



DR490-2CH Manual



ENGLISH

www.blackvue.com

Table of Contents

Introduction	4
Important safety information	5
Overview	8
In the box.....	8
At a glance	9
Front camera	9
Removing and inserting the front camera	10
Rear camera.....	11
Removing and inserting the rear camera.....	11
Installation	12
Installing the BlackVue dashcam	12
Playing and Managing Videos	16
Playing and managing video files using your computer (Windows/Mac)	16
Removing the microSD card	16
Opening video files in BlackVue Viewer	17
Viewer screen composition	18
Windows Viewer	18
Mac Viewer	19
Playing video	20
Playing back videos	20
Identify video files by recording type	20
Checking the displayed time	22
Using BlackVue Viewer	22
Exploring the timeline and G-Sensor graph	23
Zoom options	24
Checking the GPS data.....	25
Managing videos.....	26
Capturing or printing a still image from video.....	26
Deleting videos	26

For Windows users	26
For Mac users	27
Exporting videos	28
For Windows users	28
Copying videos	29
For Windows users	29
For Mac users	30

Tips for optimal performance	31
Formatting the microSD card	31
Formatting the card in the BlackVue.....	31
Format using BlackVue Viewer (Windows).....	31
Format using BlackVue Viewer (macOS).....	32
Upgrading the firmware.....	34
Upgrading the firmware using a computer (Windows or Mac).....	34
Changing settings	37
Changing settings using your computer (Windows/Mac) ...	37
BlackVue Viewer settings.....	38
Select language.....	38
Speed unit on map.....	38
Select map service	38
Firmware settings	39
Basic settings	39
Time	39
Video.....	40
Recording settings.....	41
Sensitivity settings	42
G-Sensor (Normal mode) / G-Sensor (Parking mode).....	42
Motion detection (Parking mode)	42
System settings	43
Security LED (Front camera).....	43
Volume	43
Storage allocation.....	44
Applying the settings	44

Optional accessories45

 GPS receiver (Optional)45

 Parking mode hardwiring kit (Optional)46

 Parking mode battery pack (Optional)47

Product specifications.....48

Recording time50

Disposal and recycling information.....52

Introduction

Thank you for purchasing this BlackVue dashcam made by Pittasoft Co., Ltd.

This instruction manual contains information on how to operate your dashcam.

Before using your dashcam, we recommend that you read through this manual to ensure correct usage.

To improve the performance of the product, the contents of this manual are subject to change without prior notice.

Note

- A microSD card is provided with the BlackVue dashcam when you purchase the product. After inserting the microSD card and turning on the dashcam, the microSD card will be initialized.

Important safety information

For user safety and to avoid property damage, read through this manual and follow these safety instructions to use the product correctly.



DANGER

Failure to observe the following directions could result in death or property damage:

- **Do not disassemble, repair, or modify the product yourself.**

Doing so may cause fire, electric shock, or malfunction. For internal inspection and repair, contact the service center.

- **If any foreign matter gets inside the product, detach the power cord immediately.**

Contact the service center for repair.

- **Do not adjust the product while driving.**

Doing so may cause an accident. Stop or park your car in a safe place before installing and setting up the product.

- **Do not install the product in a location where the product can interfere with the driver's field of vision.**

Doing so may cause an accident.

- **Do not use a damaged or modified power cord. Only use the cords provided by the manufacturer.**

Damaged or modified power cords may cause an explosion, fire, or malfunction.

- **Do not operate the product with wet hands.**

Doing so may cause electric shock.

- **Do not install the product in an environment with high humidity, or combustible gases or liquids.**

Doing so may cause an explosion and/or fire.



WARNING Failure to observe the following directions could result in death or serious injury:

- **Do not leave the product near infants, children, or pets.**

There is a risk of them swallowing small components, and/or their saliva may get into the product, causing an explosion due to a short circuit.

- **Do not spray water or wax directly onto the product while cleaning the inside of the car.**

Doing so may cause fire, electric shock, or malfunction.

- **If smoke or an unusual smell is emitted from the power cord, detach the power cord immediately.**

Contact the service center or your distributor.

- **Keep the terminals of the power cord clean.**

Failure to do so may cause excessive heat and fire.

- **Use the correct input voltage.**

Failure to do so may cause explosion, fire, or malfunction.

- **Plug in the power cord firmly so that it cannot easily be disconnected.**

Failure to do so may cause fire.

- **Do not cover the product with any material.**

Doing so may cause external deformation of the product or fire. Use the product and peripherals in a well-ventilated location.

**CAUTION**

Failure to observe the following directions could result in injury or property damage:

- **Do not spray cleaning products directly onto the product.**

Doing so may cause discoloration, cracks, or malfunction.

- **If the product is used outside the optimal temperature range (-20°C – 70°C/-4°F – 158°F), performance can decline or malfunctions may occur.**

- **Make sure that the product is installed properly.**

If installed incorrectly, vibrations may cause the product to fall, and may cause physical injury.

- **When entering or exiting a tunnel, when directly facing into bright sunlight, or when recording at night without lighting the quality of recorded video may deteriorate.**

- **If the product is damaged or the power supply is cut due to an accident, video may not be recorded.**

- **Excessively tinted windshield glass can distort the recorded video or cause recorded video to be indistinct.**

- **Prolonged use of the product can increase the interior temperature and cause burns.**

- **microSD cards are consumables, so replace microSD cards after prolonged use.**

microSD cards may not record video correctly after extended use, so check the microSD card's recording capability periodically and replace as necessary.

- **Clean the lens regularly.**

Foreign material attached to the lens can affect the recording quality.

- **Do not remove the microSD card while the microSD card is saving or reading data.**

The data can be damaged or malfunctions may occur.

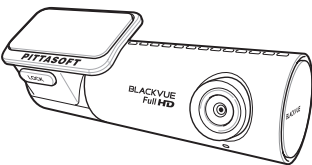
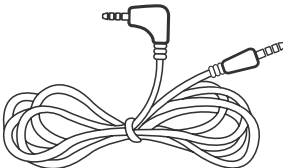
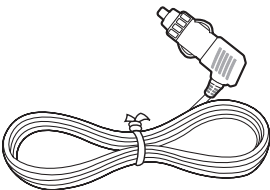
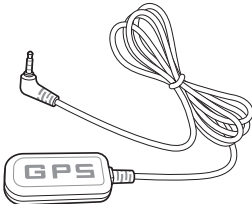
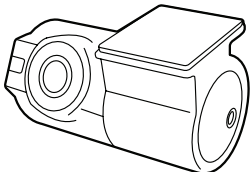
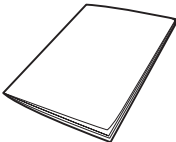
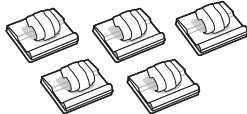
- **It is recommended that you install the software and firmware from the BlackVue downloads page (www.blackvue.com).**

- **It is recommended that you remove the power cord if the product is not used for an extended period of time.**

Overview

In the box

Check the box for each of the following items before installing the BlackVue dashcam.

	Front camera		Rear camera connection cable		microSD Card
	Power cord		External GPS (Optional)		Rear camera
	microSD card adapter		Quick start guide		Cable clips (5 EA)

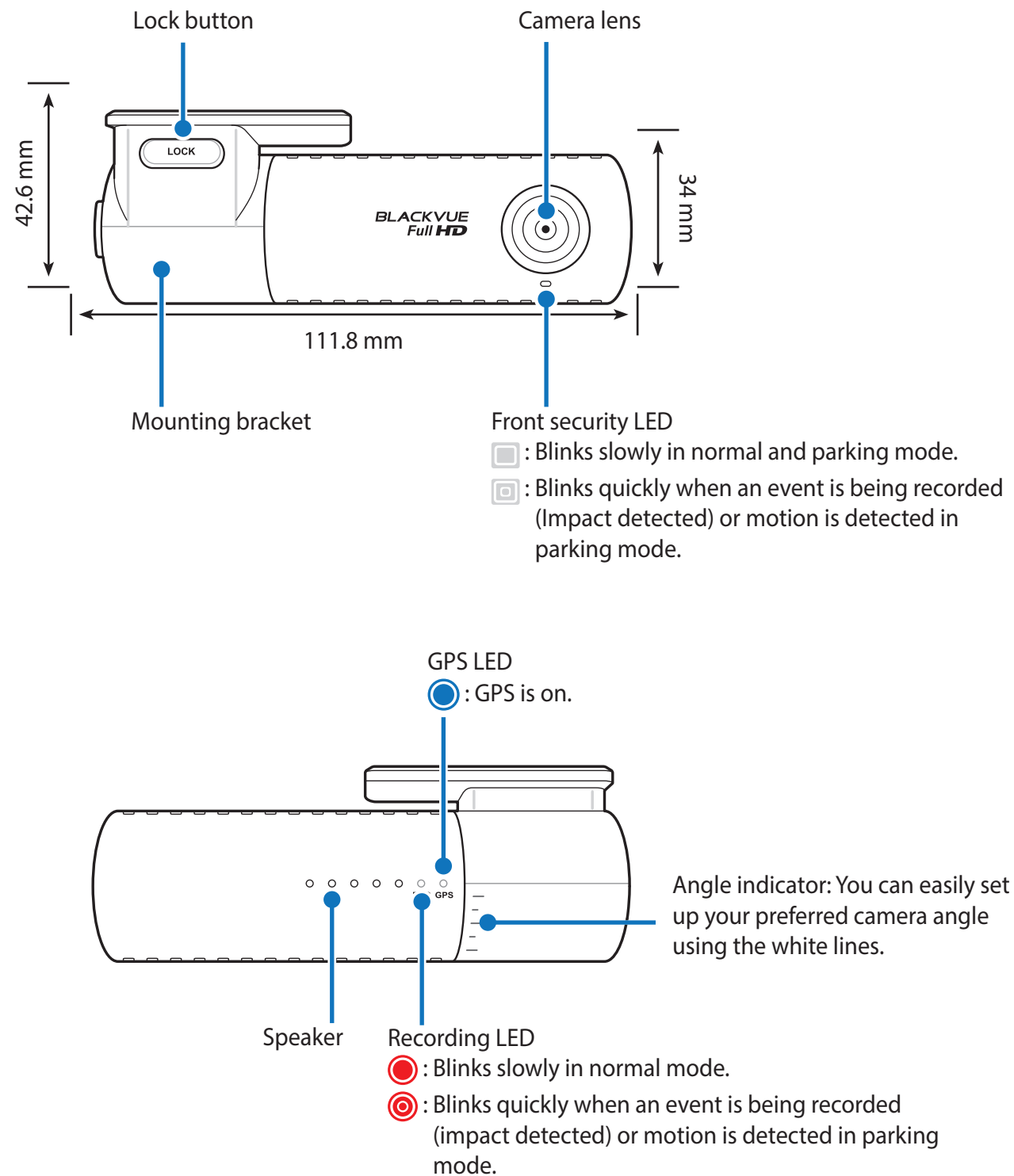
Note

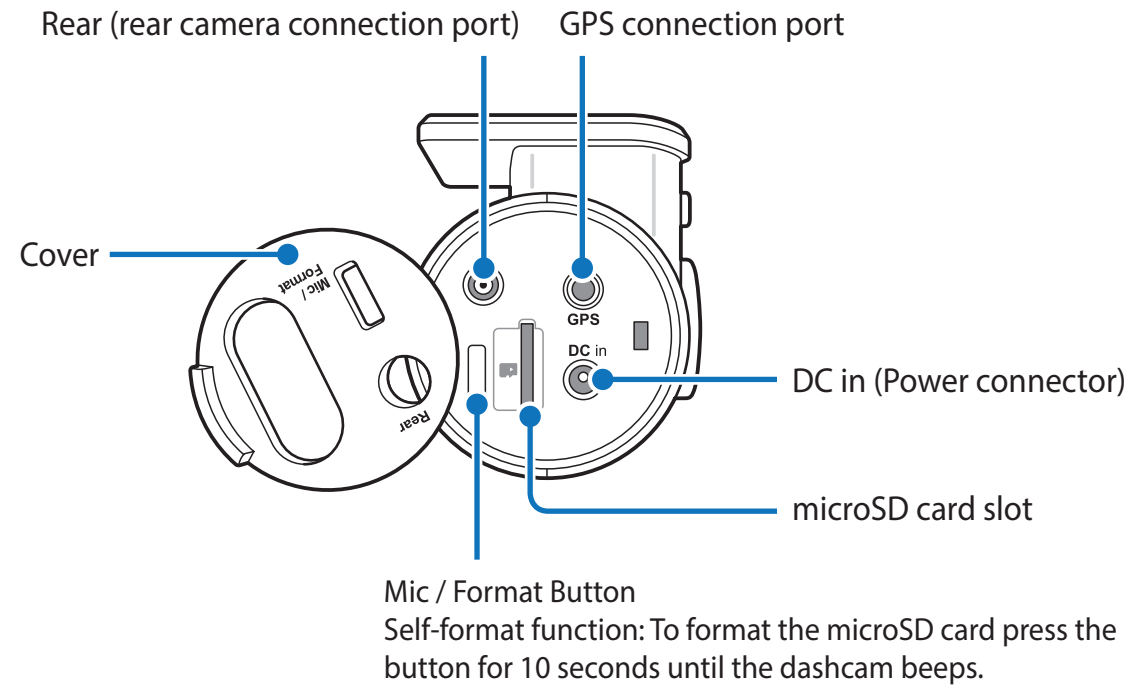
- The illustrations in this manual may differ from the product.
- To improve the performance of the product, the contents of this manual are subject to change without prior notice.
- For more information about the package components and accessories, visit the BlackVue website (www.blackvue.com).

