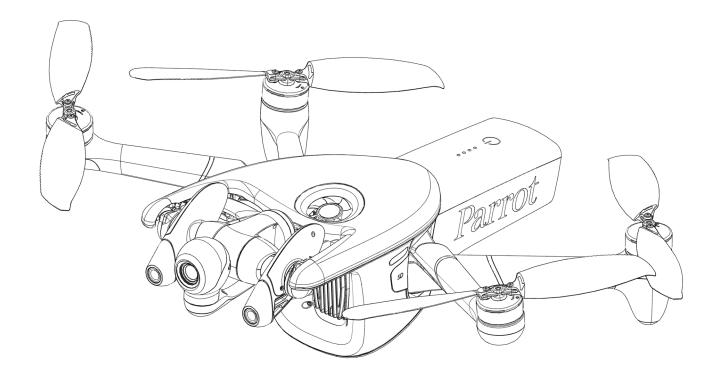
ANAFI Ai

FreeFlight 7 User Guide



Version: 7.7.1.7

Updated: April 02, 2025

Parrot

Documentation changelog

This section details the major changes to Parrot's technical documentation since the previous update.

What changed?	Where?
Ecosystem versions subchapter added.	Page 2
Preflight checklist chapter moved to before Getting started chapter.	Page 6
Getting started chapter updated, and merged with Prerequisites chapter.	Page 7
Technical specifications chapter updated.	Page 14
Installing a MicroSD card chapter moved to subchapter of ANAFI Ai.	Page 19

Ecosystem versions

This section details the software versions for the full ecosystem available at the time of the most recent update to this user guide.

Ecosystem element	Software version
Application	7.7.1
Drone	7.7.1
Controller	7.7.2



Using this guide

Parrot recommends that you read the following user guide thoroughly before your first flight. This user guide completes the documentation of ANAFI Ai, which also includes the:

- ANAFI Ai Flight safety guide;
- ANAFI Ai and FreeFlight 7 Release Notes;
- ANAFI Ai Video Tutorials

Read the Flight Safety Guide provided with ANAFI Ai to have complementary information about safety, operational limitations for use and maintenance of the drone. Always verify that you are using the latest version of the User Guide.

This guide is specific to one drone configuration:

- ANAFI Ai coupled with the Skycontroller 4
- FreeFlight 7 flight application.

NOTE: ANAFI Ai requires the FreeFlight 7 app to fly, and to make sure that your drone and controller are fully up to date with the latest features.

All future ecosystem updates (app, drone, controller) are packed in future FreeFlight 7 releases. The ecosystem update procedure is therefore always the same as that described in the following pages.

- Read entirely at least once. It answers most questions that most users encounter when they use ANAFI Ai.
- **Keep it for reference and stay alert for updates**. Updates are advertised on all Parrot websites and social media. These updates are mandatory and must be systematically performed prior to any flight to ensure maximum performance and safety.
- The <u>Table of contents</u> on page 4 is active. Click a title to access the corresponding section.

 Alternatively, if you read the user guide on an internet browser, use the side bar navigation menu on the left hand side of the screen. The side bar navigation menu is also available on the Adobe Acrobat PDF viewer Tap the **three-dot** icon at the top-right of the screen, then tap **Pages** > **Contents**. The side bar navigation menu opens.
- This online user guide has no index. Use the keyboard shortcut Ctrl + F (Windows) or Command + F (Mac) to browse all occurrences of any keyword (flight, preferences, gimbal, iOS, Flir, Boson®, photo, EV, ISO, and so on).

IMPORTANT: Parrot strongly recommends that you regularly refer to the Release Notes available on the Parrot website, to ensure that you have the latest versions of the ANAFI Ai and Skycontroller 4 firmware, and the FreeFlight 7 App.

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Preflight checklist

Transport & handling

- Always transport ANAFI Ai in its hard case, with the gimbal's protective cover on.
- Always transport the Skycontroller 4 safely in the relevant location in the hard case.
- Protect the battery from temperature extremes, both low and high. Try to keep the battery as close as possible to ambient temperatures.
- Always handle the ANAFI Ai with care. Do not apply pressure to the drone and generally avoid touching the sensitive camera and gimbal.
- Always keep the hard case with the drone and battery in dry places.

Equipment

- Ensure that you download the latest version of FreeFlight 7, and that both your Skycontroller 4 and your ANAFI Ai are up to date with the latest versions of firmware.
- **IMPORTANT:** Updates are mandatory and must be performed systematically prior to any flight to ensure maximum performance and safety.
 - Ensure that you use the correct USB-C to Lightning cable to connect your Skycontroller 4 and your device.
 - Ensure that you insert a microSD card with enough free memory space into the drone.
 - Ensure that you unfold all four foldable arms of ANAFI Ai.
 - Ensure that the propellers are clean, intact, and unobstructed.
 - Ensure that both ANAFI Ai's and Skycontroller 4's batteries are fully charged.
 - Ensure that you always use genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use voids the warranty and impacts safety requirements.
 - Ensure that the ANAFI Ai's battery is securely installed on the drone's body.
- Ensure that the ANAFI Ai's gimbal protective cover is removed.
- Ensure that ANAFI Ai's lenses are clean. If the lenses require cleaning, clean them before you press **'D Power** on the drone. Hold the gimbal between two fingers so that you do not apply pressure to the mechanism. Gently wipe the lenses with a microfiber cloth.

Regulations

- Ensure that drone use is permitted where you intend to fly.
- Check for potential restrictions regarding the use of radio frequencies in the area where you intend to fly.

Flight conditions

- Ensure that the flying zone is safe and clear.
- Do not fly ANAFI Ai over urban areas or unauthorized airspaces such as airports, train stations, power plants, national reserves, etc.
- Check the weather. Do not fly ANAFI Ai in fog, snow, hail, salt spray, thunderstorms, sandstorms, bird flocks, or in wind exceeding 14 m/s (31.3 MPH).
- Parrot recommends you do not fly ANAFI Ai low over water, or other reflective surfaces, such as mirrors, glass, etc.

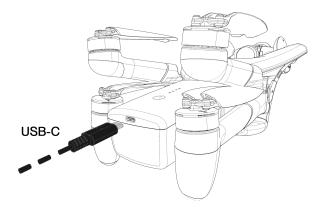
MARNING: Do not fly ANAFI Ai at night. Always deploy ANAFI Ai responsibly.



Getting started

Refer to the enclosed Quick Start Guide for illustrated guidance to get started.

1. Connect ANAFI Ai's smart battery to the enclosed charger with one of the enclosed USB-C to USB-C cables.



The battery's LEDs start to flash indicating that the battery is awake.

IMPORTANT: Always fully charge all batteries before flying ANAFI Ai. Refer to <u>Smart LiPo</u> <u>battery</u> on page 22 for more information.

2. Connect Skycontroller 4 to the enclosed USB-PD charger with one of the enclosed USB-C to USB-C cables.



- 3. Wait for the drone and controller batteries to fully charge.
- 4. Scan the following QR code to download the latest version of ANAFI Ai to your iOS device.





iOS FreeFlight 7 QR code

The fully secure piloting software of ANAFI Ai, FreeFlight 7, guarantees the integrity of data exchanges for the full ecosystem, and manages updates (piloting software, drone, remote control).

- 5. Insert your device into Skycontroller 4.
- 6. Connect your device to Skycontroller 4 with a USB-C to Lightning cable.

NOTE: Use your device and Skycontroller 4 for the best flight experience. However, you can use your device alone to fly ANAFI Ai. If you use your device without a Skycontroller, connect your device to ANAFI Ai's Wi-Fi network. Refer to the **WIFI SETTINGS** sticker located inside the drone's carry case - SSID format: ANAFI Ai ######.

7. Press and hold Skycontroller 4's **O Power** button for approximately 2 seconds to power it on.

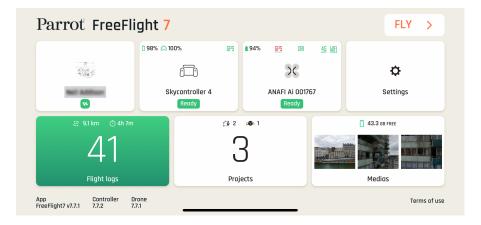
The main LED turns light blue. Refer to Skycontroller 4 on page 26 for more information.

A prompt appears on your screen, which invites you to allow communication between your device and the controller.

8. Tap Allow to run FreeFlight 7.

NOTE: If the prompt does not appear on your screen when you connect your device to your Skycontroller, tap the app logo on your device's screen to launch FreeFlight 7 manually. Refer to *FreeFlight 7* on page 30 for more information.

Your device displays FreeFlight 7's homepage.



9. Ensure that ANAFI Ai and Skycontroller 4 are paired.

Refer to *Pairing ANAFI Ai to a Skycontroller 4* on page 28 for more information.

- 10. On ANAFI Ai, remove the gimbal protective cover.
- 11. Unfold ANAFI Ai's arms.
- 12. Press and hold ANAFI Ai's **OPower** button for approximately 2 seconds to power it on.

The drone's fan starts to turn.

- **CAUTION:** During the first boot, the battery updates automatically to the firmware version on the drone. Do not remove the battery from the drone while the LEDs are flashing.
- 13. Place ANAFI Ai on a flat horizontal surface.
- 14. Check for ecosystem updates to ensure maximum performance and safety. Tap the **Drone** information and **Controller information** tiles for more information.



- **IMPORTANT:** Regularly refer to the <u>Release Notes ANAFI Ai</u> available on the Parrot website, to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 7 App.
- 15. Calibrate ANAFI Ai, Skycontroller 4, or both if required. Follow the instructions on your device's screen.

Refer to *Calibrations* on page 37 for more information.

All systems are ready for flight.

- 16. Ensure that your flying zone is safe and clear.
- 17. On the FreeFlight 7 homepage, tap FLY >>>

The FreeFlight 7 HUD opens. Refer to <u>FreeFlight 7</u> on page 30 for more information.

18. Press **Take-off/land** to start the flight operation.

MARNING: Maintain a distance of at least 2 m (6 ft) from the drone.

Foreword

ANAFI Ai was designed and optimized to fly as is. Parrot strongly advises against using any add-on or accessory attached to ANAFI Ai, such as feet extensions, buoys, hulls, etc. Accessories impose extra weight on the drone and its motors. Electronic accessories may also interfere with the drones' communications.

IMPORTANT: The maximum take-off mass (MTOM) of ANAFI Ai is 1,170 g (2.58 lb). Parrot recommends that you do not equip your drone with an accessory, as it reduces flight time.



(I) CAUTION: Do not alter the center of gravity of the drone.

ANAFI Ai ecosystem

In this user guide, the word ecosystem refers to the drone (ANAFI Ai), its controller (Skycontroller 4) and the FreeFlight 7 flying app. The word device refers to the iOS smartphone or tablet on which FreeFlight 7 is installed.

Overhead power lines and pylons

Flying close to power installations may impact the behavior of the drone. Higher voltage and/or current creates higher electromagnetic interference, which may affect the drones' communications.



MARNING: Do not fly within 3 m (9 ft) of a power installation.

Radiation Fields

The proximity of high intensity radiation fields may impact the behavior of the drone, for example, airport radar.



MARNING: Do not fly within 500 m of a high intensity radar beam. Do not fly within 50 m of a radar installation.

Wi-Fi

Parrot recommends that you switch off your device's Wi-Fi connection when flying ANAFI Ai with Skycontroller 4 and your device. When the device's Wi-Fi is switched off, the drone and the controller communicate through ANAFI Ai's Wi-Fi network. Activating your device's Wi-Fi may result in interference.

Your device's Wi-Fi must only be activated, and connected to ANAFI Ai's Wi-Fi network, when you want to fly the drone using your device as the sole controller.

GPS

ANAFI Ai does not require a satellite synchronization, or fix, to take off (for example, GPS, GLONASS, Galileo). It can therefore be piloted indoors and through cluttered areas, stabilized by its onboard sensors.



MARNING: If you choose to fly without GPS, you must ensure that the ground has sufficient texture, and is sufficiently illuminated in order to optimize the optical flow of the vertical camera. Suboptimal conditions such as non-textured, or poorly illuminated ground may cause ANAFI Ai to drift.

However, automated and assisted flight modes require both ANAFI Ai and the FreeFlight 7 device synchronization to geocoordinate satellites. The Skycontroller 4 alone does not have geo-positioning capacity.



Parrot recommends ANAFI Ai pilots to always set up, start, and finish their automated and assisted flights from wide open areas, such as a sports field.

4K video formats

4K video formats are professional grade media which may not be read natively by slower computers. If the media do not read properly on your equipment, shoot in 1080p or use a video converter to turn your ANAFI Ai's 4K videos into a more manageable format, such as 1080p.

Audio recording

ANAFI Ai is equipped with a microphone to record videos with sound. Activate or deactivate the drone's microphone via the **Settings** menu > **Quick** tab > **Audio** option in FreeFlight 7. Refer to *Settings* on page 48 for more information.

ANAFI Ai smart batteries

One smart battery comes preinstalled on ANAFI Ai. If you remove the battery, you must reinstall it in the same orientation. Do not install the battery upside down. Ensure that you install the battery correctly to avoid exposing the battery and the drone to irreparable electrical damage.



IMPORTANT: The LEDs and power button face up in the correct orientation

ANAFI Ai and Skycontroller 4 batteries enter a Wintering mode when not in use for 10 consecutive days. You must wake up and fully charge the batteries before you fly ANAFI Ai for the first time.

HDMI

Skycontroller 4 has a micro-HDMI port, which enables you to stream ANAFI Ai images to a screen or to HDMI goggles. Parrot recommends using a certified micro-HDMI to HDMI cable (not included in the box) to connect external pieces of equipment to the Skycontroller 4. Uncertified cables may impair the ecosystem's Wi-Fi performance. Certified HDMI cable packaging displays the following logo:



Technical support

Parrot recommends that you use your Parrot.CLOUD account (or create one if ANAFI Ai is your first Parrot drone) to allow Parrot to store your ANAFI Ai flight data. Sharing your data, even anonymously enables us to improve our products and directly benefits all identifiable users in case they need to contact Parrot support teams.

Refer to the <u>Data sharing and User accounts</u> chapter on page 32 for more information.



① CAUTION: If you do not share flight data / logs for the purposes of receiving support, you limit your ability to receive technical support, warranty, or both from Parrot.

Information related to Privacy Rights

For more information about the appearance of individuals in videos and photos taken by a drone, refer to the Flight Safety Guide included in the ANAFI Ai packaging.

Disclaimer

- 1. ANAFI Ai IS NOT A TOY and must not be used or handled by persons under the age of 18 years.
- 2. BEFORE USING ANAFI Ai:
 - A. CAREFULLY READ the user guide and all information and documentation available on www.parrot.com/en. Documentation is subject to change and may be updated at any time and without prior notice (hereinafter referred to as "Parrot Documentation"). SPECIAL ATTENTION must be given to the paragraphs marked: A Warning, Caution, Important
 - B. Ensure that the complete drone ecosystem is up-to-date. Parrot regularly releases firmware updates for:
 - FreeFlight 7
 - ANAFI Ai

- Smart Battery
- Skycontroller 4

IMPORTANT: Regularly refer to the <u>Release Notes</u> available on the Parrot website, to ensure that you have the latest firmware versions of the drone, controller, and application.

Updates add new features, and improve stability, and performance of the complete system. Updates are mandatory and must be systematically performed prior to any flight to ensure maximum performance and safety. Flying with a non-up-to-date system may impact warranty rights and jeopardize safety requirements.

- C. ENSURE YOU ARE AWARE OF THE REGULATIONS APPLICABLE TO THE USE OF DRONES AND THEIR ACCESSORIES (hereinafter referred to as "Applicable Regulations");
- D. REMEMBER that ANAFI Ai may expose others and yourself to EQUIPMENT DAMAGE, PERSONAL INJURY, OR BOTH, which could result in serious harm or death.
- 3. All Parrot drones must always be used with genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use voids the warranty, and impacts safety requirements.
- 4. All Parrot drone systems include charger(s). These are the only recommended chargers to use to charge your Parrot drone's Smart Battery and Skycontroller 4. Other generic USB chargers may be used provided that they are certified according to the country of use and have the applicable rating/specification. Performance and warranty are only guaranteed when using a genuine charger included in the Parrot drone system. Parrot takes no responsibility (warranty or safety) for third party USB chargers being used with a Parrot system.
- 5. Ensure that all calibrations are performed. Refer to *Calibrations* on page 37 for more information.
- **IMPORTANT:** ANAFI Ai's warranty is void if you fly the drone without the required calibrations.
 - 6. Videos and photos promoted and advertised by Parrot Drones SAS and its affiliates have been made by and with experienced professionals and drone pilots. IN CASE OF DOUBT RELATING TO THE USE OF YOUR ANAFI AI DRONE AND ITS ACCESSORIES, ALWAYS REFER TO THE MOST RECENT VERSION OF THE PARROT DOCUMENTATION.
 - 7. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, Parrot Drones SAS, ITS SUBSIDIARIES, AND THEIR RESPECTIVE DISTRIBUTORS AND RETAILERS SHALL NOT BE LIABLE FOR ANY DAMAGES ARISING FROM, OR IN CONNECTION WITH NON-COMPLIANCE OF PARROT DOCUMENTATION OR THE APPLICABLE REGULATIONS BY YOURSELF OR ANY PERSON USING



YOUR ANAFI Ai.

8. 3rd party licenses

IMPORTANT: It is the user's responsibility to ensure they have the correct licenses and/or subscriptions.

