

Product warranty

Thank you for purchasing the VG-10Z Dash Cam from ALLUCAM.

The warranty period of the ALLUCAM VG-10Z is one year. The warranty period for the components and consumables, except for the body, is six months. The product quality warranty for this product is based on the content described in this warranty. These products can be serviced for up to a year from the date of the purchase free of cost under this warranty. The purchase record and services period is based on the sales serial number in our company records. Thank you!

Product name (Model name)	VG-10Z	Purchased place	
Address phone number		Purchase date	

Type of customer damage		Warrant content	
		Within the warranty period	After the warranty period
When functional and performance failure occurs during normal use:	When important repair is needed within ten days from the purchase	Product replacement / Refund for the product	Not applicable
	When replacement product needs important repair within ten days	Refund for the product	Not applicable
	When failure occurs more than three times due to the same fault	Gratuitous repair	Payable repair
	When failure occurs more than four times due to the same fault	Product replacement / Refund for the product	Payable repair
	When the businessperson has lost the product of which a repair was requested	Product replacement / Refund for the product	Add 10 percent to the amount which was depreciated from the price and refund
	When the repair is not possible for any other reason	Product replacement / Refund for the product	Not applicable
The consumer is responsible for product failure: 01. When the user has neglected, mistreated or incorrectly used the product. 02. When a separately sold component or product (not designed by our company) causes the product to fail. 03. When a repair or change made by a third party, not a technician from our company, caused the product to malfunction.		Payable repair	Payable repair
- Other cases 01. When product failure occurs because of a natural disaster. 02. When the lifespan of a consumable component has expired.			

- This warranty is in effect only in the country where the product was purchased.





VG-10Z User manual

Product Composition

Check the Purchased Products



If there are any problems, please go to our website or contact the ALLUCAM customer center.
(ALLUCAM customer center: www.allucam.com)

For quality improvement, the basic components and separately sold products provided may change without notice.

[Basic composition]



Product Body



Rear camera



Power cable



Micro SD card and SD card adapter



Allucam film



Manual

[Separately sold goods]



Video out cable



Cigarette Lighter jack cable



SD card reader



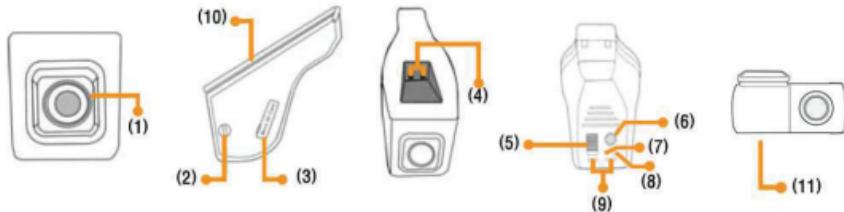
Wire cover

Names of Each Part

Check the names of each part in the VG-10Z units



Refer to the part's corresponding page for further instruction on detailed use.



(1)	Camera	HD 1280*720, 2,000,2000 pixel
(2)	Angle adjustment knob(Knob)	Camera's angle adjustment
(3)	Micro SD card slot	Micro SD card insert
(4)	Security LED	Alternative flickering or off during the parking mode
(5)	Power switch	Power on/off switch
(6)	Mode button	Forcible recording function, voice recording and voice instruction on/off
(7)	Reset	Initialization function
(8)	Microphone	Voice recording
(9)	Status LED	Product's operation status
(10)	Fixing bracket	Holder to fix the body
(11)	Rear Camera	VGA 640X480

Features



High-Resolution Images

High quality lenses and 2,000,000-pixel sensors develop soft and clear images.

HD quality 1280x720 size; takes 30 frames



Exclusive PC Viewer Program Provision

Different configuration settings and image verification is available through the exclusive PC Viewer program.



Low Voltage Automatic Shut-Off

Low voltage automatic shut-off is provided to prevent battery depletion during long periods of parking. There are three voltage options and different time periods that can be selected in the exclusive PC Viewer (operates during parked recording mode).



Once the system's low voltage automatic shut-off function is off, the parked recording mode is disabled.



Automatic Temperature Shut-Off Function

When the surrounding temperature is higher than in the parked car and the Dash Cam's internal temperature rises to a certain temperature, the power automatically shuts off to protect the images and the Dash Cam (operates during parked recording mode).

