

SAFETY INSTRUCTIONS

Precautions for installation

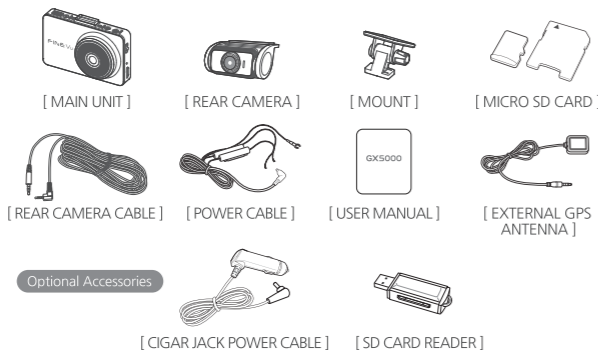
- Place the external GPS about 20cm (8 inches) or more away from the device.
- If the distance between the product and the installed DMB antenna or GPS receiver is close, it may cause the reception rate to deteriorate. Place the device 20cm (8 inches) away from DMB antenna and GPS receiver.
- Select an installation location more than 20cm away from other electronic devices like a navigation device.
- Do not install the device at the location where it obstructs the driver's view.
- Ensure the power cable plug is tightly inserted into the right power inlet on the device.
- Ensure the device is firmly installed and fixed.
- Make sure the power cable is connected to the cigarette lighter socket or a proper terminal in the fuse box.

Precautions for use

- Finedigital is not responsible for any accident caused by user inattention, product damage or injuries during the operation.
- Avoid using the device under extreme conditions such as direct sunlight, high temperature and/or high humidity. It may cause damage to the device.
- Even if the product supports the low voltage cutoff function, there is a risk of discharge when the vehicle is parked for a long time.
- Do not use damaged, modified, or unauthorized parts and accessories.
- Use the device within the rated voltage range.
- Do not operate the device while driving.
- Avoid placing the device near flammable and explosive liquids or gases. This may cause explosion or fire.
- Avoid putting metal, flammable or wet objects into the memory card slot or the connectors on the device. This may cause electric shock or fire.
- Do not operate the device with wet hands. It can cause electric shock.
- Do not leave the device or its accessories within reach of children.
- Do not cover the device with a cloth or a blanket while in use. Continuous heating may cause fire or device failure.

- For user's safety and to avoid property damages, read through this manual and follow the instructions correctly.
- Finedigital is NOT responsible for any problems and/or damages that may occur from the failure to observe the instructions.

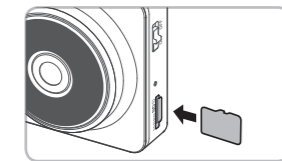
IN THE PACKAGE



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

Installing Micro SD Card and External GPS Antenna

Insert the MicroSD card into the slot and push it until it locks into the place.



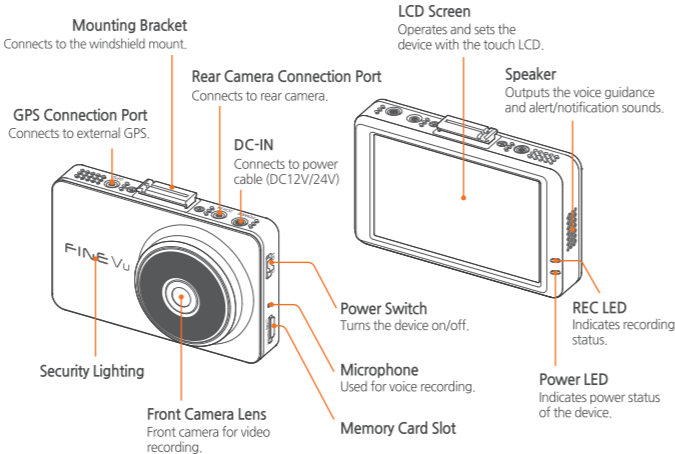
Install the External GPS Antenna on the upper left or right corner of the windshield.