Technical specifications

AIRCRAFT

- Size folded: 304 x 130 x 118 mm (11.9 x 5.1 x 4.6")
- Size unfolded: 320 x 440 x 118 mm (12.6 x 17.3 x 4.6")
- Mass: 898 g (1.98 lb)
- Maximum take-off mass (MTOM): 1,170 g (2.58 lb)
- Maximum flight time: 32 minutes
- Maximum horizontal speed: 17 m/s (38.1 MPH)
- Maximum ascent speed: 4 m/s (8.9 MPH)
- Maximum descent speed: 4 m/s (8.9 MPH)
- Maximum wind resistance:

 Ouring flight: 14 m/s (31.3 MPH)
 - During take-off/landing: 12 m/s (26.8 MPH)
- Maximum propeller speed: 12,000 RPM
- Sound power level: 81 dBA
- Service Ceiling: 5,000 m above MSL (Mean Sea Level)
- User defined geofencing
- Operating temperatures: -10.0 °C to 40.0 °C (14.0 °F to 104.0 °F)
- IP53: Rain and dust resistant
- Maximum static thrust: 23.27 N
- Thrust to weight ratio: 2.65
- Takes off from / lands in the hand of the operator
- Indoor flight
- Connectivity and storage:
 - MicroSD card slot
 - Nano SIM card slot
 - 32 GB internal memory
- Deployment time: 60 seconds

RADIO LINK

- Direct video stream resolution: 1080p
- Wi-Fi 802.11a/b/ g/n:

 AES 128 encryption
 - Range: 4 km (2.49 mi)
 - Operating frequencies: 2.4 GHz, 5 GHz, UNII-1, &
- 4G:
- Range: Unlimited (Provided there is 4G coverage)

SENSORS

- Satellite navigation:GPS

 - 0 **GLONASS**
 - Galileo
- Barometer and magnetometer
- Vertical camera and Time of Flight
- 2 x 6-axis inertial measurement units (flight and camera)
- 2 x 3-axis accelerometers
- 2 x 3-axis gyroscopes
- Stereoscopic cameras mounted on a 311° rotating gimbal (-107° to +204°) for obstacle avoidance
- Al trajectory optimization system

CYBERSECURITY

- Zero data shared without user consent
- FIPS140-2 compliant and CC EAL5+ certified
- Secure Elements Strong authentication for 4G
- Digitally signed pictures
- Transparency & Bug bounty continuous security check



CONNECTIVITY

- Seamless 4G / Wi-Fi switching
- Flies Beyond Visual Line of Sight
- 1080p 30 fps live streaming
- No interference near telecom towers

AUTONOMOUS FLIGHT

- Photogrammetry: Simple, Double, Orbit, 1-click
- Flight Plan: multiple Waypoints and Points of Interest
- Cameraman: automatic framing with visual tracking Smart RTH: customizable return altitude
- Vehicle: flight adapted to controller location reference

EO IMAGE CHAIN

- Sensor: 1/2"48 MP CMOS
- Digital zoom: 6x lossless: up to 4x (1080p) & 2x (4K UHD)
- Electronic shutter speed: 1 s to 1/10,000 s
- ISO range: 50 to 6,400
- Video resolution: 4k/UHD/HD
- Video format: MP4 (H.264, H.265)
- Photo resolution:
 - Wide: 48 MP (73.0° HFOV)
 - Rectilinear: 48 MP (up to 69.0° HFOV without EIS)
- Photo formats: JPEG, DNG (Digital Negative Raw)
- Dynamic range: 14 EV in HDR mode
- Optical LD-ASPH (low dispersion aspheric lens)
- Aperture: f/2.0
- 35 mm focal equivalent: 24 mm
- Depth of field: 4.5 m to ∞
- 6-axis stabilization

IMAGE STABILIZATION

- · Stabilized gimbal:
 - Hybrid: 3-axis
 - Mechanical: 3-axis yaw / roll / pitch
 - Electronic (EIS): 3-axis yaw / roll / pitch
- Controllable gimbal tilt range: -90° to +90°

SMART BATTERY

- Size: 167 x 58 x 56 mm (6.6 x 2.3 x 2.2")
- Mass: 366 g (0.81 lb)
- Type: High density LiPo (214 Wh/kg)
- Capacity: 6,800 mAh
- Voltage (nominal): 11.55 V (3 x 3.85 V cells)
- Maximum charging power: 45 W
- Battery life: 32 minutes
- Charging port: USB-C
- Charges fully in 2 h 30 mins with the included USB-PD charger

GROUND CONTROL STATION

- Minimum size (without device): 238 x 147 x 55 mm (9.4 x 5.8 x 2.2")
- Maximum size (with device): 315 x 147 x 55 mm (12.4 x 5.8 x 2.2")
- Mass: 610 g (1.35 lb)
- Battery capacity: 3,350 mAh
- Battery voltage (nominal): 7.2 V
- Battery charging duration: 3 h 45 mins (varies according to device used and state of charge)
- Battery life: 6 h (varies according to device used and state of charge)
- Compatible mobile devices: Screen size up to 8"
- Charges smartphones and tablets
- IP5X: Dust resistant
- Connectivity:

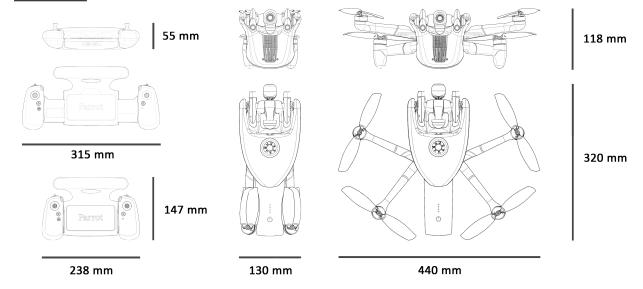
 ° 2 x USB-C (charging and connecting)
 - Micro-HDMI port

CARRY CASE

• Size: 430 x 335 x 200 mm (16.9 x 13.2 x 7.9")



DIMENSIONS



Images not to scale

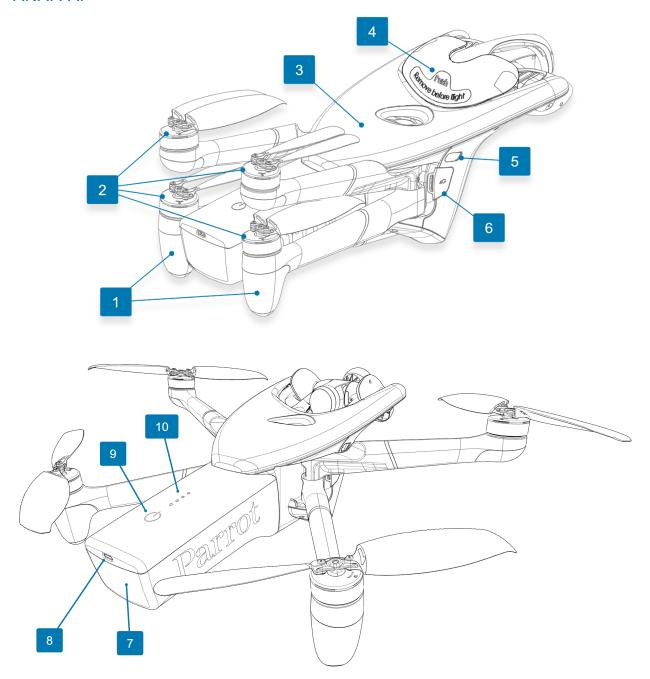
Pack contents

Your ANAFI Ai pack contains:

- 1 Parrot ANAFI Ai drone
- 1 Parrot Skycontroller 4
- 1 smart battery (preinstalled on ANAFI Ai)
- 1 worldwide compatible USB-PD fast charger
- 1 additional set of propeller blades
- 2 long USB-C to USB-C cables for charging and pairing
- 2 short USB cables (1 Lightning and 1 USB-C) to connect devices
- 1 additional set of joysticks (for Skycontroller 4 packs only)
- 1 gimbal protection cover
- 1 Flight Safety Guide
- 1 hard case

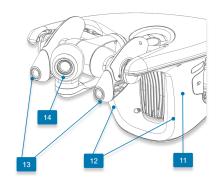


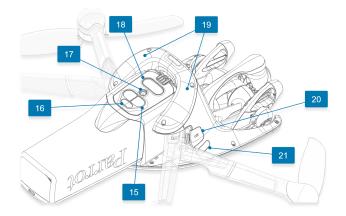
ANAFI Ai



- 1. Rear Wi-Fi antennas
- 2. Foldable arms and propellers
- 3. GNSS antenna
- 4. Gimbal protective cover
- 5. Right LED

- 6. Nano SIM card Cover
- 7. Smart battery
- 8. USB-C charging port
- 9. **Ö Power** button
- 10. Charge level LED indicators





- 11. Main 4G antenna
- 12. Front Wi-Fi antennas
- 13. Stereo obstacle avoidance cameras
- 14. 180° tilt 4K camera
- 15. Time of Flight (ToF)
- 16. Bottom LED

- 17. Vertical camera
- 18. Low light & low altitude assistance lights
- 19. Secondary 4G antennas
- 20. MicroSD Card cover
- 21. Left LED

LEDs and assistance lights

LEDs ensure ANAFI Ai's visibility, and help visualize the drone's orientation in flight.

The right LED flashes for 0.4 seconds every 2-second cycle.

The left LED flashes for 0.4 seconds every 2-second cycle.

Both right and left LEDs are dimmed when the drone is landed.

The bottom LED is off when the drone is landed. It flashes in green for 0.4 seconds every 2-second cycle when the drone is flying.

LED luminosity increases with the drone's height over its take-off point, up to 5 meters.

Assistance white lights turn on in low light conditions, when ANAFI Ai is flying between 0.25 and 5.9 meters above ground.

Turn off ANAFI Ai

Press and hold ANAFI Ai's **O Power** button for approximately 3 seconds (until all the battery's LED lights are turned off) to turn it off.

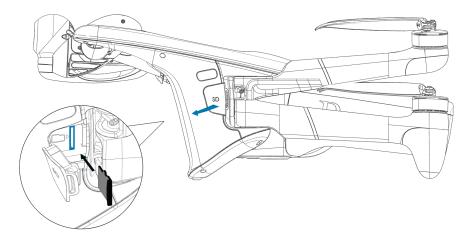
To ensure that the ANAFI Ai is completely switched-off, remove the battery from the body of the drone (Ensure that the drone is safely landed on the ground, with no propellers turning).



Installing a microSD card

This section explains how and where to install a microSD card in ANAFI Ai.

The microSD card slot is located on the left-hand side of the drone.



To install the microSD card:

- 1. Open the **SD card cover** to expose the microSD card slot.
- 2. Insert the microSD card into the keyed slot.

The drone makes a slight clicking sound.

IMPORTANT: In the correct orientation, the microSD card's metal contacts face toward the back of the drone. The notch of the microSD card faces toward the top of the drone. A **microSD-card-with-arrow** icon ', located to the left of the microSD slot, confirms how you must insert the microSD card.

3. Close the SD card cover

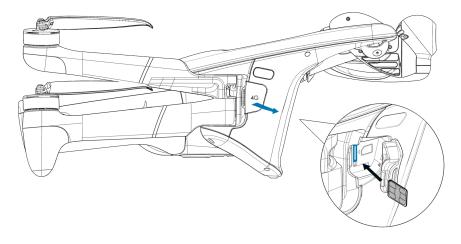
Compatible microSD cards

For more information, refer to Parrot's <u>List of compatible microSD cards</u>.

Installing a nano SIM card

This section explains how and where to install a nano SIM card in ANAFI Ai.

The nano SIM card slot is located on the right-hand side of the drone.

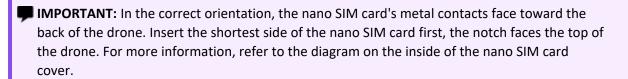


To install the nano SIM card:

- 1. Open the Nano SIM card cover to expose the nano SIM card slot.
- 2. Insert the nano SIM card into the keyed slot.
- 3. Press the nano SIM into the drone

The drone makes a slight clicking sound.

4. Close the Nano SIM card cover.



To remove the nano SIM card:

- 1. Open the **Nano SIM card cover** to expose the nano SIM card.
- 2. Press the nano SIM card into the drone.

The drone makes a slight clicking sound, and partially ejects the nano SIM card.

- 3. Fully extract the nano SIM card.
- 4. Close the Nano SIM card cover

4G connectivity

If 4G coverage is available, ANAFI Ai has no range limit, other than that of its battery. BVLOS (beyond visual line of sight) flights are available.

WARNING: Research local regulations before you use 4G connectivity. Some countries may restrict or prohibit drone connections to local 4G networks, even in areas where drone operations are permitted. If there are 4G connectivity restrictions, turn off Cellular access in the FreeFlight 7 application and use the Wi-Fi connection only. Refer to Connection on page 51 for more information.

4G connectivity offers improved communications between the drone and controller, particularly in environments that experience high levels of interference, such as urban areas.

By default, when a compatible nano SIM card is inserted in ANAFI Ai and activated, the Skycontroller 4 optimizes its connection with the drone, choosing between Wi-Fi and 4G network, automatically and in real time.

NOTE: In FreeFlight 7, go to Settings > Advanced > Connection to choose between Wi-Fi priority or 4G priority. Refer to <u>Connection</u> on page 51 for more information.

Temporarily switching this setting to 4G priority before a flight enables you to assess the strength of your 4G connection. Select Wi-Fi priority then revert to Auto to take off using Wi-Fi.

IMPORTANT: 4G connection and in flight 4G data sharing may incur charges, according to the 4G data plans associated to your drone and device SIM cards.

Activating the nano SIM card

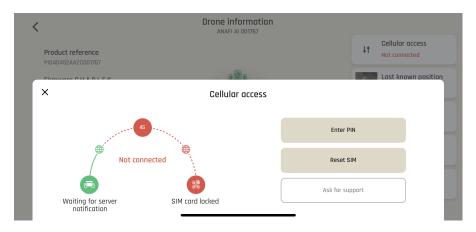
Parrot recommends that you create a Parrot.CLOUD account, however it is not mandatory to activate ANAFI Ai's 4G functions.



To activate the nano SIM card, power on the full ANAFI Ai ecosystem. Access the ANAFI Ai page of the dashboard. The **Cellular access** tile status is **Not connected**.



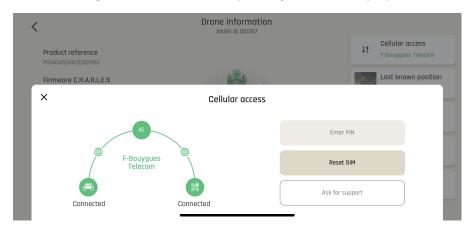
Tap the Cellular access tile to open the Cellular access interface.



If applicable, tap **Enter PIN** to access the **SIM card PIN** interface.

Enter your pin and tap Ok to confirm. The interface closes after approximately 3 seconds, and the 4G protocols are activated. The **Cellular access** tile status now shows the name of the internet service provider.

Tap the Cellular access tile again to check the corresponding interface, displayed below.



NOTE: If you select Reset SIM from this interface and then confirm, the drone reboots with a Not connected status.

Smart LiPo battery

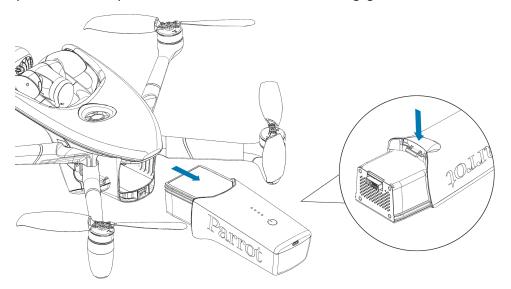
One smart battery comes preinstalled on ANAFI Ai. You can charge the smart battery when installed on ANAFI Ai, or when removed from ANAFI Ai. If you remove the battery, you must reinstall it in the same orientation. Do not install the battery upside down as it may expose the battery and the drone to irreparable electrical damage. Always use genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use voids the warranty and impacts safety requirements.

NOTE: LiPo batteries gradually lose capacity after 300 charge/discharge cycles.

Battery removal

To remove the smart battery from the drone:

- 1. Unfold the drone's arms,
- 2. Press the battery extraction button located under the battery
- 3. Gently slide the battery toward the back of the drone to disengage it.



Battery installation

To install the smart battery on the drone:

- 1. Unfold the drone's arms
- 2. Slide the battery firmly into the drone until you hear a click.
- 3. Ensure that the battery is tightly secured into the drone.

■ IMPORTANT: The LEDs and **Ů Power** button face up in the correct orientation.

Battery charging

To charge the smart LiPo battery, use the enclosed USB-C to USB-C cable to connect the battery to its enclosed charger. Alternatively, charge the battery from:

- a desktop or laptop computer's USB port.
- a power bank's USB-A port.

Full charging time depends on charger specifications and ambient temperature. At 20°C, the full charge duration is approximately 2 hours 30 minutes



CAUTION: Other generic USB chargers may be used provided that they are certified according to the country of use, and have the applicable rating/specification. Performance and warranty are only guaranteed when using the genuine charger included in the Parrot drone system.