Before Using the Product

Before Using the Product

Thank you for purchasing the Dash Cam from ALLUCAM.
This device records a vehicle's running image.

Warranty and Responsibility Scope

- This user manual is based on the VG-10Z/VG-10Z model, and contains information about its operation and usage method. Be sure to thoroughly read and get familiar with it before using the Dash Cam.
- This product records images in case of a vehicular accident, but it does not guarantee that ALL images will be recorded. Smaller accidents may not trigger the G-sensor and in such cases, images will not be recorded in a separate file. We are not responsible for any lost images when no backup was made.
- The recorded images of this product are supplementary data to judge the accident and its surroundings. ALLUCAM does not take any responsibility for the profit or loss (monetary, business or any other type of profit/loss) that occur during an accident.
- The micro SD card, the recording medium of this product, needs to be used with caution and requires continuous care. ALLUCAM does not take responsibility for problems that may occur when the user is not adhering to the elements described in this manual.
- ALLUCAM will continuously add and supplement the functions and apply new technology to its products. Any changes for performance improvement, and any changes in the information and size of the user's manual can be made without prior notice.

Certification

Machine name: Vehicle's image recording and storage device (VG-10Z)

Company name: ALLUCAM

Contact number for A/S: 866.700.6196

Made in Korea

FCC certification: Marked in the product label

Symbols Description

 Caution	When the function is not operating properly or when the configuration status has changed.
 Reference	Reference: Supplementary content and explanation for function operation.

Precautions for Product Use

Precautions During Dash Cam Installation

This Dash Cam records images while driving a vehicle using a camera. The recorded image quality may decrease when there are rapid light changes.

- ! It is not recommended to remodel, disassemble, and repair any of the products without professional help. It may lead to a fire, electric shock, or general malfunction. When a repair is needed, consult with ALLUCAM's customer service center or the store where the product was purchased. If a user disassembles and repairs the Dash Cam without any professional help, warranty is voided.
- ! The optimal temperature for best image quality is 32F~120F. Avoid hot and humid places. It may hinder the Dash Cam's operation.
- ! Image recording may be hindered when the car is parked outside during the summer or is exposed to direct sun light because of the high temperatures inside the car.
- ! Please avoid direct sun light when parking.
- ! It is recommended to clean the product with a dry cloth. Do not spray with any cleaning product or use wet tissues; it may cause discoloration or damage.
- ! We do not recommend handling the product while driving; it may lead to an accident. Park the car in a safe place and use the product as recommended.
- ! Install the Dash Cam when your attention and eyesight is not being interfered or disrupted by driving. If not, it may lead to an accident.
- ! Any foreign substance or arbitrary shock may damage or cause product failure.
- ! The image quality may be hindered if the vehicle's front glass is tinted too dark. If the user remodels or cuts the power cable, ALLUCAM does not take responsibility for any product damage or any vehicular damage caused by those actions.
- ! Check the product frequently to make sure it is safely installed. Vibrations or other product damages may cause the product to detach from its place.
- ! ALLUCAM does not take responsibility for any product damages, product failures or injuries that may occur during driving or that occur because of user negligence.
- ! Although there is a low voltage automatic shut-off function while the car is parked (especially during long term parking), the product may still consume and deplete the vehicle's battery.

Precautions During Micro SD Use

- ! It is recommended to use the micro SD card provided by ALLUCAM. We are not responsible for any data loss or product damages that a different micro SD card might cause.
- ! The warranty period for the provided micro SD card is 6 months. It is recommended to replace the micro SD card every 6 months.
- ! It is recommended to periodically check the stored data in the micro SD card to ensure that the product is operating properly.
- ! Insert and separate the micro SD card only when power is off for safe use (detach the micro SD card after checking that all of product's LED is off).
- ! Removing or reading the micro SD card while storing the data in the micro SD card can damage or delete data in micro SD card.
- ! It is recommended to format the micro SD card every two weeks.

Precautions for Product Use



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible party

Address : 5940 E. Slauson Ave. Commerce, CA 90040

Phone : 866.700.6196

Name : Jone E. Kim

User's Caution Statement

Caution: Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

FCC Compliance Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Note

This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

How to Install the Dash Cam

How to Install the Dash Cam in a Vehicle

It is recommended to install the product at a professional shop.

