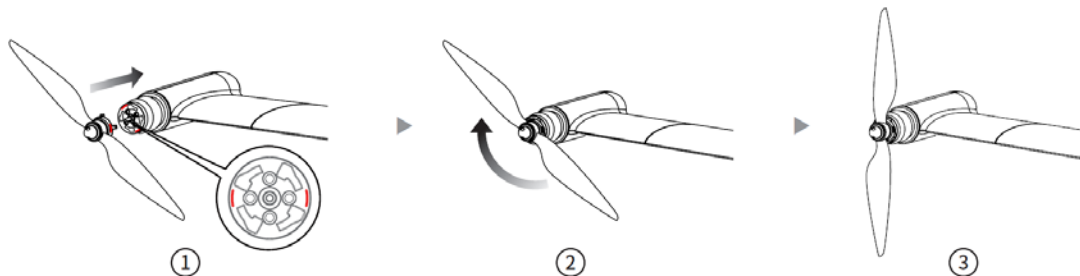


2 Install the tail



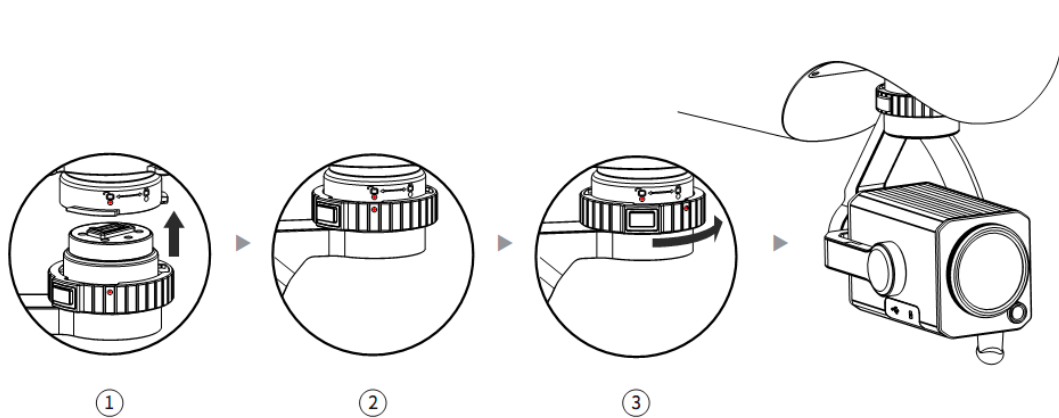
3 Install the wingtip propeller

Before installing or removing the propeller, turn off the power switch of the aircraft (the picture shows the installation process of the marked propeller and the marked motor base)