When the battery is charging, its 4 LEDs indicate in real time the charge level:

LED 1	LED 2	LED 3	LED 4	Charge Level
	Ø	Ø	Ø	0 - 25% charged
•	-	Ø	Ø	26 - 50% charged
•	•		Ø	51 - 75% charged
•	•	•	-	76 - 99% charged
Ø	Ø	Ø	Ø	Fully charged

When the battery is not installed on ANAFI Ai, check the charge level at any time by pressing the battery **O Power** button. When the battery is installed on the drone, and when ANAFI Ai is powered on, the number of steady LEDs enables you to estimate your remaining flying time:

LED 1	LED 2	LED 3	LED 4	Charge Level	Remaining flight time
0	0	Ø	Ø	0 - 25% charged	less than 8 minutes
•	0	Ø	Ø	26 - 50% charged	8 - 16 minutes
0	0	0	Ø	51 - 75% charged	17 - 24 minutes
•	•	•	•	76 - 100% charged	25 - 32 minutes

Battery care and safety

ANAFI Ai's smart battery features a wintering mode to increase its durability and simplify its care. When not in use for a prolonged period, store the battery half-charged. If the battery is not used for 10 days, it discharges itself to 65% charge, over a 48-hour period.

After a maximum of 12 days without use, the smart battery enters hibernation with a charge level which never exceeds 65%. If you leave your ANAFI Ai battery for 12 days, the **O Power** button does not activate the charge level LED indicators. You must charge the battery to exit the wintering mode and start operating as described in the earlier paragraphs. This behavior preserves the battery over time.

TIP: always run a full charge of your smart battery before flying ANAFI Ai.

ANAFI Ai's smart battery must be handled, transported and stored with care:

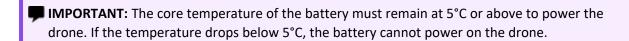
- Do not store the battery long-term (1 month or more) with a charge level below 30%;
- Never leave the battery unattended while charging;

- Never expose the battery to extreme temperatures, neither hot, nor cold;
- Never leave the battery exposed to direct sunlight for prolonged periods of time;
- Never charge the battery when it is still warm from use (wait for at least 20 minutes);
- Never use or recharge a damaged or swollen battery;
- Always store your battery in a dry, ventilated environment, at a temperature close to 20°C;
- Always carry your battery in a fire-retardant bag or case (unless it is installed on ANAFI Ai: it can then be transported with the drone, inside its carrying case).

The boundary conditions to store the battery are:

- a temperature from -20°C to 35°C;
- a relative humidity lower than 75% (rh);

NOTE: ANAFI Ai's smart battery only charges in ambient temperatures between +10°C to +45°C. Flying time is reduced if you fly in temperatures approaching 0°C. The ideal operating temperature of the smart battery is 20°C. Ensuring that the smart battery remains as close as possible to 20°C before starting a flight minimizes the reduction in the smart battery's capacity in cold environments.



TIP: Use your body heat to maintain the temperature of the battery. Keep the battery in your pocket prior to flying in a cold environment.

If the behavior of your battery is not consistent with the information in this section, and if the battery does not power your ANAFI Ai, you must hard reset your battery. To perform a battery hard reset:

- 1. Plug the battery into a power source with the enclosed cable,
- 2. Press the battery's **O Power** button pressed for 15 seconds (regardless of the behavior of the LEDs).

The reset is successful if the battery's LEDs flash quickly, one after the other, alternating green and red.

Battery state of health

On the FreeFlight 7 homescreen:

- 1. tap the **Drone information** tile
- 2. tap the **Battery** tile.

The **Battery information** screen opens and provides the status of the following battery characteristics:

- Individual cell voltage (mV)
- Total Voltage (V)
- Temperature
- Serial number

- Total Capacity (mAH)
- State of health (%)
- Cycles

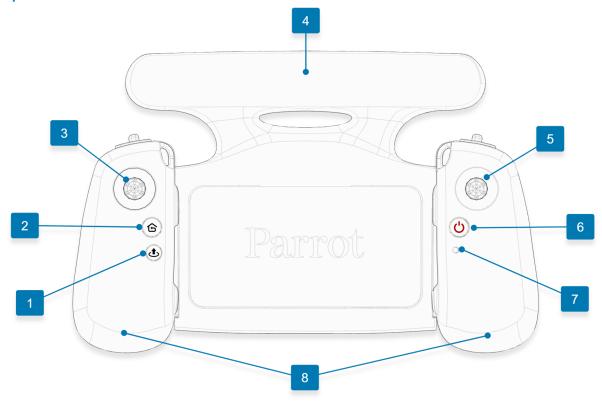
Battery update

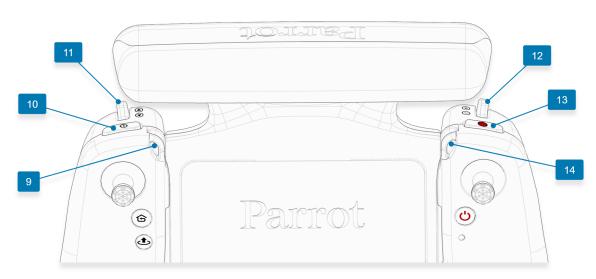
ANAFI Ai smart batteries require updates, like the drone itself, its controller and its controlling application FreeFlight 7. When a battery update is available with a FreeFlight 7 release, a message appears in the app. Follow the in-app instructions to update your battery.



CAUTION: Keep your battery plugged into a power supply throughout the software update procedure. Repeat the procedure with all your batteries.

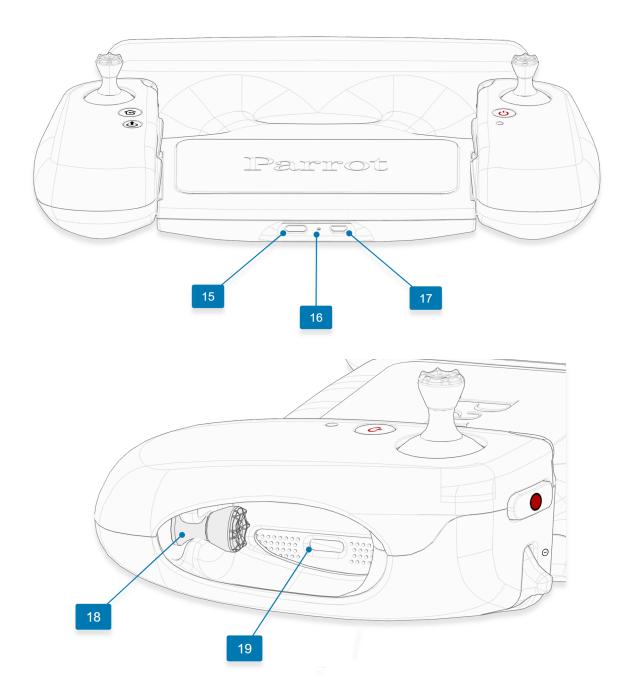
Skycontroller 4





- 2. 合 RTH (Return to Home) button
- 3. Left detachable joystick
- 4. Wi-Fi antenna
- 5. Right detachable joystick
- 6. **් Power** button
- 7. Status LED indicator

- 8. Sliding handles
- 9. Left neck strap loop
- 10. Optics reset
- 11. Gimbal Tilt trigger
- 12. **Zoom** trigger
- 13. Media recording
- 14. Right neck strap loop



- 15. USB C charging port
- 16. Charging LED
- 17. Micro HDMI port
- 18. Left spare joystick storage (1 of 2)
- 19. USB C device connection port

MARNING: If you press ⓒ RTH, ₺Take-Off/Land, and ◉ Shutter simultaneously, the EMERGENCY MODE on ANAFI Ai activates immediately. EMERGENCY MODE instantly cuts power to all motors on ANAFI Ai, which causes the drone to fall from the sky.

Refer to *Flying* on page 43 for more information.

LED status indicator color codes

When the Skycontroller 4 is powered on, its status LED indicator (number 7 on image) and its charging LED (number 16 on image) provide an instant visual indication:

Status LED indicator colors and behavior				
	Flashing green	Skycontroller 4 update in progress		
0↔0	Alternating light blue/dark blue	Connecting to ANAFI Ai		
· i	Flashing light blue	No drone configured or incorrect WPA key		
•	Steady dark blue	Connected to ANAFI Ai		
0-0	Alternating purple/dark blue	RTH in progress		
○← ○	Alternating red/any color	Low battery alert (ANAFI Ai, Skycontroller 4, or both)		
Charging LED	colors and behavior			
	Flashing green	Charging		
Ø	LED off	Charging		

Pairing ANAFI Ai to a Skycontroller 4

Follow this procedure to pair a drone and a controller for the first time, and to restore the lost pairing between a drone and a controller.

- 1. Verify that a compatible microSD card is inserted into ANAFI Ai.
- 2. Press **O Power** on ANAFI Ai.
- 3. Press **OPower** on the Skycontroller 4.
- 4. Connect the drone and the controller with a USB cable (USB-C connection to the USB-C port inside the right handle of the controller, USB-C connection to the drone).

The Skycontroller 4 status LED repeatedly flashes green to indicate it acknowledges ANAFI Ai, and to establish pairing protocols.

5. Wait for synchronization between Skycontroller 4 and ANAFI Ai.

The controller shows a steady dark blue LED.

- 6. Verify that the left trigger of the Skycontroller 4 activates the drone's gimbal to ensure the synchronization is complete.
- 7. Disconnect the controller from the drone.

HDMI video sharing

Use a micro-HDMI to HDMI cable to connect the Skycontroller 4 to an external screen (or VR goggles). The screen displays ANAFI Ai's video stream.



- **MOTE:** External screens only display the drone's video stream, and none of the additional information provided by FreeFlight 7. Operators can watch the drone's view on an external screen, while they navigate FreeFlight 7 menus (settings or dashboard) on the device associated to the Skycontroller 4.
- 🅊 TIP: Use a certified micro-HDMI to HDMI cable (not included in the box) to connect external pieces of equipment to the Skycontroller 4. Uncertified cables may impair the ecosystem's Wi-Fi performance.

GPS receiver compatibility

Connect an external GPS receiver alongside the Skycontroller 4 to improve device location accuracy.

To use a GPS receiver:

- 1. Connect a USB hub to the USB-C port at the bottom of the Skycontroller 4.
- 2. Connect the GPS receiver to the USB hub.

The external receiver signal is now used instead of the iOS device for positioning in Follow-Me, Vehicle mission etc.

Supported GPS modules:

• Any USB GNSS receiver based on the u-blox 8 or u-blox 9 family of chipsets.

FreeFlight 7

This section explores FreeFlight 7 functions, starting with a presentation of the top and bottom bars of the HUD.

The FreeFlight 7 HUD (heads-up display) interface enables you to access all the features of ANAFI Ai, from your device's screen.

Tap **FLY** to access the HUD on the FreeFlight 7 homepage.

Presentation of the HUD



- 1. < Back to Homepage
- 2. O Drone ground speed
- 3. 王 Drone height relative to take-off point
- 4. H Drone horizontal distance from pilot
- 5. Obstacle avoidance (shield) icon
- 6. Compass and drone direction to pilot
- 7. □ Controller battery & device GPS statuses
- 8. Drone: battery/4G/Wi-Fi/GPS statuses
- 9. Settings
- 10. Notifications & alerts zone

- 11. Zoom factor
- 12. Gimbal tilt
- 13. © Piloting modes/Missions
- 14. Drone speed mode (Film/Sport)
- 15. Imaging modes (Video/Photo/Pano)
- 16. Imaging settings
- 17. Shutter (Record/Stop: video mode)
- 18. Slider
- 19. Center (drone/controller) toggle
- 20. Map/3D view area

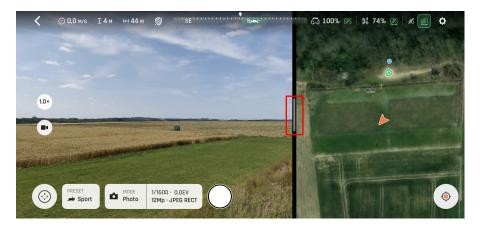
Missions	Imaging modes
	■ Video
Photogrammetry	△ Photo
Flight Plan	
Cameraman	GPS lapse
Vehicle	□ Panorama
ి Touch & Fly	Bracketing
	☐ Burst

TIP: Ensure that both GPS icons are green (and not red) before you make ANAFI Ai take off. This means that the Skycontroller 4 and ANAFI Ai are both synchronized to enough GPS, GLONASS, and Galileo satellites to optimize the stability of the drone, especially at higher altitudes.

HUD Slider Management

The slider separates the video feed from the map, or 3D view. Configure the screen to your personal preferences, or to the specifics of your mission.

Touch the slider (in the red box in the figure below) and slide it to the left to increase the map size or 3D view. Slide it to the right to decrease the map size or 3D view.



ightharpoonup NOTE: On larger devices (tablets), the map is displayed on the lower part of the screen.

Data sharing and User accounts

The FIPS140-2 compliant & CC EAL5+ certified Secure Elements and strong authentication for 4G feature of the ANAFI Ai ecosystem provide absolute protection for your workflow.

This section describes the three data sharing options available for ANAFI Ai owners and operators, in connection with the Parrot.CLOUD account. PIX4D accounts are also covered in this section.

Anonymous sharing (default option)

From the FreeFlight 7 dashboard, tap Log in to access data sharing and account options.



By default, on first launch and as the ecosystem is free from all links to Parrot or partners accounts, FreeFlight 7 forwards anonymous software data to our servers, which helps Parrot improve its products.

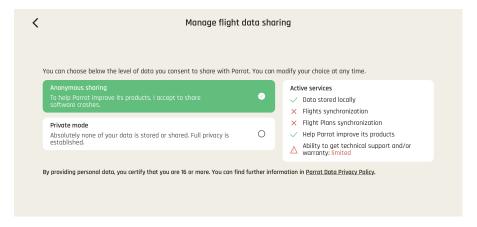
The FreeFlight 7 dashboard may display existing Flight Logs on first start up. These flight logs are:

- The initial start-up (considered as 1 flight log)
- Conformity/quality testing during production (considered as 1 flight log)

Your flight data is stored locally, between your FreeFlight 7 device and your drone, both protected by the Secure Elements and 4G strong authentication (if you have activated a nano SIM).

Tap Data sharing.

The Manage flight data sharing screen opens:





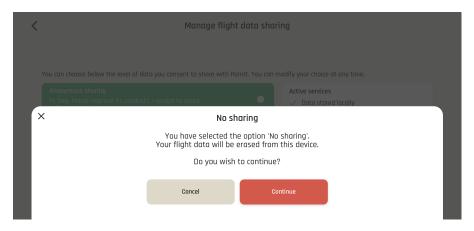
Private mode

From the Manage flight data sharing page, tap Private mode.

FreeFlight 7 warns you that confirming this choice deletes all flight data from your device.

Tap Continue.

No additional data is recorded on your device until you revert to Anonymous sharing.



IMPORTANT: If you activate Private mode, the ability to receive technical support, warranty, or both from Parrot Support is limited. Although the ecosystem produces data to enable a safe flight, none of the data is saved after you power off the ecosystem.

Parrot.CLOUD account & Full sharing

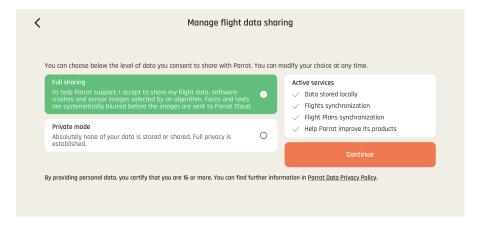
Log into a Parrot.CLOUD account to save flight data and Flight Plans on the Cloud.

Creating a Parrot.CLOUD account is optional, but this option also enables you to maximize your access to technical support, warranty, or both.

Create an account or **Log in** to your existing Parrot.CLOUD account from the following interface and follow the in-app instructions. Creating a Parrot.CLOUD may require a confirmation from your email account before full activation.



After you log into your Parrot.CLOUD account, by default, the **Full sharing** option is activated.

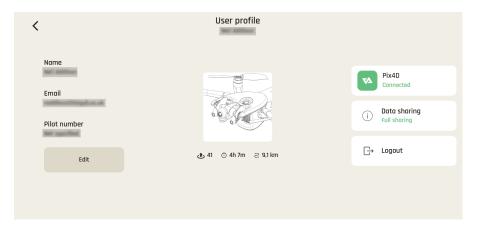


PIX4D account

Existing PIX4D users can link their account to their drone and start programming photogrammetry missions directly from FreeFlight 7 and 4G upload to PIX4D.

If you are a new user and you create a PIX4D account, you can use 3 offered photogrammetry models.

Tap the **Pix4D** tile to log in to your PIX4D account or create a PIX4D account. Follow the in-app instructions to proceed to the **PIX4D Connect** page.



Follow the in-app instructions to log in or create an account. You may receive a verification link via email. Click the link to activate your PIX4D account.

Refer to *Photogrammetry* on page 66 for more information.



Obstacle avoidance

ANAFI Ai's obstacle avoidance (OA) system relies on stereo cameras, located on each side of the main camera. Ensure that the lenses of the stereo cameras are always perfectly clean. Use specialized photo lens cleaning liquid to clean the optics.

Go to **Settings > Quick** and tap the **Obstacle avoidance** tile to activate the OA system. The OA system status is displayed on the HUD, through a shield icon in the top bar:



TIP: Deactivate the OA whenever the icon is NOT green.

If you see a Stereo camera failure notification with a red OA shield, deactivate the OA immediately, land your drone as soon as possible and reboot the full ecosystem before attempting another OA activation. You may have to recalibrate the Obstacle avoidance system before you can activate OA again. Refer to *Obstacle avoidance calibration* on page 39 for more information.

Possible causes of disabled obstacle avoidance and the associated warnings on the HUD include:

- Environment too dark
- Stereo sensors calibration required
- · Stereo camera failure

Obstacle avoidance and manual piloting

The OA is designed to assist the pilot. It is not designed to replace the pilot's control over the drone.