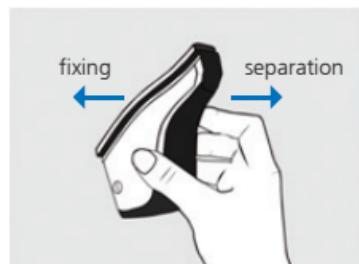
01. Insert the micro SD card in the Dash Cam. 02. Separate the fixing bracket from the body.

- Check if the power is off before inserting the micro SD card.

To remove the micro SD card, power the unit down. Be careful when removing the micro SD card; the micro SD card may pop out suddenly.



- The fixing bracket comes attached to the body. To separate the bracket and body, hold the fixing bracket and push the body to the right.



03. Attach the Dash Cam film where you want.

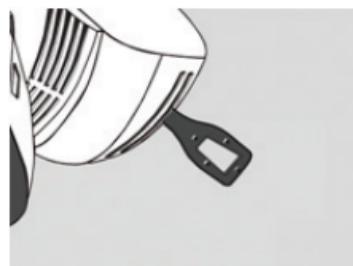
It is recommended to attach it to the middle of the front windshield.

Attach the Dash Cam film in the desired place after removing the top film on the double sided tape on the unit.

Exception: When the Dash Cam film is difficult to attach to the vehicle, install the fixing bracket by using the double-sided tape only.

- Attach the Dash Cam film provided on the vehicle's front windshield.

- Refer to the following page on how to attach in detail.



How to Install the Dash Cam

Reference: How to attach the Dash Cam film

[Preparation]

-  Materials needed: a cup, water, detergent and plastic card.

Fill the cup half way with water. Add two drops of detergent in the cup and let it dissolve.



[how to attach]

-  Clean the glass area prior to attaching the product. Wet the part where you want to attach the product with the water containing the detergent.



-  Detach the Dash Cam film from the reusable paper and dip the film in the cup with detergent water.



-  Check if the film has been attached to the desired (middle) location.



-  After attaching the Dash Cam film, use a plastic card to securely stick the film on the windshield.



-  Use a dry cloth to remove excess water and moisture.



How to Install the Dash Cam

How to Install the Dash Cam in a Vehicle (Continued)

04. Fix the Dash Cam body on the front windshield or on the Dash Cam film fixed bracket.

 Adjust the Dash Cam body's groove and the fixing bracket's groove. Insert the Dash Cam body by pushing it towards the left of the fixing bracket until you hear a short clicking sound.



05. Connect the power cable with the Dash Cam.

 It is recommended to install the power cable at a professional shop. Low voltage automatic shut-off function is provided for the recording function use.

How to connect the power when parking recording is not in use:

The DC 12 V comes out of the ACC+ line socket when you start the key.

ACC: Do the task safely using the electrical tape on the red wire.

GND: Connect the black wiring to the vehicle.



Reference: How to Connect the Power During Park Recording Mode (Common Power)

It is recommended to do any hardwire installation through a professional shop.

01. How to connect the power

1-1, B+ : The 12 V socket is checked when the power of the car is turned on or off (interior light)

----- Connect to the yellow wire of the product.

1-2, ACC : 12V socket is checked at the 1st and 2nd gear when the car is turned on.

----- Connect to the red wire of the product.

1-3, GND : 1-3. Ground connecting of the vehicle.

----- Connect to the black wire of the product.

02. The low voltage automatic shut-off function is automatically set to 12.2 V.

If the voltage of the battery falls down under DC 12.2V in the park recording mode, the power automatically shuts off and the recording stops. The setting voltage and the recording time can be adjusted in the configuration settings in the exclusive PC Viewer.

How to Install the Dash Cam

How to Install the Dash Cam in a Vehicle (Continued)

06. Fix the power cable using the cable holder.

Put the cables in order of use and use the wire cover when needed.



Cable holder(separately sold)



wire cover(separately sold)

07. Start the car and turn on the Dash Cam power button.

A voice instruction and a starting sound come out when the power button is turned on. "Hello Customer! Safe drive today. You are in the drive recording mode."



