ANAFI Ai
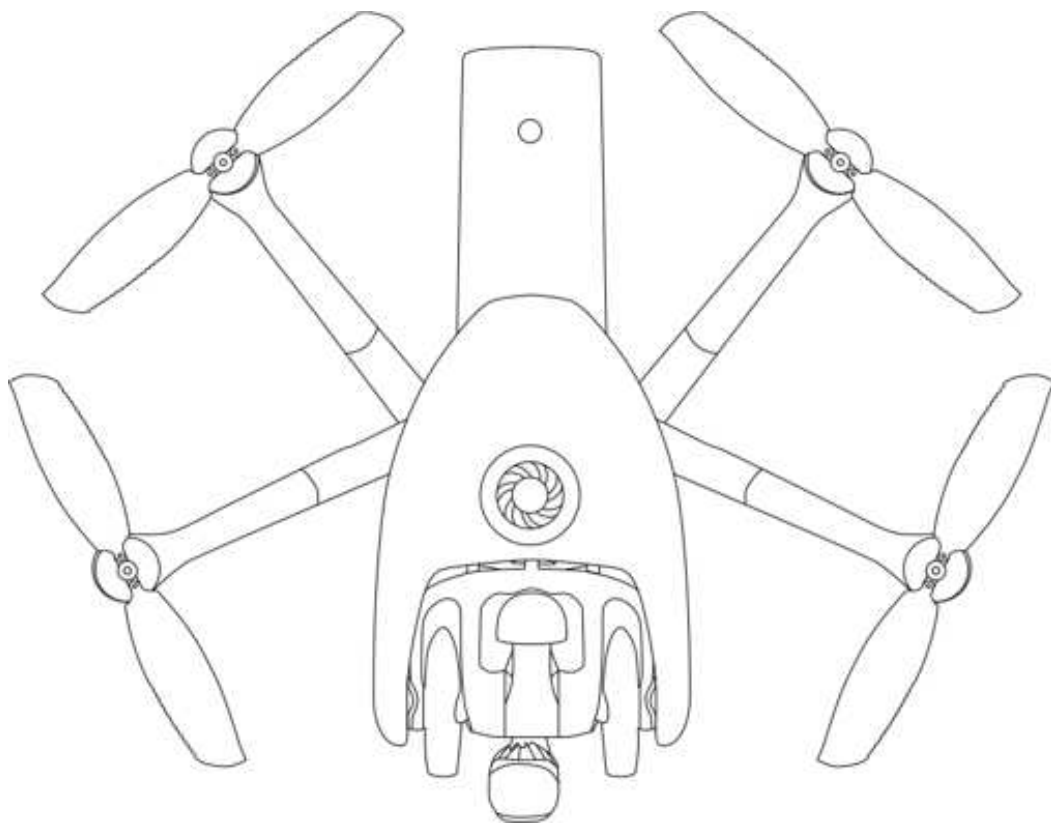
Robotics for your business

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WE ARE PARROT. WELCOME TO THE TEAM!

With ANAFI Ai, you have chosen the first IoT*-compatible and 4G flying robot, which you can use everywhere on the go, anytime.

We strongly recommend you read the following information and instructions thoroughly before you get ANAFI Ai in the air, to make the most of your first 32-minute flight.

The indispensable prerequisites, on the next pages, will not occupy more than 5 minutes of your time: ANAFI Ai requires the FreeFlight 7 app to fly, and to make sure your drone and controller are fully up to date with the latest features.

As you discover the world of possibilities that ANAFI Ai opens to you, you will fully understand the importance of mission planning in your workflow.

Have a great read, and many productive hours flying ANAFI Ai.

* IoT: Internet of Things

USING THIS GUIDE

- **Read entirely at least once**: it answers most questions that most users encounter when they discover ANAFI Ai.
- **Keep it for reference and stay alert for updates**: they will be advertised on all Parrot websites and social media.
- **The Table of contents, starting on page 7, is active.** Click a title to access the corresponding section.
- **This online user guide has no index: use [ctrl]-F (Windows) or [command]-F (Mac)** to browse all occurrences of any keyword (*flight*, *settings*, *photogrammetry*, *obstacle avoidance, gimbal*, *iPhone*, *photo*, *ISO*, and so on).

ABOUT ANAFI Ai DOCUMENTATION

The present guide completes the documentation of ANAFI Ai, which also consists in:

- ANAFI Ai Flight Safety Guide, available online - www.parrot.com;
- ANAFI Ai and FreeFlight 7 release notes, available online – www.parrot.com;
- ANAFI Ai repair and maintenance tutorials available on Parrot's YouTube account.

Always stay alert for all documentation updates.

PREREQUISITES

You want to put ANAFI Ai **to work as soon as possible, so do we. Refer to the enclosed Super Quick Start Guide (SQSG) if you need illustrated guidance to get these quick prerequisites out of the way.**

1. **Wake up the batteries of your** ANAFI Ai **and Skycontroller 4.** Charge the batteries using the enclosed USB-C to USB-C cables. The batteries' LEDs start flashing: they are awake. Let them charge while you read. **Parrot recommends you always run a full charge of the smart batteries of your drone and controller before flying** ANAFI Ai**.**

2. **Download FreeFlight 7 on your iOS device:** ANAFI Ai **requires FreeFlight 7 to fly.** The app will enable you to update your **Parrot Skycontroller 4** and ANAFI Ai when you power them on for the first time.


When you have downloaded and installed **FreeFlight 7**, press the power button of the **Parrot Skycontroller 4** for 3 seconds (until its main LED turns on in light blue) to power it on.

Use the enclosed USB-C to Lightning cable to connect your device to the side USB-C port of the **Parrot Skycontroller 4**, and install it as shown in the enclosed SQSG.

A prompt appears on your screen, which invites you to allow the communication between your device and the controller.
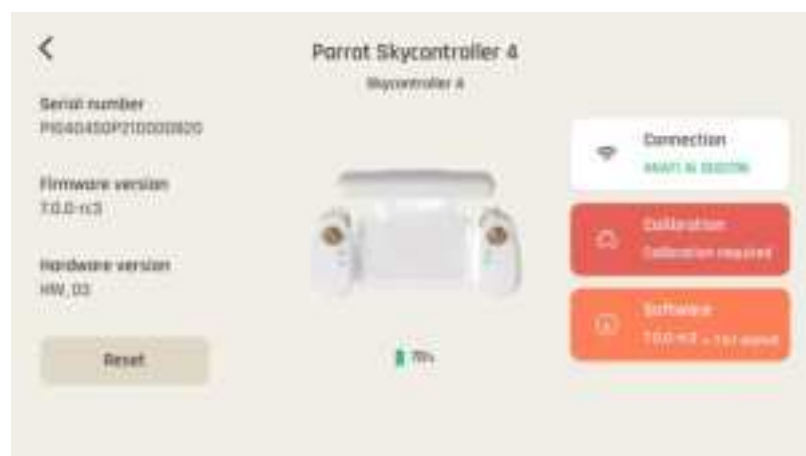
Tap "Allow": **FreeFlight 7** runs. After your device displays the app's splash screen, you get to **FreeFlight 7** HUD.