➤ At a glance

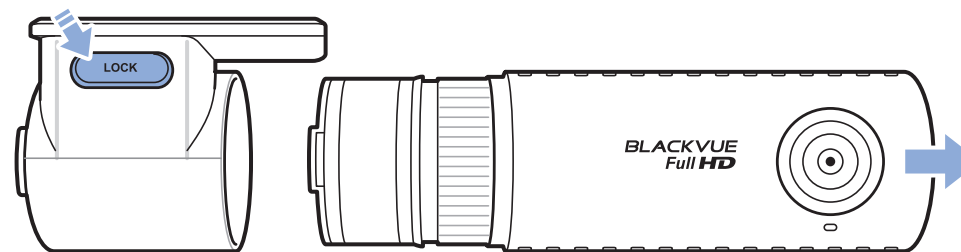
The following diagrams explain each part of the BlackVue dashcam.

□ Front camera



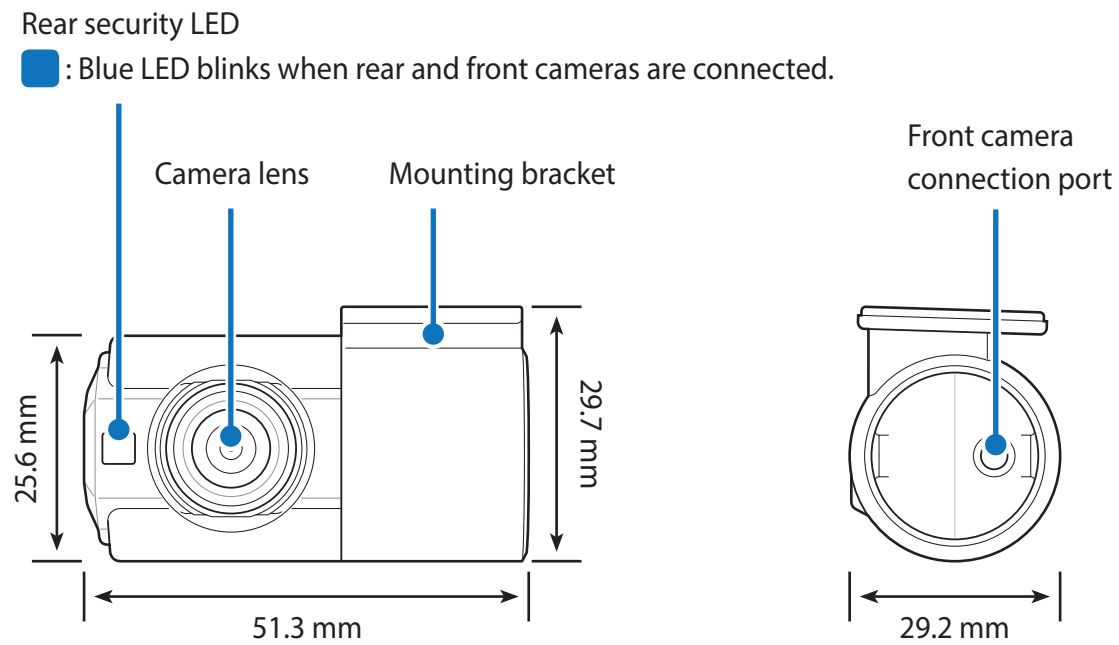


☐ Removing and inserting the front camera

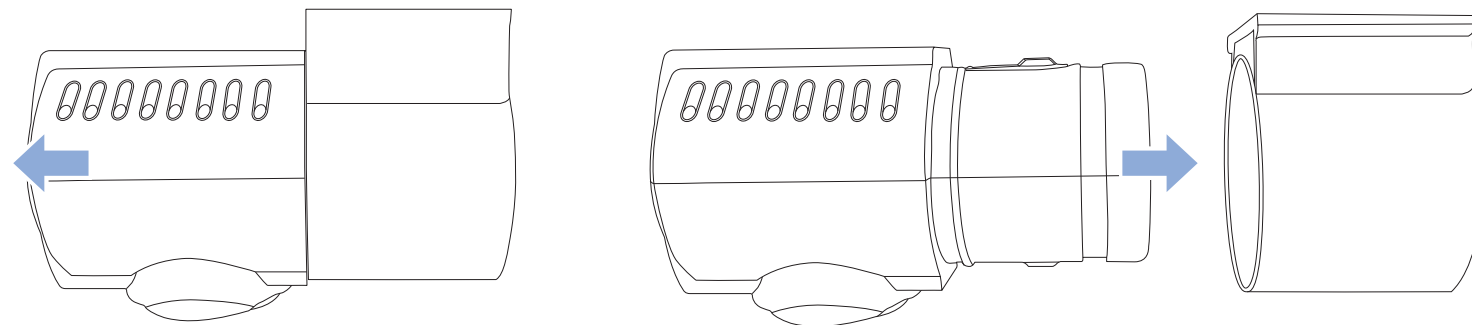


- To remove the front camera from its bracket, press the LOCK button and pull the front camera out of the mounting bracket.
- To insert the front camera into its bracket, push the front camera into the mounting bracket until it "clicks" in.

☐ Rear camera



☐ Removing and inserting the rear camera

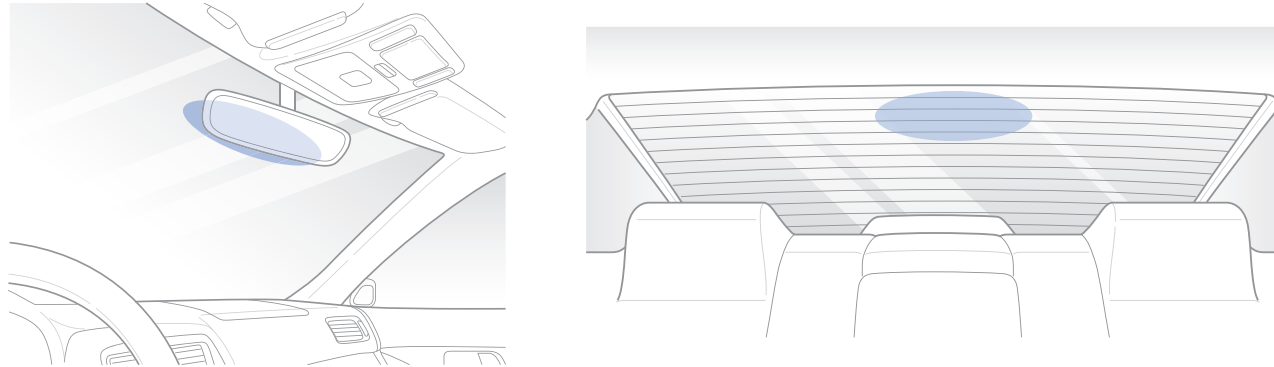


- To remove the rear camera from its bracket, rotate the camera until the lens points directly away from bracket foot and pull the rear camera out.
- To insert the rear camera into its bracket, point the lens directly away from the bracket foot and push the rear camera into the mounting bracket.

Installation

▶ Installing the BlackVue dashcam

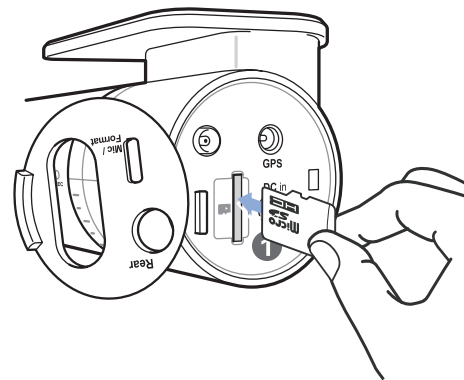
Install the front camera behind the rear view mirror. Install the rear camera at the top of the back windshield. Remove any foreign matter and clean and dry the windshield before installation.



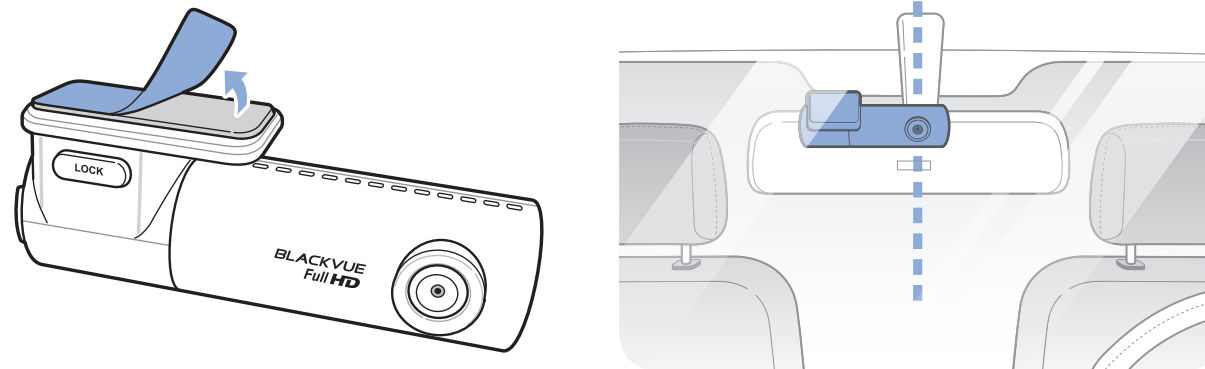
⚠ Warning

- Do not install the product in a location where it can obstruct the driver's field of vision.

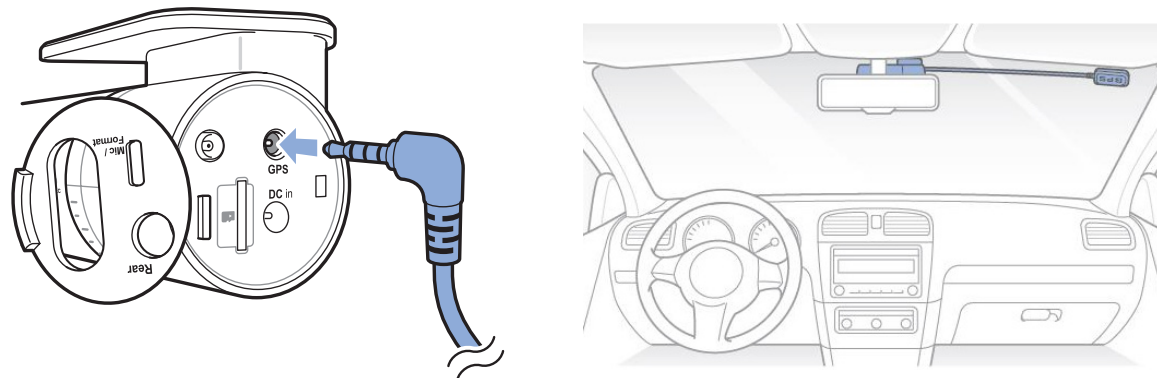
- 1 Turn off the engine. Open the cover of the microSD card slot, gently push the card into the slot until it locks into place and close the cover.



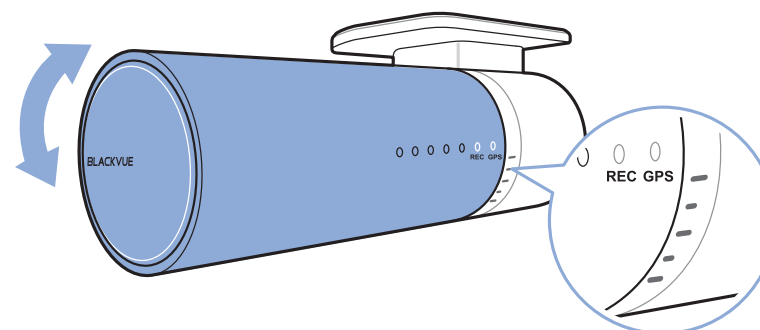
- 2** Peel off the plastic film from the front camera and the lens of the rear camera. Peel off the protective film from the double-sided tape and attach the front camera to the windshield behind the rear-view mirror.



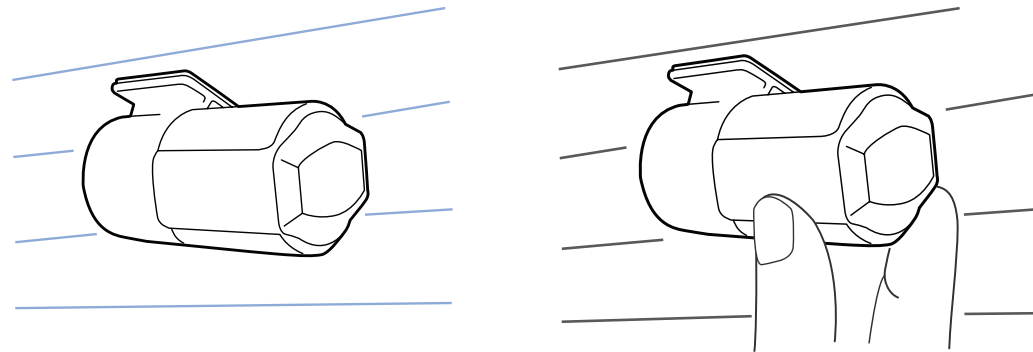
- 3** **Optional GPS receiver:** Plug in the GPS receiver and attach it in a corner of the windshield. Tuck the cable into the windshield trim using the pry tool.



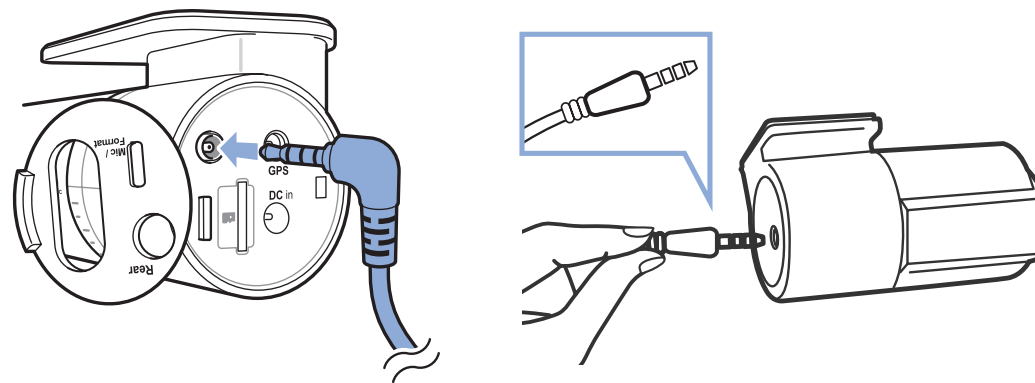
- 4** Adjust the angle of the lens by rotating the body of the front camera. We recommend pointing the lens slightly downwards ($\approx 10^\circ$ below horizontal), so as to record video with a 6:4 road to background ratio.