ON



OFF

08. Verify the image and adjust the angles in the Dash Cam camera lens.

Type of the vehicle	MPV	SUV	SEDAN	SPORTS CAR
Angle of the car	50°	55°	60°	70°
When Dash Cam is released	60°			
Dash Cam's adjust angle (Maximum)	5° toward the right		Base 60°	15° to the left
Recommended angle	5° toward the right		Base 60°	10° to the left



The recommended angle of the above is based on a mean angle. Device readjustment may be needed after checking the connection to the device.

09. Set the time in the exclusive PC Viewer.

How to Install the Dash Cam

Reference: How to Connect the Dash Cam and the AV Product

01. Connect the Dash Cam power connector and the power cable.

You can check real-time images of the Dash Cam through navigation or AV Out products.

You can view recorded and stored images in the Dash Cam through the exclusive PC Viewer.

Not all navigation systems are compatible with the AV in cables provided. Check if the AV in cable is correct for your navigation.

Reference: How to attach and detach the Dash Cam's body to the fixing bracket.

01. Adjust the Dash Cam's body groove and the fixing bracket's groove by pushing it to the left until you hear a clicking sound.

02. To remove the body from the fixing bracket push the body to the right.



fixing



separation

Micro SD card format

How to Format the Micro SD Card in the PC

Back up important data before formatting. It is recommended to format the micro SD card twice a month and replace the card every 6 months.

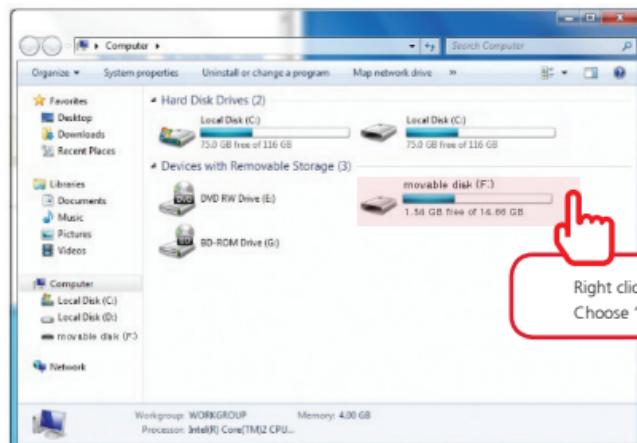
If you remove the micro SD card from the PC while formatting, it may delete or damage data.



After separating the micro SD card from the Dash Cam connect the micro SD card to the PC.

Right click and select format.

Press start; a warning window appears; click OK to start formatting; if you do not want to format the micro SD card click CANCEL.



Micro SD Card Format

How to Format the Micro SD Card Using the Mode Button

It is recommended to periodically format the micro SD card to maximize its usage and lifespan. Make sure to backup important recorded images using a PC or any other method.

[How to employ]

01. To turn power OFF the Dash Cam's body, push the power switch up. Push down the power switch to turn it ON using the mode button.
02. Keep pressing the mode button until the voice instruction says, "SD card will be formatted." Format function will then commence.
03. After format is completed, the mode changes to operating record mode. (Voice recording and voice instruction do not change.)



It is recommended to:

- Format the micro SD card once per two week.
- Replace the micro SD card every 6 months.
- Format the micro SD card if there is any disconnection in the recorded image.
- Backup important data in another storing media; any important data loss while using the product cannot be recovered.

Mode Button Function

How to Use the Mode Button Function

You can use the mode button to control various functions in the Dash Cam.

01. Manual recording

Briefly press the mode button.

Data will be recorded and stored from 10 seconds before pressing the mode button to 10 seconds after: totaling 20 seconds of data.

02. Voice recording (Record conversation or other sounds during driving)

On/Off: Press the mode button for about 3 seconds until there is a sound effect.

Voice recording starts: Voice instruction: "The voice recording starts."

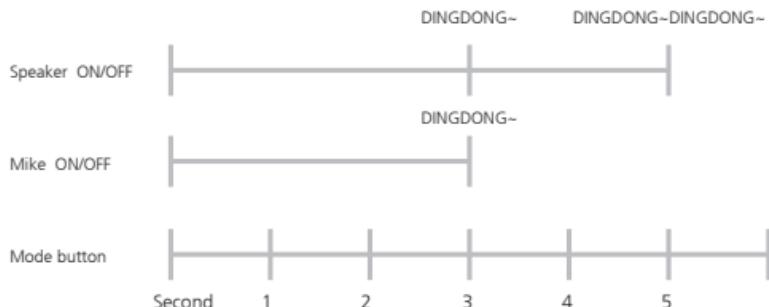
Voice recording terminates: Voice instruction: "The voice recording is ending."