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*If the prompt does not appear on your screen when you connect your device to your **Parrot Skycontroller 4**, launch **FreeFlight 7** manually, as any other app.*
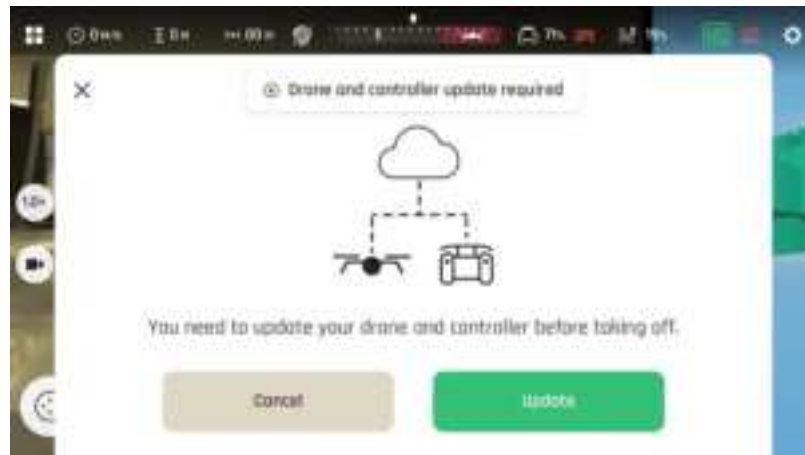
***FreeFlight 7** Update screen*

3. **Follow onscreen instructions to update your ecosystem.**

*Tap "Software" from the **Skycontroller 4** page to launch the update*

***Skycontroller 4** update in progress*

Tap "Software" from the ANAFI Ai page to launch the update

Tap "Install all"

Update complete

4. **All systems are ready for flight.**

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FOREWORD

About ANAFI Ai

Always transport ANAFI Ai safely stored in its case and always replace its gimbal protection before storing it in its case.

ANAFI Ai **was designed and optimized to fly as is. Parrot therefore strongly discourages the use of any add-on or accessory which could be mounted on, or attached to** ANAFI Ai **(feet extensions, buoys, hulls, etc.). In addition to the overweight they carry for the drone and its motors, they can indeed magnetically disturb** ANAFI Ai **and impair its communications.**

About Wi-Fi

Parrot asks you to switch off your smartphone's Wi-Fi connection when flying ANAFI Ai **with both the Parrot Skycontroller 4 and your phone: with this configuration, the drone and the controller communicate through** ANAFI Ai**'s Wi-Fi network and activating your phone's Wi-Fi can only result in interferences.**

Therefore, your phone's Wi-Fi should **only** be activated – and connected to ANAFI Ai's Wi-Fi network – when you want to fly the drone using your smartphone as its sole controller.

About GPS

ANAFI Ai does not need a satellite – GPS, Glonass, Galileo – synchronization (or fix) to take off. It can therefore be piloted indoor and through cluttered areas, stabilized by its onboard sensors.

However, automated and assisted flight modes require both ANAFI Ai and the **FreeFlight 7** device (preferably associated with the **Parrot Skycontroller 4**) synchronization to geocoordinate satellites – the **Parrot Skycontroller 4** alone has no geo-positioning capacity.

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

About 4K video formats

4K video formats are professional grade media which may not be read natively by slower computers. Shoot in 1080p or use a video converter to turn your ANAFI Ai**'s 4K videos into a more manageable format (like 1080p) if they do not read properly on your equipment.**

About the smart batteries

As you will find out by reading this guide, the batteries of both ANAFI Ai and the Parrot Skycontroller 4 are smart enough to enter a wintering mode when you are not using them

for ten days in a row. This also means you need to wake them up and charge them completely before you fly ANAFI Ai for the first time.

About HDMI

The Parrot Skycontroller 4 is equipped with a micro-HDMI port, which enables 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 those external pieces of equipment to the Parrot Skycontroller 4, as uncertified cables could impair the ecosystem's Wi-Fi performances.

About devices

In the following pages, the word *"device"* refers to the iOS smartphone or tablet on which **FreeFlight 7** is installed.

About Parrot.Cloud accounts

Parrot strongly recommends that you use your Parrot.Cloud account (or create one if ANAFI Ai is your first Parrot drone) to let Parrot store your ANAFI Ai flight data. Sharing your data, even anonymously, benefits the community, as it enables us to improve our products.

It also directly benefits all identifiable users in case they need to contact Parrot support teams.

In any case, creating a Parrot.Cloud account is mandatory to securely associate your sim card, your drone and your controller, and therefore to your use the 4G function of ANAFI Ai**.**

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DISCLAIMER

1. ANAFI Ai IS NOT A TOY and should not be used or handled by a person under the age of 18 years.

2. BEFORE USING ANAFI Ai:

   (A) CAREFULLY READ the user manual and all information and documentation available on www.parrot.com, which is susceptible to be updated at any time and without prior notice (hereinafter referred to as "Parrot Documentation"). SPECIAL ATTENTION must be given to the paragraphs marked with the symbol ⚠ ;

   (B) ENSURE YOU ARE AWARE OF THE REGULATIONS APPLICABLE TO THE USE OF DRONES AND THEIR ACCESSORIES (hereinafter referred to as "Applicable Regulations");

   (C) 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. Be aware that videos and photos that are 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.

4. TO THE 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 THE NON-COMPLIANCE OF PARROT WITH THE DOCUMENTATION OR THE APPLICABLE REGULATIONS BY YOURSELF OR ANY PERSON USING YOUR ANAFI Ai.

TECHNICAL SPECIFICATIONS

DRONE
- Size folded: 244x67x65mm
- Size unfolded: 175x240x65mm
- Weight: 320g
- Max transmission range: 4km with Skycontroller 4
- Max flight time: 25min
- Max horizontal speed: 55km/h
- Max vertical speed: 4m/s
- Max wind resistance: 50km/h
- Service ceiling: 4,500m above sea level
- Operating temperature range: -10°C to 40°C

DRONE SENSORS
- Satellite Positioning: GPS and Glonass
- Barometer & magnetometer
- Vertical camera & ultrasound sensor
- 2x6-axis IMUs (1 for the flight, 1 for the camera):
  - 2x3-axis accelerometers
  - 2x3-axis gyroscopes

SMART BATTERY
- Type: High density LiPo (2 cells)
- Capacity: 2,700mAh
- Flight time per charge: 25min
- Charging port: USB-C
- Weight: 126g
- Voltage: 7.6V
- Max charging power: 24W

PARROT SKYCONTROLLER 4
- Size folded: 238x147x55mm
- Size unfolded: XXXx147x55mm
- Weight: 606g
- Transmission system: Wi-Fi 802.11a/b/g/n
- Operating frequencies: 2.4GHz – 5GHz
- Max transmission range: 4km
- Live streaming resolution: 1080p (1920x1080)
- Battery capacity: 3.350mAh 7.2V
- Supported devices: screen size up to 8''
- USB ports: USB-C (charge), USB-C (connection)
- HDMI port: micro-HDMI

IMAGING SYSTEM
- Sensor: 1/2'' 48MP CMOS
- LD-ASPH (low dispersion aspherical) lens:
  - Aperture: f/2.4
  - 35mm format equ. focal length: 23mm
  - Depth of field: 1.5m to ∞
- Electronic shutter speed: 1 to 1/10000s
- ISO range: 100 to 3200
- Video resolutions:
  - DCI 4K (cinema) 4096x2160 24fps
  - 2160p (4K UHD) 3840x2160 24/25/30fps
  - 1520p (2.7K) 2704x1520 24/25/30fps
  - 1080p (FHD) 1920x1080 24/25/30/48/50/60fps
  - 720p (HD) 1280x720 96/100/120fps
- Video horizontal field of view (HFOV): 69°
- Max video bitrate: 100Mbps
- Video format: MP4 (H.264)
- Digital zoom:
  - Lossless: up to x2.8 (FHD), up to x1.9 (2.7K), up to x1.4 (4K UHD)
  - Standard: up to x3 (all resolutions)
- HDR: 4K UHD, 2.7K and 1080p videos, JPEG photos
- Photo resolutions:
  - Wide (JPEG & DNG): 48MP (5344x4016) / 4:3 / 84° HFOV
  - Rectilinear (JPEG): 16MP (4608x3456) / 4:3 / 75.5° HFOV
- Photo modes:
  - Single, Burst, Bracketing, Timer and Panorama (5 formats)

