Managing SMARTYCAM 4 Corsa with RaceStudio 3 App

Release 1.01

1 – LEDs and Button

SmartyCam 4 Corsa features two LEDs: STS (Status) and REC (Record), and a button on its front. Their functions are indicated here.

1.1 – Meaning of the LEDs

STS LED:

- **OFF:** Power OFF
- **GREEN:** Power ON
- **PURPLE:** The system is on and the battery is charging
- **BLINKING RED:** The system is off and the battery is charging

REC LED:

- **OFF with STS LED ON:** the software is starting up.
- **GREEN:** SmartyCam 4 Corsa is ready to start recording; user **CAN remove USB-C memory.**
- **BLUE:** SmartyCam 4 is recording; user **CANNOT remove the USB-C memory**
- **BLINKING GREEN:** SmartyCam 4 is ending the recording; user **CANNOT remove the USB-C memory.**
- **RED:** No recording request has been received (from a master via CAN or from the user via pushbutton) and SmartyCam 4 **CANNOT record.**
- **BLINKING RED:** a recording request has been received (from a master via CAN or from the user via pushbutton) but the SmartyCam 4 **CANNOT record.**
- **WHITE:** user has held down the button long enough to turn off the SmartyCam 4 Corsa; the shutdown procedure has begun, and the button can be released.

Please note: If the button is held down further, SmartyCam 4 will shut down through hardware control. This operation should only be performed in case of a serious problem that has caused the SmartyCam 4 to freeze.

1.2 – Button Functions

According to SmartyCam4 Corsa status the front pushbutton allows the user to perform these operations:

If SmartyCam 4 is OFF:

- **Short pressure:** POWER ON
- **Long pressure until REC LED turns red with USB-C memory card containing SmartyCam4 firmware**: the firmware is updated. The operation is to be considered complete when REC LED turns GREEN.

If SmartyCam 4 is ON but is not recording (REC LED green):

- **Short pressure:** SmartyCam 4 starts recording
- **Long pressure until REC LED turns white:** POWER OFF
- **Long pressure until all LEDs are off:** POWER OFF (hardware shutdown); as said before. this operation should only be performed in case of a serious problem that has caused SmartyCam 4 to freeze.

If SmartyCam4 Corsa is recording (REC LED BLUE):