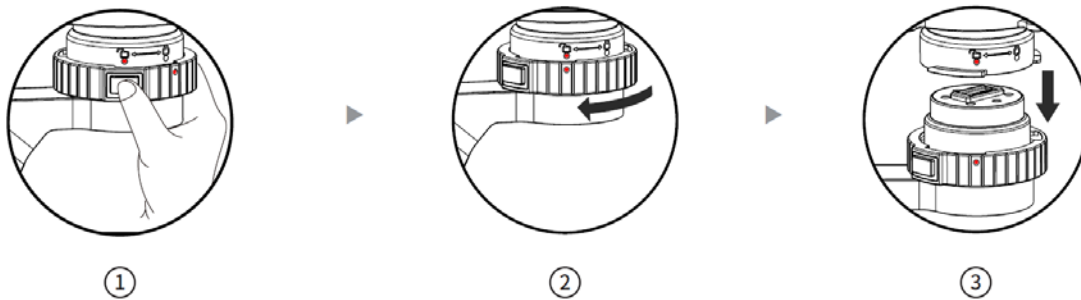


4 Install and mount

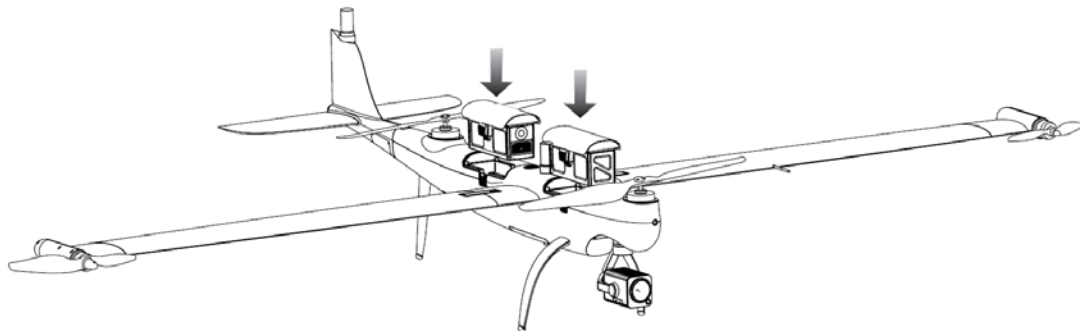
align and mount Rotate the lock ring to the locked position



5 Unlock the mount



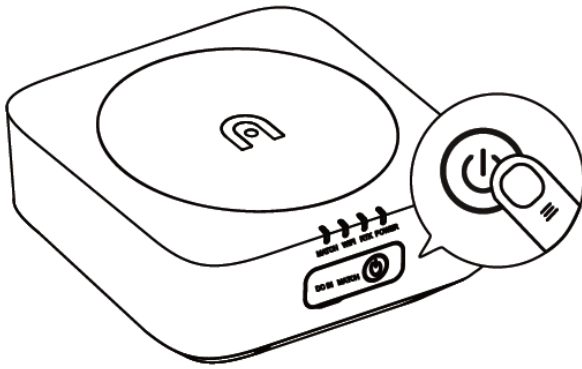
6 Install the intelligent flight battery