IMPORTANT: Do not lose sight of the drone and always remain focused on its flight.

You must:

- Rely on your own judgement to control the drone and manually avoid obstacles.
- Be wary of obstacles, in particular people and animals which may find themselves in the trajectory of the drone.
- Keep the speed of your drone under 8 m/s.
- Set an RTH altitude before each flight.

When you fly the drone in a direction where the OA cannot detect obstacles (directly sideways or sideways and toward the back), a notification appears on your screen: **Obstacle avoidance – Drone blind in this direction**.



Face the drone in the direction of travel to avoid getting this notification.

Obstacle avoidance and automated flights

During automated flights, the drone manages its trajectory to keep the OA fully functional.

However, you must carefully plan and monitor your automated flights in the following conditions, as the OA might not work optimally.

- Dynamic (moving) environments.
- In front of surfaces or objects that are:
 - ° Monochrome (plain white or black, on any other color without distinct texture or motive).
 - Reflective
 - Water based or transparent.
 - Mobile.
 - Very dark or very bright.
- In areas where the lighting conditions change drastically or very rapidly.
- In rainy conditions.



Calibrations

This section presents the 4 calibration procedures available on ANAFI Ai and the 1 calibration option on Skycontroller 4.

Skycontroller 4 calibration

FreeFlight 7 may require you to calibrate the Skycontroller 4's magnetometer if it has been exposed to a strong magnetic field, or if your flying conditions change radically (for example, if you change from one continent to another).

Tap the Skycontroller 4 tile on the homepage.

The **Controller information** interface opens.



- 1. Tap the 🔁 Calibration tile to open the Magnetometer calibration screen.
- 2. Tap Calibrate.
- 3. Follow the on-screen instructions to complete the calibration. Reproduce the movements displayed on the **Magnetometer calibration** screen:



Drone Calibrations

On the FreeFlight 7 dashboard, tap the Calibration tile of ANAFI Ai, the Calibration menu opens and displays 4 drone calibration options:

- Gimbal
- Correct horizon
- Magnetometer
- Obstacle Detection

Gimbal calibration

The gimbal calibration is more precise than the quick calibration which occurs when ANAFI Ai is powered on.

- 1. Position ANAFI Ai on a perfectly flat and level surface.
- 2. In the Calibration menu, tap the Gimbal tile to perform a gimbal calibration.

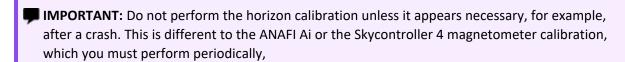
Both the main camera and the stereo camera gimbals calibrate successively.

The Gimbal calibration screen opens and informs you that the LOVE camera calibration is in progress.

X NOTE: Gimbal calibration is not mandatory to take off, but it is recommended. FreeFlight 7 prompts you to perform this calibration when required.

Correct horizon calibration (exceptional procedure)

If all your videos and photos have a tilted horizon, and if this tilt is always on the same side, you must correct the horizon.



- 1. Position ANAFI Ai on a perfectly flat and level surface, exactly perpendicular to any pattern containing straight lines you can use as horizon references.
- TIP: A large water bottle half-full of water provides a useful horizon line almost anywhere.
- 2. When ANAFI Ai is correctly positioned, perpendicular to a horizon, press O Power, along with the Skycontroller 4 and your device.
- 3. In the Calibration menu, tap the Correct horizon tile to perform a horizon calibration. Alternatively, this feature is also accessible from the ANAFI Ai box of the HUD.
- 4. Tap + plus or minus until ANAFI Ai's artificial horizon matches the horizon reference facing the drone.



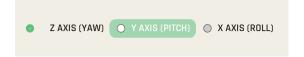


5. When you complete the procedure to straighten the tilt of the camera, tap < back on the top left of the screen to confirm your setting and exit horizon calibration.

Magnetometer calibration

- 1. In the Calibration menu, tap the Magnetometer tile to perform a magnetometer calibration.
- 2. Unfold the arms on the drone before you begin the calibration.
- 3. Tap **Start** on the **Magnetometer calibration** screen to begin the calibration.
- 4. Follow the on-screen instructions to perform a calibration for:
 - AXE Z (YAW)
 - AXE Y (PITCH)
 - AXE Z (ROLL)
- 5. Reproduce the movements in the animations displayed on the screen for each axe.

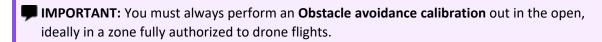
The current axe being calibrated is highlighted in green. When you complete a calibration for one axe, a checkmark in a green circle appears to the left of the axe title.



Obstacle avoidance calibration

Obstacle avoidance calibration requires a short upward flight in a straight line, and a full 360° rotation of the drone.

1. To calibrate the obstacle avoidance system, set up your full ecosystem for a flight



MOTE: Obstacle avoidance is deactivated during this procedure.

2. In the **Calibration** menu, tap the **Obstacle detection** tile to open the **Obstacle avoidance** calibration interface.

2 calibration options are available:

• Quick calibration (up to 50m) – Use this option in zones where you are not permitted to fly drones higher than 50 meters. This calibration is slightly downgraded. Only use the quick calibration in flat environments.

• **Optimal calibration (up to 120m)** – Use this option whenever possible. This calibration provides the highest quality calibration.

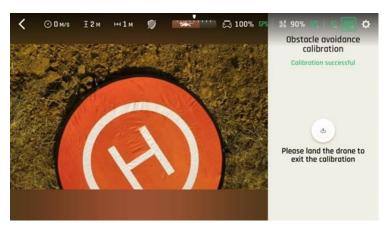


3. Tap either the **Quick calibration**, or **Optimal calibration** tile to select it.

ANAFI Ai takes off, reaches the selected height, performs a full 360° rotation and descends.

4. When you receive a prompt from FreeFlight 7, land the drone to complete the calibration.

When the drone lands, the obstacle avoidance calibration sequence is complete. The **Take-off/Land** icon is replaced by a green check mark.



Taking off

Ground take-off

- 1. Position ANAFI Ai on a flat, even, and clear surface.
- 2. Press **O Power** on ANAFI Ai.
- 3. Move at least 2 m (6 ft) away from ANAFI Ai.
- 4. Check that the surroundings of the drone are absolutely clear.
- 5. Press **Take-off/Land** on Skycontroller 4.

ANAFI Ai takes off and stabilizes at 1 m (3 ft) from the ground, waiting for commands from the pilot.

Hand launch

A hand launch procedure is more dangerous than a ground take-off. Be especially careful with the hand launch feature. It requires complete focus. Do not become distracted and stay aware of your surroundings.

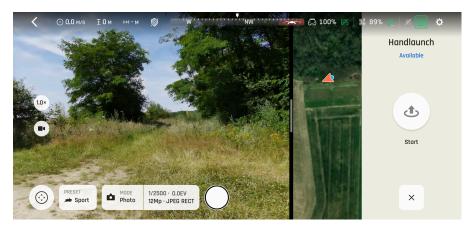
WARNING: DANGEROUS MANEUVER. RISK OF BODILY INJURY AND DAMAGE TO THE DRONE IN CASE INSTRUCTIONS ARE NOT FOLLOWED. LACERATION HAZARD. Do not touch the propeller blades during flight. Propeller blades can cause deep cuts if your fingers, or other body parts, come into contact with them. Keep the drone as far away from your face as possible. PARROT STRONGLY RECOMMENDS THAT YOU DO NOT PERFORM A HAND LAUNCH PROCEDURE INDOORS, DUE TO LOW STABILITY, AND INCREASED RISK.

TIP: Work as a team of 2 people to ease the pressure of multi-tasking: 1 person to perform the take-off procedure, while the other person focuses on flying the drone.

Pay attention to the wind direction and speed. Do not face the wind. Keep yourself at a safe distance from the drone considering the possibility of drifting with the wind.

- 1. Press **O Power** to power on ANAFI Ai.
- 2. Position the drone on your flat, open hand.

The **Handlaunch Available** interface appears on the right-hand side of your device's screen.



3. Press & Take-off/land on Skycontroller 4 or tap & Take-off/land on your device's screen.

The drone's propellors start to rotate slowly.

4. Wait until the propellers' rotation speed stabilizes, then briefly and rapidly lift ANAFI Ai up and forward with your open hand.

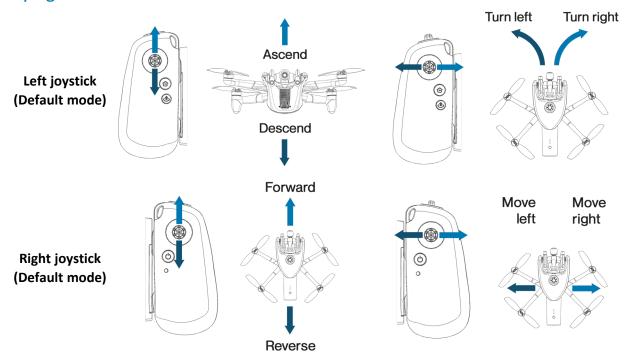
ANAFI Ai becomes airborne. It stabilizes and waits for commands from the pilot.

Only perform a hand launch procedure when there is no other launch alternative.

(1) CAUTION: In environments with sand, use hand launch, instead of ground take-off to prevent sand from penetrating the motors.



Flying



Modify ANAFI Ai's controls through the **SETTINGS** menu of FreeFlight 7. Refer to <u>Controls</u> on page 48 for more information.

As a safeguard measure, ANAFI Ai is programmed to instantly cut its motors in case of impact on one of its propeller blades; Always control your drone carefully.

WARNING: ANAFI Ai features an EMERGENCY MODE. If you activate EMERGENCY MODE in flight, all motors immediately cut out and instantly forces the drone to crash to the ground.

To activate EMERGENCY MODE, press the following buttons on Skycontroller 4 simultaneously:

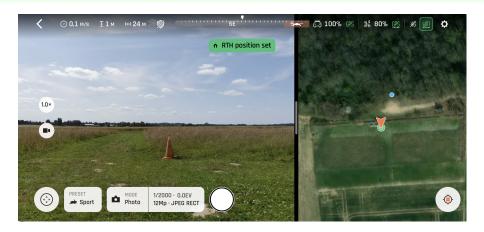
- GRTH
- **t** Take-off/Land
- Media recording

Returning home: Smart RTH

MARNING: The pilot is responsible for the drone during an RTH maneuver. The pilot must remain ready to regain control of the drone in the event of a hazardous situation.

To use the return home feature, ANAFI Ai must set a home point. This is achieved with the first GPS fix of the drone.

TIP: Ensure that the drone GPS icon is green before you take-off:



If no GPS fix is possible from the ground, you must fly ANAFI Ai upward in a straight line over the takeoff point until the drone synchronizes with enough satellites to turn the GPS icon green. This ensures the **home point** is directly over the current take-off point.

To return ANAFI Ai to the **home point**, press **C RTH** on your Skycontroller 4.

By default, ANAFI Ai rises to 50 m above its take-off point and flies back over its home point.

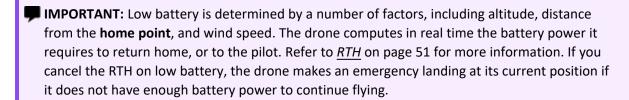


TIP: In FreeFlight 7, you can set a custom altitude between 20 and 100 m for the RTH height. Refer to RTH on page 51 for more information.

Low battery Smart RTH

ANAFI Ai features a Smart RTH capability. When battery power is low, FreeFlight 7 alerts you when it enters the Smart RTH mode. If you feel confident you can bring ANAFI Ai back to its take-off point, or if you wish to land it at a different location, cancel the Smart RTH directly from the alert pop-up.

MOTE: This feature requires synchronization to GPS, GLONASS, or Galileo satellites.



Ecosystem link loss Smart RTH

ANAFI Ai switches seamlessly between Wi-Fi and 4G to avoid a complete connection loss between the elements of the ecosystem. If the Wi-Fi signal is weak, or there is significant interference (for example, due to powerlines), a warning appears on your device's screen: F Weak Wi-Fi signal. Strong **interferences**. When connected to Wi-fi, the Wi-Fi icon on the top right of the screen is inside a box.



The icon appears red when the signal is weak.



When the switch to 4G is complete, the 4G icon is inside a box. The icon appears green when the signal is sufficient.



In the unlikely event of a complete loss of connection between the controller and the drone that lasts for more than 12 seconds, ANAFI Ai automatically enters Smart RTH mode.

This behavior (drone rises to RTH height and starts route toward home) ensures a quick recovery of pilot control over the drone, in most cases.

Pilot Smart RTH

When you select **Pilot** advanced RTH mode, ANAFI Ai returns to the GPS position of the device used to control the drone at the exact moment an RTH procedure is activated, whether the drone is linked to a Skycontroller 4 or not. If the drone loses the GPS fix, it returns to the last known coordinates of the device.

Parrot recommends that ANAFI Ai pilots remain in the same location, after activating an RTH procedure, when in Pilot advanced RTH mode.

RTH end altitude options are:

- Ground (0 m)
- A hovering altitude (1 m 10 m)

When the horizontal distance between the drone and the home position is less than 5 m

• If the RTH is caused by an ice alert, or a battery communication loss, the drone descends to the altitude set for the RTH end, or lands depending on the RTH ending selected behavior.

For other RTH reasons,

- If the precise home feature is available, the drone:
 - 1. rises to 10 m above ground level,
 - 2. moves horizontally towards the home location,
 - 3. descends with the aid of precise home.

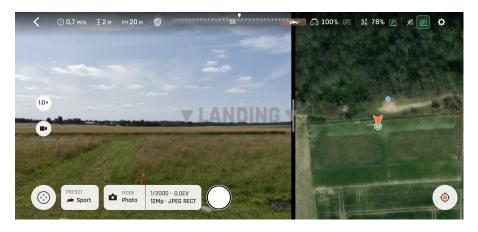
Otherwise, the drone descends directly to the altitude set for the RTH end, or lands depending on the RTH ending selected behavior.

When the horizontal distance between the drone and the home position is between 5 m and 100 m.

If the precise home feature is available, the drone performs an RTH.

Landing

Fly ANAFI Ai directly over a flat, even, and clear surface, then press & Take-off/Land. ANAFI Ai lands.



Hand landing

A hand landing procedure is more dangerous than a ground landing. Be especially careful with the hand land feature. It requires complete focus. Do not become distracted and stay aware of your surroundings.

WARNING: DANGEROUS MANEUVER. RISK OF BODILY INJURY AND DAMAGE TO THE DRONE IN CASE INSTRUCTIONS ARE NOT FOLLOWED. LACERATION HAZARD. Do not touch the propeller blades during flight. Propeller blades can cause deep cuts if your fingers, or other body parts, come into contact with them. Keep the drone as far away from your face as possible. Always wear a sturdy glove when recovering ANAFI Ai for safety. Only attempt a hand landing on a stable surface, with no obstacles in the immediate vicinity. PARROT STRONGLY RECOMMENDS THAT YOU DO NOT PERFORM A HAND LANDING PROCEDURE INDOORS, DUE TO LOW STABILITY, AND INCREASED RISK.

Do not attempt a hand landing in wind strong enough to make the drone fight to hold its hovering position.

Drone GPS synchronization is mandatory for a successful hand landing.

Let the drone do the work. Do not forcefully grab the drone while it is hovering.

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TIP: Parrot recommends that 2 people perform the hand landing procedure: 1 pilot to perform the landing procedure on Skycontroller 4, and 1 drone recovery operator to recover ANAFI Ai.

Pay attention to the wind direction and speed. Do not face the wind. Keep yourself at a safe distance from the drone considering the possibility of drifting with the wind.

Only perform a hand landing procedure when there is no other landing alternative.

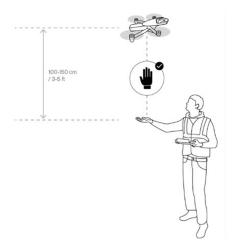
CAUTION: In environments with sand, use hand landing, instead of ground landing to prevent sand from penetrating the motors.



To perform a hand landing:

1. Fly ANAFI Ai at least 100 cm (3 ft) directly over the recovery operator's open hand.

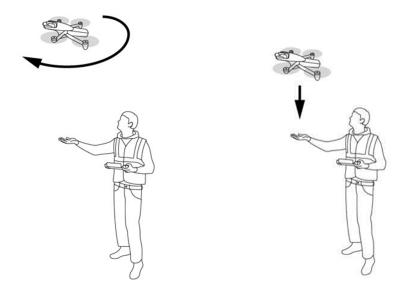
ANAFI Ai recognizes the recovery operator's hand while it hovers.



2. Press **Take-off/Land** on Skycontroller 4.

If necessary, ANAFI Ai rotates to align perfectly with the recovery operator's hand.

ANAFI Ai slowly and safely lands on the recovery operator's hand.



NOTE: During a regular ground landing procedure, if ANAFI Ai is still flying at more than 100 cm (3 ft) from the recovery operator's hand, the operator can raise their arm under the drone, with an open hand. ANAFI Ai recognizes the open hand and proceeds with the hand landing described above, instead of the ground landing procedure.

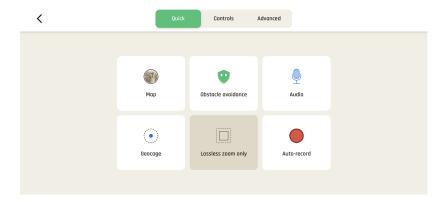
Settings

Tap Settings to access the Quick, Controls, and Advanced tabs.