- 5** Peel off the protective film from the double-sided tape and attach the rear camera to the rear windshield. Adjust the angle of the lens by rotating the body of the rear camera.

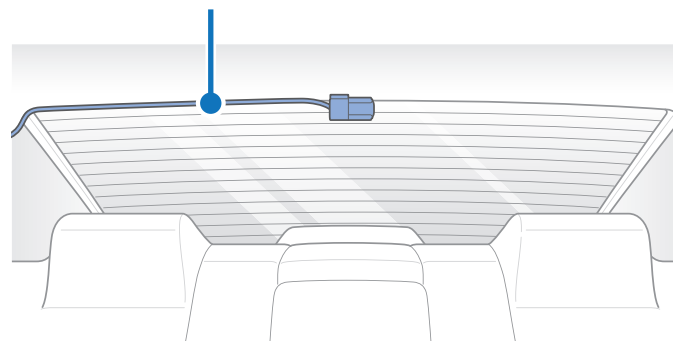


- 6** Connect the front camera ('Rear' port) and the rear camera using the rear camera connection cable.

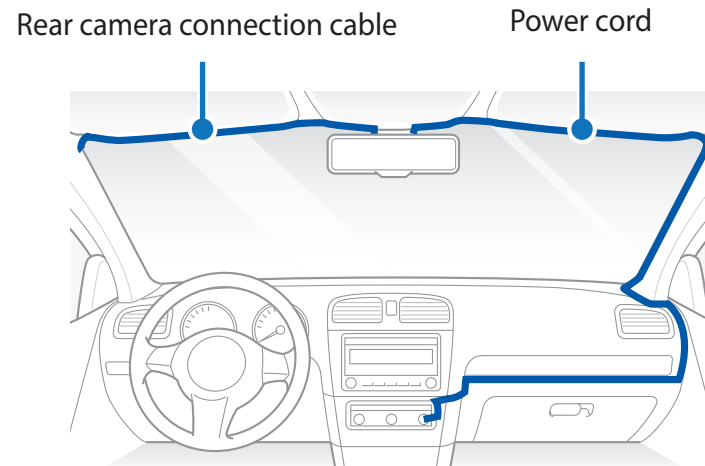


- 7** Use the pry tool to lift the edges of the rubber window sealing and molding and tuck in the rear camera connection cable.

Rear camera connection cable



- 8 Plug the power cord into the cigarette lighter socket and the front camera.
- 9 Use the pry tool to lift the edges of the windshield trim/molding and tuck in the power cord.



- 10 Turn on the engine. The BlackVue dashcam will power up and start recording. Video files are stored on the microSD card. When the microSD card fills up, the newest video files will start to replace the oldest video files (called **loop recording**) – so you will always have the most recent video files.

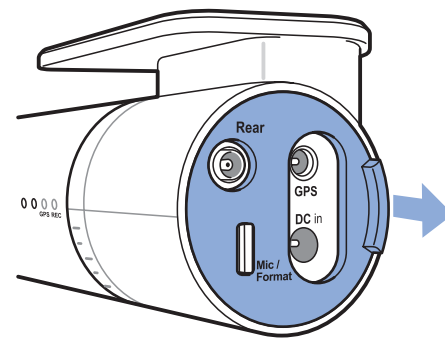
Note

- There are 3 recording modes: Normal, Event and Parking. The dashcam starts recording in normal mode, switches to event mode when an impact is detected, and switches to parking mode if the vehicle is stationary for 5 minutes.

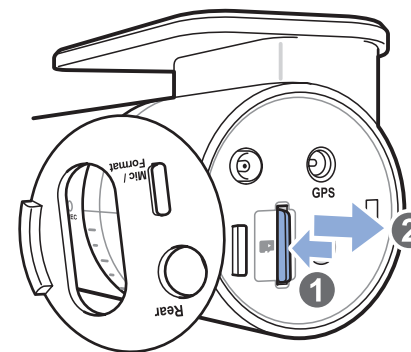
▶ Playing and managing video files using your computer (Windows/Mac)

➤ Removing the microSD card

- 1 Unplug the power cord to turn off the dashcam.
- 2 Open the side cover of the front camera.
- 3 To remove the microSD card, gently press on the card to release the lock then carefully pull the card out.
To insert the microSD card, gently push the card into the slot until it locks into place and close the side cover.



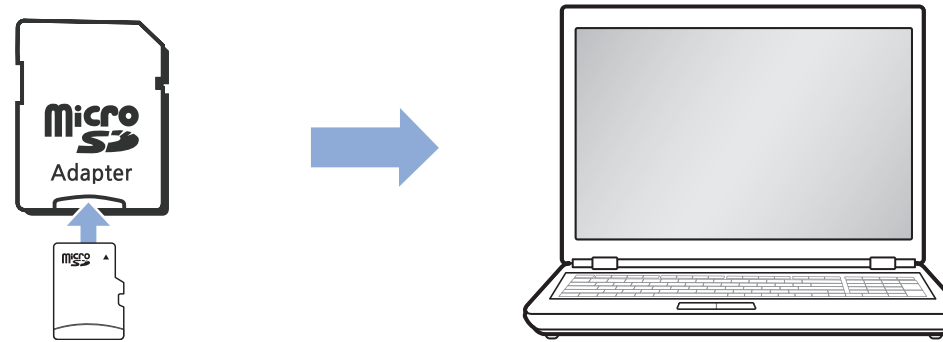
Open side cover



To remove

➤ Opening video files in BlackVue Viewer

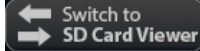
- 1 Remove the microSD card from the dashcam.
- 2 Use the included microSD card adapter to connect the card to a computer.

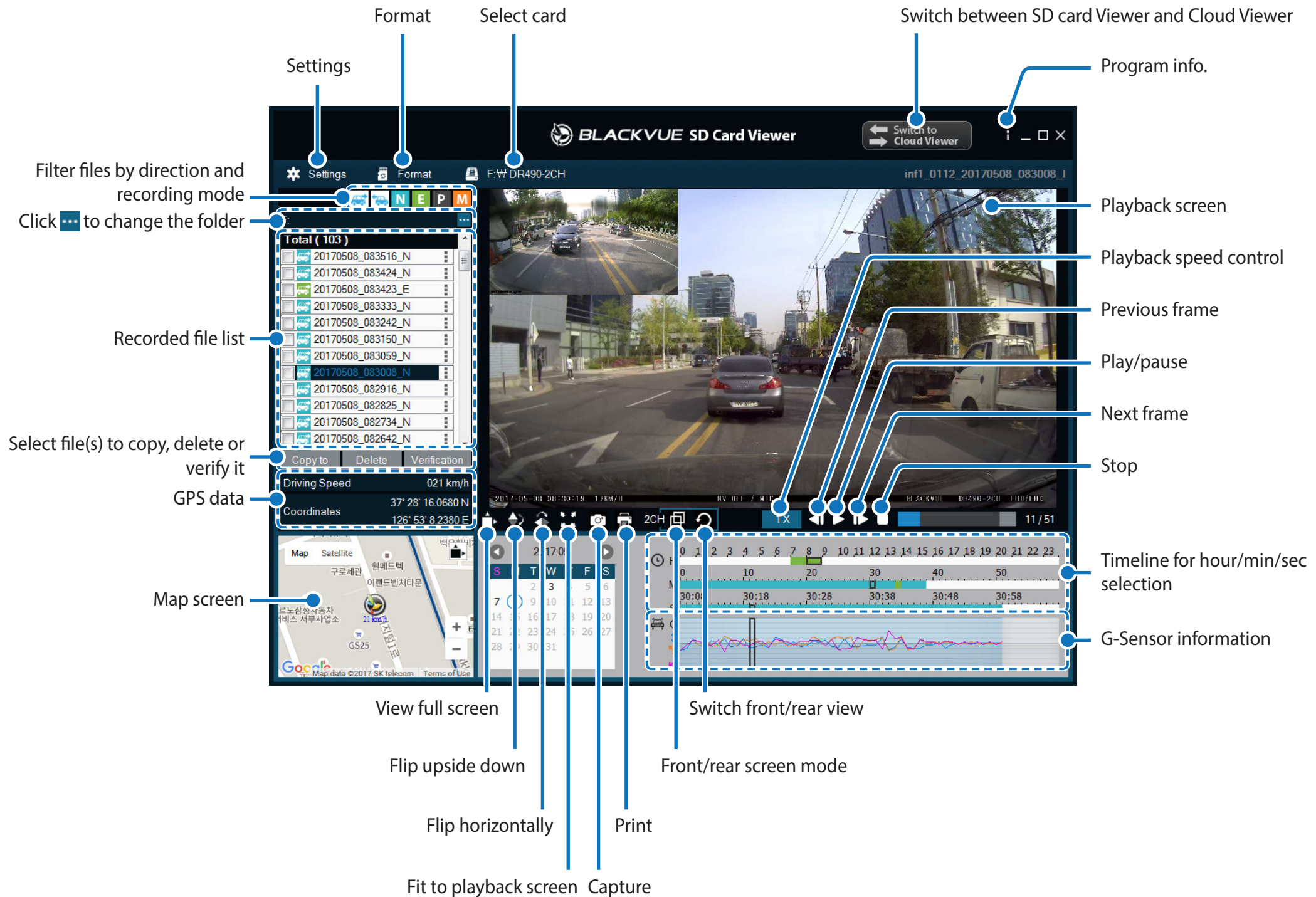


- 3 Download BlackVue Viewer from www.blackvue.com > **Support** > **Downloads** and install it on your computer.
- 4 Run BlackVue Viewer.

Viewer screen composition

Windows Viewer

When you launch the program you will see the Cloud Viewer window. Click the  button to open the SD Card Viewer window.

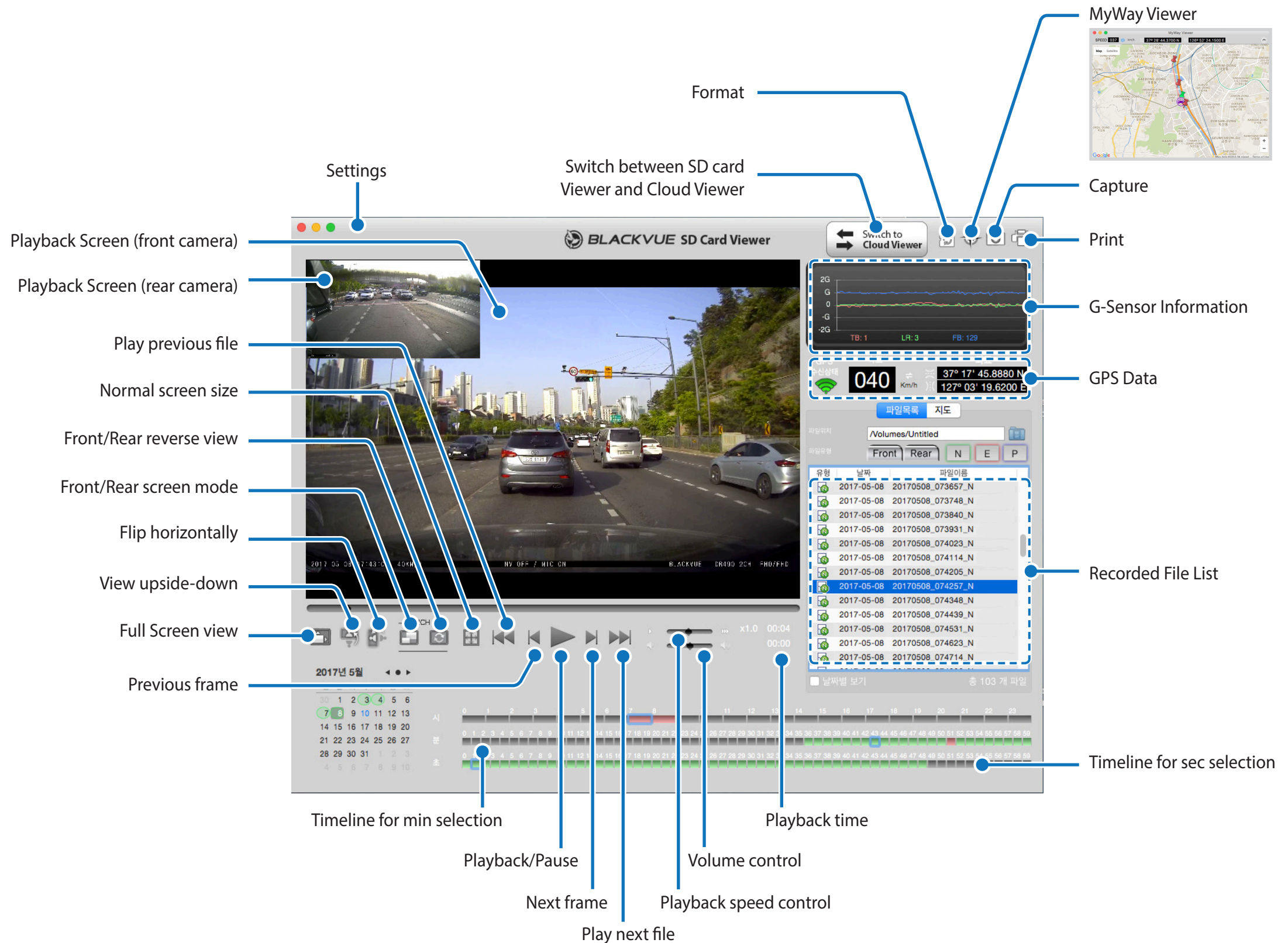


Note

- All images shown are for illustration purposes only. Actual program may differ from images shown.