turn on the power | Activate the aircraft

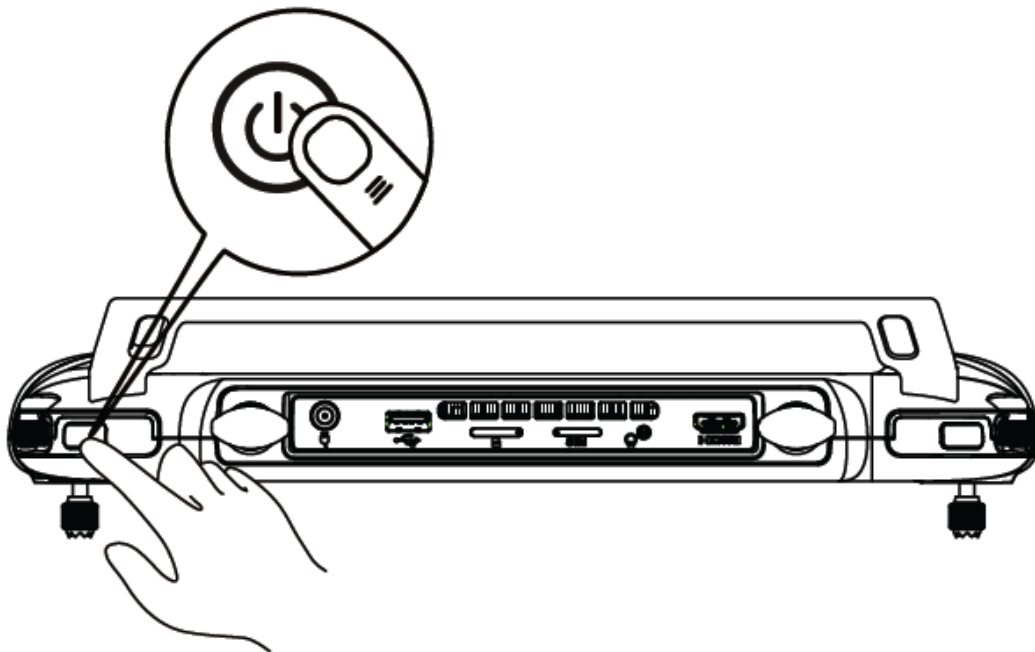
1 Turn on the power of the base station

Press and hold the power button for 1 second to turn on the base station



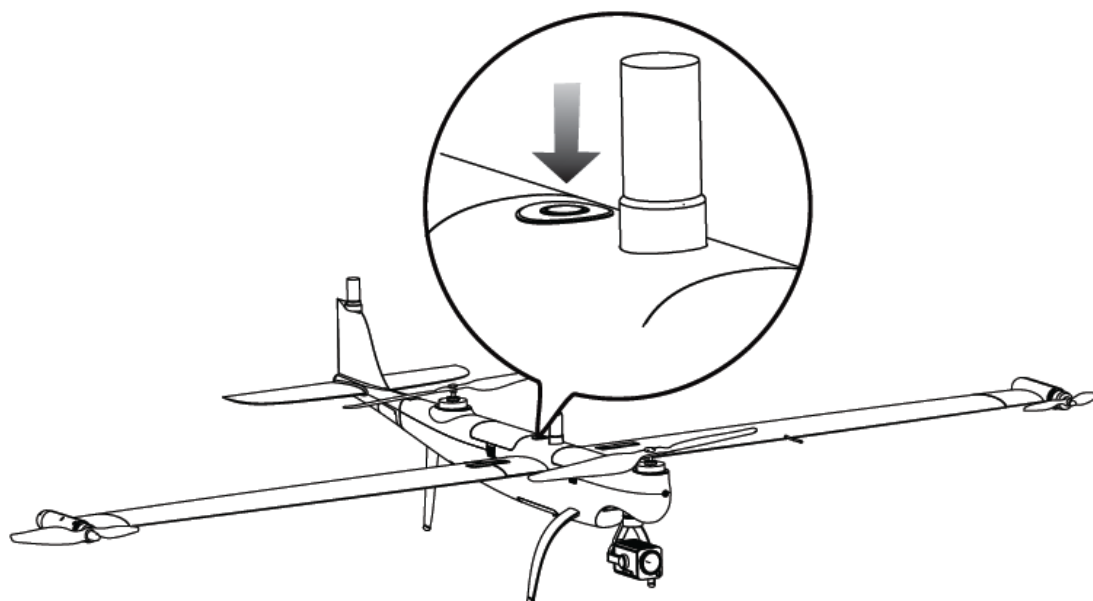
2 Turn on the ground station power

Long press the power button for 3 seconds to turn on the ground station.