IMAGE STABILIZATION
- 3-axis hybrid stabilization:
  - Mechanical: 3-axis (roll & pitch & yaw)
  - Electronic (EIS): 3-axis (roll, pitch & yaw)
- Controllable tilt range: -90° to +90° (nadir to zenith)

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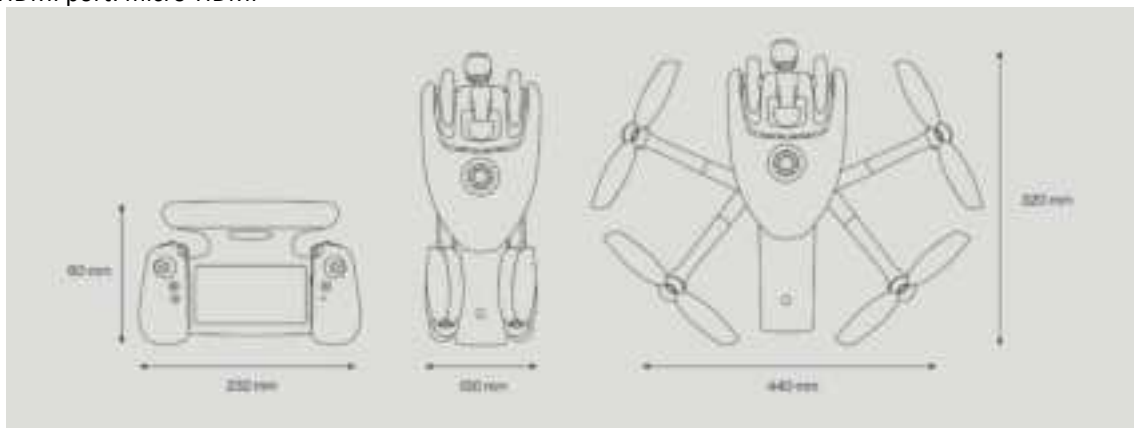
PACKAGE CONTENTS

Your ANAFI Ai package contains:

- an ANAFI Ai drone
- a smart battery, preinstalled on ANAFI Ai
- a carrying case
- a gimbal protection
- 2 USB-C to USB-C cables (charge and pairing)
- a USB-C to Lightning cable (connection to iOS devices)
- a **Parrot Skycontroller 4**
- 4 spare pairs of propeller blades
- a Flight Safety Guide
- a Super Quick Start Guide (SQSG)

PRESENTATION OF ANAFI Ai

Ready to store or carry

Foldable arms and propellers

Ready to fly

Smart battery   **Stereo obstacle avoidance cameras**

Charge level LED indicators   **180° tilt 4K camera gimbal**

USB-C charging port   **Power button**

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PRESENTATION OF PARROT SKYCONTROLLER 4

Face <proper illustration needed>

Left detachable control stick   Right detachable control stick

RTH button   Wi-Fi antenna   Take-off/Landing button

LED status indicator

Power button   Sliding handles

Top <proper illustration needed>

Gimbal tilt trigger   Zoom trigger

Shutter button   Optics reset button

Neck strap loops

Bottom <proper illustration needed>

USB-C charging port   **HDMI port**

Side <proper illustration needed>

USB-C device connection port

LED status indicator color codes

When the **Parrot Skycontroller 4** is powered on, its LED status indicator gives you an instant visual indication:

flashing green:	**Skycontroller 4** update in progress;
alternating light blue and dark blue:	connecting to ANAFI Ai;
flashing light blue:	no drone configured or wrong WPA key;
steady dark blue:	connected to ANAFI Ai;
alternating purple and dark blue:	autonomous flight in progress;
alternating red and any other color:	low battery alert (ANAFI Ai, **Skycontroller 4**, or both) or RTH alert.

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Pairing ANAFI Ai to a Parrot Skycontroller 4

This procedure is useful to pair a drone and a controller which have never been paired, and to restore the lost pairing between a drone and a controller.

1. Check a compatible microSD card is inserted into ANAFI Ai.
2. Power ANAFI Ai on.
3. Power the **Parrot Skycontroller 4** on.
4. Plug the drone to the side USB-C port of the controller with an USB-C to USB-C cable.
5. The LED of the **Parrot Skycontroller 4** flashes briefly in green: it is acknowledging ANAFI Ai.
6. Wait for synchronization between **Parrot Skycontroller 4** and ANAFI Ai (steady dark blue LED on the controller): check that the left trigger of the **Parrot Skycontroller 4** activates the drone's gimbal to ensure the synch is complete.
7. Unplug the controller from the drone.

HDMI video sharing

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4G CONNECTIVITY

About 4G connectivity

4G connectivity offers professional users a wide new world of BVLOS (beyond visual line of sight) flights. Provided 4G coverage is available, ANAFI Ai has no range limit, other than that of its battery.

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

You can choose a different behavior (Wi-Fi priority or 4G priority) from the "Connection" Advanced Settings of FreeFlight 7 – refer to the "ADVANCED SETTINGS / Connection" section of this guide for additional information.


Inserting the SIM card

The SIM card slot of ANAFI Ai is located on the right side of the drone, under the "4G" cover. To install the SIM card, lift the cover open and insert the SIM card straight into the slot, shortest side first and connectors turned to the back of the drone.

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Activating the SIM card

To activate the SIM card, power the ANAFI Ai ecosystem on as you would for a flight. The following screen pops up. Select "Configure" to activate the SIM card.
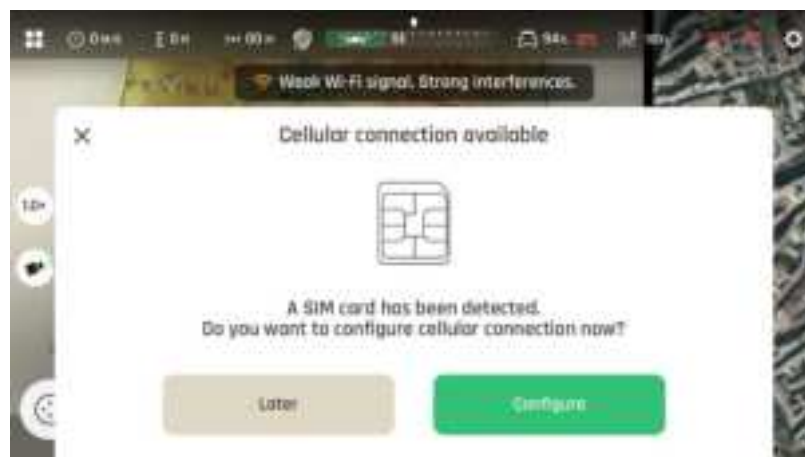
SIM card popup

If you have not created your Parrot.Cloud account yet, now is the time: tap "Please register" on the next screen and follow the instructions. All your data is secured with the ecosystem's Secure Elements, which manage the safety of the connections between drone and controller, and your Parrot.Cloud pilot account – through your SIM card's PIN code.

Log in to your Parrot.Cloud account

Log in to your Parrot.Cloud account. A popup invites you to enter the PIN code of your SIM card.

If the popup does not appear, access the "Cellular access" menu from the drone page of the dashboard, as on the following screenshot, displaying "SIM locked".

Tap "Cellular access" to unlock SIM

Enter your PIN when prompted. After a few seconds, the 4G protocols are activated.