Mac Viewer

When you launch the program you will see the Cloud Viewer window. Click the  button to open the SD Card Viewer window.



Playing video

Playing back videos

In BlackVue Viewer double click a video file to play.

BlackVue Viewer shows by default the files in the microSD card. To see files in another folder click the  button and browse to the folder.

Identify video files by recording type

		20170321_082752_N		N: Normal recording
		20170321_082749_E		
		20170321_082715_E		E: Event recording
		20170321_082700_N		
		20170321_082608_N		
		20170321_082515_N		

- **Recording type:**
 - N: Normal
 - E: Event
 - P: Parking mode motion detection
- **Example file name:** 20170104_150838_N
 - Date & time:* 4th January 2017, 03:08:38 PM
 - Recording type:* Normal

- Use the **N E P** buttons to filter the video list by recording type.

	Normal	The dashcam records in normal mode by default.
	Event	When the dashcam detects an impact while in normal or parking mode, it switches to event mode and saves an event recording beginning 10 seconds before the event trigger.
	Parking	In parking mode the dashcam continuously buffers video. When motion is detected in the dashcam's field of view, it saves a parking recording beginning 10 seconds before the motion detection.

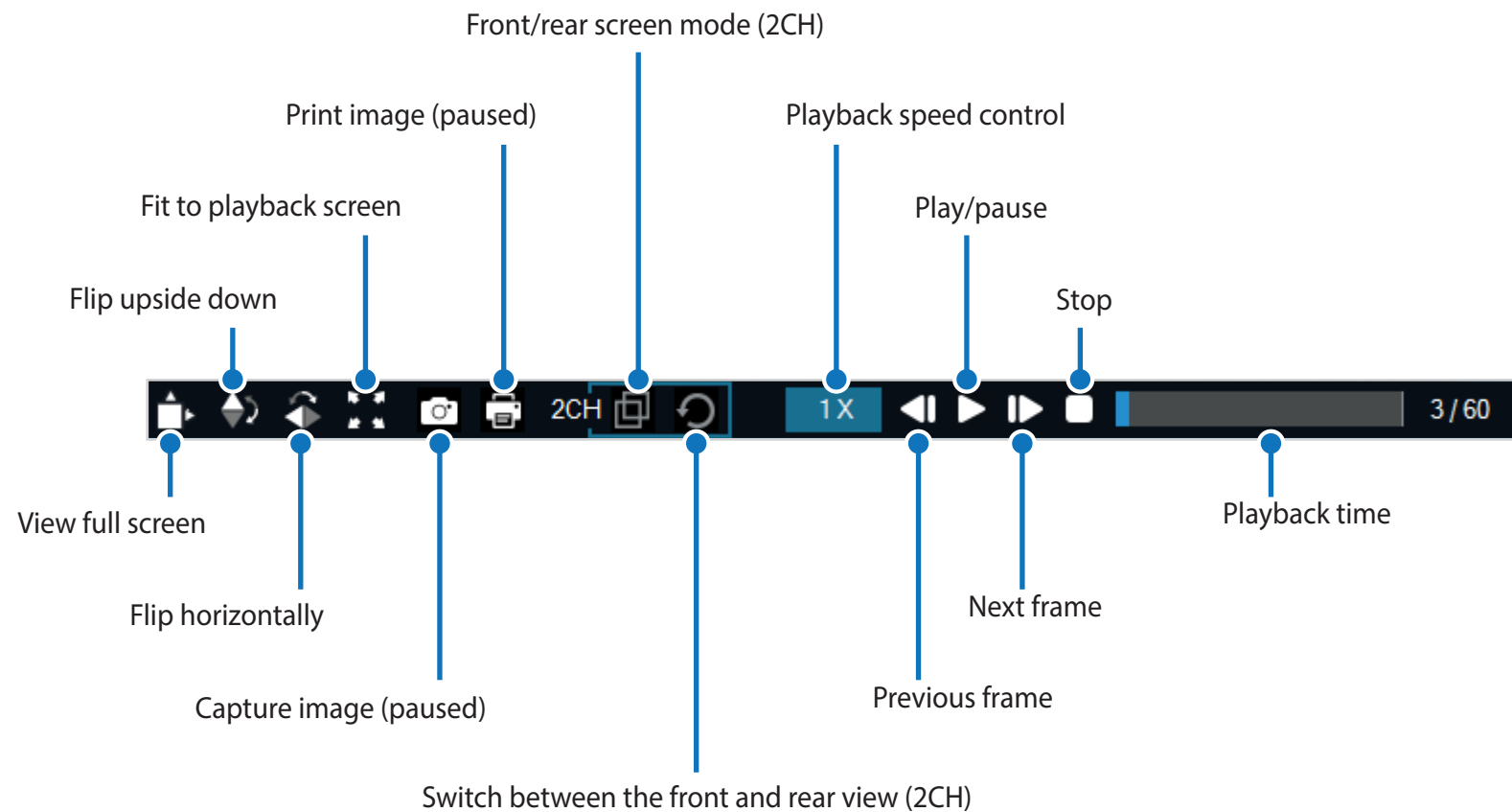
Note

- When you press the “Mic on/off” button the current recording will be stopped and a new recording will start with the new mic setting.

☐ Checking the displayed time

If text overlay is on the camera displays the time at the bottom of the video. If the displayed in the recorded videos is incorrect please see **"Time" on page 39.**

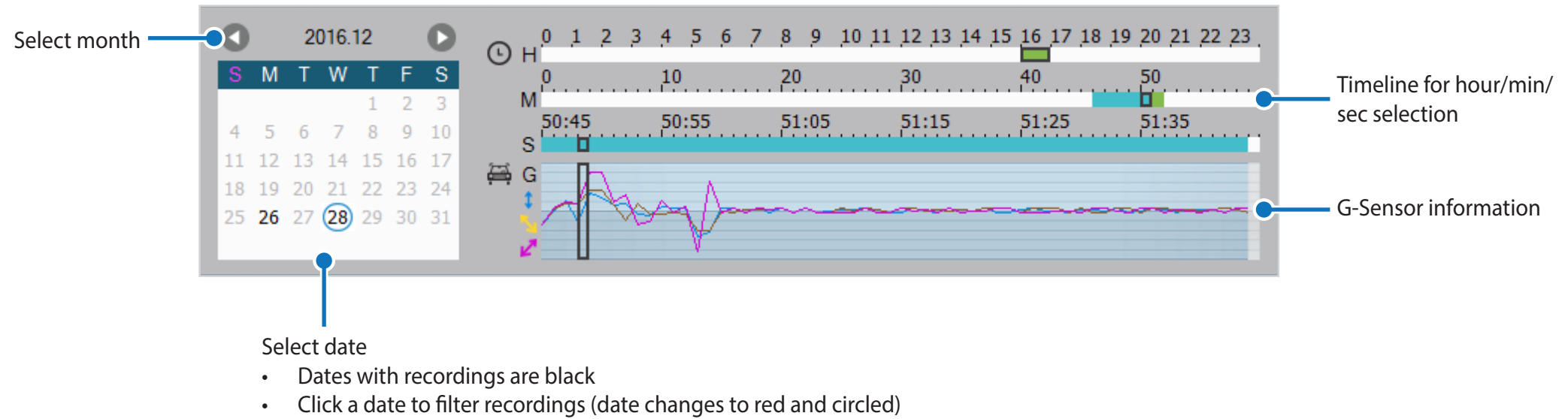
☐ Using BlackVue Viewer



❏ Exploring the timeline and G-Sensor graph

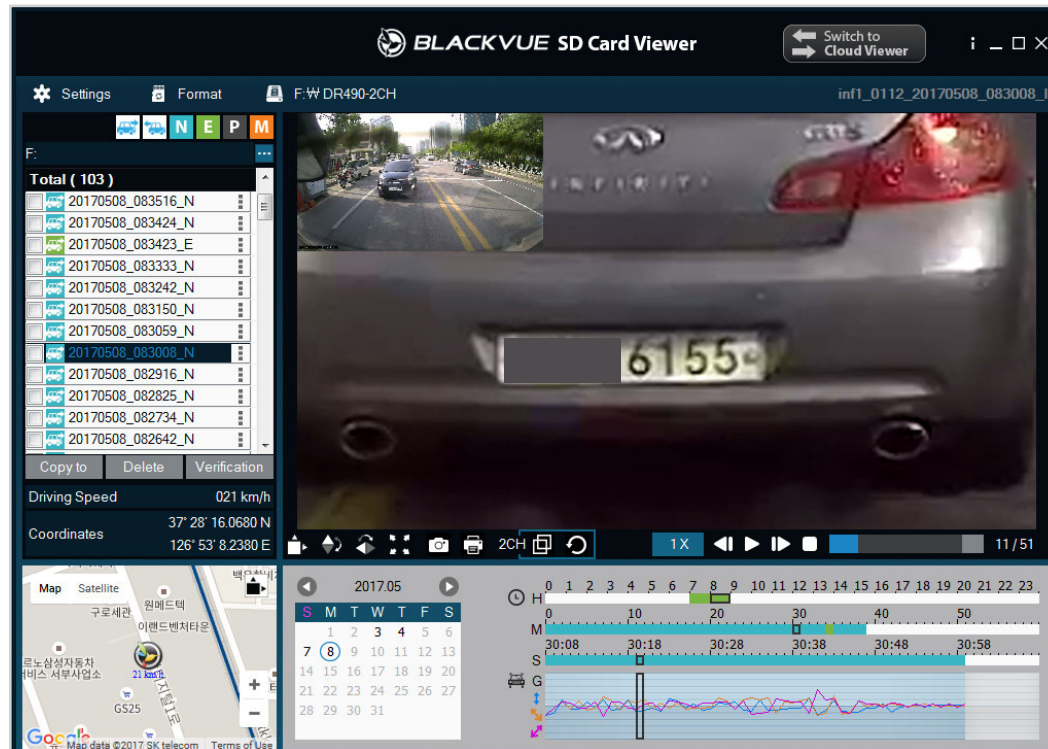
You can explore the timeline for the playback of the recorded videos by date, hour, minute and second using the timeline.

You can check the impact sensitivity (G-Sensor) information in the line graph.

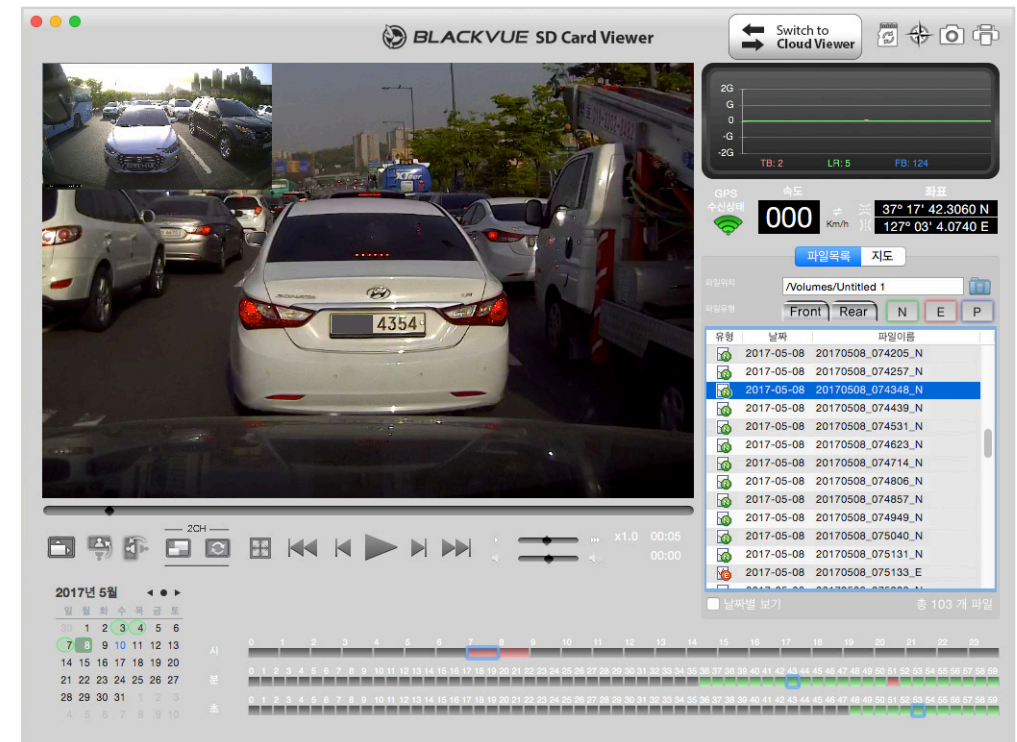


Zoom options

- Use the mouse scroll wheel zoom. Right clicking will restore the video to the default size.
- You can resize the playback frame or the BlackVue Viewer window by dragging the borders.
- **Full-screen view:** Double click on the video image to enter full-screen view. Double click again or tap ESC to return to the default view.