3 power on the aircraft

long press the fuselage power button for 3 seconds to turn on the aircraft power



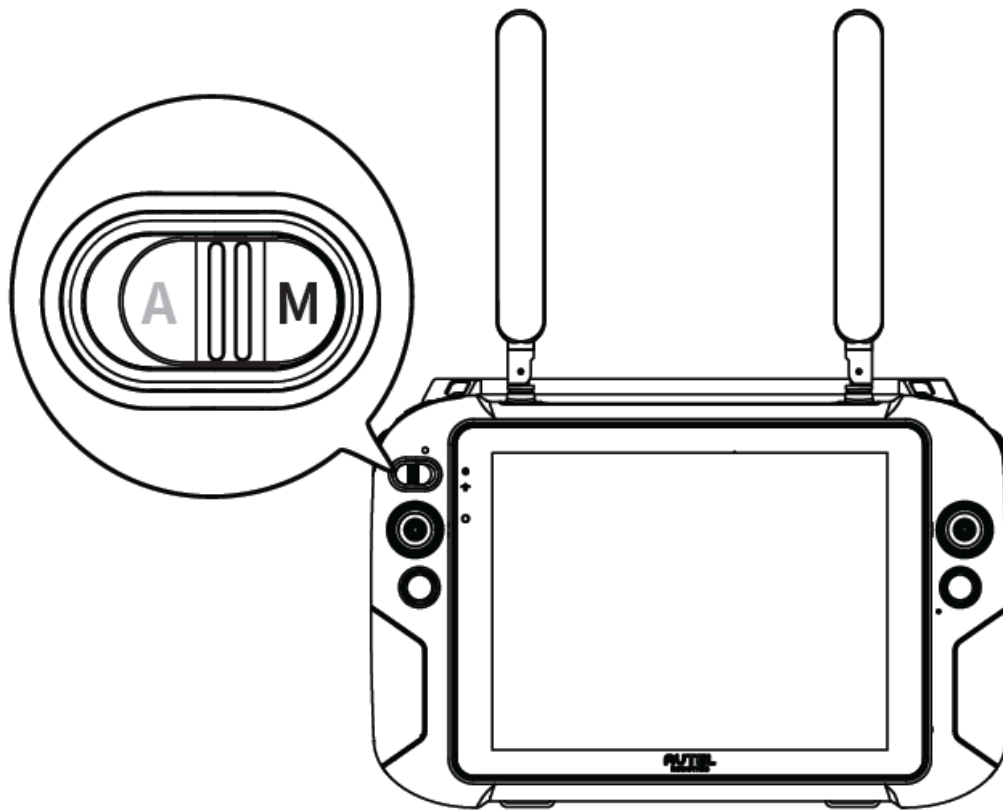
4 activate the aircraft to open the Autel Voyager APP, click the activation button to activate the aircraft.

The flight

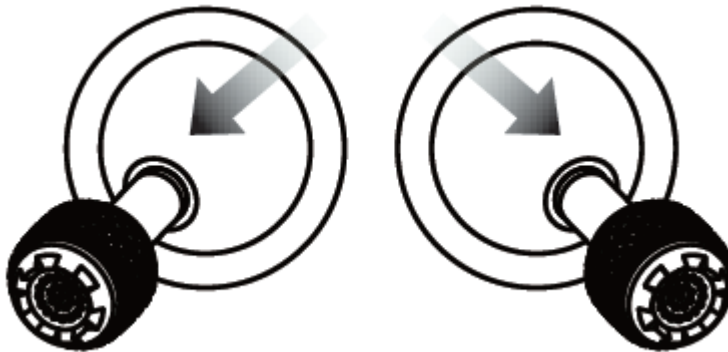
enters the Autel Voyager safe flight interface display. Before taking off, please place the aircraft on a flat ground with the tail facing you.

Manual take-off

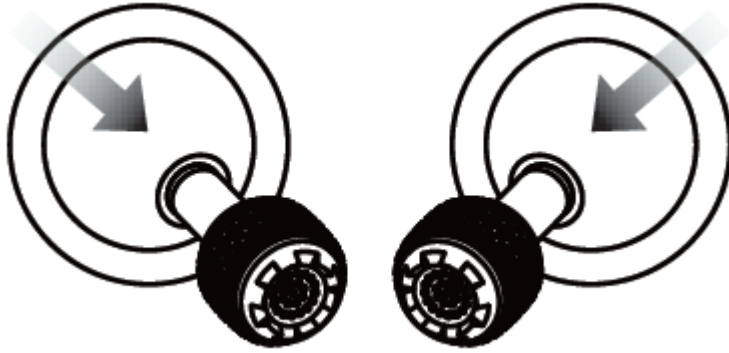
① Switch the ground station gear to M position (manual mode is not recommended for non-professional aerial photographers)