Configuration success popup

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4G flying

When the SIM card has been activated, each time the ecosystem is powered on (or each time it connects to a 4G network), FreeFlight 7 confirms the availability of 4G with the popup shown on the following screenshot.

4G connected

*Wi-Fi is about to break up, due to powerline interferences*

4G has automatically taken over

OBSTACLE AVOIDANCE

The obstacle avoidance (OA or stereo) cameras are activated through the Quick Settings and their status is displayed on the HUD, through a shield icon in the top bar:

- grey: OA deactivated
- green: OA activated and operating optimally
- orange: OA activated, degraded operation
- red: OA activated, but inoperative

Parrot strongly recommends deactivating the OA whenever the icon is not green, as in the following screenshot.
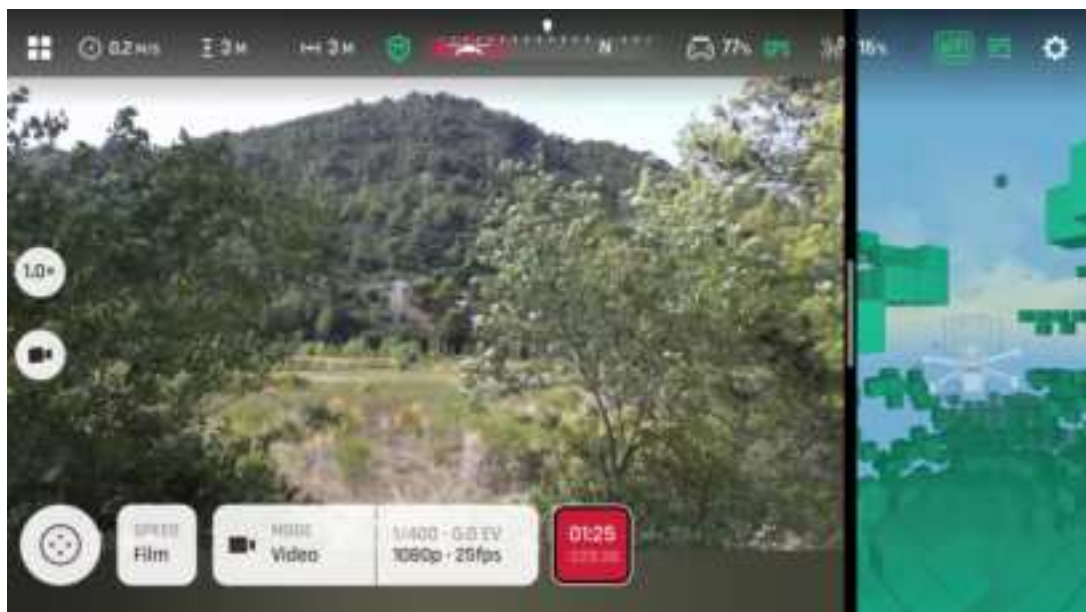
OA activated and operating optimally

The OA is designed to help the pilot, not to replace his control over the drone.

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

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 on the trajectory of the drone.

Set an RTH altitude before each flight.

Feedback needed:

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CALIBRATIONS

This section presents the calibration procedures required by the ecosystem: one procedure for the Skycontroller 4's magnetometer and four procedures for ANAFI Ai's systems:

- Gimbal calibration
- Horizon correction
- Magnetometer calibration
- Stereo camera calibration (Obstacle detection)

Skycontroller 4

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

When a calibration must be carried out, the Skycontroller 4 page of FreeFlight 7 displays a "Calibration required" alert, as on the following screenshot.
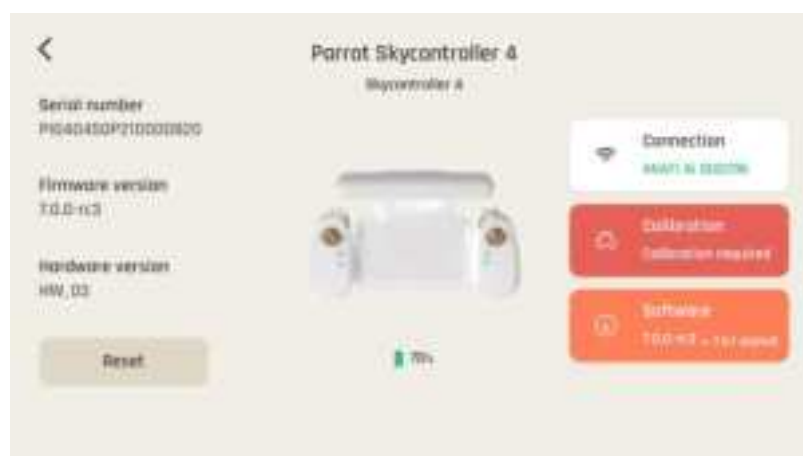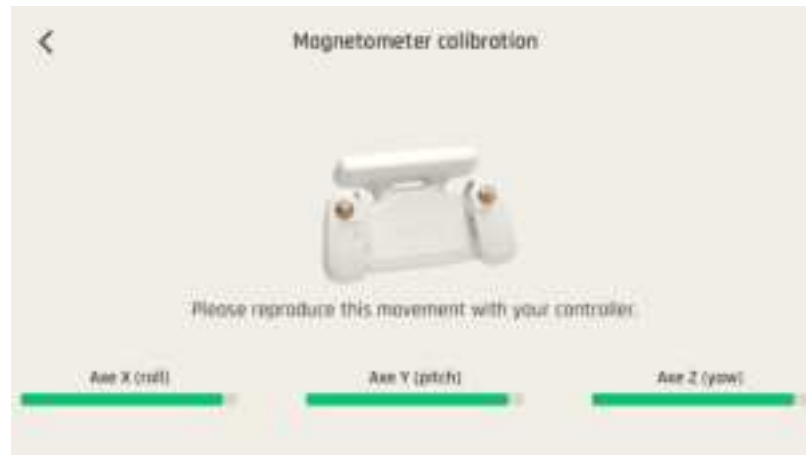

Skycontroller 4 calibration required

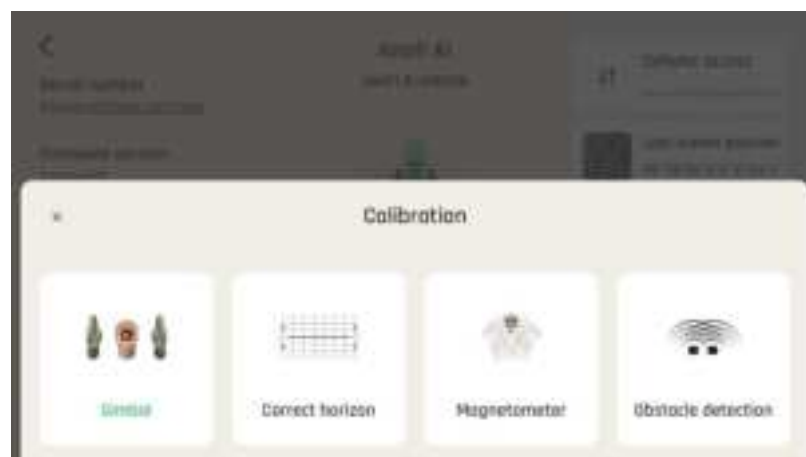Tap the alert to access the following screen and follow onscreen instructions.
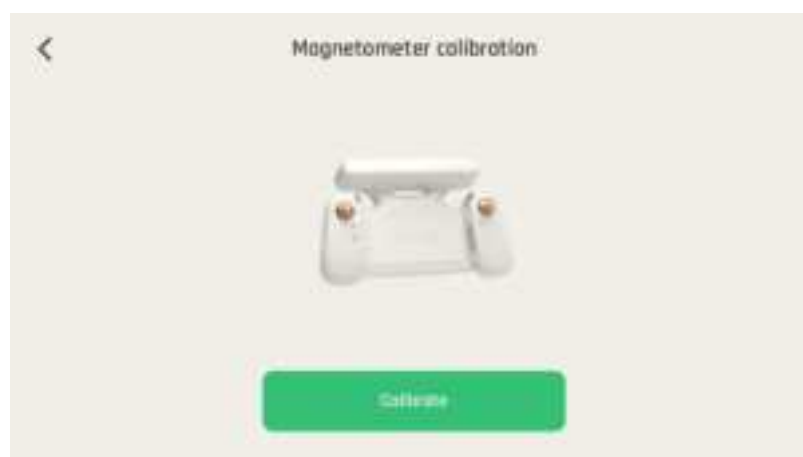
Ready to calibrate

Skycontroller 4 calibration in progress

Gimbal

Access calibration options from the ANAFI Ai page of the dashboard.