Windows



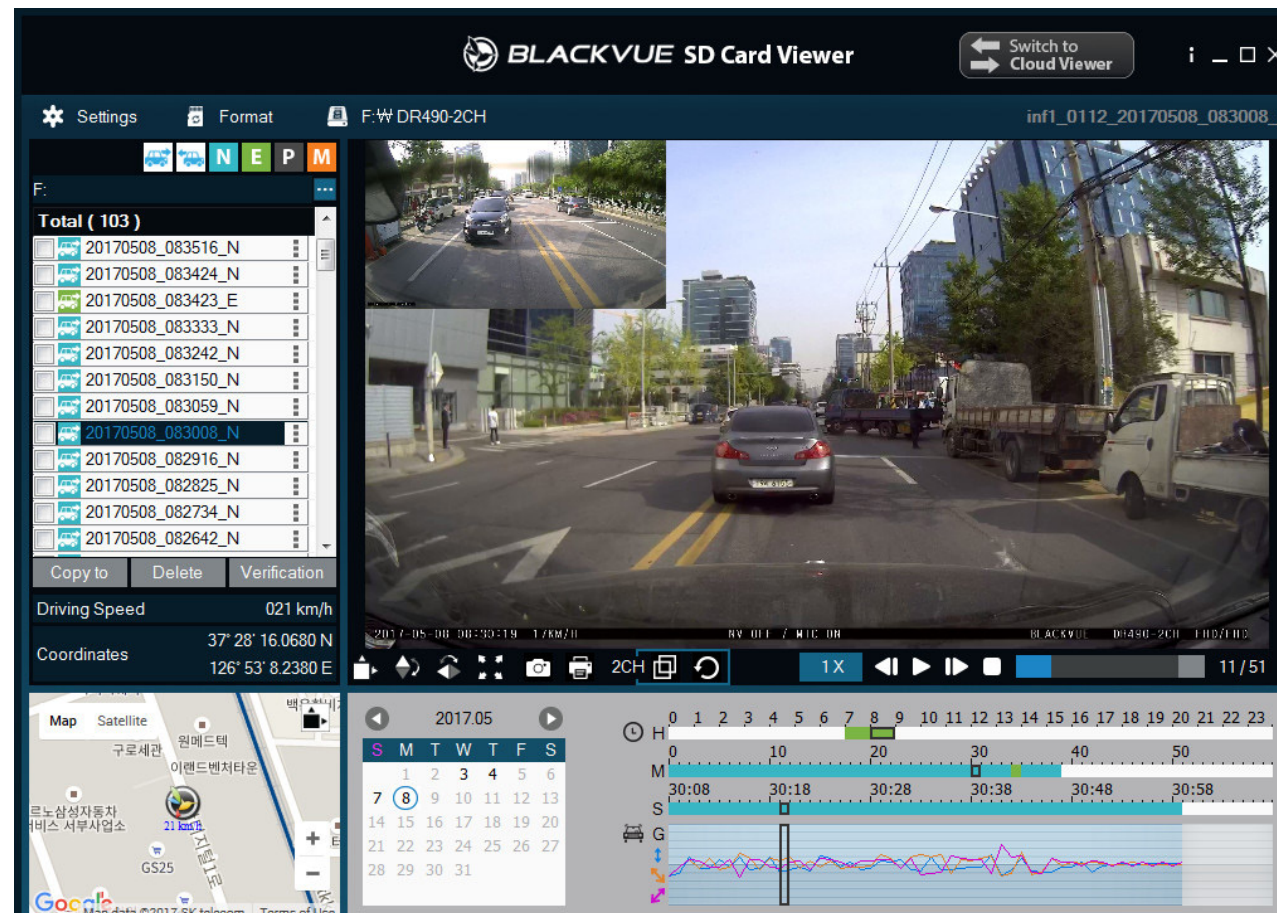
Mac

☐ Checking the GPS data

You can check the GPS data of the recorded video in BlackVue while video is playing back. The driving speed and coordinates are displayed above the map frame.

📝 Note

- The external GPS receiver is required to obtain GPS data.
- GPS data is not recorded during parking mode. Map data cannot be displayed for parking mode recordings.



Managing videos

You can manage the recorded videos through the BlackVue Viewer program. You can also format the microSD card.

Note

- If the microSD card is full, by default the dashcam will record over the oldest videos first.

Capturing or printing a still image from video

- 1 Double click a file in the file list to play.
- 2 Click the  pause button to pause the video.
- 3 Select the  capture button to capture the image or the  print button to print directly.

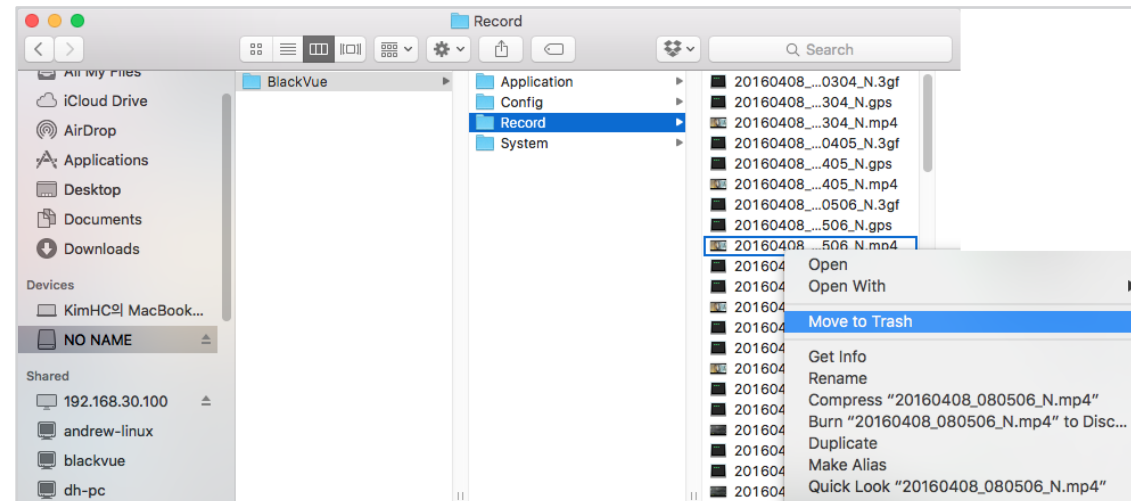
Deleting videos

For Windows users

- 1 Select the video, or videos using the checkboxes, from the recorded video list.
- 2 Click **Delete**.
 - You can also delete individual files by clicking  next to a video in the recorded video list and selecting **Delete**.

■ For Mac users

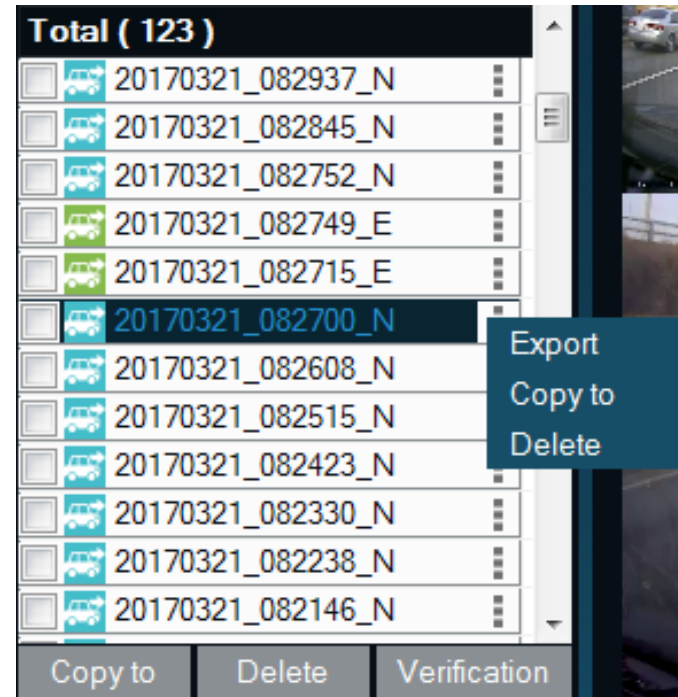
- 1 Go to \BlackVue\Record\.
- 2 Select the video from the recorded video list.
- 3 Click Move to Trash.



☐ Exporting videos

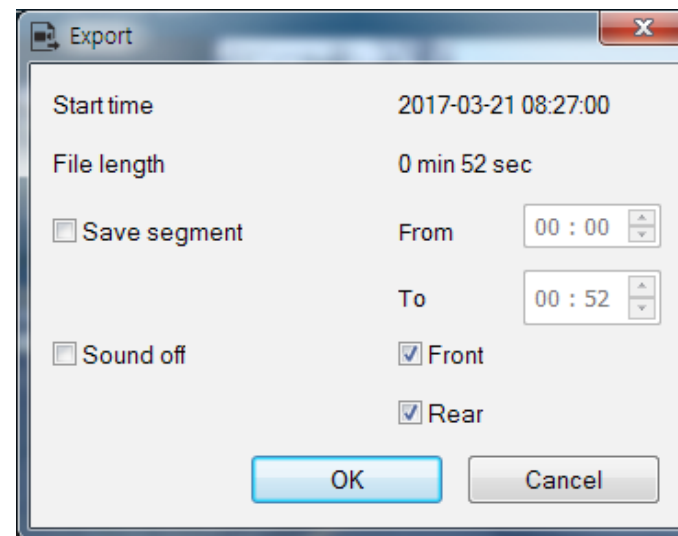
☐ For Windows users

1 Click  next to a video in the recorded video list.



2 Click **Export**.

3 If you want to extract a segment of a file select **Save segment** and edit the start and end second points. To export without audio select **Sound Off**. You can export the **Front** or **Rear** video separately or together.



- 4 Click the **OK** button.
- 5 Select the folder in which to save the file and enter the file name.
- 6 Click the **Save** button.

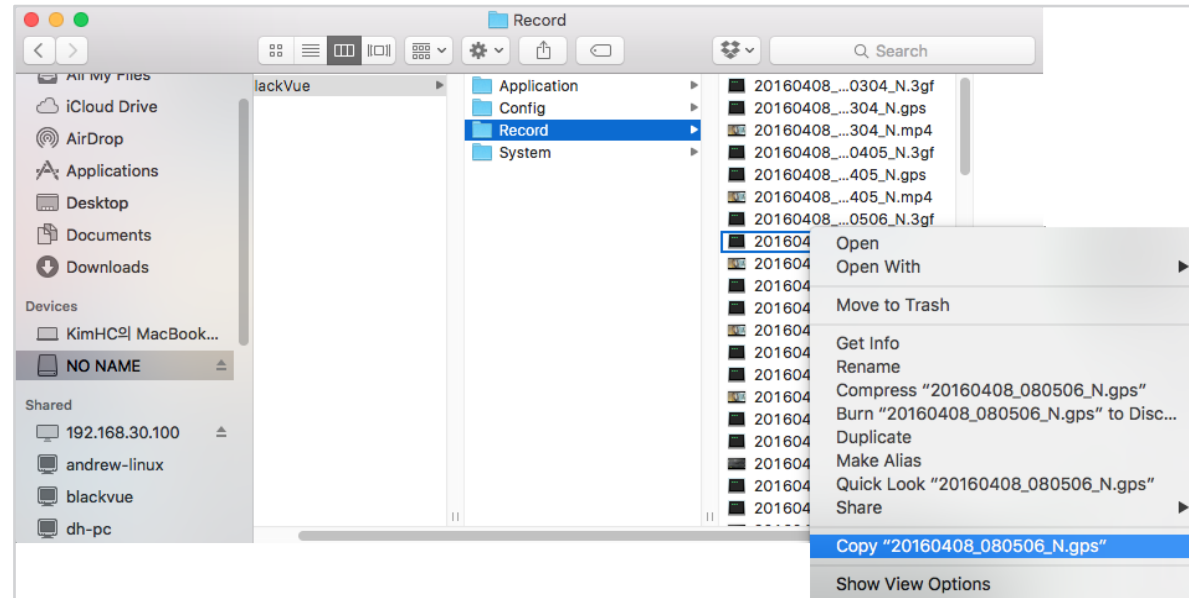
Copying videos

For Windows users

- 1 Click  next to a video in the recorded video list.
- 2 Click **Copy to**.
- 3 Select the folder in which to copy the file and enter the file name.
- 4 Click the **Select folder** button.
 - To copy multiple files at once check the boxes next to the file names and press the **Copy to** button
 - When copying files the segment adjustment and sound off tools are not available.

■ For Mac users

- 1 Go to \BlackVue\Record\.
- 2 Select the video from the recorded video list.
- 3 Click Copy "*file name*".



▶ Formatting the microSD card

Caution

- Back up important video files such as event recording files before formatting the microSD card. If you format the microSD card, all the video files stored in the microSD card will be deleted. Your saved settings will not be affected.

➤ Formatting the card in the BlackVue

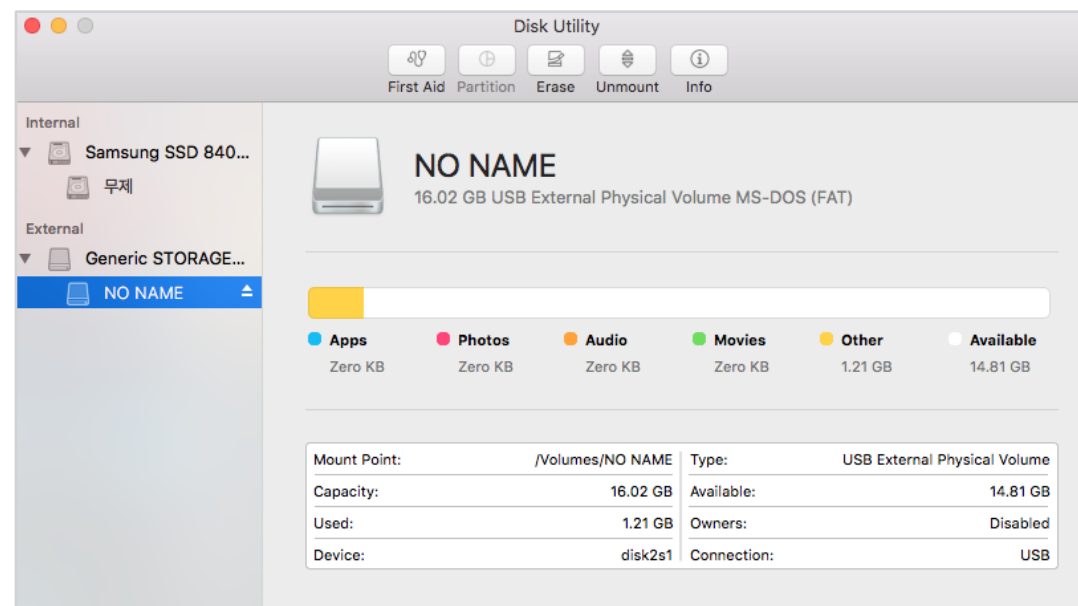
To format the microSD card press the Mic / Format Button for 10 seconds until the dashcam beeps.

