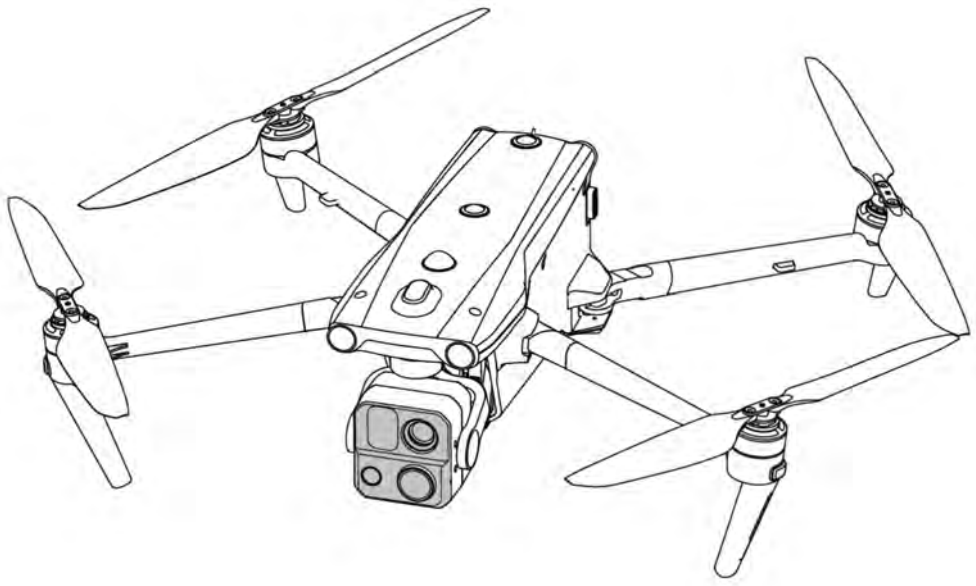
EVO Max Series

Multi-rotor Drone

User Manual

V1.2.3 2024.12



AUTEL ROBOTICS

EU Declaration of Conformity

The product complies with EU Declaration of Conformity. For details, please refer to EVO Max Series Multi-rotor Drone DoC.

Trademark Information

EVO Max™, Autel Enterprise™ and AUTEL® trademarks are registered trademarks of the Autel Robotics Co., Ltd. (hereinafter referred to as "Autel Robotics") in China or other countries/regions.

Copyright

Reading Assistance

- This manual is an electronic PDF document that supports high-resolution printing. If you are using a PDF reader such as Adobe Reader to read this manual, press Ctrl+F on Windows or Command+F on Mac to search for keywords.
- View the content structure in the table of contents and click on titles to navigate to the respective pages.

Legend

The following symbols are used in this manual to draw the user's attention to important safety and operating information. Please be sure to follow the notes or requirements under each symbol, otherwise, it may affect the safety features of the product or cause personal injury.

Symbol	Definition
	Warning: Alerts to a potentially hazardous situation.
	Important: Reminds the user to pay attention to a point.
	Remarks: Supplementary information.
	Tips: Quick tips to get the best possible experience.

Thank you for purchasing and using the EVO Max series multi-rotor drone from Autel Robotics. Relevant user documents for this product are provided in electronic form along with the product, and download links are provided in this manual. Before using this product, please carefully read the operation steps and precautions in this manual, so that you can quickly

understand the characteristics and usage methods of this product, so as to ensure safe use of the product.

	• The final interpretation right of this document and all related documents of this product belongs to Autel Robotics. • This document is subject to update without notice.

Term and Acronym

To facilitate reading, the following table displays terms and acronyms that may be used in the manual:

- Autel Robotics: Autel Robotics Co., Ltd.
- Aircraft: EVO Max Series Multi-rotor Drone, including EVO Max 4T, EVO Max 4T XE and EVO Max 4N.
- Battery: ABX40 Smart Battery or ABX41 Smart Battery
- Remote Controller (RC): Autel Smart Controller V3
- Flight Application: Autel Enterprise Application (Installed on the Remote Controller before leaving the factory)
- UAS: Unmanned Aircraft System
- UAV: Unmanned Aerial Vehicle
- C2: Command and Control
- Remote Identification System:
  - In EU, it is referred to as Direct Remote Identification
  - In other countries or regions except EU, it is referred to as Remote ID.
- DRI: Direct Remote Identification
- UGZ: UAS Geographical Zones
- IMU: Inertia Measurement Unit

Read Before Your First Flight

To ensure safe use of the EVO Max series multi-rotor drone, Autel Robotics provides you with the following documents and relevant tutorial videos. Please scan the QR codes in this manual or use the provided links to access them.

1. “Packing List”: A list of everything that should be included in the packing box.
2. “Disclaimer and Safety Operation Guidelines”: Instructions on how to operate the product safely.
3. “Battery Safety Operation Guidelines”: Basic knowledge and safe handling of smart batteries.
4. “Quick Start Guide”: Basic knowledge of operating the product.
5. “User Manual”: A guide for you to master the operation method of the product proficiently.
6. “Maintenance Manual”: Instructions on how to maintain the aircraft and its accessories.

We recommend that you first check the completeness of the items in the packing box according to the “Packing List,” then read the “Disclaimer and Safety Operation Guidelines” carefully, and then watch the tutorial videos and read the "Quick Start Guide" to get a basic understanding of how to use the product.

Before your first flight, please read the "Battery Safety Operation Guidelines" and "User Manual" carefully to get a more detailed understanding of how to use the product.

	• For users in Chinese Mainland, please refer to simplified Chinese version. For users in other countries or regions, please refer to corresponding language versions of the manual. • Due to nuance in different language versions, if you have questions on some content, please refer to the simplified Chinese version and English Version.

Getting Tutorial videos, User Documents, and Relevant Software

You can scan the QR codes below or visit the following links to access tutorial videos and user documents or download relevant software for the EVO Max series multi-rotor drone:

To watch tutorial videos, please visit:
https://www.autelrobotics.com/videos/evo-max-series/.

To download resources, please visit:
https://manuals.autelrobotics.com/?dir=/EVO%20Max%20Series/Aircraft/.

Manual Guide

This manual contains 7 main chapters and 2 appendices. You can refer to the corresponding chapters for the desired information.

Chapter	Chapter Overview
Product Overview	This chapter introduces the main functions of the EVO Max series multi-rotor drone.
Flight Safety	This chapter introduces the flight environment, wireless communication requirements, and important flight safety features of the aircraft.
Aircraft	This chapter introduces the functions and usage of various components of the EVO Max series multi-rotor drone.
Remote Controller	This chapter introduces the functions of the Autel Smart Controller V3, including how to use the controller to operate the aircraft.

Smart Battery	This chapter introduces how to use, store, and maintain the smart battery of the aircraft.
Flight Application	This chapter introduces the interfaces and functions of the flight application.
Firmware Updates and Maintenance	This chapter introduces how to perform firmware updates and routine maintenance for the aircraft.
Appendix A	This chapter provides technical specifications for the EVO Max series multi-rotor drone and its accessories.
Appendix B	EU Declaration of Conformity for EVO Max series multi-rotor drone.

Disclaimer

To ensure the safe and successful operation of this product, please read and fully understand all user documents listed above and strictly follow the operating instructions and steps described in this manual. Store the aircraft and its accessories out of the reach of children and pets. If you do not abide by the Safety Operation Guidelines, Autel Robotics shall not be responsible for any product damage or personal and property loss during use, and shall not provide any free warranty service. Never modify the product using any incompatible component or in any way that does not conform to the official instructions of Autel Robotics. Otherwise Autel Robotics will not be responsible for any product damage or personal and property loss caused by such behaviors. Please make sure that the operations you perform do not endanger the personal or property safety of yourself or those around you. By starting to use this product, you agree that you have read, understood, and accepted all terms related to this product. You undertake to be responsible for your own actions and all consequences arising therefrom. You undertake to use this product only for legitimate purposes and agree to these terms and any relevant policies or guidelines that Autel Robotics may establish.