ANAFI Ai calibration menu

Use the first option to perform a gimbal calibration, that is more precise than the quick calibration which occurs after ANAFI Ai is powered on. Both the main camera and the stereo camera are calibrated successively.

Stereo camera calibration in progress

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- Be aware that **FreeFlight 7** can require you to carry out this procedure (as it can require you to perform a drone magnetometer calibration) before allowing you to fly ANAFI Ai.

Correct horizon (exceptional procedure)

- **Your** ANAFI Ai**'s camera has been factory-calibrated with unparalleled precision.** Unlike the calibration of ANAFI Ai or that of the **Parrot Skycontroller 4**, which must be carried out periodically, **the camera calibration must not be carried out unless it appears necessary** – typically, after a crash.
  If you notice **a tilted horizon on all your videos and photos**, and if this **tilt is always on the same side**, access camera calibration to make your horizon perfectly straight again.

This feature is accessible from the ANAFI Ai box on the **FreeFlight 7** homepage (or from the ANAFI Ai box of the HUD) and from the *"PREFERENCE – Camera"* menu.

Before starting this procedure, you need to position ANAFI Ai on a flat and perfectly level surface, exactly perpendicular to any pattern containing straight lines you can use as horizon references.

A half empty large water bottle provides a useful horizon line almost anywhere.

When ANAFI Ai is correctly positioned, perpendicular to a horizon, power it on, along with the **Parrot Skycontroller 4** and your device, as you would for any flight.

Access the calibration menu from the ANAFI Ai page of the dashboard of **FreeFlight 7**.

Select the "Correct horizon" option.

Tap "−" or "+" until the artificial horizon of ANAFI Ai matches the horizon reference facing the drone.
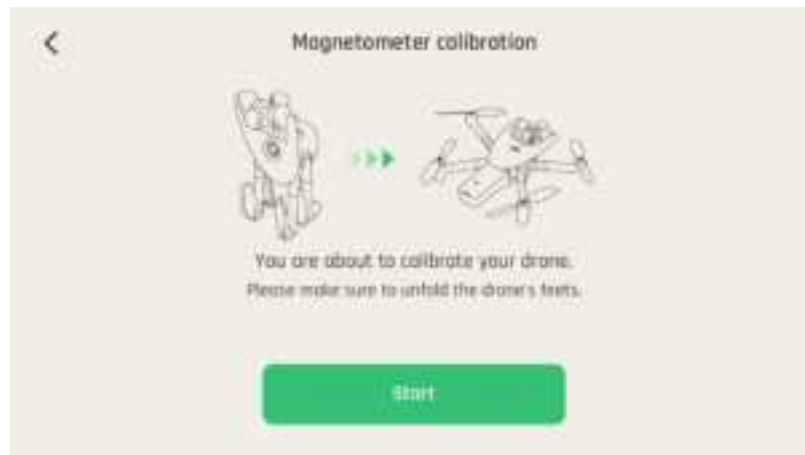

Horizon corrected

When you have straightened the tilt of the camera, tap the "<" icon on the top left of the screen to confirm your setting and exit camera calibration.

Magnetometer

When the calibration of the magnetometer of the drone is required, and notably each time you change your drone's battery, FreeFlight 7 guides you through the following procedure.
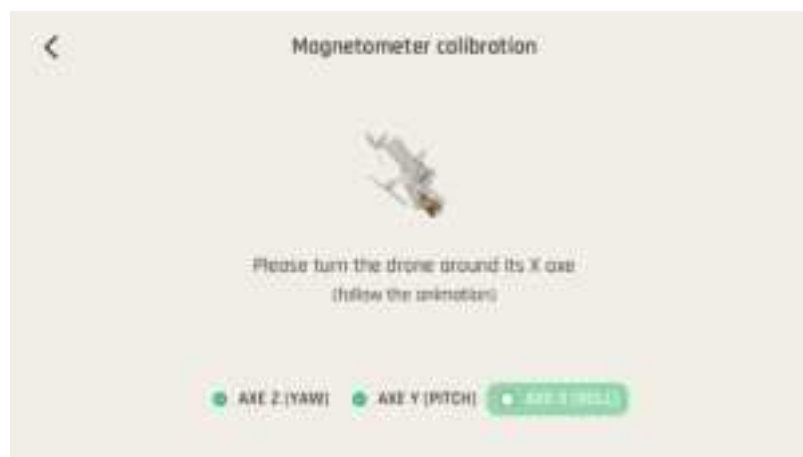

Magnetometer calibration screen
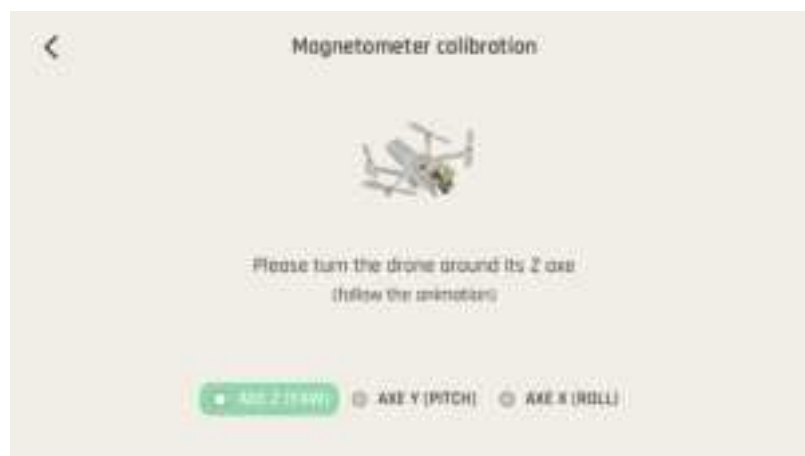
Calibrating the Z axis

Calibrating the Y axis

Calibrating the X axis

Obstacle detection

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PRE-FLIGHT CHECKLIST

Equipment

- **Make sure you have downloaded the latest version of FreeFlight 7 and that both your Parrot Skycontroller 4 and your** ANAFI Ai **have been updated with the latest versions of firmware.**
- **For the ultimate** ANAFI Ai **experience, make sure you have the right USB-A cable to connect your Parrot Skycontroller 4 and your device.**
- **Make sure** ANAFI Ai **is fitted with a microSD card with enough free memory space.**
- Make sure all four foldable arms of ANAFI Ai are unfolded.
- Make sure its propellers are clean, intact and unobstructed.
- Make sure both ANAFI Ai's and **Parrot Skycontroller 4**'s batteries are fully charged.
- Make sure ANAFI Ai's battery is securely installed on the drone's body.
- Make sure the lens cap has been removed from ANAFI Ai's camera.
- Make sure ANAFI Ai's lenses are clean – if you need to clean them, hold the gimbals between two fingers so that you do not pressure their mechanisms when you clean the lens, and gently wipe the lens with a microfiber cloth.