Quick

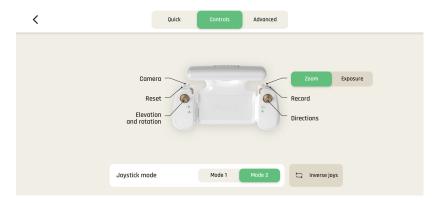
The **Quick** tab is selected by default. There are 6 tiles displayed; **Map**, **Obstacle avoidance**, **Audio**, **Geocage**, **Lossless zoom only**, and **Auto-record**.

Tap the **Map** tile to toggle between the map view and the 3D view. Tap the **Obstacle avoidance**, **Audio**, **Geocage**, **Lossless zoom only**, and **Auto-record** tiles to activate or deactivate the setting.



Controls

The **Controls** menu manages Skycontroller 4's behavior. Tap an option to select it.



Advanced

Tap the **Advanced** tab on the top menu bar to open the advanced settings interface. The advanced settings menu opens with options on the left-hand side of the screen. Tap the appropriate option to customize values for:

Default values (DV) are displayed in bold characters or highlighted on screenshots. Use the sliders, or toggle buttons on the screen to customize the values. Tap the reset button on the bottom of each page to reset the corresponding mode to its default values.



Presets

The **Presets** menu lets the pilot adapt ANAFI Ai's behavior for each mode. Select either the **Film** mode or **Sport** mode tab.

■ Gimbal	
Camera tilt speed	1°/s -180°/s (FILM - 10°/s ; SPORT - 35°/s)
∂ S Flight	
Banked turn	NO / YES (FILM - YES, SPORT - NO)
Inclination	0.25°/s - 30°/s (FILM - 10°/s ; SPORT - 25°/s)
Vertical speed	0.05 m/s - 4 m/s (FILM - 1 m/s; SPORT - 4 m/s)
Rotation speed	10°/s - 200°/s (FILM - 10°/s ; SPORT - 90°/s)

CAUTION: Inclination and **Vertical speed** values have the biggest impact on ANAFI Ai's acceleration and general flying behavior. Higher settings require extreme care, superior piloting skills, or both, when flying ANAFI Ai.

Interface

The **Interface** menu lets the pilot customize the FreeFlight 7 interface during flight. The following customization options are available:

Map type	Plan / Satellite / Hybrid
Measurement system	Auto / Metric / Imperial
Display grid	No / 3x3 / 6x6

Display grid adds a grid overlay to the streaming view.

Tap **RESET INTERFACE SETTINGS** on the bottom of the page to reset to the default values.

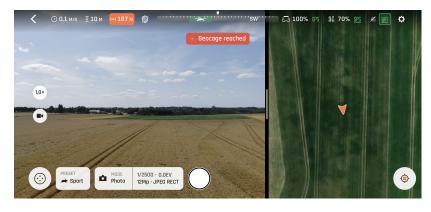
Flight area

The **Flight area** menu lets the pilot customize the geocage boundaries, and activate or deactivate geoawareness.

Activate geocage	No / Yes
Max distance	configurable from 10 m to 4 km (100 m default)
Max altitude	configurable from 1 m to 150 m (100 m default)
Activate geoawareness	No / Yes

The geocage feature allows provides options to define distance and height boundaries for ANAFI Ai.

When the Geocage is activated, FreeFlight 7 displays an alert; **Geocage reached**, when the drone approaches the set limit. The drone stops when it reaches the set limits, as in the screenshot below.



If the drone disconnects from FreeFlight 7 at takeoff, or during flight, the Geocage activates automatically with the following parameters:

- Altitude 120m (C1 regulation)
- Distance 4000m

If the drone disconnects when it is above 120m, the drone cannot ascend.

The geoawareness function detects potential airspace boundary violations and alerts the pilot remotely. This feature is designed to help pilots respect European regulations. Drone pilots must respect the country's geographical flight limits in place.

The geo-awareness function alerts the pilot when:

- The drone is about to enter a restricted airspace, or
- The drone is in a restricted airspace.

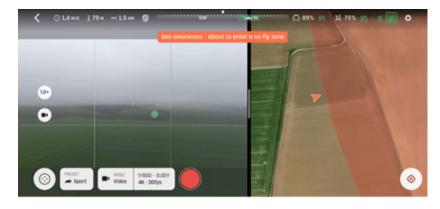
Examples of restricted areas include, airports, prisons, government facilities, or other sensitive areas, etc.

MOTE: Geographical data on restricted areas is managed by Parrot and is updated regularly without the need for user intervention.

Geo-awareness is enabled by default. Deactivate it in the advanced settings.

♠ WARNING: It is the pilot's responsibility to respect restricted airspace.

When the geo-awareness function is activated, the alert: Geo-awareness – about to enter a no-fly zone appears on the screen in orange, if the pilot is about to enter a restricted area. The alert appears 10 seconds before entering the area, estimating the course if the pilot maintains the same heading and speed.



If the drone is inside a restricted area, the orange alert is replaced by: Geo-awareness – no-fly zone in red.

The geo-awareness function indicates restricted areas but does not exempt the pilot from being alert to, and aware of the environment. For safety reasons, do not fly near airports, highways, train stations, railroads, city centers and other sensitive areas.

① CAUTION: If the drone cannot use GPS or the magnetometer, the geo-awareness function does not work.





🗹 NOTE: some areas have vertical limits. The altitude of the drone being calculated in relation to the take-off point and not in relation to the ground, it is possible that a difference is present between the announced limit and the real limit. Take precautions when flying in areas of high terrain: the pilot remains responsible for respecting the vertical limits of the drone geographical zones.

Tap **RESET ALL GEO SETTINGS** on the bottom of the page to reset to the default values.

RTH

The RTH menu lets the pilot define the drone's behavior when the RTH feature is activated. The following customization options are available:

Return to	Take-off point / Pilot position
End by	Hovering / Landing
Hovering	horizontal slider configurable between 1m and 10m (2m default value)
RTH height	vertical slider configurable between 20m and 100m (50m default value)

Tap **RESET RTH PREFERENCES** on the bottom of the page to reset to the default values.

The RTH can be used automatically if the weather is frosty, foggy, or if the battery is disconnected.

Recording

The **Recording** menu lets the pilot customize camera options, both in photo and video modes.

Display overexposure	No / Yes
Sign pictures	No / Yes
Video encoding	H.264 / H.265
Video HDR mode	HDR8 / HDR10
Anti-flickering	Off / Auto / 50 Hz / 60 Hz

When Display overexposure is activated, the HUD of FreeFlight 7 shows all overexposed areas of the screen as hatched, which enables you to fine-tune your framing, your EV settings, or both.

Sign pictures allows authentication and proof of integrity of files produced by ANAFI Ai (to serve as evidence, for example), but it increases the achievable time interval between photos in Timelapse and GPS-lapse modes. When this feature is activated, a .sig file is recorded simultaneously with each picture taken.

Anti-flickering and the associated technology attempts to eliminate the flicker effect which may arise due to some artificial lights. The Auto option works for most users, but depending on the country, try other settings if the flicker effect on the device's screen persists, or persists in artificial light videos, or both.

Tap **RESET CAMERA SETTINGS** on the bottom of the page to reset to default.

Connection

The Connection menu lets the pilot manage the 4G connection, change ANAFI Ai's Wi-Fi network name, **PASSWORD** and band, and broadcast Direct Remote Identification (DRI).

Cellular data		
Cellular access	Off / On	
Network preference	4G / Wi-Fi / Auto	
APN selection	Manual / Auto	

The **Auto** (default) option in Network preference lets the drone manage its connections.

Wi-Fi	
Wi-Fi network name	Type network name in the field, then tap PASSWORD
Wi-Fi channel	Manual / Auto
Broadcast DRI	No / Yes

Use other options to adapt to the flight conditions. 4G priority relies on the 4G network as long as it is available, before switching to Wi-Fi; Wi-Fi priority relies on the Wi-Fi connection as long as it is available, before switching to 4G.



IMPORTANT: 4G connection and in flight 4G data sharing may generate a charge, according to the 4G data plan associated to your nano SIM card.

While flying without 4G connection in dense environments such as cities, Parrot recommends switching to **Manual** Wi-Fi channel and using UNII3 5GHz band (channel 149 to 161) if available in country.

Tap **PASSWORD** to define the Wi-Fi key shared by ANAFI Ai and the Skycontroller 4. Parrot defines a unique random password for each ANAFI Ai and Skycontroller 4 package, but Parrot highly recommends the pilot to define a personal password. The password must be robust: 10 characters long or more and using at least 3 types of characters among uppercase, lowercase, digits, and special characters. The security of the ecosystem and data depends on the security of this password.

The **Direct Remote Identification (DRI)** option ensures, in real time, the local broadcast of remote pilot (operator registration number) and drone information (such as the serial number) during the flight. The DRI electronic signal is compliant with both European & American drone regulations.

According to European for open category or American drone regulation, ensure that the DRI function is activated during in-flight operation by tapping **Yes**. For additional information, consult the regulations in force.



■ IMPORTANT: It is the pilot's responsibility, as an ANAFI Ai owner, operator, or both, to check the local authorities' requirements before flight.

Tap **RESET WI-FI PREFERENCES** on the bottom of the page to reset to default. FreeFlight 7 must be connected to ANAFI Ai for this button to appear.

Developer

The **Developer** menu lets the pilot use debug tools for AirSDK mission developers. The following customization options are available:

Direct connection from PC or smartphone	No / Yes	
Shell access	No / Yes	
Activate AirSDK missions logs	No / Yes	

Shell access and **Activate AirSDK missions logs** cannot be modified by default. The pilot must activate **Direct connection from PC or smartphone** to activate ANAFI Ai shell access and custom mission logs.



Videos, photos, and panoramas

ANAFI Ai is equipped with a 3-axis-stabilized camera, which is capable of motion and still pictures, through a 1/2" CMOS 48 MP sensor. The lens of the camera includes low dispersion aspherical elements, that reduce chromatic aberrations and flare. FreeFlight 7 has multiple configurable settings, from full auto to manual professional options.

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TIP: You can film and take pictures using your device as ANAFI Ai's controller. However, Parrot recommends that you use the Skycontroller 4 and your device, for the best flight experience.

Video mode



To access ANAFI Ai's video options:

- 1. Tap the MODE box in the HUD,
- 2. Tap the **Video** mode box (mode menu not shown on the screenshot).
- 3. Tap the video settings box to open the video settings.
- 4. Tap the **Resolution** box
- 5. Select **1080p**, or **4k** from the **Resolution menu** (4k resolution in screenshot).
- 6. Tap the **Framerate** box to select the value (30 fps in screenshot)
- 7. Tap the video settings box again to close the sub-boxes and confirm your choices.

Available fps values depend on the resolution you select, and on whether you activate the HDR option:

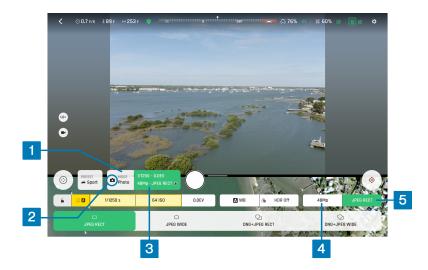
4K:	24 fps, 25 fps, or 30 fps
4K HDR:	24 fps, 25 fps, or 30 fps
P-Log 4K:	24 fps, 25 fps, or 30 fps
1080p:	24 fps, 25 fps, 30 fps, 48 fps, 50 fps, or 60 fps
1080p HDR:	24 fps, 25 fps, or 30 fps
P-Log 1080p:	24 fps, 25 fps, 30 fps, 48 fps, 50 fps, or 60 fps

Press the Skycontroller 4's Media recording button (or tap the HUD's Soft shutter button) to start filming.

The round **Soft shutter** button of the HUD turns into a square and displays a double timer. It shows the time since the video started (main timer, top) and remaining filming time (small timer, bottom).

Press the Media recording button (or tap the Soft shutter button) again to end the recording. The HUD's Soft shutter button returns to steady red, and round. The timer disappears.

Photo mode



To access ANAFI Ai's photo options:

- 1. Tap the MODE box in the HUD,
- 2. Tap a photo mode from the corresponding box in the HUD (mode menu is not shown on the screenshot, **a Photo** mode is selected).

6 photo modes are available on ANAFI Ai, the following table describes the available photo formats:

	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
	JPEG RECT only
ூ GPS Lapse	JPEG RECT only
□ Panorama	JPEG RECT only
Bracketing	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
☐ Burst	JPEG RECT, JPEG WIDE

NOTE: The HDR option is only available for 12MP JPEG photos.

- 3. Tap the **Photo settings** box to open the photo settings.
- 4. Tap the **Resolution** box to select **12MP** or **48MP** (Screenshot shows 48MP resolution is selected).
- 5. Tap the **Photo formats** box to select one of the following photo formats:

☐ JPEG RECT	4:3 aspect ratio, 12 MP or 48 MP, 64° HFOV (Horizontal Field Of View)
☐ JPEG WIDE	4:3 aspect ratio, 48 MP, up to 73.0° HFOV - zoom is disabled for this format
☐ DNG+JPEG RECT	4:3 aspect ratio, 48 MP, up to 73.0° HFOV
○ DNG+JPEG WIDE	4:3 aspect ratio, 48 MP, up to 73.0° HFOV - zoom is disabled for this format

- 6. Tap a format (JPEG RECT, or JPEG WIDE if available, or any DNG+JPEG if available) to select it.
- 7. Tap the Photo settings box again to close the sub-boxes and confirm your choice.
- **NOTE:** The **DNG+JPEG** option produces at least 2 files: 1 DNG (Digital NeGative) and 1 JPEG, for each shutter action. DNG is a RAW format. RAW formats retain all the information gathered by photography sensors, contrary to JPEG formats which are compressed and processed renderings of this comprehensive information. As a result, RAW pictures such as DNG images are heavy files, but they provide the best post-processing and retouching possibilities.

When you select a photo mode, the HUD **Soft shutter** button appears as a full white circle.



- **△ Photo** mode has no options. It takes 1 photo each time you press the shutter. The screen flashes black and white to confirm a picture has been taken.
- Timelapse mode has 7 options: **0.5s** (12MP only), **1s**, **2s**, **4s**, **10s**, **30s**, and **60s**. The screen flashes black and white to confirm a picture has been taken. The drone continues to take photos every 0.5 to 60 seconds, depending on your option choice, until you press the shutter button again to stop the timelapse.
- GPS Lapse mode has 9 options: 0.5 m, 1 m, 2 m, 5 m, 10 m, 20 m, 50 m, 100 m, and 200 m. The screen flashes black and white to confirm a picture has been taken. The drone continues to take photos when it reaches any point on a 0.5 to 200 meter radius sphere around the initial photo, depending on your option choice, until you press the shutter button again to stop the GPS Lapse. Between each shutter action, a green progress bar, at the bottom of the HUD, lets you estimate the distance the drone must cover before the next shot.
- Panorama mode has 4 options: Vertical, Horizontal, 360, and Super Wide.
- Bracketing mode has 3 options: **3 photos** (-1 EV, +0.0 EV, +1 EV), **5 photos** (2 EV to +2 EV) and **7 photos** (-3 EV to +3 EV). When you select an option, the HUD **Soft shutter** button displays the number of the corresponding option. The screen flashes black and white to confirm 3, 5 or 7 pictures have been taken.
- **□ Burst** mode has no options. It takes 10 photos in the span of 1 second each time you press the shutter. The screen flashes black and white to confirm 10 pictures have been taken.

Panoramas

ANAFI Ai panoramas are generated automatically through the FreeFlight 7 gallery, based on a series of pictures taken by the drone.

NOTE: ANAFI Ai cannot proceed with a panorama if the drone battery power is low (capturing a 360 Panorama takes ANAFI Ai 85 seconds).

The generation of a panorama, regardless of its format, has 3 phases:

- a. collecting the pictures, in flight (except for the **Super Wide** format, which can be shot with a landed drone);
- b. downloading the pictures from ANAFI Ai to your device;
- c. stitching the pictures together to create the panorama, on in the FreeFlight 7 gallery.

Before shooting a panorama:

- 1. Ensure you are not flying lower than 10 meters (30 ft) over water.
- 2. Ensure no object or subject is present in a 10-meter (30 ft) radius around ANAFI Ai. This optimizes the stitching process.
- **NOTE:** ANAFI Ai locks the exposure of the frame with which you start your panorama. For this reason, Parrot recommends you always frame the main subject of the intended panorama before pressing the shutter button. Refer to *Lock AE* on page 59 for more information.

To capture a panorama, tap the MODE box, then tap the Panorama box in the HUD. There are 4 panorama formats:

Panorama types capture characteristics	
	ANAFI Ai takes 8 photos in approximately 20 seconds
□ Horizontal	ANAFI Ai takes 10 photos in approximately 20 seconds
360	ANAFI Ai takes 38 photos in approximately 96 seconds
☐ Super Wide	ANAFI Ai takes 9 photos in approximately 18 seconds

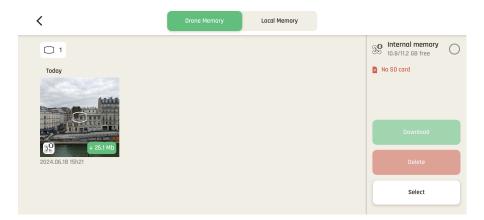
X NOTE: Vertical, Horizontal and 360 panoramas require the drone to be flying before you activate the shutter.

Press Media recording on Skycontroller 4 (or tap the HUD's Soft shutter button) to begin the panorama capture. ANAFI Ai starts taking pictures and the bottom of the HUD displays a progress bar which fills with green as the capture unfolds.