Important

- When unboxing the product for the first time, carefully check the aircraft and other accessories included in the packing box according to the “Packing List”.
- The content of this manual will be updated from time to time based on the function updates of the product. Please be aware that Autel Robotics will not be responsible for any product damage or personal and property loss caused by usage of outdated user documentation. Every time before product update, please ensure the user documentation is the latest version.
- Please be aware that in the absence of flight logs from the flight application, Autel Robotics may not be able to analyze the causes of product damage or accidents and provide after-sales service.

Warning

- Using the aircraft involves certain safety risks. Do not allow minors to operate the aircraft.
- Do not use this product in places that children tend to stay.

- Before using this product, please obtain corresponding flight certificate according to the laws and regulations in the corresponding countries or regions in advance.
- Only users who have mastered the usage method can be allowed to conduct operations and daily maintenance on the aircraft and its relevant accessories.

End Use Statement

This product may be subject to export control laws in China, U.S, EU or other countries, which can only be authorized for civil (not military) use in sale, export or domestic transfer. Users need to confirm the product will not be used in the following situations, otherwise he or she will assume all losses caused by usage in such situations and legal responsibility on their own:

1. any military end use;
2. used for nuclear weapons, biological or chemical weapons or missiles that carry those weapons;
3. export or re-export or transfer it to any entity or person sanctioned by China, U.S, EU or any other government with jurisdiction;
4. export, re-export or transfer it to Cuba, Iran, North Korea, Syria, Crimea, Sevastopol and other areas under embargo;
5. any device or equipment that supports monitoring purpose.

Warranty Policy

Autel Robotics guarantees users who purchase products through its official authorized channels that:

- Under normal use, the Autel Robotics products you purchase will be free from material and workmanship defects during the warranty period.
- If you can provide a valid purchase receipt, the warranty period of this product is calculated from the midnight of the next day after you receive the product.
- If you cannot provide a valid purchase receipt, the warranty start date will be postponed by 90 days from the date of manufacture indicated by the product's serial number or as defined by Autel Robotics.

Tip

- For the after-sales policy of the product, please visit: https://www.autelrobotics.com/service/policy/.

After-Sales Support

If you have any questions or concerns about our products, please contact Autel Robotics customer support:
Hotline: (844) MY AUTEL or (844) 692-88 35

Maintenance Service

If your equipment needs to be inspected or repaired, please contact Autel Robotics through the following methods:

- Email after-sale@autelrobotics.com or support@autelrobotics.com.
- Call Autel Robotics customer support at (844) MY AUTEL or (844) 692-88 35.

- Contact dealers authorized by Autel Robotics.

Important
• All data stored on the product may be erased during the repair process. To avoid data loss, please back up important files in your aircraft or remote controller before the product is under warranty.

Update Log

The content of this manual will be updated irregularly. The update log is as follows:

Version	Date	Revisions
V1.1	2023.09	• Added introduction of EVO Max 4N model. • Updated usage descriptions related to remote controller firmware (V1.6.0.3) and Autel Enterprise App (V1.4.1). • Optimized document structure.
V1.1.1	2023.11	• Added detail information of the image transmission frequency. • Added warnings for some chapters. • Adjustment of the light language of the rear arm light during flight.
V1.1.2	2023.12	• Added detail information of the Wi-Fi frequency. • Optimized description of Geo-fencing section.
V1.1.3	2024.01	• Added UGZ import function.
V1.1.3.1	2024.01	• Added description of power-on self-test flight safety strategy.
V1.1.3.2	2024.02	• Added term and acronym. • Added gravity center limitation. • Added list of safeguard. • Added the Canada part in Legal Use Notice.
V1.2	2024.07	• Updated Flight Application to V2.1.x • Updated aircraft and RC firmware to V1.8.2.x • Moved frequency matching function to shortcuts and added multiple-aircraft matching operation • Removed rectangle mission in the shortcuts and added it into polygon mission • Added flight application user manual access in the shortcuts • Changed the model of smart battery to ABX40 and added ABX41 smart battery.

V1.2.1	2024.08	• Adjusted some function descriptions. • Added Fusion 4T XE parameters and relevant description. • Added obstacle description about auto landing process.
V1.2.2	2024.09	• Added 1158 propeller and 1136 propeller description.
V1.2.3	2024.12	• Added Warning Information Reference Table. • Added Post-flight inspection checklist. • Update the arm light status table.

Table of Contents

Chapter 1 Product Overview

1.1 Introduction

The EVO Max series multi-rotor drone is equipped with an industry-leading high-performance processing chip, has powerful autonomous flight and mesh network mission capabilities, is integrated with a visual obstacle avoidance sensing system and a millimeter-wave radar sensing system, and has an omnidirectional obstacle avoidance system. With an excellent power management system, the aircraft can reach a flight time of up to 42 minutes. Also, it utilizes a three-axis stabilized gimbal, allowing you to view observed videos and data from different lenses of the gimbal camera in real time through the flight application.
The EVO Max series multi-rotor drone adopts a foldable arm design and can hold its propellers for easy storage and transportation. The aircraft is equipped with a PSDK interface at its top, allowing you to add different industry-specific mounts on the aircraft to meet various operational needs.
At its top, the aircraft is equipped with a high-intensity strobe for indicating the aircraft's position in the air, while at its bottom, it has auxiliary lights to improve visual positioning performance in weak light conditions, thus enhancing flight safety during landing.
The remote controller (hereinafter referred to as "RC") adopts the Autel SkyLink 2.0 Image Transmission solution, has strong anti-interference capabilities. After matching with the aircraft, it can achieve stable transmission of HD videos to its display screen. The RC is equipped with multiple function buttons, enabling quick aircraft control and camera operation.
The remote controller features a 7.9-inch 2048×1536 high-brightness touchscreen with a maximum brightness of 2000 nits. It adopts a customized Android system that supports the installation of third-party apps and offers functions such as satellite-based positioning, Wi-Fi, Bluetooth, and HDMI output. Moreover, it supports the PD60 fast charging protocol, allowing it to operate up to 4.0 hours on a full charge.

Tip

- The visual obstacle avoidance sensing system and millimeter-wave radar sensing system are limited in usage environments and regions. Please read the "Disclaimer and Safety Operation Guidelines" to learn about relevant safety precautions.
- The flight time of the aircraft is measured in a laboratory environment (the aircraft flies at a constant speed of 10 meters per second in a light breeze environment) and is for reference only. The actual flight time may vary depending on factors such as environmental conditions and flight mode.
- The 4.0-hour operating time of the remote controller is measured with the screen brightness set to 50% and is for reference only. The operating time may vary in different scenarios.

Warning

- If multiple aircraft are flying in an area at the same time, please keep an appropriate air distance to avoid any accidents.

1.2 What's In The Rugged Case

The aircraft is packed and transported in a rugged case (with built-in shock absorption protective materials) and the items inside the case are as follows:

Important

- Upon receiving the product, please inspect the rugged case in its integrity and confirm that its outer packaging is intact, with no signs of unpacking. Meanwhile, save the unboxing video for potential logistics damage claims.
- After daily use, please put the aircraft and other items in the case and store the case in a dry and cool environment. When moving, please do not drop or bump the case.