➤ Format using BlackVue Viewer (Windows)

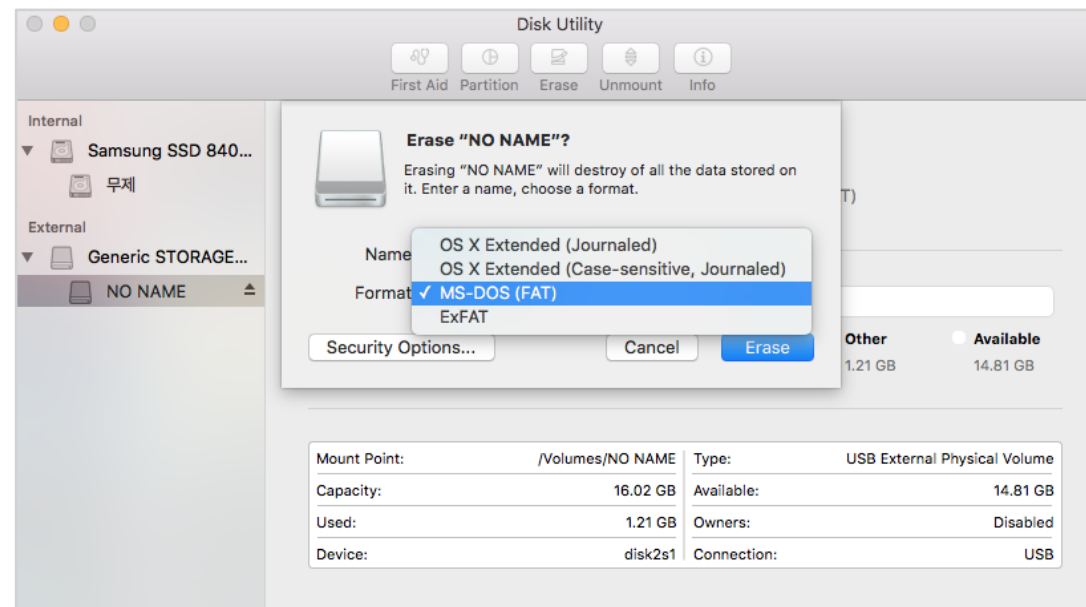
- 1 Insert the microSD card into the microSD card adapter and connect it to your computer.
- 2 Download BlackVue Viewer from www.blackvue.com > **Support** > **Downloads** and install it on your computer.
- 3 Run BlackVue Viewer.
- 4 Click the  **Format** button, select the card drive and click OK.

➤ Format using BlackVue Viewer (macOS)

- 1 Insert the microSD card into the microSD card adapter and connect it to your computer.
- 2 Download BlackVue Viewer from www.blackvue.com > **Support** > **Downloads** and install it on your computer.
- 3 Run BlackVue Viewer.
- 4 Click the  Format button and select the microSD card from the list of drives in the left frame.



5 After selecting your microSD card select the Erase tab in the main window.



6 Select "MS-DOS (FAT)" from the Volume Format drop-down menu and click Erase.

Note

- Formatting the microSD card once a month is recommended.
- Format the microSD card if the recorded video quality appears to be poor.
- Only use official BlackVue microSD cards. Other cards may have compatibility issues. Pittasoft Co., Ltd. will not be held responsible for any problems caused by using another manufacturer's microSD card.

Upgrading the firmware

Regularly upgrade the firmware for performance improvements and updated features. Firmware updates will be made available for download at www.blackvue.com > **Support** > **Downloads**.

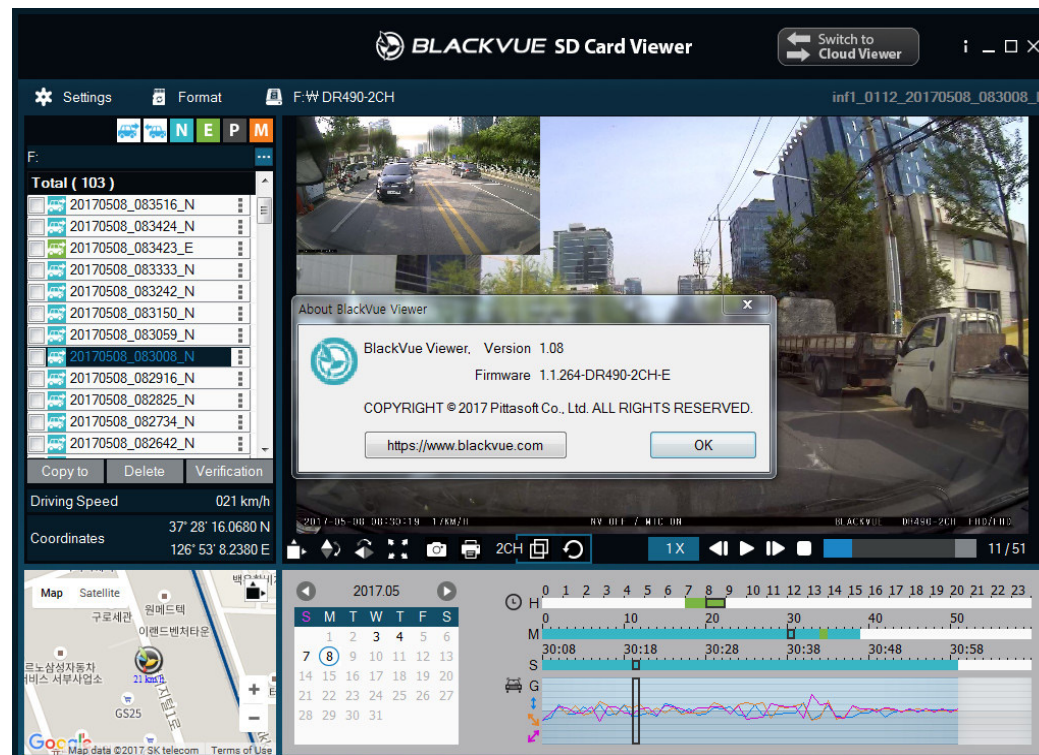
When upgrading the firmware all settings will be reset to their defaults. Once you have upgraded the firmware please reconfigure your settings.

Upgrading the firmware using a computer (Windows or Mac)

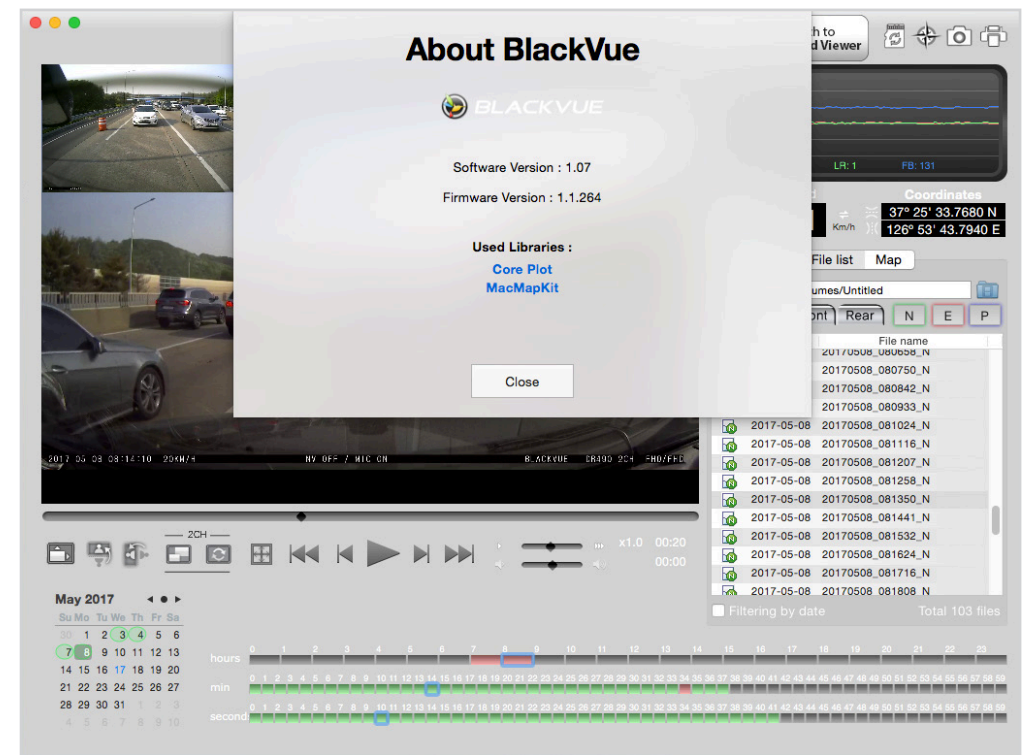
Keep your BlackVue dashcam updated by upgrading the firmware to the latest version. Visit the BlackVue website (www.blackvue.com) to check for any new firmware releases for your BlackVue dashcam model.

- 1 Insert the microSD card into the microSD card reader.
- 2 Connect the microSD card reader to a computer.
- 3 Launch BlackVue Viewer and click on the About  button.
 - For Mac users, click  **BlackVue Viewer** and select About BlackVue from the menu.

- 4 Check the current firmware version of your BlackVue dashcam and proceed only if your version is not the latest one.



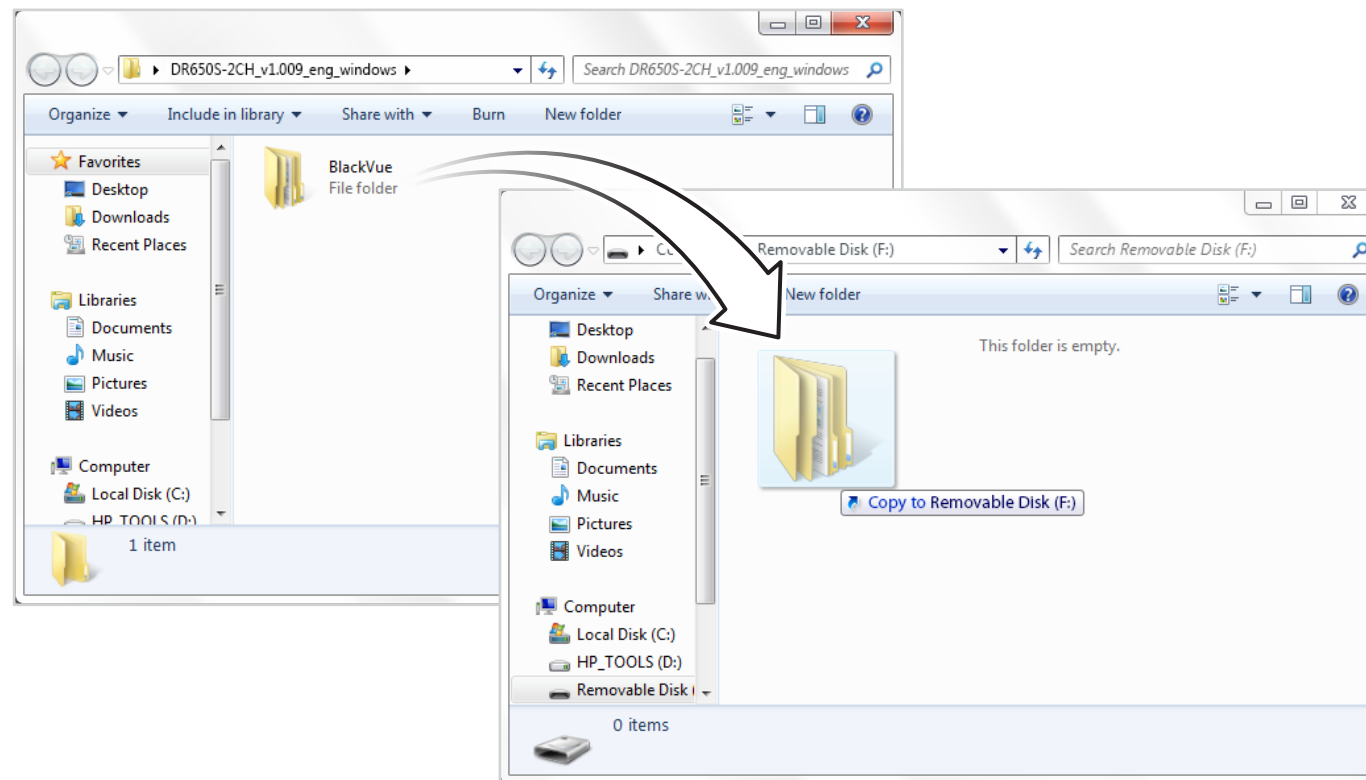
Windows



Mac

- 5 Format the microSD card. See **"Formatting the microSD card"** on page 31.
- 6 Go to the BlackVue website (www.blackvue.com > Support > Download) and download the latest firmware for your BlackVue dashcam model in zip format.