To download the panorama pictures to your device:

- 1. land ANAFI Ai.
- 2. from the FreeFlight 7 homepage, tap the **Medias** tile to access the **Gallery**.

Panoramas show their distinct icon. A green download box shows the size of the corresponding . The icon boxes at the top center of the screen enable you to filter your media.

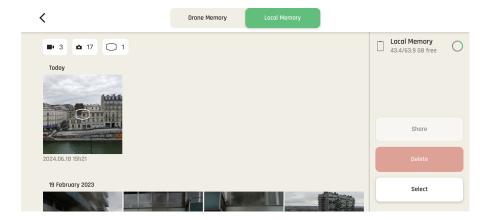


Tap the green box of the panorama you want to generate to start downloading the corresponding series of pictures to your device. When the download is complete, FreeFlight 7 displays a page from where you can delete the downloaded photos. Tap **Keep**, to keep the originals on the microSD card. Tap **Delete** to delete them.

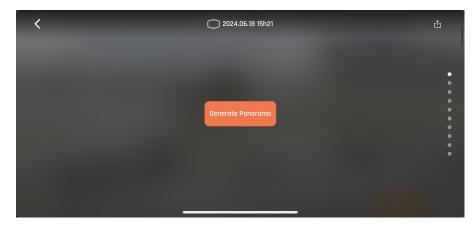
Tap the Local Memory tab to access the device gallery, which contains only the media you have downloaded from ANAFI Ai's microSD card.



Tap a panorama from the local gallery to generate it. FreeFlight 7 shows the following screen.



Tap **Generate Panorama** to generate the panorama, or browse the individual pictures with the slider on the right. When the panorama creation is complete, FreeFlight 7 displays the result.



Media metadata

ANAFI Ai photos and videos contain Metadata with the drone telemetry elements (position, altitude, speed, battery level, etc.) and video metrics (angle of the camera, exposure value, field of view, etc.).

The altitude in the photo metadata is based on WGS84 whereas the altitude displayed on FreeFlight 7 is the altitude above takeoff. Because of that, both values might differ depending on the take-off location.

Refer to this <u>link</u> for more information about the embedded photo metadata. Refer to this <u>link</u> for more information about embedded video metadata.

Gimbal tilt control

ANAFI Ai features a controllable gimbal (180° tilt range, nadir to zenith). Gimbal tilt is controlled with Skycontroller 4's **Gimbal tilt** trigger (left trigger). It is available in all video and photo modes, and in all manual piloting modes.

- To aim the gimbal toward the ground, push the **Gimbal tilt** trigger down.
- To aim the gimbal toward the sky, pull the **Gimbal tilt** trigger up.
- To reset the gimbal tilt to a horizontal position, press the **Optics reset** button.

Zoom control

ANAFI Ai features a 6x zoom. Zoom is controlled with Skycontroller 4's **Zoom** trigger (right trigger). It is available in all video modes, and in **JPEG RECT** photo mode (with an impact on the final resolution of your pictures). **WIDE** photo modes imply the use and rendering of all 48 MP delivered by ANAFI Ai's CMOS sensors. Zoom is deactivated in both **WIDE** photo modes.

- To zoom in on a subject, push the **Zoom** trigger down.
- To zoom out, pull the **Zoom** trigger up.
- To reset the zoom factor to 1x, press the **① Optics reset** button

ANAFI Ai's HUD presents precise, decimal-by-decimal zoom information at all times, in the middle of the left-hand side of the screen.

ANAFI Ai presents no lossless zoom capabilities for pictures. The zoom is deactivated by design in **WIDE** formats (**JPEG** and **DNG+JPEG**), and it has an impact on the resolution of the pictures in **JPEG RECT** format.

By contrast, ANAFI Ai offers lossless zoom capabilities for 1080p (4x) and 4K (2x) videos. The 1080p video mode offers the best resolution for direct observation, even out of the lossless zoom envelope.





The following table shows the zoom level correlation depending on each photo and video mode:

Mode	Media format	Lossless zoom off	Lossless zoom on
■ Video	4k (std, HDR, P-Log) 1080p (std, HDR, P-Log)	Up to x6 Up to x6	Up to x2 Up to x4
△ Photo	JPEG RECT JPEG WIDE DNG+JPEG RECT DNG+JPEG WIDE	Up to x6 Unavailable Up to x6 Unavailable	Unavailable Unavailable Unavailable Unavailable
© Timelapse	JPEG RECT	Unavailable	Unavailable
GPS Lapse	JPEG RECT	Unavailable	Unavailable
□ Panorama	JPEG RECT	Unavailable	Unavailable
Bracketing	JPEG RECT JPEG WIDE DNG+JPEG RECT DNG+JPEG WIDE	Up to x6 Unavailable Up to x6 Unavailable	Unavailable Unavailable Unavailable Unavailable
☐ Burst	JPEG RECT JPEG WIDE	Up to x6 Unavailable	Unavailable Unavailable



Advanced image settings

ANAFI Ai is set to deliver high quality and balanced 4K videos and 48 MP photos, out of the box. However, there are multiple advanced image settings. This section is designed to help you exploit the manual settings.

To access the advanced image settings:

- 1. Tap the Image settings box in the HUD.
- 2. Tap **M A** to toggle between **Manual** mode and **AUTO** mode.

Additional settings boxes are unlocked:



NOTE: In **AUTO** mode, the only setting accessible is the exposure value **EV**. If you attempt to change other values while in **AUTO** mode, FreeFlight 7 switches to **Manual** mode.



Manual mode: The pilot chooses the shutter speed **s**, and the **ISO**. (Shutter speed box and ISO box in gray). **EV** not accessible.



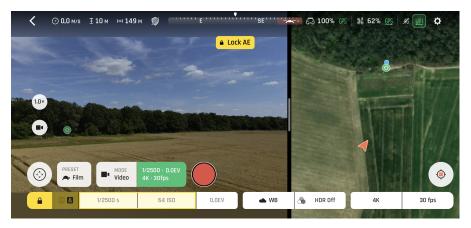
AUTO mode: ANAFI Ai chooses the shutter speed **s**, and the **ISO** value based on the surroundings. (Shutter speed box and ISO box in yellow).

Lock AE

FreeFlight 7 allows the pilot to lock the general exposure of a view, to fine-tune the framing of a shot and keep the desired exposure.

The **Open lock** icon is on the far left of the **Image settings** menu.

Tap the **Open lock** icon to lock the exposure value to that of the current view. The icon turns into a **Closed lock** on a yellow background. A yellow **Lock AE** box appears in the **Notifications & Alert** zone, below the top bar of the HUD.



Move ANAFI Ai around or tilt its gimbal to change the frame. The exposure settings remain as they were when you activated the function.

Tap the Closed lock icon again to deactivate the exposure lock. The icon reverts to an Copen lock on a white background.

Lock AE Touch

With the AE Touch (or Spot AE) function of FreeFlight 7, you can also lock the exposure of a frame on any detail of any view.

To activate this function, follow the **AE** procedure of the preceding section. When the exposure is locked, long press the part of the frame you want to base your exposure on. A yellow square animates around this spot and the settings change (s value, ISO value, or both).

The following screenshots show an underexposed image and a correctly exposed image.



Shutter speed (s)

The shutter speed **s** value refers to the exposure time, in fractions of a second, where the shutter stays open to capture a still picture.

In **AUTO** mode, ANAFI Ai selects the best shutter speed and ISO value couple, in real time, depending on the scene and available light.

NOTE: selecting a shutter speed deactivates the automatic ISO mode.

ANAFI Ai's f/2.0 aperture lens lets in a lot of light, and achieves fast shutter speed values (down to 1/10,000 s) and captures very fast action. It can also be used for slow shots, up to 1/15 second for the photo mode.

NOTE: ANAFI Ai can shoot pictures and videos when it is not flying. Hold the drone to use it as a stabilized 4K video and photo camera.

Tap the **Shutter speed** box to open the shutter slider.

Select a value to exit AUTO mode for shutter speed and ISO. This action also deactivates the EV slider.

Set the desired shutter speed value, then tap the **ISO** box to select an ISO value. The HUD reflects the chosen settings. If you get lost, tap **AUTO** either on the shutter speed or the ISO slider to get back to AUTO exposure and reactivate the EV slider.

ISO value (ISO)

The ISO value refers to the sensitivity of the sensor. The ISO value is linked to the shutter speed value. Both sliders activate when you deactivate the **AUTO** mode and set a value for one, or the other. The lower the ISO value, the lower the sensitivity of the sensor, and the lower the image noise (digital grain). Therefore, under good lighting conditions, such as sunny daylight outside shots, select low ISO values (for example, between 50 or 200). Use 3200 ISO to capture low light interior scenes, or exterior shots at dusk or dawn, for example.

By default, in **AUTO** mode, ANAFI Ai constantly adapts its ISO and shutter speed values to the scene it is filming. However, setting an ISO value for a whole shot or series of shots is advised for professional filming.



Tap the ISO box to open the ISO slider.

Select a value to exit the **AUTO** mode for ISO and shutter speed. This action also deactivates the EV slider.

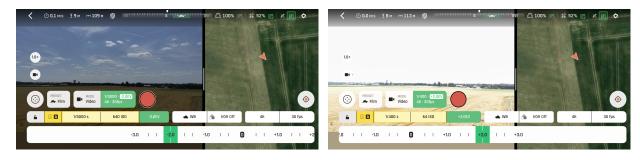
Set the desired ISO value, then tap the shutter speed box to select a shutter value. The HUD reflects the chosen settings. If you get lost, tap **AUTO** either on the s or the ISO slider to get back to auto exposure and reactivate the EV slider.

Exposure value (EV)

The EV expresses the general darkness or lightness of a photograph or video. At +0.0 (zero) EV, ANAFI Ai automatically adapts the shutter speed and the ISO value to deliver a perfectly balanced photo or video.

Tap the **EV** box to activate the EV slider.

Move the EV slider to the left (negative) to darken the image, or to the right to lighten it (positive).



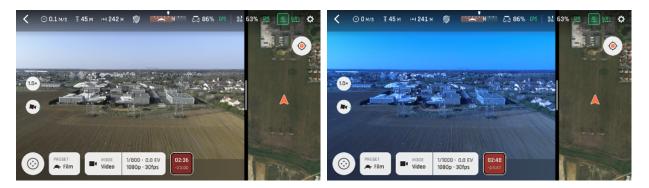
White balance (WB)

White balance refers to the process of adjusting the colors in an image to accurately represent how they appear under different lighting conditions, particularly in relation to the color temperature of the light source. Cold lights make the whites look blue. Warm lights make the whites look yellow. By default, **Auto WB** mode ensures that white objects appear neutral white, at all times. It adapts its WB value in real time.

However, setting a WB value for an entire shot is advised for professional filming. Stable WB facilitates the grading (color treatment) of videos.

Tap the **WB** box to open the white balance options.

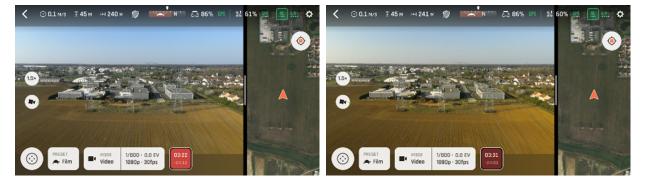
Select the **WB** option that is best suited for your shooting conditions, your subject, or both. The HUD reflects the chosen settings and helps you make the best choice.



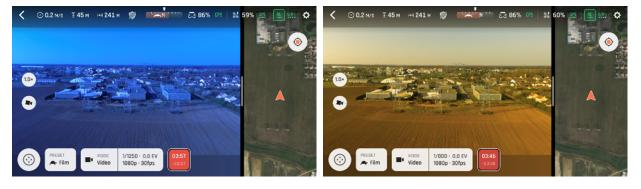
Auto WB Incandescent WB



Fluo WB Sunny WB



Cloudy WB Shaded WB



WB 2000k WB 10000k

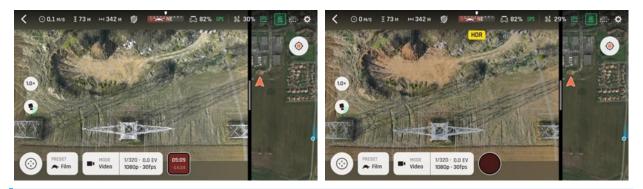
HDR

HDR (high dynamic range) enhances videos or photos. The HDR option is available for videos (no lossless zoom and limited to 30 fps max in 4K, lossless zoom limited to 2x and limited to 30 fps max in 1080 p) and 12MP photos.

To activate the HDR option, tap the **Image settings** box from the lower bar of the HUD, then tap the **HDR** box.

Tap **HDR On**. A HDR notice appears in black inside a yellow box, at the center of the top of the HUD. Press the Skycontroller 4's • **Media recording** button (or tap the **soft shutter** button in the HUD) to start filming in HDR or to take an HDR photo.

Follow the same procedure and select HDR Off to revert.



NOTE: You cannot modify, shutter speed s, ISO, or EV values when the HDR mode is activated. However, you always keep control over your white balance WB. Activating (or deactivating) HDR stops any ongoing video recording. A new recording with the new setting starts after 5 seconds.

ANAFI Ai features 2 HDR options: HDR-8 and HDR-10. HDR-10 is only available through H265 video encoding. Refer to *Recording* on page 51 for more information.

P-Log

P-Log style is also available through the HDR box, for video mode only. This alternative imaging style reduces contrast and saturation. P-Log style is ideal for videos you want to edit and post-process using professional grading tools and filters.



Media management

Retrieving photos and videos

- 1. Remove the microSD card from the drone. Refer to Installing a microSD card chapter on page 19 for more information.
- 2. Insert the microSD card into the microSD card slot on your computer.

If your computer does not have a microSD card slot, use a microSD to SD card adapter.

3. Copy the videos and photos taken with ANAFI Ai to the computer hard drive to store, edit, and manage the media.



TIP: Backup all photos and videos, and clear the microSD card after each flight to free memory space for new images and images.

Direct media retrieval (drone to computer)

Alternatively, retrieve the media directly from ANAFI Ai, without extracting the microSD card.

Power on the full ecosystem and activate the **Direct connection from PC or smartphone** option from the **Developer** settings. Refer to *Developer* on page 52 for more information.

Use the enclosed USB-C to USB-C cable to connect the drone to the USB-C port of your PC (Windows OS computer).

Alternatively, if your computer does not have a USB-C port, use a USB-A to USB-C cable to connect ANAFI Ai to your computer.

ANAFI Ai mounts as an external drive. Copy your media from the **DCIM/100MEDIA** directory to your computer's hard drive.

When you finish managing your media, click Safely Remove Hardware in the Windows taskbar, then click on Eject ANAFI Ai, like any other external drive.



NOTE: When plugged in to a computer and powered on, ANAFI Ai's battery discharges itself. You must recharge your smart battery after you retrieve your media, even if the battery was fully charged when you began the procedure.

FreeFlight 7 Medias Gallery

Access the Medias gallery from the FreeFlight 7 homepage. Tap the Medias tile

The Medias gallery has 2 tabs at the top of the interface; Drone Memory, and Local Memory.



NOTE: If ANAFI Ai is powered on and connected to Skycontroller 4 directly (or connected through your device), the FreeFlight 7 Gallery displays the microSD card media, by default.

Tap any media to preview it.

Tap any green media download box to transfer the corresponding media to your device.

Tap the **Local Memory** tab at the top of the interface to access any media you download to your device.



The **Medias** gallery also lets you:

- preview videos and photos, without downloading them to your device
- create panoramas (Refer to *Panoramas* on page 55 for more information.)
- erase all media
- format a microSD card
- share media

MicroSD card formatting

To format the microSD card:

- 1. tap the **Drone Memory** tab,
- 2. Tap Format SD Card
- 3. Select one of the following options:



Confirm your selection from the next screen to launch the formatting.

① CAUTION: Both options delete all microSD card contents, including flight data.

Missions

Tap the **MISSIONS** icon in FreeFlight 7's HUD to access the 6 different Missions:

- ② Piloting
 □ Flight Plan
 □ Vehicle
 □ Cameraman
 □ Touch & Fly
- **IMPORTANT:** Absolute Altitude Reference (AAR) is the default flight height setting for all missions. AAR is the height the drone flies above the relevant ground level. AAR height may be different from Average Mean Sea Level (AMSL).

All tables in this section show default values (DV) in bold.

Piloting

The ^③ **Piloting** Mission is ANAFI Ai's default Mission. It enables you to pilot the drone and fully control its camera tilt and zoom.

When you release the commands, ANAFI Ai hovers in position.

Photogrammetry

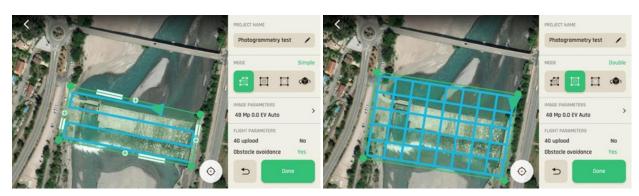
ANAFI Ai and FreeFlight 7 utilize PIX4D technologies which enable existing PIX4D users to link their drone to their PIX4D account. New users can use ANAFI Ai to discover PIX4D photogrammetry services, through 3 offered mapping missions.

1. Tap New project

You are prompted to enter a **PROJECT NAME**

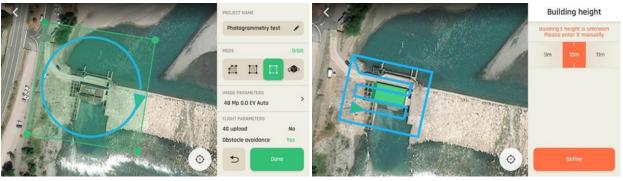
2. Tap **done** in the keyboard after you type the project name

There are 4 photogrammetry modes: 🗐 Simple, 🗐 Double, 🖸 Orbit, and 🐠 1-Click.