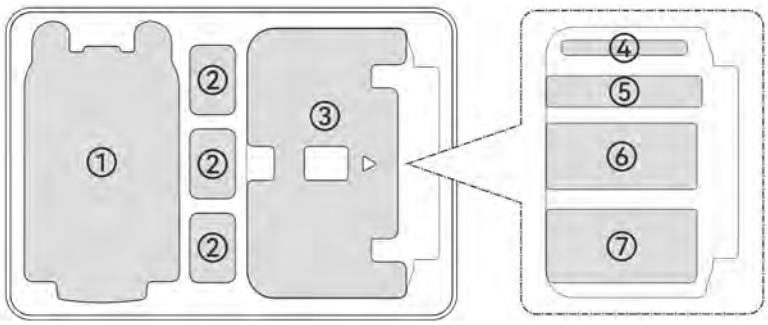


Fig 1-1 What's in the Rugged Case

Table 1-1 Items inside the Case

No.	Item	Note
1	Aircraft	Includes a gimbal camera, a gimbal protective cover, propellers, and 64GB microSD storage card. When storing it, please fold the arms and hold the propellers.
2	Smart Battery	Comes with 1 battery and provides 3 battery storage slots.
3	Remote Controller	Comes with 1 RC, includes RC protective case.
4	Document Box	Includes "Quick Start Guide" and a camera lens cleaning cloth. To obtain user documents, users can also scan the corresponding QR code.
5	Reserved Storage Slot	/
6	Battery Charger	Includes a charger and an AC power cable.
7	Accessory Area	Includes a remote controller charger, a USB-C to USB-C data cable, a USB-C to USB-A data cable, a remote controller lanyard, spare propellers (1158CW×1 and 1158CCW×1), and spare sticks

		(×2).

1.3 Product Acceptance Checklist

After unboxing the product, please check whether the actual items match the items described in the following packing list and carefully inspect the appearance of the aircraft and all accessories. If anything missing or damage is found, please contact Autel Robotics After-Sales Support or authorized dealers promptly.

Table 1-2 Packing List

No.	Item	Model/Specification	Quantity	Note
1	Aircraft	MDX	1	Includes 4 propellers, 1 gimbal camera (as per the purchased model), a gimbal protective cover and 64GB microSD storage card.
2	Gimbal Camera	Fusion 4T Fusion 4T XE Fusion 4N Fusion 4T Pro	1 1 1	EVO Max 4T Gimbal. EVO Max 4T XE Gimbal. EVO Max 4N Gimbal. EVO Max 4T Pro Gimbal.
3	Gimbal Protective Cover		1	
4	Smart Battery	ABX40 or ABX41	1	As per the purchased model
5	Remote Controller	EF9-3	1	Autel Smart Controller V3 comes with 2 sticks and 2 antennas.
6	Battery Charger	MDX120W	1	
7	AC Power Cable		1	Used with the battery charger.
8	Remote Controller Charger	GaN-001US	1	
9	USB-C to USB-C Data Cable		1	Used with the remote controller charger.
10	USB-C to USB-A Data Cable		1	

11	Spare Propeller	1158CW and 1158CCW	1	One CW propeller and one CCW propeller.
12	Spare Stick		2	
13	Remote Controller Lanyard		1	
14	Smart Controller Cover		1	
15	"Quick Start Guide"		1	Placed in the document box.
16	Lens Cleaning Cloth		1	Placed in the document box.
17	Product Certification		1	

1.4 UAS Introduction

Before first flight, please perform a comprehensive inspection of the UAS to ensure that all components meet the following requirements. A complete UAS consists of two parts: the aircraft and the remote controller. The relevant requirements and explanations are as follows:

■ Aircraft Components And Payload

Please be noted that a complete aircraft includes the aircraft body, gimbal camera, propellers, and the battery. Any damage or missing of these components may result in a malfunction.
The RTK module is an optional accessory for enhancing aircraft positioning accuracy. Users can contact Autel Robotics to purchase the RTK module based on their needs.

Table 1-3 Aircraft Component List

Item	Product Info	Manufacturer	Note
EVO Max 4T Aircraft	Max. weight: 1640 g Max. Dimension: 563×657×147 mm **US:** EAN: 6924991127420 UPC: 889520207423 **EU:** EAN: 6924991125167 UPC: 889520205160	Autel Robotics	Includes propellers, ABX40 smart battery, and a Fusion 4T Gimbal. The firmware version of the aircraft is V1.8.2.237 or higher.
EVO Max 4N Aircraft	Max. weight: 1665 g Max. Dimension: 563×657×147 mm	Autel Robotics	Includes propellers, ABX40 smart battery, and a Fusion 4N

	US: EAN: 6924991125617 UPC: 889520205610 **EU:** EAN: 6924991127260 UPC: 889520207263		Gimbal. The firmware version of the aircraft is V1.8.2.237 or later.
EVO Max 4T XE EVO Max 4T Pro Aircraft	Max. weight: 1635 g Max. Dimension: 563×657×147 mm **US:** EAN: 6924991135470 UPC: 889520215473 **EU:** EAN: 6924991138020 UPC: 889520218023	Autel Robotics	Includes propellers, ABX40 smart battery, and a Fusion 4T XE Gimbal. The firmware version of the aircraft is V1.8.2.237 or later.
ABX40 Smart Battery	Max. weight: 520 g Max. Dimension: 158.4×74.3×50.7 mm EAN: 6924991124412 UPC: 889520204415 Type: Lithium Ion Polymer Rechargeable Battery Capacity: 8070mAh Number of batteries needed for the aircraft: 1. Number of backup batteries: Optional, up to users' requirement	Autel Robotics	Included or Retail Sale. The firmware version is V0.4.29.1 or later.
ABX41 Smart Battery	Max. weight: 533 g Max. Dimension: 158.4×74.3×50.7 mm EAN: 6924991132349 UPC: 889520212342 Type: Lithium Ion Polymer Rechargeable Battery Capacity: 8070mAh Number of batteries needed for the aircraft: 1. Number of backup batteries: Optional, up to users' requirement	Autel Robotics	Included or Retail Sale. The firmware version is V0.4.29.1 or later.
1136 CW/CCW Propeller	Max. weight: 10.8 g Max. Dimension: 11 inches EAN: 6924991125297	Autel Robotics	Included or Retail Sale (EU Excluded). End of service, please

	UPC: 889520205290 Number: 4 Number of blades in a propel: 2. Type: Nylon + glass fiber rotor blade		replace it with 1158 propellers.
1158 CW/CCW Propeller	Max. weight: 10.3 g Max. Dimension: 11 inches EAN: 6924991133506 UPC: 889520213509 Number: 4 Number of blades in a propel: 2. Type: Nylon + carbon fiber rotor blade	Autel Robotics	Included or Retail Sale.
XRT-2301X RTK Module	Max. weight: 29 g Max. Dimension: 72×48×45 mm EAN: 6924991127222 UPC: 889520207225	Autel Robotics	Optional

Tip

- For details about how to install a RTK module, see "3.12 Extension Interface" in Chapter 3.
- All the above components have passed Autel Robotics safety and compatibility tests. Users can purchase and use accordingly.
- In case of adding any third-party payload before flight, please reasonably evaluate the mounting weight and the gravity center of the aircraft after mounting. For more details, see "2.5 Declaration of Maximum Take-off Mass" In Chapter 2.

■ Remote Controller Components & The App

A complete remote controller includes the controller body (with properly functioning display, touchscreen, and button), joysticks, and antennas. Any damage or missing of these components may result in a malfunction of RC's corresponding feature. The built-in flight application software, which serve as the only human-machine interface to control the aircraft, should be maintained to ensure comprehensive control over the UAS.

Table 1-4 Remote Controller Components List

Item	Product Info	Operating System	Manufacturer	Note
EF9-3	Max. weight: 1194 g Max. Dimension: 269×302×87 mm **US:**	Android 11	Autel Robotics	Includes 2 command sticks and 2 antennas.