03. Voice instruction (Guiding the Dash Cam's operation status using a voice.)

On/off: Press the mode button for about 5 seconds until there is a sound effect.

[Functions of the mode button]

Time(second)	How to manipulate	Function
1	Press once shortly	Manual recording starts
3	Press for 5 seconds and wait for the sound	Voice recording on/off
5	Press for 5 seconds and wait for the sound	Voice recording on/off



Specific LED Operations

Specific LED operation

	Manipulating method	Item	Operating status	Operating LED		Inspection LED
				Red LED	Green LED	
Power	Switch on	Booting	Normal booting	Turns off after green and red LED light up		
			Micro SD card is not recognized	Red LED flickers (at 0.5 second intervals)		
			Camera is not recognized		Green LED flickers (at 0.5 second intervals)	
		Operating mode (Driving mode)	Operation recording	Red LED off	Green LED lights up	White 1 and 2 LED flickers alternatively (at 1 second intervals)
			Event recording	Red LED flickers (at 0.5 second intervals)	Green LED lights up	
		Park recording mode (ACC off)	Recording motion and shock detection	LED operation turns off when entering parking mode. Only inspection purpose white LED operates.		White 1 and 2 LED flickers alternatively (at 0.3 second intervals)
			Recording standby			
		GPS	GPS reception		Green LED flickers	White 1 and 2 LED flickers alternatively
			No GPS reception			
			GPS connection lost			
Mode	Quick press	Operation mode (Driving mode)	Forcible recording	Red LED flickers (at 0.5 second intervals)	Green LED flickers	White 1 and 2 LED off
	For more than 3 seconds	Voice recording	Microphone on			
			Microphone off			
	For more than 5 seconds	Voice instruction	Voice on			
			Voice off			
	Mode button pressed and turn power switch on	Format	Format commences	Red LED flickers (at 0.5 second intervals)		
			Format completed	Normal operation after format is completed		
	Insert the micro SD card in firmware storage and turn power switch on	Firmware	Firmware commences	Red LED flickers (at 0.5 second intervals)		
			Firmware completed	Automatic booting after upgrade is completed		

Recording Function

Automatic Deletion and Recording Function

Continuous image storage is supplied during driving through automatic deletion. When the storage space on the micro SD card is limited, the oldest images are deleted in chronological order.

Recording Function While Driving

Recording starts when the Dash Cam's power is on and the voice instruction prompts start.

Parked Recording Function

The VG-10Z records during parking when it's connected to the common power; 20fps is stored during this time. 10 seconds after the car stops, the mode changes into the parking mode. Recording starts again when a shock or any movement is detected. The low voltage automatic shut-off function and the automatic temperature shut-off function operate only in the parked recording mode. The configured voltage and the operation time can be adjusted in the configuration menu found in the exclusive PC Viewer

Event Recording Function

If the Dash Cam detects any shock over the intensity level set by the G-sensor, the event is recorded 10 seconds before the shock and 10 seconds after the shock for a total of 20 seconds.

The sensitivity level, in which the Dash Cam detects the shock, can be adjusted in the configuration of the Dash Cam's exclusive PC Viewer program.

Manual Recording Function

When a manual recording is needed, briefly press on the manual recording button. The event is then recorded 10 seconds before the button is pressed and 10 seconds after for a total of 20 seconds.

The product automatically returns to the operation record mode 10 seconds after the manual recording button is pressed.