Photogrammetry: Simple

Photogrammetry: Double



Photogrammetry: Orbit

Photogrammetry: 1-Click



- 3. Tap the **MODE** box to select a photogrammetry mode.
- 4. Tap the **IMAGE PARAMETERS** box:

RESOLUTION	12Mp / 48Mp
EXPOSURE	-3.0EV to +3.0EV (DV: 0.0EV)
WHITE BALANCE	Auto / Sunny / Cloudy
SIGN PICTURES	Yes / No

5. Tap the **MISSION PARAMETERS** box:

4G UPLOAD	Yes / No
OBSTACLE AVOIDANCE	Yes / No
FINAL RTH	Yes / No
RTH ON DATA LINK LOSS	Yes / No
CUSTOM RTH PARAMETERS	Yes / No

RTH PARAMETERS are unavailable by default. If you select **Yes** for the **CUSTOM RTH PARAMETERS** in the **MISSION PARAMETERS** menu, the following menu becomes available:

RETURN TO	Take-off / Pilot position
RTH ALTITUDE	20m to 100m (DV: 100m)
END BY	Hovering / Landing
HOVERING ALTITUDE	1m to 10m (DV: 10m)

Each photogrammetry mode has specific **PHOTOGRAMMETRY PARAMETERS**. Refer to the following subchapters for the different options available.

Simple

The **Simple** photogrammetry mode creates 2D maps. Simple grids can be precisely adapted to any shape, to match the borders of a field or a coastline, for example. Follow these steps to program and launch a simple grid mapping flight:

A. Tap the **PHOTOGRAMMETRY PARAMETERS** box:

ALTITUDE		5m to 500M (DV: 50m)
GSD:		
	CAMERA TILT	-90.0° to 0.0° (DV: -90.0°)
	FRONT OVERLAP	20.0% to 90.0% (DV: 80.0%)
	SIDE OVERLAP	20.0% to 90.0% (DV: 60.0%)

- B. Tap the map to create a square grid.
- C. Tap and slide the green corners of the square to adapt the grid to the zone you want to map.
- D. Tap any + Plus sign to create a new segment and a new corner.
- E. Tap **Done** when you finish mapping the grid.
- F. Tap **Play** to launch the flight.

Double

The **Double** grid photogrammetry mode creates 3D maps or 3D models of square areas. Follow these steps to program and launch a double grid mapping flight:

A. Tap the **PHOTOGRAMMETRY PARAMETERS** box:

ALTITUDE		5m to 500M (DV: 50m)
GSD:		
	CAMERA TILT	-90.0° to 0.0° (DV: -90.0°)
	FRONT OVERLAP	20.0% to 90.0% (DV: 80.0%)
	SIDE OVERLAP	20.0% to 90.0% (DV: 60.0%)

- G. Tap the map to create a square grid.
- H. Tap and slide the green corners of the square to adapt the grid to the zone you want to map.
- I. Tap **Done** when you finish mapping the grid.
- J. Tap **Play** to launch the flight.

Orbit

The Orbit photogrammetry mode models isolated buildings or structures in 3D. Follow these steps to program and launch an Orbit mapping flight:

A. Tap the **PHOTOGRAMMETRY PARAMETERS** box:

ALTITUDE		5m to 500M (DV: 50m)
GSD:		
	NUMBER OF PHOTOS	18 to 90 (DV: 51)
	CAMERA TILT	-90.0° to 0.0° (DV: -45.0°)

- B. Tap the map to create a square flight area.
- C. Tap and slide the square to position the object you want to map at the center of the flight area.
- D. Tap and slide the green corners of the square to adapt the flight area to the part surrounding the target object you want included in the 3D model.
- E. Tap **Done** when you finish mapping the grid.
- F. Tap **Play** to launch the flight.

NOTE: If the FreeFlight 7 device loses internet connection during the mission, the map may not be visible depending on the basemap tiles stored in the cache. However, the drone's path remains visible on the app.

1-Click

The **1-Click** photogrammetry mode creates a 3D model of a single building, with a single tap on the screen. Follow these steps to program and launch a 1-Click mapping flight:

A. Tap the **PHOTOGRAMMETRY PARAMETERS** box:

ALTITUDE 5m to 500M (DV: 50m)	
--	--

B. Tap the box which appeared on the map over the building you want to model.

The box turns green.

- C. Define the **Building height** if it is unknown by the land register.
- D. Tap **Done** when you finish mapping the grid.
- E. Tap **Play** to launch the flight.



🔀 NOTE: If the mission starting point is 50 km away, or further, an alert message appears: First waypoint too far away.

PIX4D suite compatibility

ANAFI Ai is compatible with the PIX4D software suite, including Pix4Dmapper, Pix4Dinspect, Pix4Dmatic, and Pix4Dcloud. To learn more on how to optimize the processing of the images, please read the PIX4D SOFTWARE TUNING FOR ANAFI Ai documentation.

Flight Plan

The © Flight Plan mission enables you to fully prepare and configure your flights and filming sessions.



- 1. Currently selected waypoint
- 2. Flight path segment
- 3. Waypoints linked to POI 1
- 4. Waypoint camera direction
- 5. Waypoint altitude
- 6. Waypoint number

- 7. Point of Interest (POI) 2
- 8. ALTITUDE slider
- 9. CAMERA SLIDER slider
- 10. Delete
- 11. Undo

NOTE: In the screenshot above, POI 1 is obstructed by the linked waypoints.

ANAFI Ai supports AMSL altitude (Above Mean Sea Level), which allows the drone to use a reference point to measure the environment more precisely.

1. Tap New Flight Plan.

Alternatively, tap Projects on the FreeFlight 7 home screen. Ensure that the Flight Plan tab is selected, then tap New.

The map of your surroundings opens full screen. If you are not connected to ANAFI Ai, the minimized live view is black.

In both scenarios, the Flight Plan project screen opens, and you are prompted to enter a PROJECT NAME

- 2. Tap **done** after you type the project name.
- 3. To start a new flight plan, tap the screen to create the initial waypoint, ideally, very close to your intended take-off point

Waypoints appear as green circles. The white figure in the center represents the drone's altitude, and the green arrow represents the camera direction.

- 4. Change the direction of the ANAFI Ai's camera by pressing and holding on the green arrow.
- 5. Rotate the arrow to the desired camera direction.
- 6. Tap the map to create more waypoints.

By default, the new WP is set at the same altitude and camera angle as the previous WP. The camera points in the direction of the flight which brought the drone to the new WP.

7. Tap the flight path segment between 2 waypoints to activate the Segment interface.

Modify ANAFI Ai's speed for any flight segment (from 0.5 m/s to 12 m/s by 0.5 m/s increments – default value: 5 m/s).

8. Tap the + plus on the middle of the segment to create a new WP there.

By default, the altitude of the new WP considers flight level change between the previous WP and the next WP.

- 9. To change the height of an individual waypoint, tap the desired waypoint.
- 10. Drag the slider on the right of the screen to modify the altitude.

In the example above, ANAFI Ai climbs from 37 meters at the currently selected waypoint to 50 meters for the following waypoint.

- 11. To change ANAFI Ai's camera angle at a given waypoint, tap the desired waypoint.
- 12. Drag the slider on the right of the screen to modify the camera angle.
- 13. Press and hold on the screen to create a Point of Interest (POI)

The POI appears as a square diamond. The white figure in the center represents the POI altitude. Drag the slider on the right of the screen to modify the altitude.

- 14. Select a POI to link waypoints to it.
- 15. Tap a waypoint to link it to the POI

When you link a waypoint to a POI, the waypoint arrow rotates toward the POI, and the camera angle changes automatically.

NOTE: POIs are color coded. Each POI is a different color from the previous. When you link a waypoint to a POI, the waypoint arrow changes color to the corresponding POI color.

To unlink a waypoint from a POI, tap the POI, then tap the waypoint that you want to unlink.

You can modify waypoints and POIs at any time. Tap the waypoint or POI to change the height, and drag the icon to change the location.

To remove a waypoint or a POI, press and hold on the icon, then tap **Delete**.

Flight Plans can take any shape or form, and the last WP does not have to be close to the take-off area. You can start and finish a Flight Plan in different locations.



However, if you want to land away from your take-off area, select **No** from the **CUSTOM RTH PARAMETERS** option from the **MISSION PARAMETERS** menu. Refer to <u>MISSION PARAMETERS</u> below for more information.

IMAGE PARAMETERS

Tap **IMAGE PARAMETERS** to open the corresponding interface:

MODE: Video		
	RESOLUTION	1080p or 4K
	FRAMERATE	30 fps (24 to 30 fps for 4K / 24 to 60 fps for 1080p)
	EXPOSURE	-3.0EV to +3.0EV (DV: 0.0EV)
	WHITE BALANCE	Auto / Sunny / Cloudy
MODE: Timelapse		
	DURATION	1s, 2s , 4s, 10s, 30s or 60s intervals between shots
	RESOLUTION	12 Mp / 48 Mp
	EXPOSURE	-3.0EV to +3.0EV (DV: 0.0EV)
	WHITE BALANCE	Auto / Sunny / Cloudy
	SIGN PICTURES	Yes / No
MODE: GPS lapse		
	DISTANCE	0.5 m, 1 m, 2 m, 5 m, 10 m , 20 m, 50 m, 100 m, or 200 m between shots
	RESOLUTION	12 Mp / 48 Mp
	EXPOSURE	-3.0EV to +3.0EV (DV: 0.0EV)
	WHITE BALANCE	Auto / Sunny / Cloudy
	SIGN PICTURES	Yes / No

Tap X to close Image parameters and confirm your settings.

NOTE: Zoom is not available in Flight Plan Modes Timelapse and GPS Lapse.

MISSION PARAMETERS

Tap MISSION PARAMETERS to open the corresponding interface:

OBSTACLE AVOIDANCE	Yes / No
PROGRESSIVE ORIENTATION	Yes / No
FINAL RTH	Yes / No
RTH ON DATA LINK LOSS	Yes / No
CUSTOM RTH PARAMETERS	Yes / No

RTH PARAMETERS are unavailable by default. If you select **Yes** for the **CUSTOM RTH PARAMETERS** in the **MISSION PARAMETERS** menu, the **RTH PARAMETERS** becomes available. Refer to <u>Photogrammetry</u> on page 66 for more information.

Tap **X** to close the Mission parameters and confirm your settings.

Tap **Done** to save your Flight Plan.

Start your flight plan

- 1. Go to your take-off area.
- 2. Tap the **MISSIONS** icon in the bottom-left corner of the HUD of FreeFlight 7 to access missions options.
- 3. Tap **Flight Plan** to select the mission.

The previous plan you programmed appears.

4. Tap the green Play icon from the right of the Flight Plan interface to launch the flight.

ANAFI Ai takes off, flies to the first WP and begins the mission.

You can interrupt a flight plan at any time by either stopping or pausing the flight plan.

To stop a flight plan, tap **STOP** (red square). When you finish exploring or taking Panoramas and you are ready to resume the Flight Plan, tap **Play** to start again from the latest waypoint ANAFI Ai has passed.

To pause a flight plan, reclaim the commands of the drone during the flight plan. Press **RESUME** to resume the Flight Plan where it paused.

CAUTION: Monitor the Flight Plan with extreme care. Always verify the drone's flight path is safe, and clear of obstacles. Always maintain visual contact with ANAFI Ai, and always be ready to stop the Flight Plan in case of danger or unexpected obstacles.

If the mission starting point is over 50km away, an alert message appears: First waypoint too far away.

NOTE: If the FreeFlight 7 device loses internet connection during the mission, the map may not be visible depending on the basemap tiles stored in the cache. However, the drone's path remains visible on the app.

Import

To import a MAVlink file directly in FreeFlight 7, follow the next steps:

- 1. Send the file to your email address.
- 2. Open the email with Outlook on your iOS device.
- 3. Tap on the file.
- 4. Click on the **Share** button.
- 5. Click on **Share with**, and choose FreeFlight 7 App.

FreeFlight 7 opens directly on the Flight Plan interface and loads the MAVlink file.

NOTE: An imported flight plan cannot be edited.

Cameraman

The **Cameraman** mission enables you to pilot ANAFI Ai around an object or a subject and keep them in the center of your frame.

Frame the object or subject you want to film and fly around.



Up to 10 potential targets (people, vehicles, animals, etc.) appear highlighted in yellow:



Tap a potential target to select it, or draw a rectangle with your finger on the screen of your device, around the object or subject you want ANAFI Ai to follow.

When your target is locked, it appears highlighted in green, as in the next screenshots, where a moving vehicle was selected.



Fly ANAFI Ai around your target. The drone keeps your target at the center of the frame.

Push Skycontroller 4's right joystick left (clockwise rotation) or right (counterclockwise rotation) to circle around the target.

The drone keeps your target in the part of the frame you have selected.

ANAFI Ai manages the gimbal tilt to keep the target in the frame. Skycontroller 4's left trigger is deactivated in this mode. However, zoom control is still available with the right trigger.

When you release the commands, ANAFI Ai hovers and rotates to continue following the target.

Tap **STOP** (white square on red background) in the HUD to stop tracking the target.

When no target is selected, or when the tracking is stopped by the pilot, ANAFI Ai's behavior is similar to that of the **Piloting** mission.

CAUTION: Monitor the Cameraman mission with extreme care. Always verify the drone's flight path and the trajectory of the subject is safe, and clear of obstacles. Always maintain visual contact with ANAFI Ai, and always be ready to stop the Cameraman mission in case of danger or unexpected obstacles.

Vehicle

The vehicle mission enables authorized pilots to take off and control their drone from a moving vehicle (for example a pickup truck or a boat), then to land it safely back on the moving vehicle (up to a 25 km/h or 17.5 mph speed).

Vehicle missions consume more battery power. Increase the safety margins on your battery readings. If you normally land with 20% battery power remaining, aim for 30%.

Set up ANAFI Ai for take-off in the direction of motion of the moving platform.

To activate this feature, you must have a double GPS fix (drone and device).

Parrot recommends initiating Vehicle mission flights from a distinctive black and white take-off/landing platform such as the Parrot landing pad. Download and print the Parrot landing pad here. The minimum size is 70cm x 70cm.



From take-off, ANAFI Ai synchronizes its speed and trajectory to that of the vehicle, tracking and following it. The pilot retains control of the flight of the drone, relative to the vehicle's reference.

The drone follows the vehicle by default, even when the command is activated. However, the pilot retains control of the precise trajectory of ANAFI Ai, its direction, and the framing of the camera.

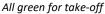
When you follow a vehicle, a link appears between your drone and the vehicle to symbolize the tracking mission.

During a Vehicle mission, activating the RTH command initiates a return sequence toward the vehicle (Returning to vehicle). The following sections describe all phases of Vehicle missions.

Vehicle take-off

- 1. Set up ANAFI Ai in the direction of the movement of the vehicle.
- 2. Check your operating area provides GPS synchronization for both the drone and the controller.
- 3. Stabilize the speed of the vehicle to under 25 km/h (15.5 mph).
- 4. Activate the Vehicle mission from the MISSIONS icon on the bottom left of the FreeFlight 7 screen.
- 5. Stabilize the direction of the vehicle. If possible, take off from a straight stretch of a road.
- 6. Tap Take-off to make ANAFI Ai take off. It stabilizes 5m above its take-off point and then tracks and follows the vehicle.







Take-off complete, RTH position set



- 7. From this point onwards, you cannot exit the Vehicle mission before you land the drone. For more information, refer to the next sections of this guide for additional details.
- 8. You have control over the trajectory and framing of the drone, relative to the referential of the motion of the vehicle in which you travel with the Skycontroller 4.

Vehicle navigation safety

Always activate and monitor Vehicle missions with great care. It is easy to get disoriented when controlling a moving vector from another moving vector.





Tracking in progress, no command from the pilot: ANAFI Ai is travelling at the same speed as the vehicle

Tracking suspended, no command from the pilot. ANAFI Ai hovers

NOTE: When the tracking is active, the default behavior of ANAFI Ai is to track and follow the vehicle. It does not hover without commands from the pilot.

CAUTION: Monitor the Vehicle mission with extreme care. Always verify the drone's flight path and the trajectory of the vehicle is safe, and clear of obstacles. Always maintain visual contact with ANAFI Ai, and always be ready to stop the tracking and make the drone hover in case of danger or unexpected obstacles.

When the pilot suspends tracking during a Vehicle mission, the behavior of the drone is the same as the Piloting mission.

Tap the green ▶ PLAY button, as seen in the previous screenshot, to restore tracking.

Returning to vehicle

The Returning to vehicle (RTV) feature returns ANAFI Ai to the vehicle from which it took off, and which hosts the Skycontroller 4. The smart rules associated with RTH features (low battery, ecosystem link loss) are also valid for RTV.

When an RTV is activated:

1. ANAFI Ai accelerates toward the tracked vehicle, moving upward to reach the minimum RTH altitude, if it was flying below it. Refer to <u>RTH</u> on page 51 for more information.



2. ANAFI Ai catches up with the vehicle based on its GPS position, then begins to descend to scan for it visually. When the drone reaches 30m above the vehicle, the drone's main camera turns to the ground to locate it.



3. When the vehicle is identified, ANAFI Ai stays synchronized to its route and speed, and descends to the selected hovering height, or the landing zone search height, if you have selected the Landing ending from the Advanced RTH settings.