	EAN: 6924991130819 UPC: 889520210812 **EU:** EAN: 6924991128878 UPC: 889520208871			

Table 1-5 Firmware and Software version explanation

No.	Item	Release Version	Note	Release Date
1	Image Transmission	V1.8.2.237	/	24Q3
2	Remote Controller	V6.0.4.6	/	24Q3
3	Android System	V1.8.2.237	Based on Android 11	24Q3
4	Autel Enterprise	V2.1.119	Flight Application	24Q3

Tip

- The above information is for reference only. Both the remote controller and the aircraft have been upgraded to the latest versions before shipment. Users can use accordingly.
- When the remote controller and the aircraft are matched in frequency and the remote controller is connected to the internet, the flight application will automatically check for firmware updates. For more instructions, see "7.1 UAS Components Updates" in the Chapter 7.
- When there's any prompt for new version upgrade, please follow the instructions to update in time to address any issues and to enjoy the new features. Users also have the option to temporarily pause updates, which won't affect the existing functions.

Table 1-6 List of Pre-installed Apps on the Remote Controller

NO.	Pre-installed App	Software Version	Note
1	Autel Enterprise	V2.1.119	Flight Control Software
2	Files	11	System Software
3	Gallery	1.1.40030	System Software
4	Chrome	68.0.3440.70	System Software
5	Settings	11	System Software
6	Maxitools	2.45	System Software
7	Google Pinyin Input	4.5.2.193126728-arm64-v8a	System Software
8	Android Keyboard (AOSP)	11	System Software

Tip

- Users can, based on their own needs or preference, replace those system basic applications with third-party applications.

Chapter 2 Flight Safety

When unboxing the product for the first time, please scan the QR code provided in the "Quick Start Guide" to access the latest electronic version of this manual, and then carefully read and understand the contents of this manual, so as to ensure safe and proper use of the aircraft.
Before operating any actual flight, be sure to first carry out relevant basic flight training (such as watching tutorial videos and receiving guidance from a professional) and be familiar with the functions and characteristics of the aircraft and the remote controller.
Before the flight, please understand all the local laws and regulations regarding civil unmanned aerial vehicles (UAVs) in advance, and according to the local flight requirements and restrictions, select an appropriate flight environment and set a reasonable flight altitude for legal flights. There may be legal risks when using an aircraft in an unsuitable flight environment.
Before the flight, be sure to read the "Disclaimer and Safety Operation Guidelines" to understand all safety precautions.

Note

- For users in other regions except mainland, China, please refer to corresponding language version of this manual.

2.1 Legal Use Notice

When unboxing the product for the first time, please comply with your local regulations in accordance with the laws and regulations of the following countries and regions to complete the real-name registration of the aircraft.

2.1.1 Chinese Mainland

- According to the “Regulations on Real-name Registration of Civil Unmanned Aerial Vehicles” issued by the Civil Aviation Administration of China (CAAC), upon purchasing a civil drone, the owner must register the drone on the “Civil UAV Comprehensive Management Platform” (https://uom.caac.gov.cn) in real name and paste the QR code registration mark on the drone. Those who fail to implement real-name registration and paste registration marks will be punished by the regulatory authorities in accordance with relevant regulations.
- The aircraft is a light unmanned aircraft. Autel Robotics prohibits youth under the age of 18 from operating this aircraft.
- We recommend that you read the “Interim Regulations on the Management of Unmanned Aircraft Flights” before flying to learn more about the regulations.
- Before flight, users should, in advance, obtain lifting approval document of corresponding flight space from local aviation authority and report flight activities.

Important

- According to the regulations outlined in the "Civil Unmanned Aerial Vehicle System Safety Requirements" in Chinese mainland, users are required to input their real-name registration number and Remote ID in the flight application after registration. Additionally, users should enable the Civil Aviation Administration's flight dynamic data reporting function and the aircraft will automatically enable Remote ID broadcast after power-on self-check. For more details, see "2.14 Remote Identification" in this Chapter and "6.5 "Settings" Interface" in Chapter 6.

2.1.2 The U.S.

- Before using a drone, the owner of the drone must register the drone on the FAA website (https://faadronezone-access.faa.gov/#/) in real name (Registrants must be 13 years of age or older). Failure to register an unmanned aircraft that is required to be registered may result in regulatory and criminal penalties.
- The Federal Aviation Administration (FAA) may assess civil penalties up to $27,500. Criminal penalties include fines of up to $250,000 and/or imprisonment for up to three years.

2.1.3 Canada

- Drone pilots must be 14 or older and always carry a valid drone pilot certificate while operating their drone. A valid drone pilot certificate is a printed or electronic document issued by Transport Canada. No other form of certification will be accepted. For details about how to get a drone pilot certificate in Canada, refer to the following link: https://tc.canada.ca/en/aviation/drone-safety/drone-pilot-licensing/getting-drone-pilot-certificate
- Before flight, please register your drone through the following portal: https://tc.canada.ca/en/aviation/drone-safety/drone-management-portal
- The aircraft belongs to the muti-rotor aircraft type. You can only fly them in following operating environments:
  1. In controlled airspace. For details about the controlled airspace, please refer to relevant Canadian law: https://tc.canada.ca/en/aviation/drone-safety/learn-rules-you-fly-your-drone/choosing-right-drone
  2. Near people. For details about flying a drone near people, please refer to relevant law: https://tc.canada.ca/en/aviation/drone-safety/learn-rules-you-fly-your-drone/choosing-right-drone
- Violation of relevant laws and regulations may incur penalty of up to 3000 dollars (for person) or 15000 dollars (for company) or jail time.

⚠ Warning

- Please do not fly over people, which may cause physical damage to people around.

2.1.4 The EU

- Drone operators/owners must register with the National Aviation Authority (NAA) of the Member State in which they reside. (https://www.easa.europa.eu/drones/NAA).
- This product is not a toy and should not be used by children under the age of 16.
- In the EU, the aircraft is a drone classified as C2. When using the aircraft, you must comply with the following operational limitations in subcategory A2 in an urban environment:
  1. Must not overfly uninvolved people.
  2. Maintain a horizontal distance of 30 meters from uninvolved people (can be reduced to 5 meters if the low-speed function is activated).
  3. Maintain flight altitude below 120 meters above ground level.
- The aircraft can also fly in subcategory A3.
- Remote pilot should obtain a 'Remote pilot certificate of competency' for A2 'open' subcategory by:
  1. Having a 'Proof of completion for online training' for A1/A3 'open' subcategory.
  2. Conducting and declare a practical self- training.
  3. Passing an additional theoretical exam at the NAA or proctored online.
- Before using this product, click the following link to learn the detailed information on safety operation limitations about **EASA Class 2 drones with low speed mode**. (https://www.easa.europa.eu/document-library/general-publications/drones-information-notices).

Important

- According to the relevant laws and regulations in the EU, the aircraft is equipped with sensors (gimbal cameras) that can detect personal data. Users are required to register in compliance with the laws and regulations when using the aircraft.
- After registration, please enter Remote ID in the flight application before flight. For more information, see "2.14 Remote Identification" in this chapter.

2.1.5 Other Countries and Regions

Before flight, consult local legal professionals or aviation authorities to learn about local laws, regulations, and policies regarding civil UAVs and follow relevant guidelines for legal registration.

2.2 Flight Operation Guidelines

Before flight, be sure to understand and adhere to the following flight operation guidelines to avoid serious consequences and legal violations:

- Do not operate the aircraft while under the influence of alcohol, drugs, medication, dizziness, fatigue, or nausea, or in any other poor physical or mental conditions.
- Do not fly near manned aircraft, and make sure that the aircraft does not interfere with large manned aircraft in the same flight path when flying. Keep vigilant at all times and avoid other aircraft. Land immediately if necessary.