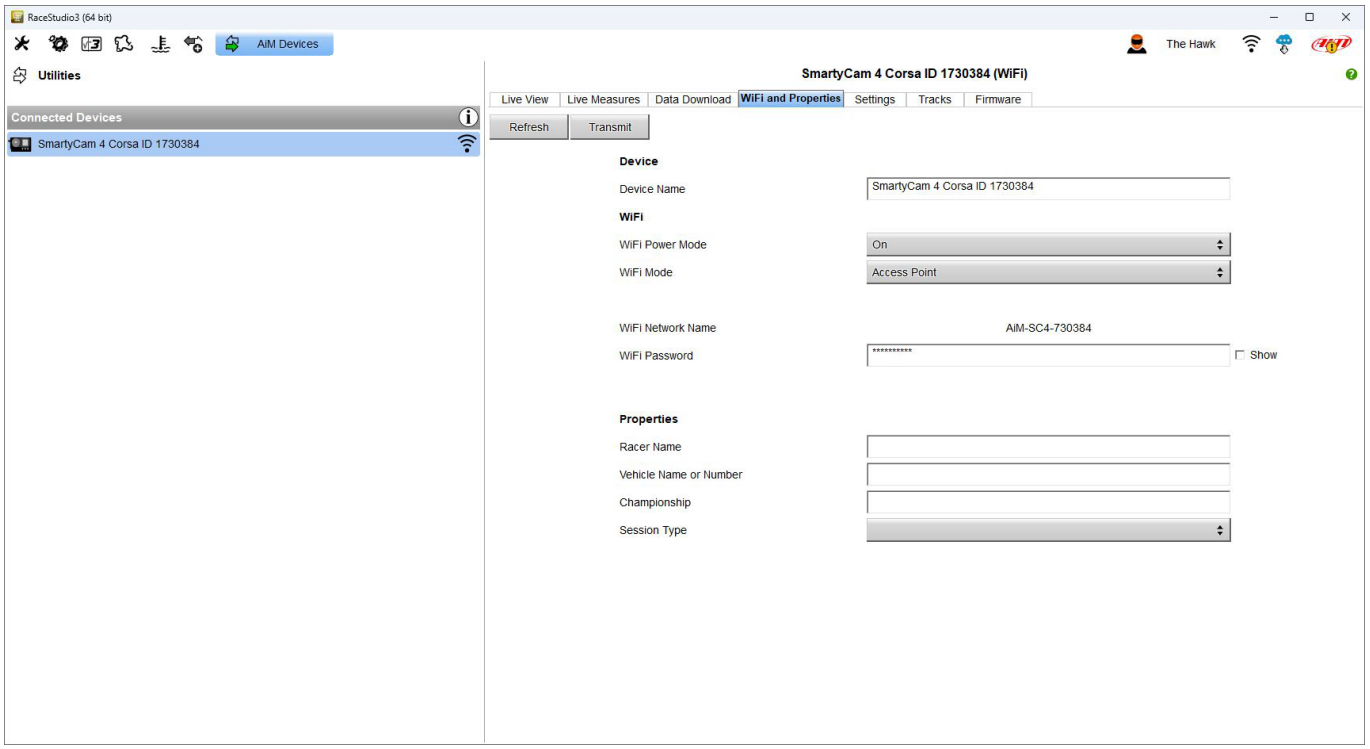
- **Short pressure:** STOP RECORDING

2 – How to manage SmartyCam4 Corsa through RaceStudio 3 App

AiM RaceStudio 3 App is available for both iOs and Android operative systems.

2.1 – How to connect RaceStudio 3 App to SmartyCam 4

SmartyCam4 Corsa is connected to RaceStudio3 App through both BLE (Bluetooth Low Energy) and Wi-Fi. To use the Wi-Fi you must enter Wi-Fi password defined in “Wi-Fi and properties” page of RaceStudio 3 desktop software during the camera configuration. Default password is: **aimsmarty4**.



2.2 – Managing RaceStudio 3 App with iOs and Android operative systems

Please download AiM RaceStudio 3 App from App Store/Google Play Store.

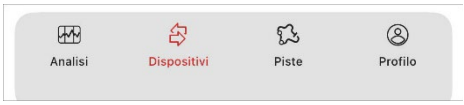
RaceStudio 3 App allows you manage the following functions:

- Status display
- Status report and command transmission
- Parameters settings
- Track map management
- Live view
- Firmware update

2.2.1 – RaceStudio 3 App working mode

To connect RaceStudio3 App with SmartyCam 4 follow these steps:

- Open RaceStudio 3 App and enter “Devices” menu

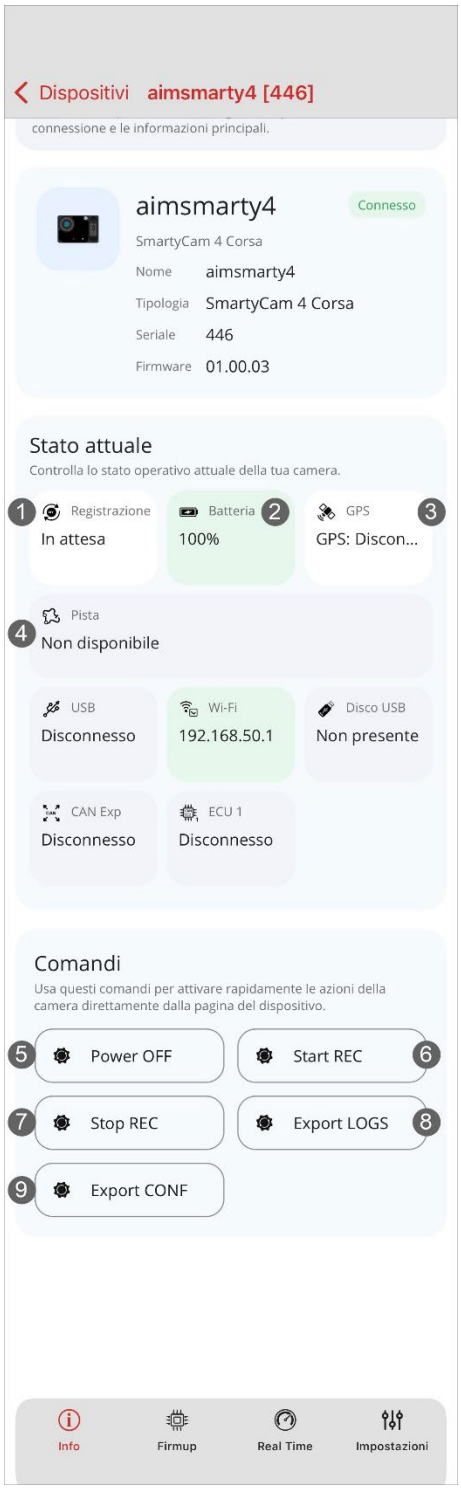


- Select your SmartyCam 4

RaceStudio3 App and SmartyCam 4 are now connected. The Status page of SmartyCam 4 appears and is explained in paragraph 2.2.2