Recording Function

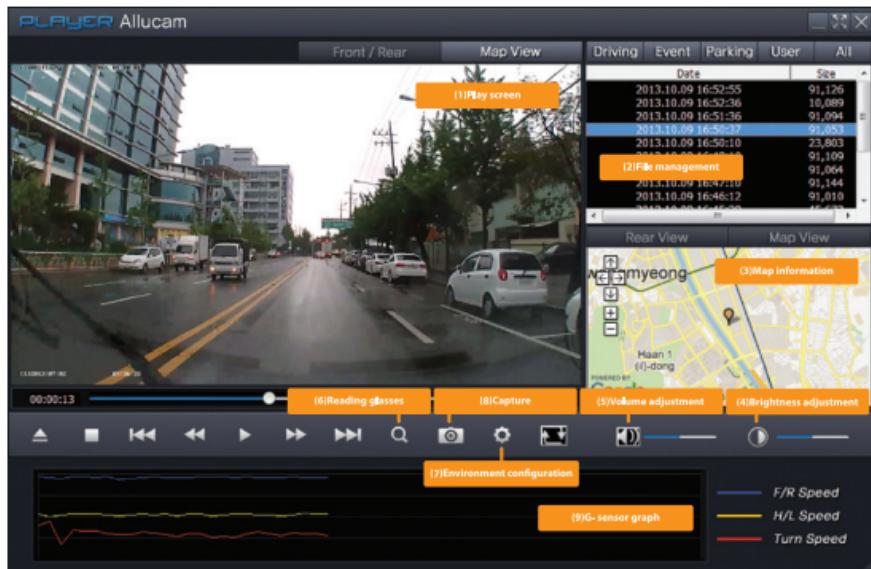
The files recorded by the Dash Cam can be checked in common video players; there is no need to convert the files.



Connect the micro SD card to the PC; select the movable drive; check the recorded images.

File name	Meaning
Driving	Contains images recorded while driving.
Event	Contains images recorded during an event while driving or parking.
User	Contains images recorded passively (manual recording).
Parking	Contains images recorded when movement is detected while parked.

DRIVING	2013-05-20 PM 4:25	File folder
EVENT	2013-05-20 PM 4:25	File folder
PARKING	2013-05-20 PM 4:26	File folder
SETTING	2013-05-20 PM 4:26	File folder
USER	2013-05-20 PM 4:26	File folder



Press 'open' and select the drive.

The drive was created when the micro SD card is inserted in the PC (the name of the drive may differ depending on the PC.)

From the four recording modes, select the desired mode and select the file on the list.

Double click or press play to view the video.

Map view can be printed only when there is Internet connection as well as an external GPS installed and connected to the product.

The rear and front-forward recorded image can only be seen when a rear camera is installed.
The VG-10Z is not provide the external GPS and rear camera functions.

The front and rear image size can be changed. Type of screen can also be chosen by selecting the Front+Map or Rear+Map .

3-1. ALLUCAM's Software

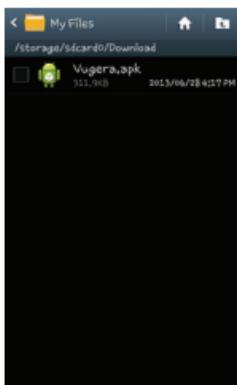
Android Viewer

Wireless LAN function is optional

How to install

Android version 2.3 or higher is needed to operate the smart phone viewer program.

To install, go to ALLUCAM's homepage and download the installation file.



Main Function

Watching Real-Time

To verify the product's operation status or installation, transmit the real-time image using wireless LAN.

Watching the recorded image

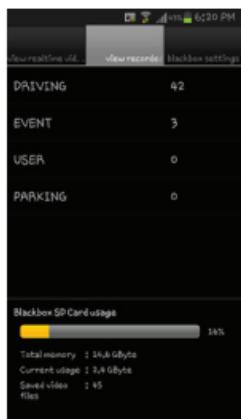
Transmit the images stored in the micro SD card to your smart phone using wireless LAN.

Configuration

Change the configuration settings to your preference and create a user password.