Vehicle landing safety

MARNING: Landing a drone on a moving vehicle is a technical gesture, which requires training and focus. Landing is always one of the most sensitive parts of a flight and performing it in motion makes it even more crucial.

Always monitor each stage of the **Returning to vehicle** and Landing sequences carefully, even if you select the **Landing** ending for Vehicle missions. Always be ready to reclaim control of the drone at any stage of the flight.

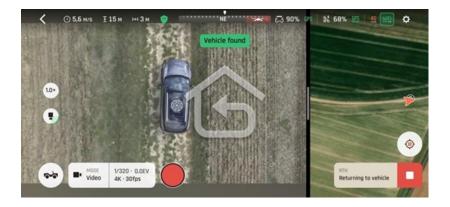
Vehicle missions consume more battery power. Increase the safety margins on your battery readings. If you normally land with 20% battery power remaining, aim for 30%.

The landing sequence of a Vehicle mission implies the activation of a landing zone search by ANAFI Ai.

This search can:

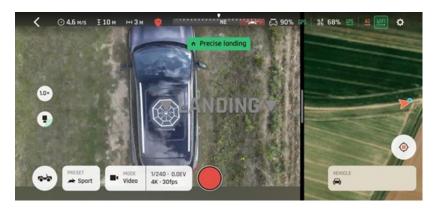
- occur automatically after an RTV, if you select the Landing ending from the Advanced RTH settings;
- occur by pilot action on the **Take-off/Land** button when the drone is at a maximum distance of 30m from the vehicle. The drone descends to 8m high before starting the search.





- If the vehicle is moving and the landing zone cannot be acquired after 8 seconds, the drone automatically lands at a reduced speed. FreeFlight 7 prompts you to adjust the drone's position.
- If the vehicle is stopped, the drone continues to descend while searching for the landing zone. If the landing zone cannot be acquired, FreeFlight 7 prompts you to adjust the drone's position and the drone lands while tracking the vehicle position.

When the drone acquires the landing zone, the top center of the screen displays a **Precise landing notification**.



This is ANAFI Ai's final approach signal. From there it descends steadily, around 1 m/s, from 8 m height to its landing point.

• Stabilize the direction of your vehicle and maintain the vehicle at a constant speed below 25 km/h (15.5 mph).

Up until ANAFI Ai has safely landed, you can abort the Vehicle landing by reclaiming the thrust commands and making the drone climb, if any issue arises (for example, GPS loss, bump on the road, wind gusts, water too choppy, etc.).

• Always monitor and control Vehicle mission landings with care. Do not hesitate to briefly stop the vehicle to perform a safer landing if you feel unsure about motion landing conditions.

The vehicle mission landing sequence is less effective when there is a strong contrast between the vehicle and the vehicle surroundings, particularly when there is strong sun exposure. For example, on a sunny day, ANAFI Ai may not be able to identify the vehicle and the landing zone, if:

- The vehicle is a white boat on a dark lake.
- The vehicle is a black car on ground covered in snow.

To reduce the contrast, add elements (paint, boards, non-reflective paper, etc.) to the vehicle so that the landing area and the vehicle are not under/overexposed. Parrot recommends initiating Vehicle

mission flights from a distinctive black and white take-off/landing platform such as the Parrot landing pad. Download and print the Parrot landing pad here.

Touch & Fly Waypoint

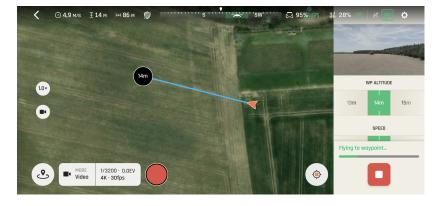
The **Waypoint** (WP) **Touch & Fly** mode enables you to fly ANAFI Ai to any point on the map. Tap **Touch & Fly** from the **PILOTING MODE** box menu. The map of your surroundings opens full screen. The live image captured by ANAFI Ai is minimized in the top right-hand corner of the screen.



Single tap a point on the map to select a destination for ANAFI Ai. The drone turns toward this point, which is marked as a black circle with a green border. Use the slider on the right of the screen to set the drone's WP ALTITUDE.



Tap the green Play button on the bottom right of the interface to send ANAFI Ai toward its defined WP (position and height).



When the waypoint is set on the map, tap the live image window to display it full screen. The waypoint is visible at its center.



Then tap on the live image or drag and drop the waypoint to set its new position. The new waypoint location is set on a cylinder with, as a center the drone, and as a radius the distance between the drone and the last waypoint.



POI

The **Point of Interest** (POI) **Touch & Fly** mode enables you to fly ANAFI Ai around any point on the map, keeping this particular point at the center of the map. Tap **Touch & Fly** from the **PILOTING MODE** box. The map of your surroundings opens full screen. The live image captured by ANAFI Ai is minimized in the top right-hand corner of your screen.



Long press a point on the map to create a POI for ANAFI Ai. This point is marked as a green square with a white border. Use the slider on the right of the screen to set the POI ALTITUDE.

When the POI is set on the map, tap the live image window to display it full screen. The POI is visible at its center.

Then tap on the live image or drag and drop the POI to set its new position. The new POI location is set on a horizontal plane which has the same height as the previous POI.



Fly ANAFI Ai around your POI. The drone keeps the POI at the center of the frame.

Push the right joystick of the Skycontroller 4 to the left, ANAFI Ai circles around the POI clockwise.

Push the right joystick of the Skycontroller 4 to the right, ANAFI Ai circles around the POI counterclockwise.

When the Touch & Fly POI mode is activated, ANAFI Ai manages the gimbal tilt to keep the POI in the frame. Therefore, the left trigger of the Skycontroller 4 is deactivated in this mode. However, zoom control is still available with the right trigger.

When you release the commands in Touch & Fly POI mode, ANAFI Ai hovers and keeps the POI at the center of the frame. To end the following of the POI, tap the white square on red background (STOP button) in the bottom right-hand corner of the HUD.



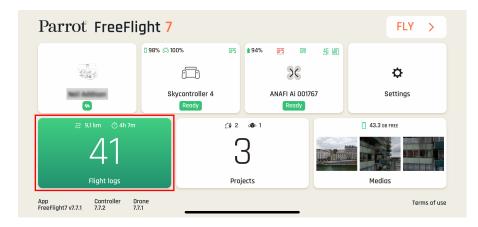
Flight logs and projects management

If you have not activated the ANAFI Ai ecosystem **Private mode**, FreeFlight 7 keeps your flight logs and lets you easily manage your projects (Flight Plans and Photogrammetry), from the dashboard.

This section describes the corresponding interfaces.

Flight logs

Tap the **Flight logs** tile of the dashboard to display the number of recorded flights, the corresponding distance flown, and the corresponding flight time.



From this interface, toggle between 2 tabs: All flights and Executed projects.



Tap a flight to open it.



From this screen, you can:

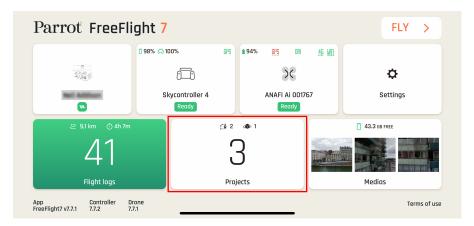
- Tap / Edit to edit the name of the flight,
- Check the time, date, and details of the flight,
- Tap Share flight to share through all iOS sharing options,
- Tap **Delete flight** to delete individual flight. You must confirm your choice to delete.

On the left-hand side, slide, zoom in or out, and navigate in the map of the surrounding area of your flight.

Tap < back to return to the Flights list.

Projects

Tap the **Projects** tile of the dashboard to display the total number of projects.



Toggle between 2 tabs: the **Flight Plan** tab shows the details of the number of recorded flight plans, and the **Photogrammetry** tab shows the number of recorded photogrammetry missions.



The app displays saved **Flight Plans** first. If no flight plan has been programmed, the list is empty the first time you access the interface.

Tap **New** to create a new project in the **Flight Plan** mission interface.

Tap a project to select it, the following options appear or activate:

- Zedit the project name;
- Duplicate the project;
- **Delete** the project;
- Open the project (double tap projects directly in the list to open in the Flight Plan screen).



Tap the **Photogrammetry** tab to access the photogrammetry projects.



Tap **New** to create a new project in the Photogrammetry mission interface.

Tap a project to select it, the following options appear or activate:

- Tap / Edit to edit the project name;
- **Duplicate** the project;
- **Delete** the project;
- Open the project (double tap projects directly in the list to open in the Photogrammetry screen).

Tap < back to return to the dashboard.

Maintenance and troubleshooting

This section explains basic maintenance procedures for your drone and how to troubleshoot possible issues with ANAFI Ai. It also includes reset procedures for the drone and controller, which are useful when changing the operator or operating structure.

Changing propeller blades

Propeller blades are delicate pieces of equipment and are instrumental for flight integrity. Even minor contacts with external elements (walls, tree branches, etc.) can damage their structure. Damage is not necessarily visible.

As a safeguard measure, ANAFI Ai is programmed to cut its motors instantly in case of impact to one of its propeller blades. Always control your drone carefully.

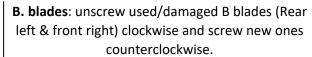


TIP: Replace propeller blades if they sustain even minor contacts with the environment. Replace propeller blades every 50 flight hours, as part of scheduled maintenance.

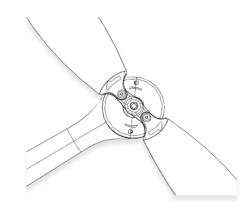
ANAFI Ai propeller blade replacement is instant and does not require tools. Follow this procedure to replace a propeller blade:

- 1. Unfold the arm that supports the blades which require replacement.
- 2. Hold the motor (round rotating part) of the propeller between your left thumb and index finger.
- 3. Unfold the blades.
- 4. Pinch the propeller hub (between the blades) with your right thumb and index.

A. blades: unscrew used/damaged A blades (Front left & rear right) counterclockwise and screw new ones clockwise.







Ensure that your blades respect the following diagram before setting up ANAFI Ai for its next flight.



Propeller blades and smart batteries can be purchased separately. Find an ANAFI Ai spare parts reseller here.

(I) CAUTION: Do not remove the propellers unless you need to replace them. Do not overtighten the propeller hubs. Overtightening or frequent removal of the propellers may weaken the thread lock and reduce the propeller assembly's fixation quality.



Rebooting all systems

When the ecosystem does not perform as expected, the first procedure is to power off and reboot all elements of the ecosystem. Rebooting all systems may solve connectivity issues (black screen, white noise, etc.):

- 1. Press **O Power** to power off ANAFI Ai.
- 2. Close the FreeFlight 7 application on your device.
- 3. Reboot your Skycontroller 4.
- 4. Press **O Power** to power on ANAFI Ai.
- 5. Wait for synchronization between Skycontroller 4 and ANAFI Ai: check that the left trigger of the Skycontroller 4 activates the drone's gimbal to ensure the synchronization is complete.

Reinstalling FreeFlight 7

If you must delete and reinstall FreeFlight 7 later, ensure that you back up all your device FreeFlight 7 media, as media may be deleted along with the application.

ANAFI Ai drone hard reset

Hard resetting ANAFI Ai reverts the drone's most recent firmware to its original state. Parrot recommends the drone hard reset as a first intent procedure for several issues, notably gimbal calibration troubles. It cleans all media, logs and credentials from the drone. For this reason, ensure that you back up all your **Drone memory** FreeFlight 7 media before resetting ANAFI Ai.

To reset ANAFI Ai, press and hold the drone's **OPower** button for approximately 10 seconds, until one of the LED flashes in red, then release the button immediately.

The drone reboots. The reset is successful.

The same procedure can be performed through the **Reset** button of ANAFI Ai's page, in FreeFlight 7.



Skycontroller 4 hard reset

Resetting the Skycontroller 4 cleans all logs and credentials, removes any pairings with drones, and removes any custom button remapping.

To reset the Skycontroller 4, ensure that it is not connected to any drone. If a drone is connected, it initiates a take-off sequence.

Press and hold the controller's **Take-off/Land**, **Optics reset**, and **Media recording** buttons for 15 seconds, then release the 3 buttons.

NOTE: The LED starts flashing after 10 seconds, but you must hold the buttons for 5 more seconds.

The Skycontroller 4 reboots. The reset is successful.

The same procedure can be performed safely, even with a drone connected, through the **Reset** button of the Skycontroller 4 page, in FreeFlight 7.



MARNING: When the Skycontroller 4 reboots, the connection between the drone and controller is lost.

ANAFI Ai's smart battery hard reset

A hard reset of ANAFI Ai's battery may correct battery issues. Parrot recommends a battery hard reset whenever the battery's behavior is unexpected.

You must reset your battery if:

- the battery behavior is not consistent with the information in Smart LiPo battery on page 22,
- the battery does not power on ANAFI Ai,

Follow this procedure to hard reset the smart battery:

- 1. Connect the smart battery to a power source.
- 2. Regardless of the battery's behavior, press and hold the **O Power** button for 15 seconds.
- 3. Release the **O Power** button.

The battery's LEDs flash quickly, one after the other, alternating green and red.

The battery's hard reset is complete.



TIP: Replace smart batteries after 300 charge/discharge cycles to ensure lasting performance.

Recover ANAFI Ai

In the event of a hazardous situation, follow this procedure:

- 1. Press & RTH on the Skycontroller 4 to cause the drone to return to its home position.
- 2. If the drone does not return, attempt to initiate an automatic landing by pressing the **Take-off/Land** button on the Skycontroller 4.
- 3. Try to locate the ANAFI Ai position.
- 4. Ensure that this event does not cause a subsequent hazardous situation based on its last known position.

WARNING: If there is a reasonable expectation that the loss of control will cause injury to a person, contact the emergency services. Hazardous circumstances may result in a situation where normal use of ANAFI Ai is not respected. Read and respect the operational requirements described in *Appendix: Operational checklist* chapter on page 88.



4G connectivity issues

Possible causes of 4G connectivity issues include:

- There is no SIM card in the drone.
- You did not enter the SIM card code of the drone.
- Drone's 4G connectivity is not activated.
- Your mobile has no internet access.
- The 4G connection is not established.

In these cases, FreeFlight 7 connectivity interface informs the origin of the issue.

Otherwise, the interface displays the ask for support option.



If you tap **Ask for support**, a dialogue box appears. You must enter the following information:

- Smartphone SIM card operator name
- Phone number or email
- Country

For the following fields, choose between the 2 options:

- Internet connection used on your device
- Did you already manage to connect your drone in 4G?

When you tap **Send**, you must accept to share your data with Parrot.

The App then helps you to create a ticket for our technical team. Parrot will contact you to solve your problem.

Drone end of service life

Refer to the Flight Safety Guide provided in the packaging to find complementary information on how to recycle this product.

The propeller blades and the carry box are made of plastic, they can be disposed of in a recycle bin.

All the electronic devices (ANAFI Ai, Skycontroller 4, smart battery) must be returned to a collection point (e.g. stores, recycling center) to be recycled. It is indicated by the following logos:



Appendix: Operational checklist

Update & calibration

Device SYSTEMATICALLY UP TO DATE FreeFlight 7 SYSTEMATICALLY UP TO DATE Skycontroller 4 SYSTEMATICALLY UP TO DATE ANAFI Ai SYSTEMATICALLY UP TO DATE

Magnetometer calibrationOKSkycontroller 4 calibrationOKGimbal calibrationOKHorizon calibration (exceptional)OKObstacle avoidance calibrationOK

,

IMPORTANT: Regularly refer to the <u>Release Notes ANAFI Ai</u> to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 7 App.

Skycontroller 4 & ANAFI Ai OFF

Arms Unfolded, locked

Gimbal protective cover Removed

Check drone and gimbal OK

Check propellers Intact, free, fully screwed on

Check Skycontroller 4 battery 100 % charged

ANAFI Ai battery Intact, locked in place, 100% charged

ANAFI Ai battery LED 4 x OK

ANAFI Ai battery temp Within operational range

Device battery OK, 100% charged

Skycontroller 4 & ANAFI Ai ON

Skycontroller 4 On, flashing LED - light blue to dark blue

ANAFI Ai On, gimbal calibration OK

Skycontroller 4 / ANAFI Ai radio link Steady dark blue LED on Skycontroller 4

Device On, Wi-Fi & Bluetooth off

Device / Skycontroller 4 USB connection OK

FreeFlight 7 Launched

Left trigger moves gimbal OK
Image feed & telemetry OK
Mission Mode Set
RTH parameters Set
Max altitude/max distance Set

Geocage Set if needed

Image settings OK

Check joystick mode Inverse / Default

Map on FreeFlight 7 OK

MicroSD card Inserted, formatted, with sufficient memory

Obstacle avoidance Set Global reactivity Set



Camera tilt speed Set
Inclination Set
Speed (Vertical and Rotation) Set

Before take-off

GPS signal (ANAFI Ai and device) Green

Weather Checked and OK

Take-off Zone Clear
Drone status Check
Take-off/Land command Take-off

After take-off

Precise Home Set Depending on conditions / 10 s or 10 meters

Check joystick mode Inverse / Default

Check flight commands OK
Check gimbal OK
Video feed OK
Video latency OK
Drone status Check

Before landing

Weather OK
Landing Zone Clear
Drone status Check
Take-off/Land command Land

After landing

Check engines off OK
Drone status Check

Skycontroller 4 Off, stored away

Check drone/gimbal/propellers

Gimbal protective cover

ANAFI Ai battery

ANAFI Ai arms

Folded

ANAFI Ai drone, MicroSD card, cables

Stored away