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› Autel Robotics EVO MAX 4N 4K Night Vision Drone with Smart Controller V3 User Manual

Autel Robotics EVO MAX 4N

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Model: EVO MAX 4N | Brand: Autel Robotics

INTRODUCTION

The Autel EVO MAX 4N 4K Night Vision Drone with Smart Controller V3 is an advanced aerial platform designed for high-resolution photography and videography, particularly in challenging lighting conditions. This drone features a 4K camera with starlight night vision capabilities, allowing operation in extremely low light. Its advanced Autonomy Engine enables 3D flight path planning and navigation in complex environments, making it suitable for various commercial applications including rapid 3D scene reconstruction, public safety overwatch, industrial inspection, and land surveying. The EVO MAX 4N also incorporates advanced sensors for navigation in GPS-denied environments and AI recognition technology for target identification and tracking.

SAFETY INFORMATION

Always operate the Autel EVO MAX 4N responsibly and in accordance with local regulations. Failure to follow safety guidelines can result in injury, property damage, or legal penalties.

- **Pre-Flight Check:** Before each flight, inspect the drone, propellers, and battery for any damage. Ensure all components are securely attached.
- **Flight Environment:** Fly in open areas, away from people, animals, buildings, and obstacles. Avoid flying near airports or restricted airspace.
- **Weather Conditions:** Do not fly in strong winds, heavy rain, snow, or fog.
- **Battery Safety:** Use only approved batteries and chargers. Do not overcharge or puncture batteries. Store batteries in a cool, dry place.
- **Propeller Safety:** Keep hands and face clear of rotating propellers. Ensure propellers are correctly installed before flight.
- **Maintain Visual Line of Sight:** Always keep the drone within your visual line of sight during flight.
- **Emergency Procedures:** Familiarize yourself with emergency landing procedures and the Return-to-Home function.

WHAT'S IN THE BOX

The Autel EVO MAX 4N package includes the following components:



Image: Overview of all included components.

- Autel EVO MAX 4N Drone
- Smart Controller V3
- Hard Carrying Case
- Battery Charger
- Power Cable
- USB-C to USB-C Cable
- USB-A to USB-C Cable
- Spare Propellers (multiple sets)
- Propeller Screwdriver
- Neck Strap for Controller
- Gimbal Protector
- SD Card (e.g., 64GB)

SETUP

1. **Unpack and Inspect:** Carefully remove all components from the packaging. Inspect the drone, controller, and accessories for any signs of damage.



Image: Autel EVO MAX 4N drone and Smart Controller V3.

2. **Charge Batteries:** Connect the battery charger to a power outlet and charge both the drone's flight battery and the Smart Controller V3. Ensure batteries are fully charged before first use.
3. **Install Propellers:** Attach the propellers to the drone's motors. Match the marked propellers (e.g., silver cap with silver cap motor) and twist them on securely until they lock into place. Refer to the markings on the propellers and motors for correct installation.



Image: Autel EVO MAX 4N drone with propellers.

4. **Prepare Smart Controller V3:** Power on the controller. If prompted, connect to Wi-Fi and update the firmware. Ensure the Autel SkyLink app is installed and up to date.
5. **Gimbal Protector Removal:** Before powering on the drone, gently remove the gimbal protector. Reattach it when storing or transporting the drone.

OPERATING THE DRONE

Pre-Flight Checks

- Ensure drone and controller batteries are fully charged.
- Check propellers for damage and ensure they are securely attached.
- Verify the gimbal protector is removed.
- Select a safe, open flight area, clear of obstacles and people.
- Check local weather conditions and airspace restrictions.

- Power on the controller, then the drone. Wait for GPS signal acquisition.

Takeoff and Landing

1. **Automatic Takeoff:** In the Autel SkyLink app, tap the "Auto Takeoff" button. The drone will ascend to a safe altitude and hover.
2. **Manual Takeoff:** Push both control sticks down and outwards to start the motors. Slowly push the left stick up to ascend.
3. **Automatic Landing:** Tap the "Auto Landing" button in the app. The drone will descend and land automatically.
4. **Manual Landing:** Slowly pull the left stick down to descend. Once landed, push both sticks down and inwards to stop the motors.