7 Unzip the downloaded file and copy the BlackVue folder to the microSD card.



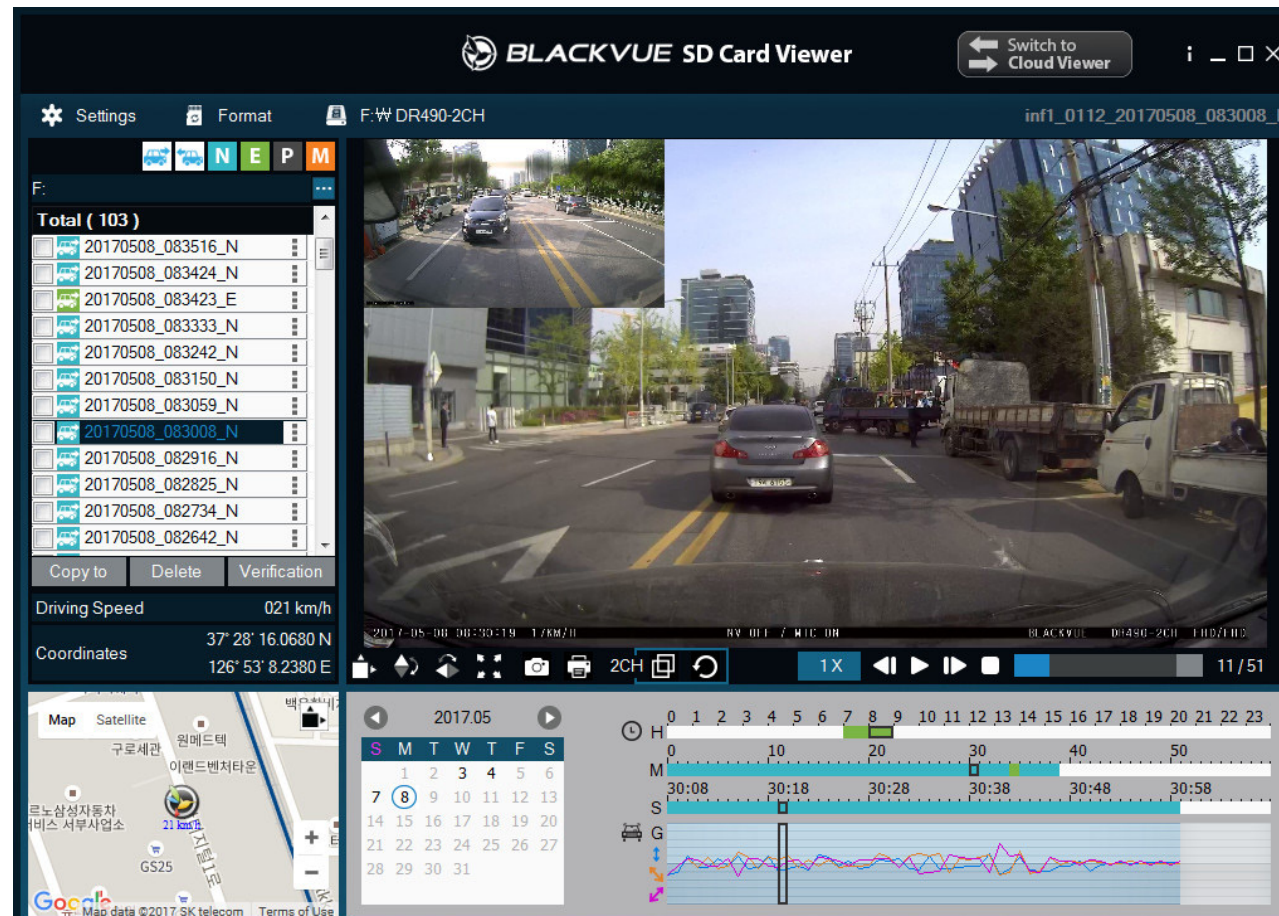
8 Insert the microSD card into the dashcam and connect the power to initiate the firmware upgrade. Make sure the power remains on until the upgrade is completed. Any power interruption may prevent the firmware upgrade from completing, resulting in malfunction.

Note

- Do not insert or remove the microSD card when the dashcam is turned on. Doing so may damage the data and cause a malfunction of the microSD card.
- After a firmware upgrade all settings are reset to the defaults to ensure stable operation. Please reconfigure your personal settings (such as the time etc.).

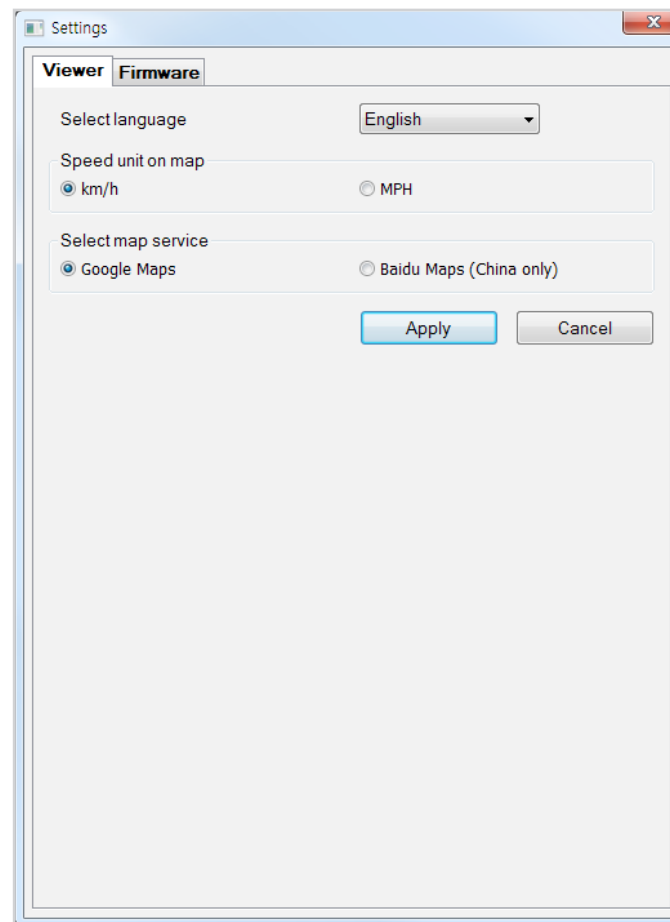
Changing settings

► Changing settings using your computer (Windows/Mac)



Click on the  Settings button (Windows) or the  BlackVue Viewer menu (macOS) to open the BlackVue settings panel. You will be able to change most of the BlackVue settings to customize its operation.

BlackVue Viewer settings



☐ Select language

Select your preferred language for the BlackVue Viewer interface from the dropdown list.

☐ Speed unit on map

Change the speed unit displayed on the map.

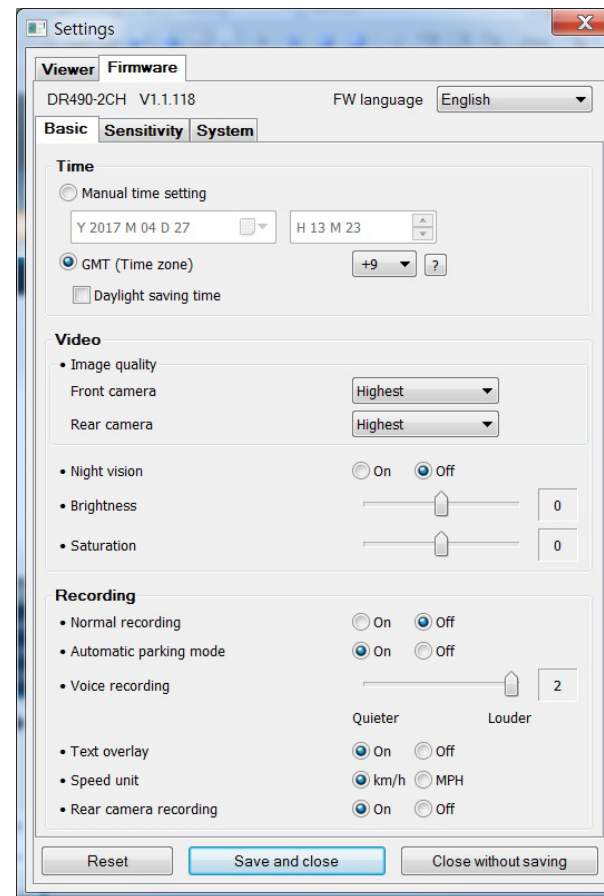
☐ Select map service

Change the mapping service used.

Firmware settings

Select your preferred language for the firmware from the FW language dropdown list. The audio announcements by the dashcam will be in the selected language.

Basic settings



Time

Caution

- Please backup any important recordings before adjusting the time. For optimal performance the dashcam will format the microSD card and delete all recordings stored on the card when you reinsert the microSD card into the dashcam.

If you do not connect the GPS receiver:

To manually set the time select **Manual time setting** and set your date and time.

If you connect the GPS receiver:

If you run the dashcam with the GPS receiver connected, it is possible to sync with GPS time. To sync with GPS time uncheck **Manual time setting** and select your GMT time zone. The factory setting is GMT -11.

Some examples of GMT time offsets are:

- GMT-7: Los Angeles
- GMT-4: New York
- GMT+0: London
- GMT+1: Paris
- GMT+3: Moscow
- GMT+8: Singapore
- GMT+9: Seoul
- GMT+10: Sydney

If you are unsure of your GMT offset please look up your city on <https://greenwichmeantime.com/>

Selecting **Daylight saving time** will advance the clock by one hour.

Video

– Image quality

You can adjust the recording image quality (bit rate). Choose between:

- Highest (Front: 11 Mbit/s, Rear: 11 Mbit/s)
- High (Front: 9 Mbit/s, Rear: 9 Mbit/s)
- Normal (Front: 7 Mbit/s, Rear: 7 Mbit/s)

Increasing the image quality will increase the size of the video files. Loading and copying time will increase accordingly.

– Night vision

Turning on night vision will brighten the image when recording in parking mode in low-light environments. Night vision is only active in parking mode.

- **Brightness**

You can adjust the recording brightness level of the cameras.

- **Saturation**

You can adjust the color saturation level of the cameras.

- **Recording settings**

- **Normal recording**

When turned off the dashcam does not record in normal mode.

- **Automatic parking mode**

If enabled, the dashcam switches from normal mode to parking mode when the vehicle is stationary for 5 minutes.

- **Voice recording (Mic Volume)**

When turned off the dashcam does not record audio.

- **Text overlay**

Turn the text overlay on/off.

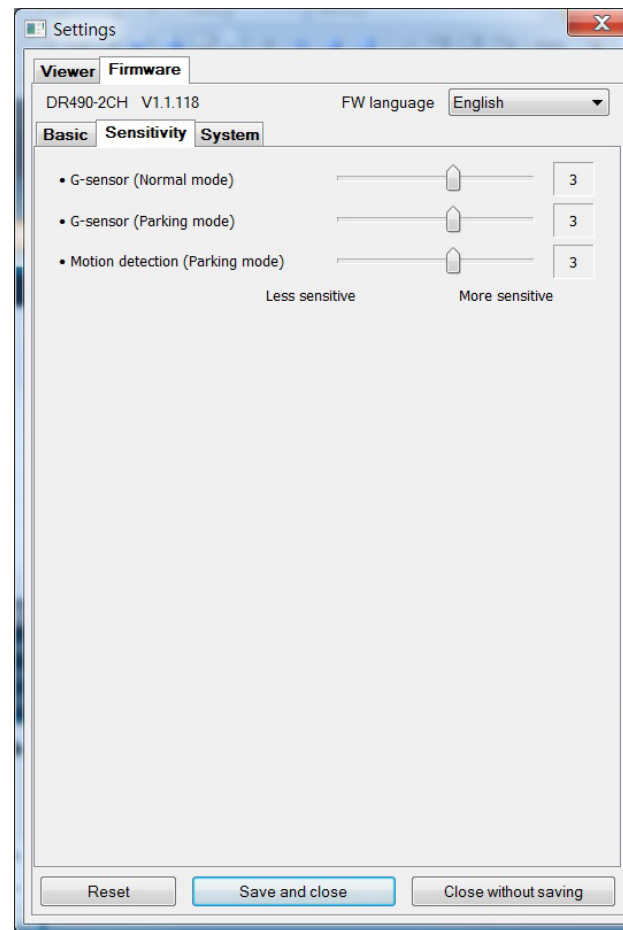
- **Speed unit**

Select km/h or MPH.

- **Rear camera recording**

You can enable or disable rear camera recording.

Sensitivity settings



G-Sensor (Normal mode) / G-Sensor (Parking mode)

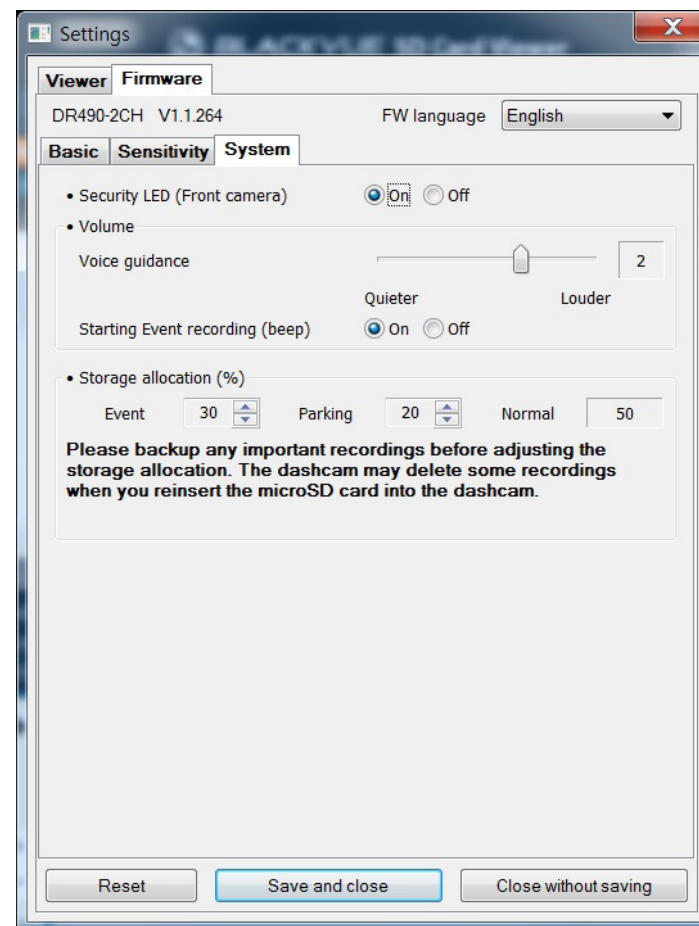
The G-sensor measures the movement of your vehicle. When the G-sensor detects significant or sudden movement (such as an impact or collision) it will trigger an event recording. You can adjust the sensitivity so minor incidents and bumps don't trigger an event recording. To turn off event recordings by impact detection set the G-sensor sensitivity to off.

Motion detection (Parking mode)

In parking mode the dashcam continuously buffers video and saves a parking recording when motion is detected in the dashcam's field of view.

You can adjust the sensitivity of the motion detection so minor motion caused by wind or rain doesn't trigger a recording. Please take into account your vehicle's surroundings when adjusting the sensitivity.