- Do not fly in areas prohibited by local regulations without authorization. The prohibited areas may include airports, borders, major cities, densely populated areas, large event sites, emergencies (e.g., forest fires), and sensitive building facilities (e.g., nuclear power plants, power stations, transformer stations, prisons, traffic arteries, government buildings, and military facilities).
- Do not use the aircraft at large event sites, including but not limited to sports arenas and concerts.
- Do not fly in airspace above the altitude limit specified in regulations.
- Do not use the aircraft to carry any illegal or hazardous goods.
- Be aware of the flight activity category (e.g., recreational, official, or commercial). Before flying, be sure to obtain the necessary permits from relevant authorities. If necessary, consult local legal professionals for a detailed explanation of flight activity categories.
- When using the aircraft for filming or photography, respect the privacy rights of others. Do not use the aircraft for unauthorized surveillance activities, including but not limited to monitoring individuals, groups, events, performances, exhibitions, or buildings.
- Note that using cameras to film or photograph individuals, groups, events, performances, exhibitions, or buildings without authorization may infringe upon copyrights, privacy rights, or other legal rights of others. Therefore, it is essential to familiarize yourself with and comply with local laws and regulations before using the aircraft.

2.3 Flight Environment Requirements

- Do not fly in severe weather conditions such as strong winds, snow, rain, heavy fog, dust storms, extreme cold, or extreme heat. The aircraft has a maximum wind resistance of 12 meters per second during take-off and landing.
- Make sure that the aircraft takes off from and lands on open, unblocked, and flat ground, away from crowds, nearby buildings, trees, etc., and within a visual line of sight for flight safety, so as to ensure flight safety.
- Due to insufficient lighting conditions, no GNSS signal, and narrow space, some functions of the aircraft may be limited. Always pay attention to the surrounding environment of the aircraft and maintain control of the aircraft at all times.
- When flying at night, turn on the strobe and make sure that the Aux Light is enabled during landing for flight safety.
- Do not take off from or land on moving surfaces such as moving vehicles or boats.
- Do not take off from or land on sandy surfaces to prevent sand particles from affecting the motor service life.
- The performance of the aircraft is subject to ambient temperature and air density. Please use the aircraft within the temperature range of -20℃ to +50℃ and fly the aircraft in regions at an altitude below 4000 meters (with ABX40 smart battery) or 3000 meters (with ABX41 smart battery).
- When using the aircraft in post-disaster scenarios such as fires, explosions, lightning, storms, tornadoes, heavy rain, floods, earthquakes, and dust storms, pay special attention to the safety of take-off and landing points and changes in the surrounding environment and prioritize personal safety.
- Keep the aircraft away from steel structures, iron ore mines, etc., to avoid interfering with the compass of the aircraft.

2.4 Wireless Communication Requirements

- Keep the aircraft at least 200 meters away from areas with strong electromagnetic interference, such as radar stations, microwave stations, and mobile communication base stations.
- Keep the aircraft at least 2000 meters away from drone interference equipment. Otherwise, the drone interference equipment and the aircraft cannot work at the same time.
- When flying near sources of electromagnetic interference, exercise caution and continuously observe and assess the stability of image transmission signals and videos of the remote controller. Common sources of electromagnetic interference include but are not limited to high-voltage power lines, high-voltage substations, mobile communication base stations, and television broadcasting signal towers. If the aircraft encounters significant signal interference when flying near these locations, it may not be able to work normally. In this case, please return to the home point for landing as soon as possible.
- Fly in open, unblocked areas or highlands. Tall mountains, rocks, urban buildings, and forests may block the GNSS signal and image transmission signal of the aircraft.
- It is recommended to turn off unnecessary Wi-Fi and Bluetooth devices in the vicinity to avoid interference with the signals of the remote controller.

2.5 Declaration of Maximum Take-off Mass

During flight operations, make sure that the actual take-off mass of the aircraft does not exceed the maximum take-off mass (MTOM) declared for the aircraft. Exceeding this limit can lead to safety accidents. For detailed data, see Appendix A “A.1 Aircraft”.
The actual take-off mass of the aircraft consists of the aircraft's mass and the mount mass. Before adding any mount, make sure that the mount mass is within a reasonable range.

Note

- The aircraft's mass comprises the mass of fuselage, gimbal camera, propellers, and smart battery. Different models of gimbal cameras may differ in mass. If you change the gimbal camera with one of different model, re-weigh the aircraft to determine its mass.
- Mounts consist of functional module mounts and physical mounts. When adding mounts to the aircraft, always re-weigh the actual take-off mass of the aircraft.
- The mount mass should satisfy: Maximum Mount Mass≤MTOM-Aircraft's Mass.

■ Gravity Center Limitation

When users are mounting payload to the aircraft before flight, the payload should be installed in limited position in order to not affect the obstacle avoidance sensing function and flight stability of the aircraft. In other words, payload should be installed within the gravity center range, and the payload installed should not cover the lens group of visual obstacle avoidance at the bottom of the aircraft and downward millimeter-wave radar. The suggested mounted location is as follows:

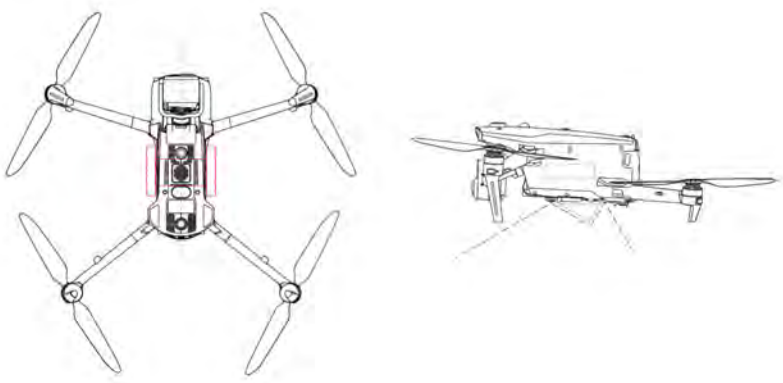


Fig 2-1 Mount gravity center and non-interference zone (circled by red line)

Note

- When installing a function module to the aircraft, please choose a function module that has passed Autel Robotics safety and compatibility test as this kind of product has already passed flight safety test.
- When users are mounting payload, please ensure that the mounting point should be located at the center line of the aircraft and should not be beyond the area bracketed in the left picture in fig 2-1. Meanwhile, the size of the mounted payload, as circled in the right picture in fig 2-2, should not be too big to go beyond the non-interference zone.
- When users are mounting payload at the side of the aircraft, it is recommended that the payload mounted on the one side should weight no more than 100 g as the payload of more than 100 g (and less than 200 g) mounted may affect the braking performance of the aircraft to some degree,

2.6 Obstacle Avoidance System

2.6.1 Introduction to Visual Obstacle Avoidance Sensing System and Millimeter-Wave Radar Sensing System

The aircraft adopts a dual-sensing system design of "Visual Obstacle Avoidance Sensing System + Millimeter-Wave Radar Sensing System". The integration of these two systems provides excellent omnidirectional obstacle avoidance performance and ensures precise positioning and safe flight of the aircraft.

The visual obstacle avoidance sensing system is an image positioning system that uses visual image ranging to sense obstacles and obtain aircraft position information. The visual obstacle avoidance sensing system of the aircraft is located on the front, rear, top, and bottom of the fuselage. The front and rear parts use a "dual pinhole lens" structure, while the top and bottom parts use a "dual fisheye lens" structure, the combination of which enables omnidirectional visual obstacle avoidance.