2.2.2 – Status and Commands

This page shows information about the status of SmartyCam 4. The most relevant items are:



- Recording status (**1**); available options are:
  - Waiting
  - Recording
- Battery level (**2**): when the battery drops to 10%, if no external power supply is connected, SmartyCam 4 automatically shuts down.
- GPS (**3**): SmartyCam 4 can obtain GPS coordinates in three ways:
  - through an AiM GPS Module, such as GPS09-C; available options are connected/not connected
  - through an AiM master device such as Solo 2 DL, MX series, SW4, PDMs and EVOs connected to SmartyCam through an AiM CAN expansion that uses AiM CAN network
  - through the ECU CAN bus of a non-AiM system
- Track (**4**): shows the currently selected track. If SmartyCam 4 is connected to an AiM master device, it automatically uses track currently selected on the master. Otherwise, the SmartyCam 4 automatically selects the closest track map.

The commands that you can send are:

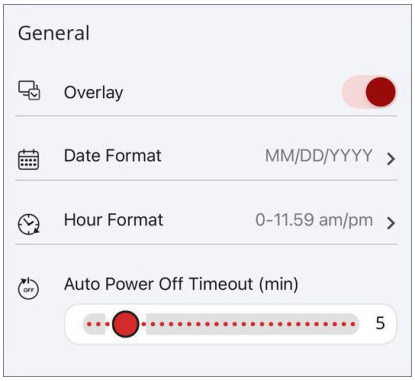
- Power off (**5**)
- Start/Stop Rec (**6** and **7**)
- Export Logs (these files are useful for AiM technicians in case of any issue **8**).
- Export configuration (**9**)

2.2.3 – Settings

Tapping Settings option, you can configure all the parameters needed to make the SmartyCam 4 work the way you want:

First of all, a preview shows what the SmartyCam 4 is framing, helping you find the best position for the camera.

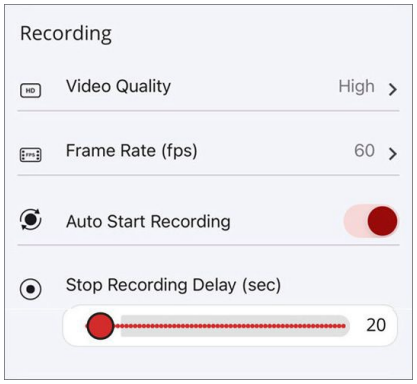
General settings



Menu options are:

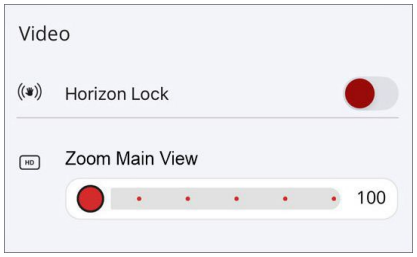
- Overlay: enabled/disabled
- Date format: available options are:
    - MM/DD/YYYY
    - DD/MM/YYYY
    - YYYY/MM/DD
    - YYYY/DD/MM
- Hour format; available options are:
    - 1-12:59 am/pm
    - 0-24
    - 0-11:59 am/pm
- Auto power-off timeout can be set between 2 and 30 minutes

Recording



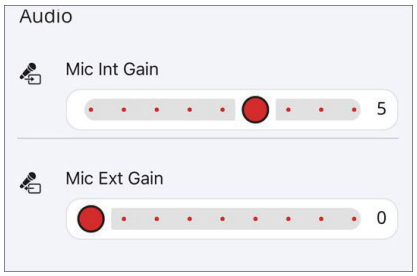
- The video quality can be set:
    - Low: 10 Mbps
    - Normal: 15 Mbps
    - High: 20 Mbps
    - Best: 40 Mbps
- Framerate: 60 fps or 30 fps
- Auto start recording: you can choose whether to start recording according to the conditions set in the RaceStudio 3 (software desktop) configuration, or to ignore them and start recording manually from this App.
- Stop Recording Delay (sec.): to set the delay time the camera waits before stopping the recording once the conditions are no longer met.