Regulations

- Make sure the use of ANAFI Ai is allowed where you are intending to fly.
- Check for potential restrictions regarding the use of Wi-Fi frequencies in the area where you are intending to fly.

Flight conditions

- Check that your flying zone is safe and clear.
- Do not fly ANAFI Ai at night.
- Do not fly ANAFI Ai over urban areas or over restricted airspaces such as airports, train stations, power plants, national reserves, and so on.
- Check the weather: do not fly ANAFI Ai in the fog, snow, or in a wind exceeding 14 meters per second or 50 km/h.
- **Due to the operating mode of its vertical camera and Time of Flight (ToF) sensor, Parrot recommends you do not fly** ANAFI Ai **low over water and other reflective surfaces (mirrors, glass, and so on).**

Parrot

GETTING STARTED

1. Charge the battery using the enclosed USB-A to USB-C cable and a USB-A power adapter (not included in the box). Charging times depend on the supply capacity of the adapter. Refer to the *"Battery charging"* section of this guide for additional information. **Parrot recommends you always run a full charge of your smart battery before flying** ANAFI Ai**.**

2. If you want to use the controller and enjoy the full ANAFI Ai experience, charge **Parrot Skycontroller 4**.

3. Check that your flying zone is safe and clear.

4. To start the drone, place it on a flat horizontal surface and press the power button.

5. **a) If you use Parrot Skycontroller 4**, unfold the central part of the controller to power it on, wait for the steady dark blue light, then plug your device to the controller using a USB cable. **Parrot recommends you always fly** ANAFI Ai **with Parrot Skycontroller 4 and a device, for the best flight experience.**
   b) If you do not wish to use the controller, connect your device to the Wi-Fi network of ANAFI Ai, using the Wi-Fi settings card located inside the drone's carrying case, shoulder bag or backpack - SSID format: ANAFI Ai-xxxxx.

6. **FreeFlight 7** runs automatically on your device and connects to ANAFI Ai and to **Parrot Skycontroller 4**.

7. Check for controller and drone software updates.

8. Calibrate your ANAFI Ai, your **Parrot Skycontroller 4**, or both, if required, following the instructions on the screen of your device.

9. Check that your flying zone is still safe and clear, and that no one (people, animal) has approached or is approaching ANAFI Ai.

10. Stay at least 2m (6ft) clear from the drone, press the ⊚ button and enjoy the flight!

TAKING OFF

Ground take-off

Position ANAFI Ai on a flat, even, and clear surface.

Power it on, move at least 2m (6ft) away from ANAFI Ai and check that the surroundings of the drone are absolutely clear.

Press the ⊙ button on your **Parrot Skycontroller 4**.

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

Hand launch

- **Be especially careful when you hand launch** ANAFI Ai**. This procedure is safe provided you are not distracted or startled by an outside event with a live drone in your hand: concentrate on what you are doing, but always stay aware of your surroundings.**
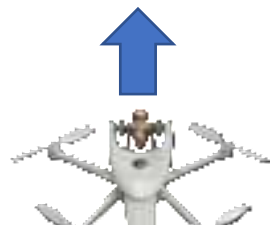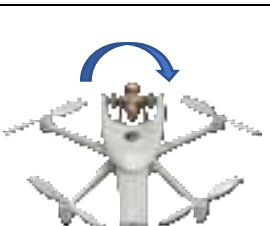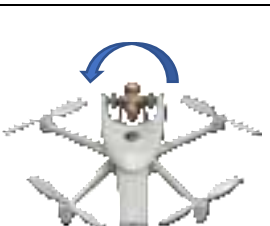
Power ANAFI Ai on and position the drone on your flat, open hand. On the left of the screen of your device, a "Handlaunch Available" interface appears.

"Hand Launch" Screen

Press the ⊙ button on your **Parrot Skycontroller 4**, or tap icon on the screen of your device. The drone's blades start rotating and ANAFI Ai takes off. It stabilizes, waiting for commands from the pilot.

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FLYING

Left control stick (default mode)		Right control stick (default mode)	
	 Rise		 **Forward**
	 Descend		 **Reverse**
	 Turn right		 **Move to the right**
	 Turn left		 **Move to the left**

- Note that you can modify ANAFI Ai's controls through the SETTINGS menu of **FreeFlight 7**. Refer to the "*SETTINGS/ Controls*" section of this guide for additional information.

RETURNING HOME

To bring ANAFI Ai back to its take-off position, press the ⚇ button on your **Parrot Skycontroller 4**, or tap the ⚇ icon on the screen of your device.

ANAFI Ai rises to 30 meters over its take-off point – or to the altitude you have set, through **FreeFlight 7**, between 20 and 100 meters – and flies back over its take-off position – by default.

Refer to the *"ADVANCED SETTINGS – Safety"* section of this guide for instructions on RTH height configuration.

In the Follow Me mode, when the ⚇ button or icon is activated, ANAFI Ai flies back to the position of the pilot.

Precise Home Setting

When flight conditions are optimal at take-off, ANAFI Ai can set a "precise home" for itself, through its vertical camera. In that case, a pop-up on the screen of **FreeFlight 7** confirms a precise home has been set, and the home icon of the mini-map turns green.

Precise Home Set" pop-up

SMART RTH

ANAFI Ai features a Smart RTH capability: considering its altitude and its distance from its take-off point, the drone computes in real time the power it needs to return home – or to the pilot, or to a custom location (refer to the *"PREFERENCES / Safety / Advanced RTH settings"* of this guide for additional details on this feature). When short on battery power, **FreeFlight 7** alerts you that it will enter automatic 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, you can cancel the auto-RTH directly from the alert pop-up.

Pilot RTH

When the "Pilot" advanced RTH option is selected, ANAFI Ai comes back to the GPS position of the device used to control the drone (whether linked to a **Parrot Skycontroller 4** or not) at the exact moment an RTH button is activated – or to the last known coordinates of the device, in case it has lost GPS synch.

For this reason, we recommend ANAFI Ai **pilots not to move, after they have activated an RTH button, when in "Pilot" advanced RTH mode.**

- **Note that when the Smart auto-RTH function is activated in "Pilot" advanced RTH mode,** ANAFI Ai **comes back to the GPS position of the device, at the moment of the activation of the auto-RTH function** – or to the last know coordinates of the device, in case it has lost GPS synch.