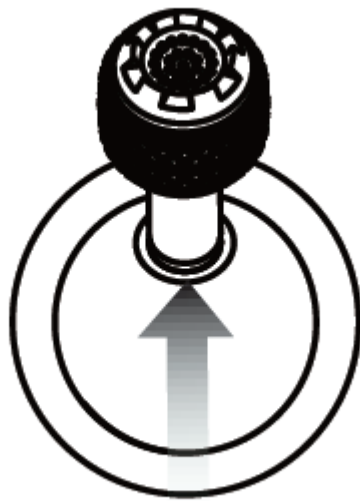
- ② Aircraft system status check
- ③ Simultaneously move the joystick in inner eight or outer eight ways and hold for 2 seconds to unlock the motor



or

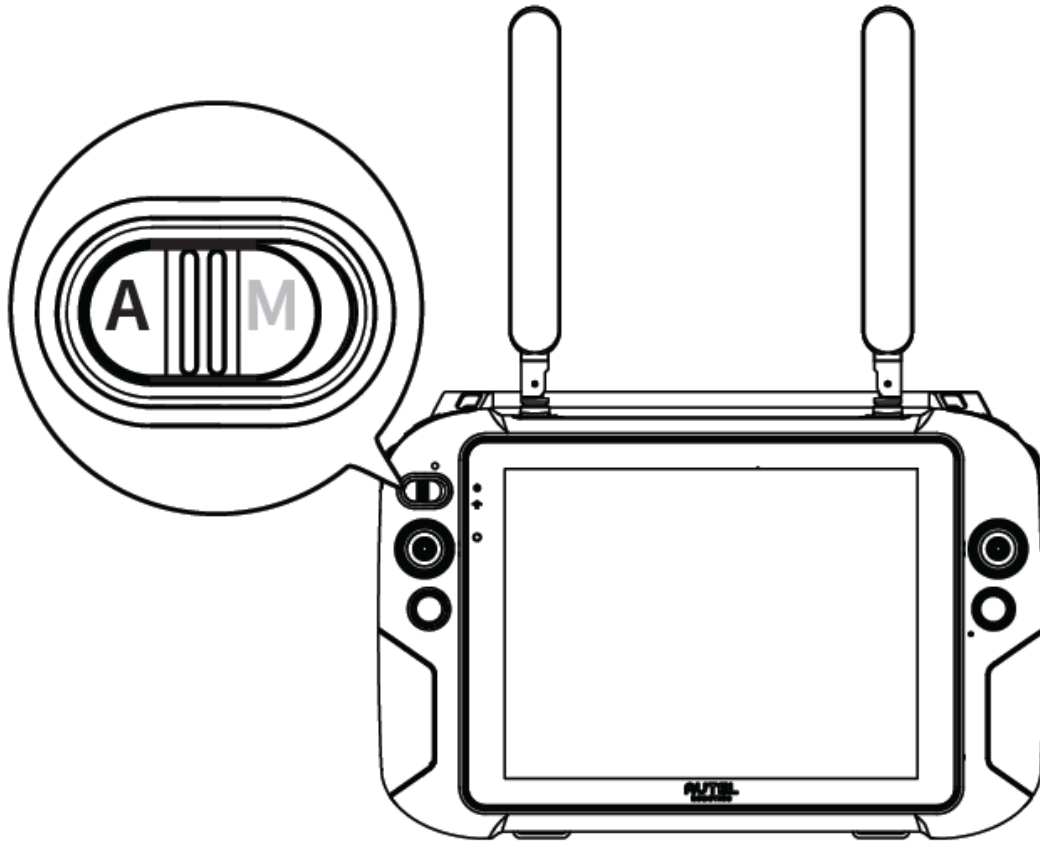


④ push up to the left Side stick (mode 2) The aircraft rises and

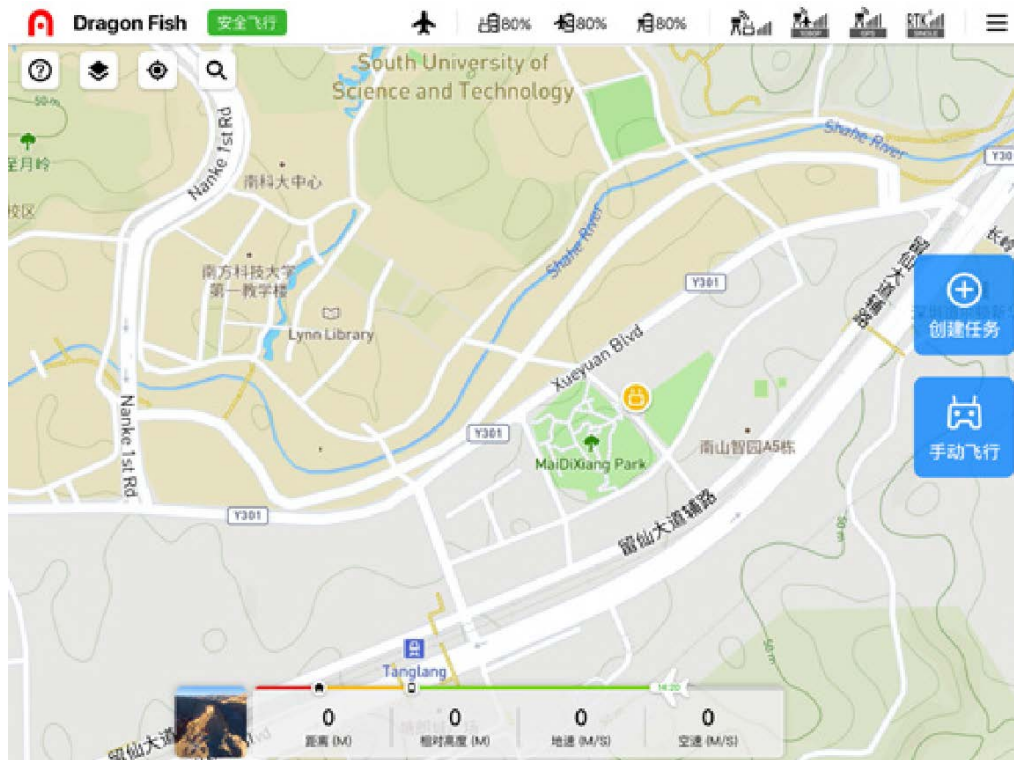


automatically takes off

① Switch the ground station position to A position

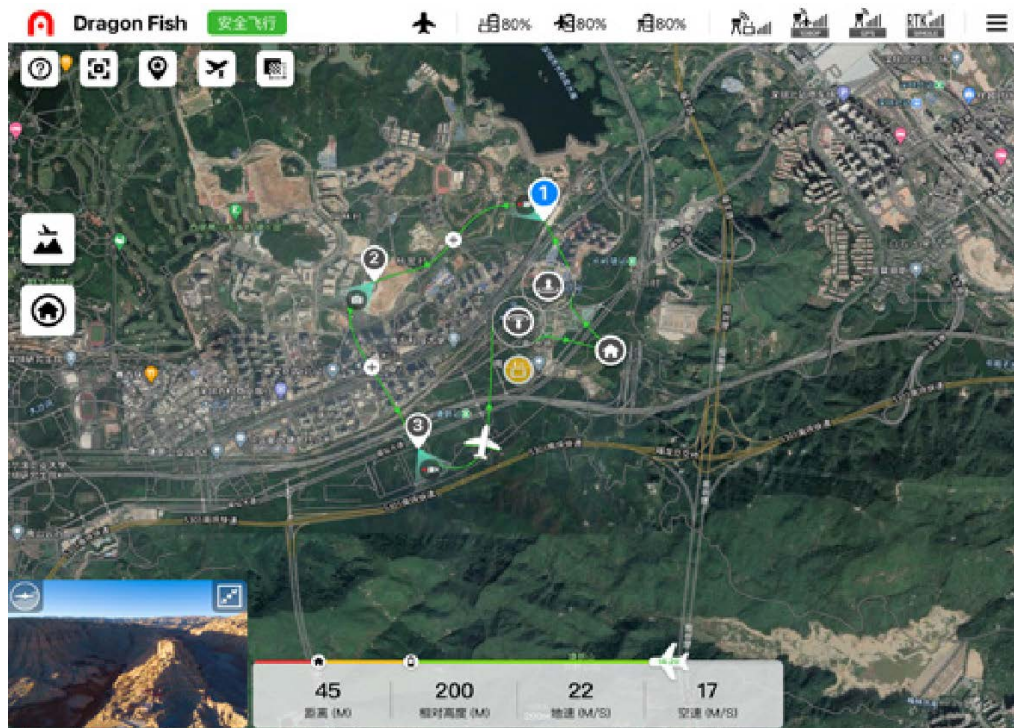


② Click the Create mission button to plan the flight mission



③ Aircraft system status check

④ In-flight flight interface display



specifications

Aircraft

size	2.2*1.1*0.45
weight (Excluding battery ,gimbal)	4.4kg
maximum load	1.5 kg
maximum take-off weight	8.5 kg
working frequency	900Mhz, 2.4 GHz
transmit power (EIRP)	2.4 GHz SRRC/CE/MIC/KCC: <20 dBm; FCC/NCC: <30 dBm 900MHz FCC: <30 dBm; Wi-Fi 2.4 GHz SRRC/CE/MIC/KCC: <20 dBm; FCC/NCC: <22 dBm 5.8 GHz

	<p>SRRC/NCC/FCC: <22 dBm</p> <p>CE: <14 dBm</p>