Video



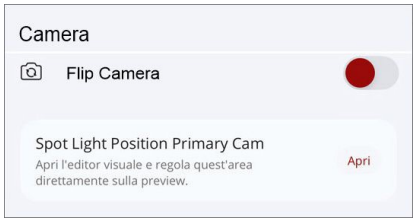
- Horizon lock: when enabled the horizon line remains stable regardless of the vehicle's roll
- Zoom Main View: to zoom the image. **Please note**: this zoom is electronic not an optical so zooming will reduce video resolution.

Audio

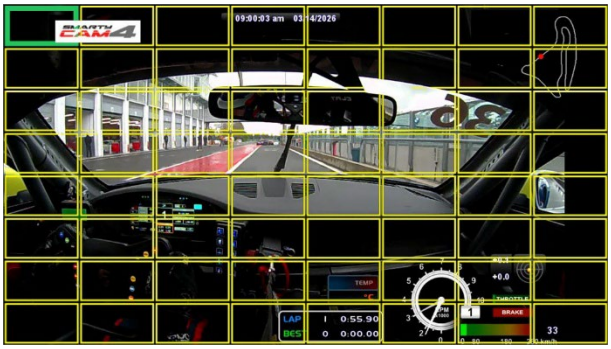


- SmartyCam 4 has two microphones: internal and external that can be connected through pins 6 and 7 of the 7 pins Binder 712 female connector placed rear on the camera. Both microphone gains can be set according to your needs.

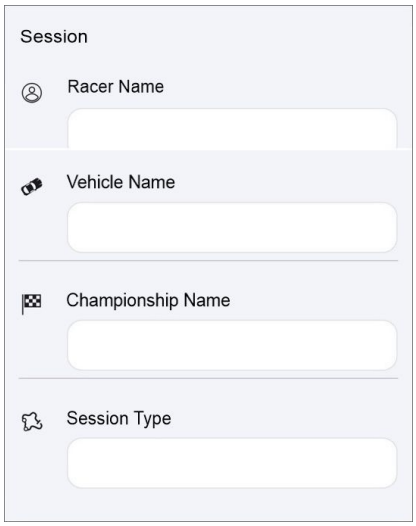
Camera



- Flip Camera: if Horizon Lock in Video settings is enabled this option is not needed, since SmartyCam 4 always keeps the horizon line in the correct position regardless of how the camera is mounted. Otherwise, if you need to install the camera upside down, this setting flips the image accordingly.
- Spot Light Position Primary Cam: by default exposure is calculated on the whole image. If you want to base it on a specific area of the screen, follow this procedure:
  - Tap the upper-left rectangle of the desired area
  - Drag your finger to the lower-right corner of the area
  - The selected area will be highlighted
  - Tap Apply

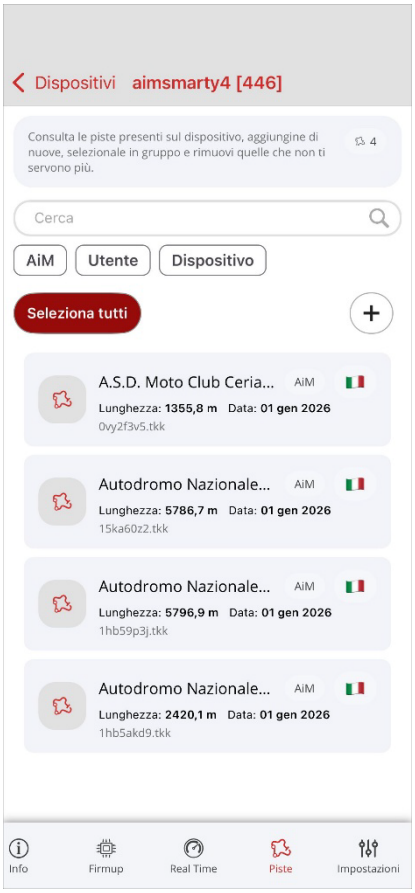


Session



- You can enter information to help you identify your video later.

2.2.4 – How to transmit the track maps to SmartyCam 4



RaceStudio3 App includes all RaceStudio 3 desktop software available track maps. The database is constantly updated. Automatic selection of the correct map is what allows the system to show your vehicle's position in the video and to calculates lap times.
Maps are listed by distance from your current position.
To load the desired maps onto SmartyCam 4, tap "+" and select them. **Please note**: when you turn SmartyCam 4 on while at a track, it automatically recognizes which track you are on and shows the map on the video.