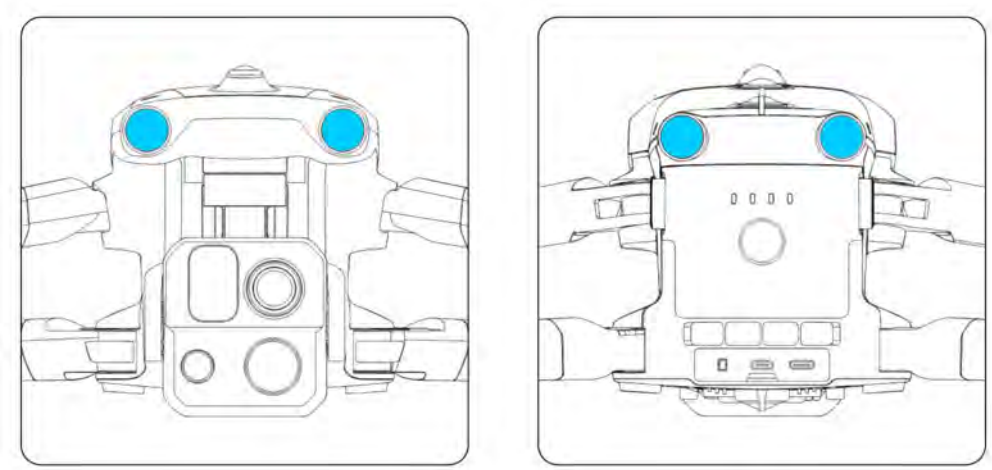


Fig 2-2 Front and rear visual obstacle avoidance lens modules of the aircraft

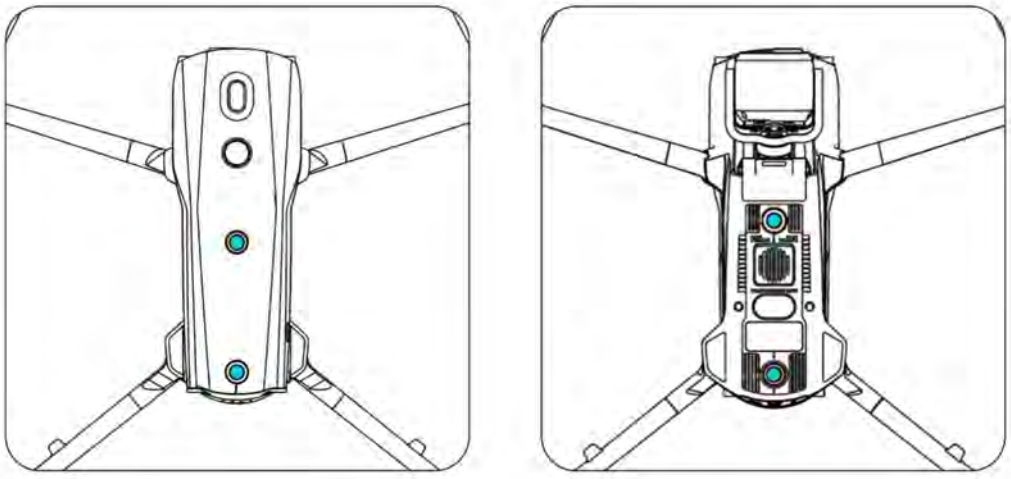


Fig 2-3 Top and bottom visual obstacle avoidance lens modules of the aircraft

⚠ Warning

- Do not block the lenses of the visual obstacle avoidance lens during flight, as it will affect the visual obstacle avoidance performance of the aircraft, potentially leading to flight accidents.

The millimeter-wave radar sensing system senses the distances and positions of obstacles by emitting electromagnetic waves. According to the regulations of different countries and regions, the millimeter-wave radar sensing system of the aircraft can either integrate four 60 GHz millimeter-wave radars inside the fuselage in four directions (front, rear, top, and bottom) or integrate a 24 GHz millimeter-wave radar under the fuselage for sensing.

Note

- For detailed frequency bands and Effective Isotropic Radiated Power (EIRP) data of the millimeter-wave radar, see Appendix A "A.1 Aircraft".
- For the four millimeter-wave radars used in the aircraft, the front, rear, and top

millimeter-wave radars use the 60 GHz frequency band, while the frequency band used for the bottom millimeter-wave radar depends on local regulations.
- Please be noted that the frequency band of the millimeter-wave radar is a hardware parameter, which cannot be adjusted through software. Autel Robotics ensures that the millimeter-wave radar frequency band of the EVO Max series multi-rotor drone complies with local legal regulations.

2.6.2 Observation Range

■ Observation Range of Visual Obstacle Avoidance Sensing System

By using fisheye lenses, the visual obstacle avoidance sensing system achieves a 180° field of view (FOV) in both left and right directions, allowing for 720° all-around observation.

Important

- The visual obstacle avoidance performance of the aircraft's visual obstacle avoidance sensing system is not 100% reliable, as the system may be affected by ambient lighting and object surface texture. When the visual obstacle avoidance system is enabled during flight, always pay attention to the image transmission screen and alarm information in the flight application.

■ Observation Range of Millimeter-wave Radar Sensing System

Note

- Please be aware that millimeter-wave radars of different frequency bands may have varying observation performance. For detailed data, please refer to "A1 Aircraft".

Fig 2-4 Observation Range of Millimeter-Wave Radars

Warning

- The obstacle avoidance distance of the millimeter-wave radar sensing system varies with

the obstacle's ability to reflect electromagnetic waves and its surface size.
- The gray area represents the blind spot of a millimeter-wave radar, where the radar cannot detect obstacles.

■ Observation Range of Radar and Visual Obstacle Avoidance Sensing Systems

With the integration of radar and visual obstacle avoidance sensing systems, the aircraft achieves 720° omnidirectional obstacle avoidance and supports nighttime obstacle avoidance.

Note

- If the aircraft uses a 60 GHz bottom millimeter-wave radar, it supports nighttime obstacle avoidance by millimeter-wave radars.
- If the aircraft uses a 24 GHz bottom millimeter-wave radar, the front, rear, and top millimeter-wave radars are disabled by default. The aircraft does not support nighttime obstacle avoidance and only supports visual obstacle avoidance in good lighting conditions. Additionally, it uses the bottom millimeter-wave radar only for assisted landing.

2.6.3 Visual Positioning Function

The aircraft supports the visual positioning function. When the visual positioning is enabled, the aircraft will keep hovering when GNSS signal is poor, so as to ensure flight safety.

Warning

- If you do not have extensive flight experience, do not fly the aircraft beyond your sight distance.
- When the aircraft is in visual positioning mode, please make sure that the aircraft flies in a well-lit environment and over object surfaces with clear texture and does not fly in mirror reflection areas such as water or snow.
- Before an aircraft takes off, if the visual positioning of the aircraft is turned off, do not turn on the visual positioning function after the aircraft takes off as it might lead to visual positioning failure. If you need to turn on the visual positioning function again, it is recommended to land the aircraft before conducting relevant operations.

Tip

- When GNSS signal is strong, the aircraft will enter GNSS mode in which the visual positioning function is only used for assisting positioning and improving the aircraft's positioning accuracy.
- When there is no GNSS signal and visual positioning fails at the same time, the aircraft will enter the attitude mode automatically.
- In the event of GNSS signal loss or weakening during flight, the remote controller will

display the following warning prompts:
1. If the takeoff point is inaccurate: The flight application will display a warning "GNSS signal is weak. The landing point may deviate." with a corresponding verbal warning.
2. If GNSS signal is weak: The flight application will show a warning " GNSS signal is weak. Move the aircraft to an open area." with a corresponding verbal warning.
3. If GNSS is being spoofed: The flight application will display a warning "GNSS Spoofing" with a corresponding verbal warning.