hover Accuracy (P-GPS)	<p>Vertical:</p> <p>±0.1 m (when the visual positioning is working normally)</p> <p>±0.5 m (when the GPS is working normally)</p> <p>±0.1 m (when the RTK positioning is working normally)</p> <p>Horizontal:</p> <p>±0.3 m (when the visual positioning is working normally)</p> <p>± 1.5 m (when GPS is in normal operation)</p> <p>±0.1 m (when RTK positioning is in normal operation) When</p>
RTK position accuracy is	<p>at RTK FIX:</p> <p>1 cm + 1 ppm (horizontal)</p> <p>1.5 cm + 1 ppm (vertical)</p>
Maximum rotation angular velocity	<p>Pitch axis: 180° /s</p> <p>yaw axis: 60°/s</p>
Maximum pitch angle	20°
Maximum roll angle	35°
Maximum ascent speed	<p>Vertical flight mode: 4 m/s</p> <p>Fixed-wing flight mode: 5 m/s</p>
Maximum descent speed (vertical)	<p>Vertical flight mode: 3 m/s</p> <p>fixed-wing flight mode: 5 m/s,</p>
maximum horizontal flight speed	30 m/s,
maximum flight altitude	6000 m,
maximum wind speed,	<p>fixed-wing flight: 15 m/s (level 7 wind) during</p> <p>vertical take-off and landing: 12 m / s (stage 6 wind)</p>