LANDING
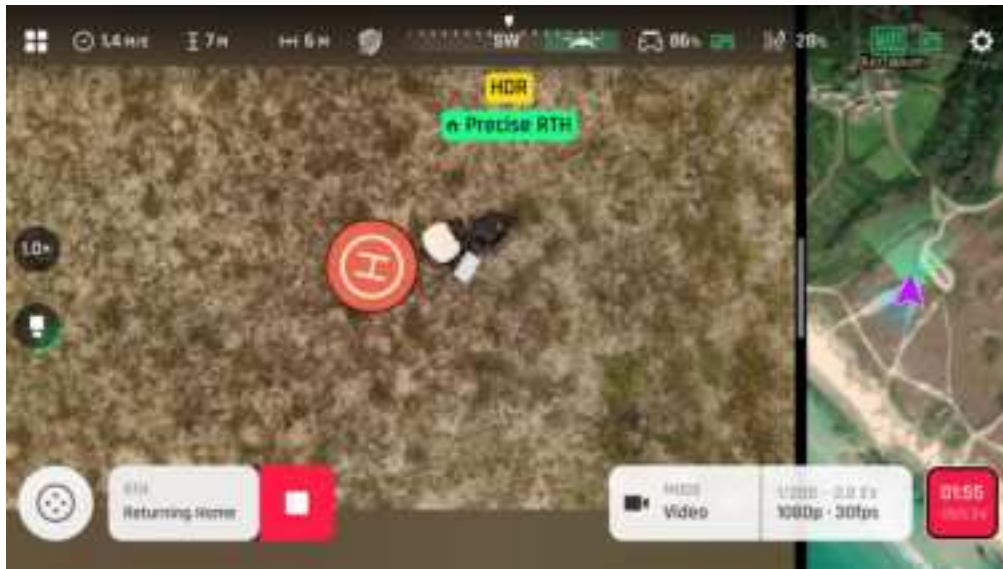
Setting up for landing

Fly ANAFI Ai directly over a flat, even, and clear surface, then press the ⊚ button: ANAFI Ai lands.

Hand landing

- **Be especially careful when you hand land** ANAFI Ai**. This procedure is safe provided you are not distracted or startled by an outside event with a live drone approaching your hand: concentrate on what you are doing, but always stay aware of your surroundings.**

Fly ANAFI Ai between 60 cm (2 ft) and 120 cm (4 ft) directly over your open hand.

Press the ⊚ button of your Skycontroller 4: ANAFI Ai lands on your hand.

After each landing, **FreeFlight 7** displays a flight report as the one in the screenshot below.

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SMART LIPO BATTERY

ANAFI Ai**'s smart LiPo battery is preinstalled on the drone. It can be charged whether it is installed on** ANAFI Ai, **or not.**

Battery removal

To remove the smart battery from the drone, unfold the arms of ANAFI Ai and press the push-button located under the battery and disengage it from the drone.

Battery installation

To install the smart battery back on the drone, unfold the arms of ANAFI Ai, slide the battery firmly into the drone until the you feel and hear the battery clicking into the body of the drone. Check that the battery is tightly secured into the drone. You are set!

ANAFI Ai: battery ready for installation

Battery charging

To charge ANAFI Ai**'s smart LiPo battery**, use one of the enclosed USB-C to USB-C cable to plug the battery to its charger, or to:

- o   a tabletop or laptop computer's USB-C port;
- o   a power bank's USB-C port.

Full charging time depends on temperature. At 20°C, you can expect charging your battery in 2 hours.

When ANAFI Ai's smart LiPo battery is plugged to a power source and charging, **its 4 LEDs indicate in real time its level of charge**:

LED 1 flashing: battery is between 0 and 25% charged;

LED 1 steady & LED 2 flashing: battery is between 25 and 50% charged;

LEDs 1 and 2 steady & LED 3 flashing: battery is between 50 and 75% charged;

LEDs 1, 2 and 3 steady & LED 4 flashing: battery is between 75 and 100% charged;

battery is plugged and all LEDs are off: battery is full.

Similarly, when **your battery is not installed on** ANAFI Ai, you can check its charge level at any time by pressing its power button:

1 steady LED lights up: battery is between 0 and 25% charged;

2 steady LEDs light up: battery is between 25 and 50% charged;

3 steady LEDs light up: battery is between 50 and 75% charged;

4 steady LEDs light up: battery is between 75 and 100% charged.

Finally, the same logic applies when **the smart LiPo 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:

1 steady LED is lit up: less than 8 minutes flying time remaining;

2 steady LEDs are lit up: between 8 & 16 minutes flying time remaining;

3 steady LEDs are lit up: between 16 & 24 minutes flying time remaining;

4 steady LEDs are lit up: between 24 & 32 minutes flying time remaining.

Battery care and safety

As you can see, ANAFI Ai**'s smart LiPo battery is as high-tech as any other element of your flying 4G robot.**

It features a wintering mode, designed to increase its durability and facilitate its care. Ideally, when not in use for a prolonged period, batteries should be stored half-charged. When not in use for 10 days, ANAFI Ai's smart battery discharges itself, if required, to 65% charge, over a 48h period. In other words, after a maximum of 12 days without use, this smart battery enters hibernation with a charge level which never exceeds 65%. If you leave your ANAFI Ai battery for 12 days, you will find out its power button does not activate the charge level LED indicators. **The battery needs to be charged to exit the wintering mode and start operating as described in the earlier paragraphs: this behavior preserves the battery over time. Parrot recommends you always run a full charge of your smart battery before flying** ANAFI Ai.

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Like all other LiPo batteries, ANAFI Ai's smart battery must be handled, transported and stored with care:

- never leave a battery unattended while charging;

- never expose a battery to extreme temperatures, neither hot, nor cold;

- never charge a battery which 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 place, 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).

Finally, note that ANAFI Ai's smart battery will only allow charge in ambient temperatures between +10°C and +45°C, and that using ANAFI Ai in temperatures approaching 0°C will reduce its flying time. To minimize this slight drop in the smart battery's capacity, keep your battery as warm as possible before starting a flight in a cold environment.

- **If the behavior of your battery is not consistent with the elements contained in this section, and if you cannot get it to power your** ANAFI Ai**, you must hard reset your battery: plug it to a power source with the enclosed cable, then keep the battery's power button pressed for 15 seconds (regardless of the behavior of the LEDs), and release the button.**

   The battery's LEDs flash quickly, one after the other, alternating green and red: the hard reset is successful!

MEDIA RETRIEVAL

Installing and retrieving the microSD card

The micro SD card slot of ANAFI Ai is located on the left side of the drone, under the "SD" cover. To install the micro SD card, lift the cover open and insert the micro SD card straight into the slot, shortest side first and connectors turned to the back of the drone.

To retrieve the micro SD card, press the card and extract it.

Retrieving photos and videos

Use a microSD to SD card adapter to transfer videos and photos you have taken with ANAFI Ai to your computer. Slide the microSD card into the adapter and use the adapter how you would use any other SD card: access your videos and photos through a card reader or the SD card slot of your computer. Copy your videos and photos to the hard drive of your computer to edit, store, and manage your media.

Compatible microSD cards

Refer to Parrot online documentation for an updated list of ANAFI Ai **compatible microSD cards.**

Direct media retrieval (drone to computer)

You can also retrieve your media directly from ANAFI Ai**, without extracting the microSD card.**

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Use the enclosed USB-A to USB-C cable to connect the drone (USB-C) to a USB-A port of your computer. Power ANAFI Ai on.

ANAFI Ai mounts as any other external drive: copy your media from the DCIM/100MEDIA directory to your computer's hard drive.

When you are done managing your media, eject ANAFI Ai as any other external drive.

- **When plugged in to a computer and powered on,** ANAFI Ai**'s battery discharges itself. This means you must recharge your smart battery after you have retrieved your media, even if it was fully charged when you began the procedure.**

FreeFlight 7 Gallery

Finally, you can manage your media and download them directly from ANAFI Ai **to your device with the Gallery of FreeFlight 7.**

The Gallery also lets you:

- **preview videos, without downloading them to your device;**
- **format microSD cards** (refer to the next section of this guide);
- **create panoramas** (refer to the "*Creating panoramas*" section of this guide for additional details);
- **share media.**

To access the Gallery from the dashboard of **FreeFlight 7**, **tap the "Gallery" box**.

If ANAFI Ai is powered on and connected to the device (directly or through the **Parrot Skycontroller 4**), 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.

Access the media you have downloaded to your device by tapping the "Local" box, at the top of the interface.