1. Real time watching



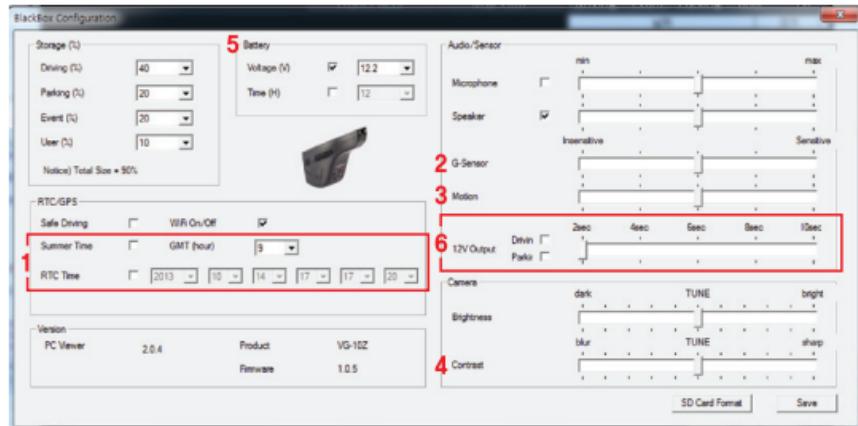
2. Watching the recorded image



3. Configuration

Product's Configuration

To change configuration settings, press the Settings button    in the Dash Cam's exclusive PC Viewer.



1. Time configuration:

Set the time and date in the configuration menu. When the GPS is not connected, the date and time might not be accurate. Be sure to set the time periodically. Set a regional time zone and daylight saving (if it applies).

2. G-sensor sensitivity:

There are 5 G-sensor sensitivity phases; adjust the vehicle's shock sensitiveness to your preference.

3. Motion sensitivity:

There are 5 motion sensitivity phases; depending on the image change during parked recording mode, adjust the recording sensitivity.

4. Image screen quality:

Configure the light, shade, and visibility settings depending on the vehicle's window tint and preference.

5. Low voltage setting:

To prevent depleting the vehicle's battery during parking recording mode, set the blocking voltage and operation time.

6. Output signal function in case of emergency:

Set an output signal to an external device as caution for an event occurrence.

! The output signal function in case of an emergency does not work in some cars. Consult a professional shop prior to installation.

! Do not use excessive output current when connecting to an external device.



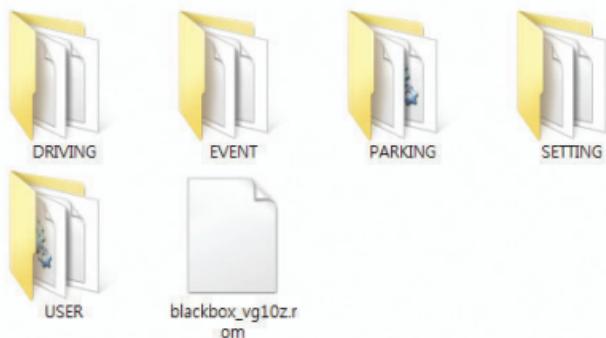
4-1. Miscellaneous

F/W upgrade

'F/W upgrade' means upgrading the conventional product by downloading the new firmware. To ensure maximum performance of the product, it is recommended to upgrade the firmware when available.

Do not turn off the product until the firmware is fully installed and the system has restarted.

01. Install the latest firmware available (according to your product model) on your PC. You can download the latest VG-10Z/VG-10Z program at www.allucam.com.
02. Connect the micro SD card to the PC and format the card.
03. Store the downloaded firmware in the formatted SD card and remove the SD card.
04. Insert the SD card to the Dash Cam.
05. Turn on the Dash Cam; upgrade will start automatically.
06. Voice instruction will say, "The system will start," once download is completed.



Product Specification and Size

Product	VG-10Z front	VG-10Z rear
Camera	Apptina 2.0M	Pixel plus 0.3M
Resolution	HD 1280X720 / 30fps	VGA 640X480 / 30fps
Compact method	H.264 / PCM	
Recording	Drive recording, event recording, park recording, and manual recording	
Low voltage blocking function	O	
Wi-Fi	802.11b/g/n wireless LAN, Android smart phone viewer is supported	
Audio	Cast-in microphone /Codec: PCM	
Angle of view	Diagonal:120/Horizontal: 90/ Vertical: 6	Diagonal: 120/Horizontal: 90/ Vertical: 64.8
Memory	16GB (Up to 32GB is supported)	
Video output	Composite (NTSC)	
Size/weight	56.00mm X 96.95mm / 92g	60.00mm X 30.00mm / 25g
Power	12V ~ 24V DC	12V ~ 3.3V DC
Consuming power	Max 4.5 W	
Operating temperature	-20 C ~ 60 C	

- Use of this product is recommended for 12V