System settings



Security LED (Front camera)

You can turn the front security LED on/off.

Volume

You can adjust the volume of the voice guidance/alarms and turn the event recording beep on/off.

Storage allocation

Please backup any important recordings before adjusting the storage allocation. The dashcam may delete some recordings when you reinsert the microSD card into the dashcam.

You can adjust the percentage of the microSD card storage allocated to Event and Parking mode recordings (10% up to 80%). The remaining space will be allocated to Normal mode recordings.

Applying the settings

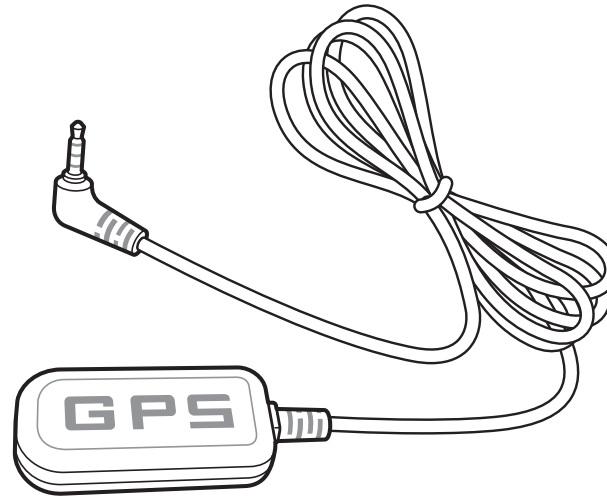
You can automatically apply the configuration by inserting the microSD card into the BlackVue dashcam and turning it on. Configure the settings before using the dashcam.

To reset all settings (except for the time and language settings) to their defaults press the **Reset** button at the bottom of the settings panel.

Optional accessories

➤ GPS receiver (Optional)

If you do not install an external GPS receiver, videos are recorded without GPS coordinates and driving speed information. To include speed, recording location, and the driving route data in the videos, install an external GPS receiver.

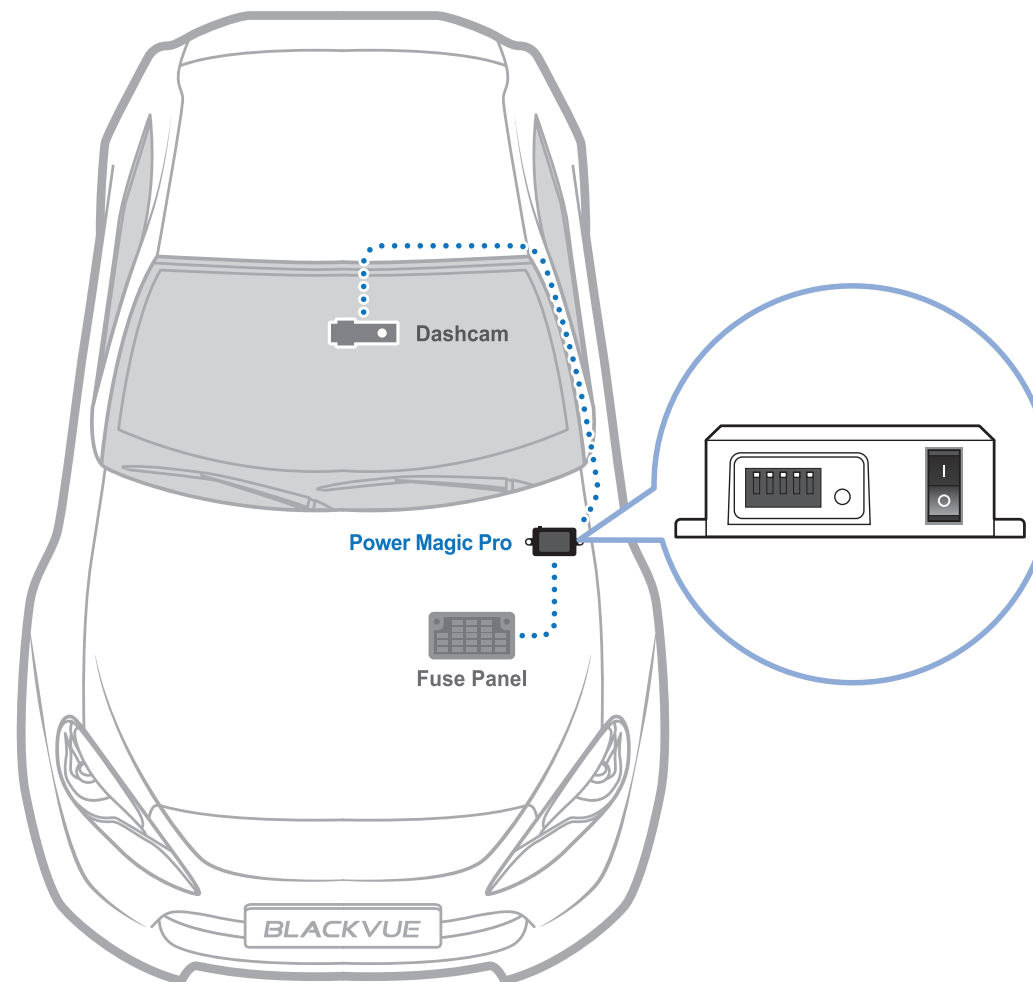


Note

- If you purchased the product without an external GPS receiver, please visit the BlackVue website (www.blackvue.com) for information about purchasing a GPS receiver separately.

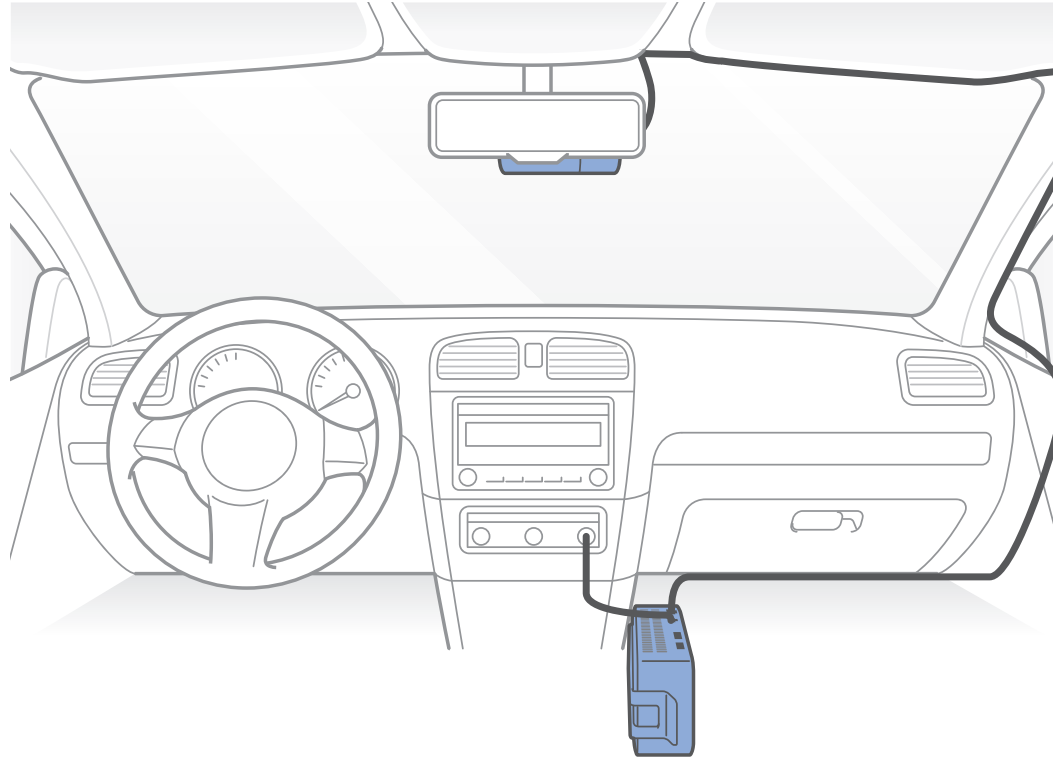
➤ Parking mode hardwiring kit (Optional)

The BlackVue dashcam will turn off when the engine is turned off. To record video while the engine is turned off, a hardwiring kit (such as the Power Magic Pro) is required. The Power Magic Pro powers your dashcam when the engine is off by hardwiring it to the automotive battery. A low voltage power cut-off function and a parking mode timer protect your vehicle's battery from discharge.



➤ **Parking mode battery pack (Optional)**

To record video when the engine is turned off without using the vehicle's battery, you can install a parking mode battery pack. The Power Magic Battery Pack B-112 powers a single dashcam for up to 12 hours after 1 hour of rapid charging. When the engine is off the battery pack powers the dashcam. When the engine is on the dashcam is powered directly from the vehicle's battery and the battery pack charges.



Product specifications

Model Name	DR490-2CH
Color/Size/Weight	Front: Black / Width 111.8 mm x Height 34 mm / 58 g Rear: Black / Width 51.3 mm x Height 29.7 mm x Thickness 29.2 mm / 18 g
Memory	microSD Card (16 GB/32 GB/64 GB/128 GB)
Recording Mode	Normal Recording, Event Recording (Impact Detection), Parking Mode Recording (Motion & Impact Detection) * For parking mode recording, a Parking Mode Battery Pack (Power Magic Battery Pack) or a Parking Mode Hardwiring Kit (Power Magic Pro) is required.
Camera	Front: CMOS Sensor (Approx. 2 M Pixel) Rear: CMOS Sensor (Approx. 2 M Pixel)
Viewing Angle	Front: Diagonal 130°, Horizontal 113°, Vertical 58° Rear: Diagonal 130°, Horizontal 110°, Vertical 62.5°
Resolution/Frame Rate	<Front - Rear> Full HD (1920x1080) @ 30 fps - Full HD (1920x1080) @ 30 fps
Image Quality	Highest/High/Normal
Video Compression Mode	AVI
GPS	External (Optional)
Microphone	Built-in
Speaker (Voice Guidance)	Built-in
LED Indicators	Front: Front Security(WHITE), REC(RED), GPS(BLUE) Rear: Rear Security(BLUE)
Sensor	3-Axis Acceleration Sensor

Backup Battery	Built-in super capacitor
Input Power	DC 12V – 24V (DC Plug:  (Ø3.5 x Ø1.35), MAX 1A/12V)
Power Consumption	Avg. 320 mA (3.84 W at 12 V, when there is no external GPS receiver) Avg. 350 mA (4.20 W at 12 V, when an external GPS receiver is connected) * Actual power consumption may vary depending on use conditions and environment.
Operation Temperature	-20 °C–70 °C (-4 °F–158 °F)
Storage Temperature	-20 °C–80 °C (-4 °F–176 °F)
High Temperature Cut-Off	Approx. 70 °C (158 °F)
Certifications	FCC, CE, RoHS, WEEE
Software	BlackVue Viewer * Windows XP or higher and Mac Yosemite OS X (10.10) or higher
Other Features	Format-Free Technology for Stable Recording

Recording time

Camera	Memory Capacity	Image Quality	Total Recording Time (Normal + Event + Parking)
Front + Rear	16GB	Highest	1 HR 34 MIN
		High	1 HR 54 MIN
		Normal	2 HR 26 MIN
	32GB	Highest	3 HR 10 MIN
		High	3 HR 51 MIN
		Normal	4 HR 57 MIN
	64GB	Highest	6 HR 21 MIN
		High	7 HR 42 MIN
		Normal	9 HR 59 MIN
	128GB	Highest	12 HR 44 MIN
		High	15 HR 34 MIN
		Normal	20 HR 2 MIN

Camera	Image Quality	Bit Rate
Front	Highest	11 Mbit/s
	High	9 Mbit/s
	Normal	7 Mbit/s
Rear	Highest	11 Mbit/s
	High	9 Mbit/s
	Normal	7 Mbit/s

 Note

- If the microSD card is full, the oldest files of the same recording mode type are deleted first to make space for newly-recorded videos. Copy important files, such as event recording files, to other storage media.
- Total recording time is different depending on the memory capacity of the microSD card, image quality and storage allocation settings.
- You can adjust the percentage of the microSD card storage allocated to Event or Parking mode recordings (minimum 10%; maximum 80%). The remaining space will be allocated to Normal mode recordings. See "**Storage allocation**" on page 44 for details.

Disposal and recycling information

Disposal of your BlackVue dashcam



1. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities. Contact local authorities to learn about disposal and recycling options available in your area.
2. The correct disposal of your BlackVue dashcam will help prevent potential negative consequences for the environment and human health.
3. For more detailed information about disposal of your BlackVue dashcam, please contact your city office, waste disposal service or the shop where you purchased the product.

Customer Support

For customer support and firmware updates please visit www.blackvue.com

You can also email a Customer Support expert at cs@pittasoft.com

Before Requesting Service

Please back up all important files and data before requesting service. In order to service the dashcam it may be necessary to delete all files and data from the dashcam. All servicing is provided on the basis that the user has backed up all necessary files and data before requesting service. Therefore Pittasoft Co., Ltd. will not be responsible for the loss of any files or data.

Copyright & Trademark

- This instruction manual is protected by Copyright Law, and all rights to it are protected by law.
- It is prohibited to reproduce, copy, modify, or translate this instruction manual without permission.

 **BLACKVUE** BlackVue is the registered trademark of Pittasoft Co., Ltd. Pittasoft Co., Ltd. reserves all rights regarding all works related to the BlackVue brand such as product design, trademarks, and product-promotional videos. It is prohibited to reproduce, copy, modify, or use related works without permission. Any violation may be penalized in accordance with the relevant regulations.



Product | Car Dashcam

Model Name | DR490-2CH

Manufacturer | Pittasoft Co., Ltd.

Address | 7F, BYC HIGHCITY Building A 131, Gasan Digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea, 08506

Customer Support | cs@pittasoft.com

Product Warranty | One-Year Limited Warranty

 facebook.com/BlackVueOfficial

www.blackvue.com

Made in Korea