MicroSD card formatting

Tap the "Format SD card" button of the SD Card screen of **FreeFlight 7** Gallery to access formatting options. Select one of the following options.

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

Note that both options delete all microSD card contents.

Parrot

INTRODUCING FREEFLIGHT 7

The HUD (head-up display) interface of FreeFlight 7 is the ultimate companion to ANAFI Ai**. It enables you to access all the outstanding features of** ANAFI Ai**, from the screen of your device, at the touch of your thumbs.**

This section explores FreeFlight 7 functions, starting with a presentation of HUD information.

Presentation of the HUD

ANAFI Ai and **FreeFlight 7** are packed with features which are accessible from the HUD.

Piloting modes:
Manual flight
Cameraman
Photogrammetry
Vehicle
Flight Plan
Touch & Fly: Waypoint & POI

Imaging modes:
Video (4K and 1080p)
Single photography
Time lapse
GPS lapse
Panorama
Burst
Bracketing

- **Note that both GPS icons are green, on the screenshot. This means that the drone's controller (Skycontroller 4 or device) and** ANAFI Ai **are both synchronized to**

enough GPS, Glonass and Galileo satellites to optimize the stability of the drone, especially at higher altitudes.

Parrot therefore recommends you always check both your FreeFlight 7 HUD's GPS icons are green (and not red), before you make your ANAFI Ai **take off.**
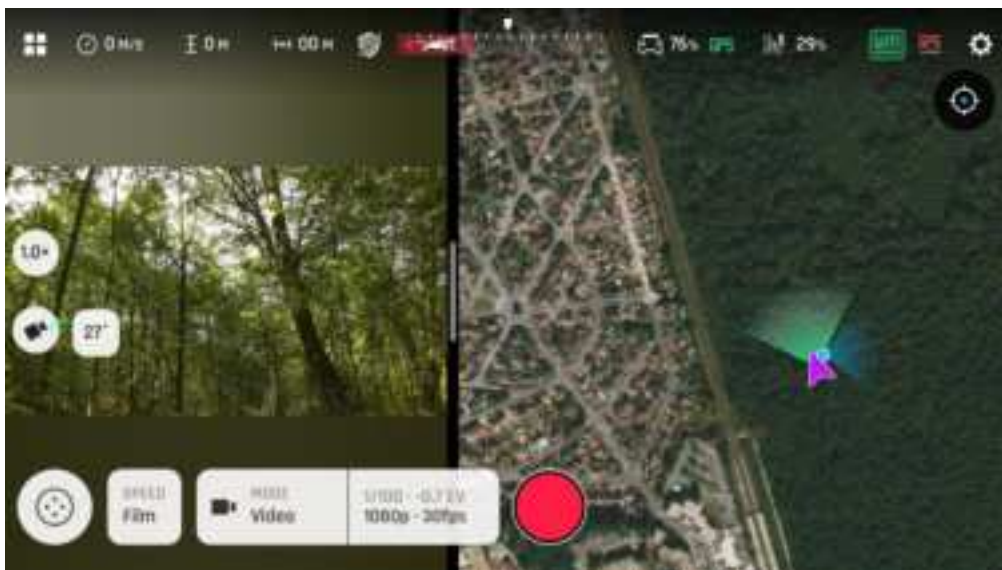
HUD Slider Management

The slider which separates the video feed from the map (or 3D view) enables you to configure your screen to your liking or to the specifics of your mission.
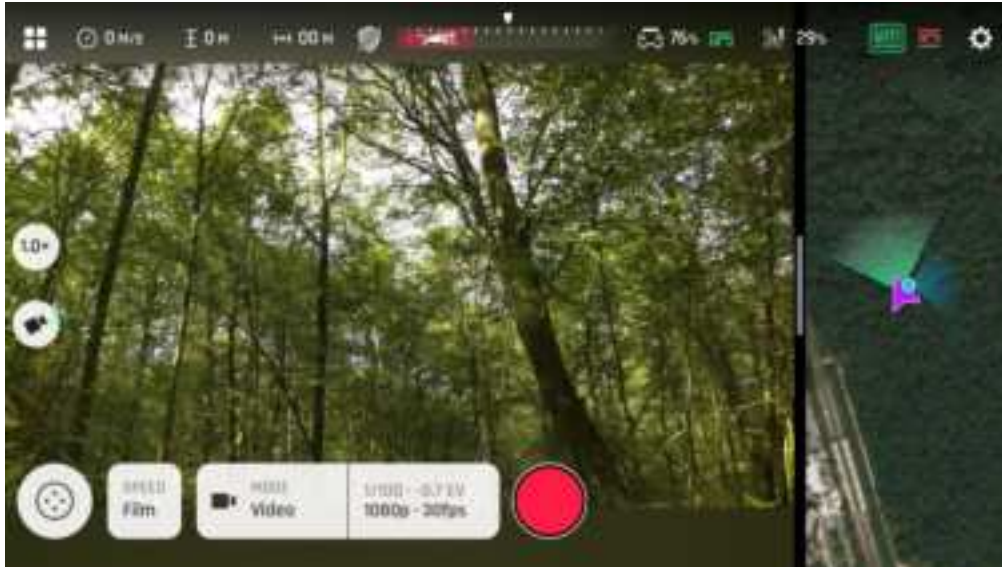
Slider: default view

Touch and slide the slider to the left to increase and adjust the size of the map (or 3D view).


Slider: more map

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Keep sliding it toward the left and hold the position for a second to maximize the map (or 3D view) and minimize the video feed into a small rectangular window, top left of the interface.

Slider: video feed minimized

Tap the video window to revert to default.

Touch the slider; slide it toward the right and hold the position for a second to minimize the map (or 3D view) to a small round window; bottom right of the interface.
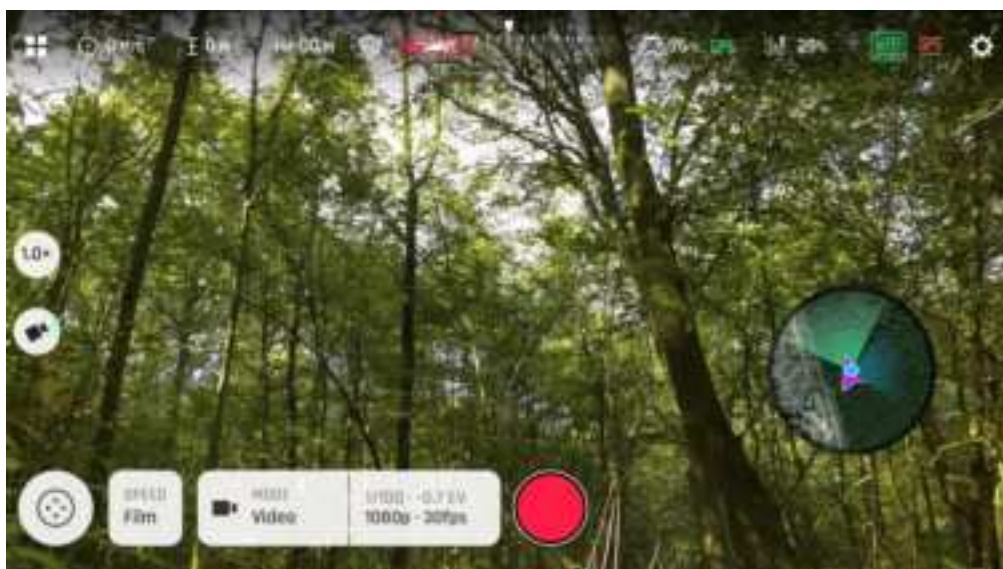
Slider: minimap mode

Tap the map (or 3D) window to revert to default view.