2.6.4 Visual Obstacle Avoidance Function

The aircraft supports visual obstacle avoidance function. When there is sufficient light, the aircraft will detect obstacles within the flight range and brake or bypass within the set safety distance.

Note

- After the obstacle avoidance behavior is set, the obstacle avoidance function of the aircraft still may fail if there are obstacles that are too spare in the flight route, such as sparse fine wire meshes or small branches at the outer edges of trees. To ensure flight safety, please choose an open and spacious airspace for flight.
- Due to inertial, to ensure the aircraft brakes or bypasses within the set safety distance, the flight control system will limit the flight power performance of the aircraft and its attitude angle will be no more than 30° and its maximum flight speed will be less than 15 meter per second.

Warning

- The obstacle avoidance function of the aircraft cannot be enabled when Ludicrous mode is set for the aircraft.

2.6.5 Precautions for Using Obstacle Avoidance Systems

The measurement accuracy of the visual obstacle avoidance sensing system is easily affected by factors such as light intensity and object surface texture. Exercise caution when using the visual obstacle avoidance sensing system in the following scenarios:
- Flying over pure-colored surfaces (e.g., pure white, pure black, pure red, and pure green) and low-texture surfaces.
- Flying over surfaces with strong reflections.
- Flying over moving objects (e.g., crowds, swaying reeds, bushes, and grasses).
- Flying over water surfaces or transparent object surfaces.
- Flying in environments with rapid and intense changes in lighting or direct exposure to strong light sources.
- Flying over extremely dim (with light intensity of less than 15 lux) or extremely bright object surfaces.

- Flying over small obstacles (e.g., iron wires, electric wires, and tree branches).
- Lenses contamination (e.g., water droplets and fingerprints).
- Flying in low-visibility conditions (e.g., heavy fog, heavy snow, and sandstorm).
- Flying at an altitude below 2 meters with a very fast flight speed.

The millimeter-wave radar sensing system operates as an auxiliary enhancement system for visual obstacle avoidance and can work continuously throughout the day.

Note

- Please be noted that when flying in low-light conditions (such as at night), there is a strong possibility that the aircraft's visual obstacle avoidance sensing system may fail, leading to loss of visual obstacle avoidance function of the aircraft.
- If you need to fly in low-light conditions (such as at night), please confirm that the downward millimeter-wave radar of the aircraft is 60 GHz version. Additionally, please operate cautiously in nighttime flights, as in the nighttime obstacle avoidance is not 100% functional. It is recommended to fly in open areas.
- Please note that the aircraft does not support OA function in auto landing process. When you are setting home point, please make sure the home point and the airspace above are spacious with no obstacles; in some cases (such as critically low battery landing), when the aircraft is triggering auto landing, please take over the control of the aircraft in time to ensure the aircraft lands safely.

2.7 Auto-Return

The aircraft is equipped with an auto-return function. When the GNSS signal is good, once the auto-return condition is triggered, the aircraft automatically returns to the home point and lands to avoid possible accidents.

The aircraft provides three methods of activating the auto-return function: manual auto-return activation, low battery auto-return activation, and behavior-based auto-return activation.

Note

- Home point: the landing point of the aircraft during an auto-return flight. In the flight application, you can set the home point of the aircraft as "Aircraft" or "RC". For more information, see “6.5 “Settings” Interface” in Chapter 6.
- If no home point is set in the flight application, the take-off point is used as the home point.
- During an auto-return, the control function of the remote controller for the aircraft is disabled. In this case, users can quickly press the pause button "  " on the remote controller or press and hold it for 2 seconds to pause or exit the auto-return function, or pull the pitch stick down to exit the auto-return. After exiting the auto-return, the RC will regain control of the aircraft. For more information, see “4.11.2 Take-off/Return-to-Home Button and Pause Button” in Chapter 4.

⚠ Warning

- When the aircraft is in visual positioning mode or attitude mode, the auto-return function cannot be activated.
- If the obstacle avoidance behavior is set as “Turn off”, during an auto-return flight, the aircraft will not be able to automatically avoid obstacles.
- If the home point of an auto-return flight is not suitable for the aircraft to land (such as uneven grounds and crowds), please exit the auto-return function first, and then manually assume control to land the aircraft.

2.7.1 Manual Auto-Return Activation

During the flight, users can press and hold the return-to-home button “” on the remote controller for 2 seconds until the RC emits a “beep” to manually activate the auto-return function.

2.7.2 Low Battery Auto-Return Activation

During the flight, to prevent unnecessary risks caused by insufficient power of the smart battery, the aircraft will automatically check, based on the aircraft's current position, whether the current battery level is sufficient for returning to home point.
If the current battery level is only enough to complete the return journey, the flight application will prompt a warning “The remaining battery is only enough for Return to Home. The aircraft will Return to Home in 10s.” to prompt users to decide to execute low battery auto-return. If you choose to execute it or don't take any action within 10 seconds, the aircraft will initiate low battery auto-return after 10 seconds.
If you cancel the execution and continue flying with a low battery level, when the battery level decreases to critically low battery warning threshold, the aircraft will activate a critically low battery landing.

Tip

- Please note that besides the above intelligent low battery auto return, when the aircraft battery level decreases to the low battery warning threshold set in the flight application, the aircraft will also be triggered to return. The aircraft flight control system executes auto return no matter which one of those two scenarios occur.
- When critically low battery landing is triggered, in the process of landing, users can push and pull the remote controller sticks to adjust the landing location of the aircraft. After users stop using the sticks, the aircraft will continue to land.

⚠ Warning

- When the low battery auto-return is triggered in the aircraft, it is recommended that the auto-return process should not be canceled. Otherwise, the aircraft may be unable to

return to the home point due to insufficient power.
- It is recommended that the aircraft should not enter the critically low battery landing process. Once the critically low battery landing process is initiated, if the landing point does not meet safe landing standards, the aircraft may have no sufficient battery to land in safe place, which may lead to aircraft damage.
- When the flight application displays a warning alert, it should be processed according to the corresponding references immediately.

2.7.3 Behavior-Based Auto-Return Activation

During a flight mission, if "Finish Action" is set to "Auto RTH", the aircraft will activate auto-return after completing the mission; if "Signal Loss Action" is set to " Auto RTH ", when the flight application displays a warning saying “Aircraft disconnected.”, the aircraft will activate auto-return. For more information, see “6.9 Flight Missions” in Chapter 6.
During a manual flight, if "Signal Loss Action " is set to " Auto RTH ", when the flight application displays a warning saying “Aircraft disconnected.”, the aircraft will activate auto-return. For more information, see “6.5 “Settings” Interface” in Chapter 6.

Tip

- In the flight application, the signal lost action is set to “Return to Home” by default.
- During a flight mission, after the aircraft is disconnected from the remote controller, the aircraft will continue to fly in the original state. It will not perform the "Signal Loss Action" until the flight application displays a warning saying “Aircraft disconnected.”. During a manual flight, after the aircraft is disconnected from the remote controller, the aircraft will slow down and hover. It will not perform "Signal Loss Action" until the flight application displays a warning saying “Aircraft disconnected.”.
- During the lost action auto-return process, even if the aircraft resumes connection with the remote controller, the aircraft will continue to execute auto-return.