flight time maximum	120 min
IP rating	IP43
GNSS	GPS + GLONASS + BeiDou +
working temperature	-20 ° C to 50 ° C

9.7 inch strip Screen ground station

operating frequency	902-928 MHz; 2.4-2.4835 GHz
maximum signal effective distance (no interference, no obstruction)	NCC / FCC: 10 km CE / MIC: 5 km SRRC: 5 km
equivalent isotropic radiation power (EIRP)	902-928 MHz ≤30 dBm (FCC) 2.4-2.4835 GHz ≤30 dBm (FCC); ≤20 dBm (CE); ≤20 dBm (SRRC)
Wi-Fi protocol	Wi-Fi Direct, Wi-Fi Display, 802.11a/g/n/ac support 2 x 2 MIMO Wi-Fi
Wi-Fi operating frequency	2.4- 2.4835 GHz; 5.725-5.850 GHz
Wi-Fi equivalent isotropic radiated power (EIRP)	2.4-2.4835 GHz ≤30 dBm (FCC); ≤20 dBm (CE); ≤20 dBm (SRRC); ≤20 dBm (MIC); 5.725-5.850 GHz ≤30 dBm (FCC); ≤14 dBm (CE); ≤26 dBm (SRRC); ≤20 dBm (MIC)
Battery	name: Lithium polymer battery capacity: 8200mAh voltage: 11.4 V battery type: Li-Po energy: 93 Wh charging time: 180 minutes
battery life	about 3 hours