Flight Controls (Smart Controller V3)

The Smart Controller V3 provides intuitive control over the EVO MAX 4N. Familiarize yourself with the stick modes and button functions.

- **Left Stick:** Controls altitude (up/down) and yaw (rotate left/right).
- **Right Stick:** Controls forward/backward movement and left/right strafing.
- **Return-to-Home (RTH) Button:** Initiates automatic return to the takeoff point.
- **Photo/Video Button:** Triggers photo capture or video recording.
- **Gimbal Dial:** Adjusts the camera's tilt angle.

Camera Operation and Night Vision

The EVO MAX 4N features a powerful 4K camera with advanced night vision capabilities.



Image: Front view of the EVO MAX 4N, showing the camera and obstacle avoidance sensors.

- **Photo/Video Modes:** Switch between photo and video modes within the Autel SkyLink app. Adjust resolution, frame rate, and other camera settings as needed.
- **Starlight Night Vision:** Activate night vision mode in the app for enhanced visibility in extremely low-light conditions (down to 0.0001 Lux). This mode optimizes sensor sensitivity for clear night operations.
- **AI Recognition:** Utilize the AI recognition feature to automatically identify and track targets such as heat sources, moving people, or vehicles. This is accessible through the app's intelligent flight modes.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Autel EVO MAX 4N.

- **Cleaning:** After each flight, gently wipe down the drone and controller with a soft, dry cloth. Ensure no dust or debris accumulates on the camera lens, sensors, or motor vents.
- **Propeller Inspection:** Regularly check propellers for cracks, bends, or nicks. Replace damaged propellers immediately.

- **Battery Care:** Store batteries at approximately 50-60% charge if not used for extended periods. Avoid fully discharging or overcharging. Keep batteries away from extreme temperatures.
- **Gimbal and Camera:** Ensure the gimbal moves freely and the camera lens is clean. Avoid touching the lens directly.
- **Firmware Updates:** Periodically check for and install firmware updates for both the drone and the Smart Controller V3 via the Autel SkyLink app. Updates often include performance improvements and new features.
- **Storage:** Store the drone and all accessories in the provided hard case in a cool, dry place, away from direct sunlight.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Drone does not power on.	Low or uncharged battery; battery not properly inserted.	Charge the flight battery. Ensure the battery is fully inserted and locked into place.
No video feed on controller.	Poor connection; app not running; drone not powered on.	Ensure drone and controller are powered on and linked. Restart the Autel SkyLink app. Check for interference.
Drone drifts during flight.	GPS signal weak; compass calibration needed; strong winds.	Fly in an open area with clear sky for strong GPS. Perform compass calibration. Avoid flying in windy conditions.
Propellers not spinning.	Motors not armed; propellers not installed correctly.	Arm motors by pushing sticks down and outwards. Re-install propellers, ensuring they are locked.
Firmware update fails.	Weak Wi-Fi connection; low battery; interrupted download.	Ensure stable Wi-Fi. Fully charge drone and controller. Do not interrupt the update process. Try again.

SPECIFICATIONS

Feature	Detail
Brand	Autel Robotics
Model Name	EVO MAX 4N
Video Capture Resolution	4K
Effective Still Resolution	1 MP (Note: This seems low for 4K camera, likely refers to a specific sensor or feature, but will use provided data)
Special Features	Extended flight time, superior camera quality, incredible transmission range, enhanced stability, precise GPS navigation, starlight night vision
Connectivity Technology	Wi-Fi
Control Type	Remote Control
Maximum Range	12.4 Miles (20km)
Flight Time	Up to 42 minutes

Feature	Detail
Wind Resistance	Up to 27 mph
GPS Navigation	GPS, Galileo, BeiDou, GLONASS
Item Weight	20 Pounds
Product Dimensions	25.6"L x 5.8"W x 22"H

WARRANTY AND SUPPORT

Autel Robotics products are covered by a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Autel Robotics website.

For technical support, troubleshooting assistance, or service inquiries, please contact Autel Robotics customer support through their official channels. Have your product model and serial number ready when contacting support.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question