2.7.4 Auto-Return Mechanism

Table 2-1 Auto-Return Mechanism

Aircraft distance when the return mechanism is triggered	Return-to-Home Mechanism
Distance from the home point ≤ 10 meters	The aircraft returns to the home point at the current altitude.
10 meters＜Distance from the home point ≤ 25 meters	If the current flight altitude is lower than 20 meters, the aircraft ascends to the altitude of 20 meters and returns to the home point. If the current flight altitude is higher than 20 meters, the aircraft returns to the home point at the current

	altitude.
25 meters < Distance from the home point ≤ 50 meters	If the current flight altitude is lower than 30 meters, the aircraft ascends to the altitude of 30 meters and returns to the home point. If the current flight altitude is higher than 30 meters, the aircraft returns to the home point at the current altitude.
Distance from the home point > 50 meters	If the flight altitude is lower than the set RTH altitude, the aircraft ascends to the RTH altitude. If the flight altitude is higher than the set RTH altitude, the aircraft returns to the home point at the current altitude.

Note

- Aircraft distance refers to the horizontal distance from the current aircraft to the home point.

2.7.5 Auto-Return Obstacle Avoidance Process

When the obstacle avoidance system is enabled (the obstacle avoidance behavior is not set as “Turn off”) and the light/altitude conditions meet working requirement of the visual obstacle avoidance sensing system, the aircraft will achieve obstacle avoidance during the return process. The specific situation is as follows:

- During flight missions, the obstacle avoidance behavior is set as “Emergency stop” or "Bypass". In the case of a lost action auto-return, low battery auto-return, or auto-return after mission completion, when an obstacle is detected in front of the aircraft, the aircraft will automatically brake within the set safety distance and autonomously choose a random direction from the left, right, or upward directions to bypass the obstacle.

Important

- During the obstacle avoidance process, if the aircraft's ascent altitude reaches the maximum altitude limit and obstacle avoidance is not yet achieved, the aircraft will hover in place until a critically low battery landing is triggered. In this case, please manually take control of the aircraft in advance.

2.8 Landing Protection Function

When the landing protection function is enabled, the aircraft will assess whether the ground conditions are suitable for landing before landing. For more information, see “6.5 “Settings” Interface” in Chapter 6.

During the auto-return process, when the aircraft reaches above the home point and the landing protection function is enabled, the aircraft will execute the following strategies:

1. If the landing protection function detects that the ground is suitable for landing, the aircraft will land directly.
2. If the landing protection function detects that the ground is not suitable for landing (e.g., uneven ground or water below), the aircraft will keep hovering, send a prompt in the flight application, and wait for the user to take action. In this case, the aircraft will start descending only when a critically low battery landing is triggered, and the user cannot cancel this process.
3. If the landing protection function cannot detect ground conditions, the aircraft will descend to an altitude of 1.2 meter above the ground and enter the assisted landing process.

Note

- Assisted landing: During the landing process, when the aircraft reaches an altitude of 1.2 meters above the ground, it will automatically descend slowly and the user does not need to pull the throttle stick.
- Before the aircraft enters the assisted landing process, make sure that the landing point is suitable for the aircraft to land.

2.9 Rebuilding the C2 Link

To ensure the safety and controllability of flight behaviors, the aircraft will stay in reconnection status and constantly attempt to reestablish a connection with the ground control station (remote controller) after losing the C2 link. In practice, this process is divided into the following stages:

- When the aircraft is disconnected from the remote controller, if the connection can be restored within 10 seconds, the remote controller will automatically regain control of the aircraft.
- If the link is not restored within 10 seconds, the flight application will display a warning saying “Aircraft disconnected.”, and the aircraft will automatically execute relevant flight control actions according to the set lost action.
- During the execution of a lost action, the aircraft will continue its attempts to restore the C2 link. When the aircraft successfully restores the C2 link with the remote controller, the remote controller still cannot control the flight of the aircraft. To make the remote controller regain control of the aircraft, you must press and hold the pause button “⏸” on the remote controller for 2 seconds or pull the pitch stick to exit the lost action.

Tip

- During the flight, as long as the aircraft and the remote controller can communicate normally, the C2 link will remain active.
- If there are decoding errors that persist for a certain duration, leading to communication failure, the C2 link will be disconnected, and the aircraft will enter the reconnection status.
- The lost actions of the aircraft include RTH, hovering, and land.

- After the aircraft loses connection with C2 link, the flight application will display an alert “Aircraft disconnected.” with a corresponding verbal alert.

2.10 Flight Restrictions and Unlocking Restricted Zones

Important

- Before flying, always carefully plan out the airspace in which you intend to fly in accordance with local laws and regulations. Do not operate the aircraft in the restricted airspace without permission.

2.10.1 Geofencing System

Autel Robotics has developed a geofencing system for its aircrafts to ensure safe and legal flights. This system can provide real-time updates on airspace restriction information worldwide. In different restricted zones, the flight functions of the aircraft are subject to varying degrees of restrictions. The geofencing system also supports the function of unlocking restricted zones. If you need to perform a flight mission in a specific restricted zone, you can contact Autel Robotics to lift the aircraft within valid authorization period after obtaining legal authorization for unlocking the restricted zone.
The geofencing system does not completely align with local laws and regulations. Before each flight, you should consult and understand local laws, regulations, and regulatory requirements to ensure flight safety.
The flight control system of the aircraft is pre-configured with the geofencing system. Before each flight, make sure that the remote controller can connect to the Internet to automatically update airspace restriction information and synchronously upload it to the aircraft. During the flight, relevant airspace restriction information will be synchronously displayed in the flight application to ensure the safe and legal flight of the aircraft.

Tip

- Due to information lag, the airspace restriction information provided by the geofencing system may not always be completely consistent with the latest local laws and regulations. All information is subject to local laws and regulations.
- For temporary airspace restrictions, Autel Robotics can obtain the relevant regulatory announcements in a timely manner and synchronously upload the relevant airspace restriction information to the geofencing system. When you take flight actions in relevant zones, be sure to synchronize and update flight airspace restriction information.

Warning

- Please note that when GNSS signal is lost (the aircraft is in visual positioning mode or attitude mode), the geofencing system may not function, and relevant flight restriction

functions will not take effect normally.

2.10.2 Restricted Zones

The geofencing system divides airspace restrictions into four categories: no-fly zones, restricted altitude zones, warning zones, and unlocked zones. The flight application will provide different prompts based on the specific zone.

Table 2-2 Flight Restrictions of Restricted Zones

Restricted Zones	Flight Restriction Description
No-Fly Zones (appear in red on the map)	No-fly zones are divided into permanent no-fly zones and temporary no-fly zones. ● Permanent no-fly zones: The zones are pre-configured in the geofencing system at the factory and are regularly updated. ● Temporary no-fly zones: The zones are added by Autel Robotics in the geofencing system backend. Update method: After the remote controller is connected to the Internet, it will automatically retrieve update information related to no-fly zones and push it to the aircraft. Flight restrictions: Aircraft cannot take off or fly in no-fly zones. If you obtain authorization from relevant authorities to fly in a no-fly zone, contact Autel Robotics to request for unlocking the aircraft.
Restricted Altitude Zones (appear in grey on the map)	Autel Robotics only provides access to set altitude restrictions, allowing users to set the altitude limit accordingly. Update process: Users enable height restrictions and set the altitude limit within the flight application, based on the local legal regulations of the country and region. For detailed information, see "2.11 Altitude and Distance Limits" in Chapter 2 and "6.5 “Settings” Interface" in Chapter 6. Flight restrictions: When an aircraft is flying in a restricted altitude zone, the actual flight altitude of the aircraft will not exceed the set altitude limit.
Warning Zones (appear in yellow on the map)	Warning zones are pre-configured in the geofencing system at the factory and are regularly updated. Update method: After the remote controller is connected to the Internet, it will automatically retrieve update information related to warning zones and push it to the aircraft. Flight restrictions: In a warning zone, an aircraft can fly unrestrictedly (relevant flights must comply with local regulations).
Unlocked Zones	If you unlock a no-fly zone with a valid permit, you can legally