storage space	ROM 256GB + expandable (via micro SD card)
video output interface	HDMI interface
USB-A interface supply voltage / current	5V / 500m A
Working environment temperature	-20°C to 40°C
Storage environment temperature	-20°C to 60°C (within one month) -20°C to 45°C (within three months) -20°C to 30°C (within one year)
Charging Ambient temperature	0°C to 45°C
Satellite positioning module	GPS+GLONASS+Galileo three-mode
size	319×233×74 mm (antenna folded) 319×398×74 mm (antenna unfolded)
Weight	1987g

Base station

satellite receiving frequency point	simultaneous reception: GPS: L1, L2, L5 BeiDou: B1, B2, B3 GLONASS: F1, F2 Galileo: E1, E5A, E5B
Positioning accuracy	single point level: 1.5 m (RMS) vertical: 3.0 m (RMS) RTK level: 1 cm+1 ppm (RMS) Vertical: 1.5 cm + 1 ppm (RMS) 1 ppm: For every 1 km increase, the accuracy becomes 1 mm worse.

	For example, if the distance from the base station is 1 km, the accuracy is 1.1 cm.
Positioning update rate 1 Hz, 2 Hz, 5 Hz, 10 Hz and 20Hz	
cold start	<40 s
hot start	<10 s
recapture	<1 s
initialization reliability	> 99.9%
differential data transmission format	RTCM 2.X/3.X
data Link	image transmission, Wi-Fi
operating frequency	2.4000-2.4835 GHz; 902-928 MHz
equivalent isotropic radiated power (EIRP)	<p>image transmission</p> <p>2.4 GHz</p> <p>SRRC/CE/MIC/KCC: <20 dBm</p> <p>FCC/NCC: <30 dBm</p> <p>900MHz</p> <p>FCC: <30 dBm</p> <p>Wi-Fi2</p> <p>2.4 GHz</p> <p>SRRC/CE/MIC/KCC: < 20 dBm;</p> <p>FCC/NCC: < 22 dBm</p> <p>5.8 GHz</p> <p>SRRC/NCC/FCC: < 22 dBm</p> <p>CE: < 14 dBm</p>
communication from the base station and flight	<p>device: 30km (FCC)</p> <p>remote ground station and the base station: 200m</p> <p>(no interference, no blocking; erection of the base station antenna tripod i.e.</p>

	Height difference between the end of 2m, and in the ground station 10m, height from the ground earth station 1.2 m)
power consumption	7.5 W
power supply	5 to 20V DC
battery	type: lithium polymer battery capacity: 4950 mAh energy: 57.1 WH
working time	> 7.5 h
size	193 mm×177 mm×73 mm
(base station body + extension pole) weight	1275g
Dustproof and waterproof	IP65
working environment temperature	-20°C to 50°C

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

§ 15.19 Labeling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies requirement of FCC part 15.407(c).

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

IC STATEMENT

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

In order to avoid the possibility of exceeding the ISED radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Afin d'éviter la possibilité de dépasser les limites d'exposition aux fréquences radio de la ISED CNR102, la proximité humaine à l'antenne ne doit pas être inférieure à 20 cm (8 pouces) pendant le fonctionnement normal.

Note: The content is subject to update without notice. You can check the latest version on the official website of Autel Intelligent <https://www.autelrobotics.cn/>



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深圳市道通智能航空技术有限公司

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