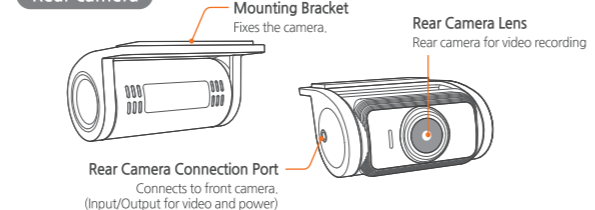
- It is strongly recommended to use FineVu memory card in order to minimize memory card error.
- Do not apply excessive force on the MicroSD card or attempt to insert it in the wrong direction as it may cause damage to the MicroSD card and the card slot.
- To prevent loss of important data, please frequently copy recorded videos from a MicroSD card to another storage device such as a personal computer for backup.

PRODUCT OVERVIEW

Main Unit(Front Camera)

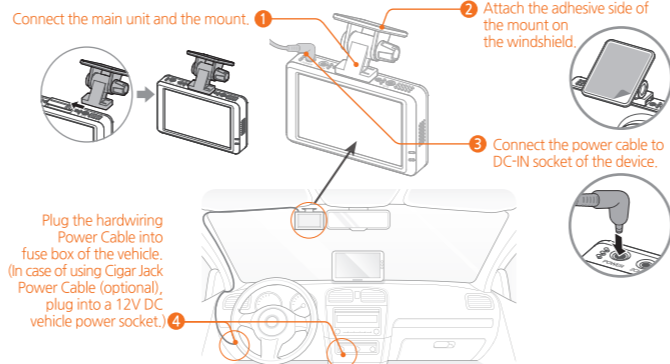


Rear camera

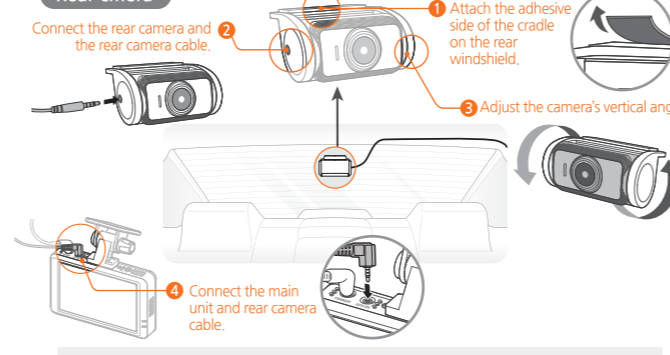


INSTALLATION

Front Camera



Rear camera



- Please install the device away from the heat rays of the vehicle.

KEY FEATURES

- STARVIS**: With SONY Exmor R STARVIS™ image sensor, it provides a more bright and clean image resolution than with ordinary CMOS sensors day and night. And, Auto Night Vision helps to show much clearer image quality in dark alleys and underground parking lots.
- Record High Resolution Video**: Record both the front and rear view in FULL HD (1920x1080p@30fps) through a high performance camera sensor and lens.
- High Resolution IPS LCD**: With 2.5 times more pixels than the general TN panel LCD, IPS LCD offers clear images and wide viewing angle. The resolution is 800 x 480, providing a clearer screen than the existing (480x320).
- Auto Night Vision**: Minimize deterioration of image quality and record a bright image at a place of low illumination or during night driving and parking.
- Power Saving Parking Mode**: With FineVu's unique low-power technology, it safely records even while parked for a long time. When set as the low power mode, there are restrictions on the use of some services, such as AI Damage Detection 2.0.
- Smart Time Lapse 1.0**: This is an intermittent recording mode in which the camera takes photos of motion at a consistent interval and reproduces them at normal speed. It enables you to check recorded videos quickly by setting time lapses in driving and parking mode. Record video in standard 30fps when an event occurs in driving and parking mode.
- AI Damage Detection 2.0**: It is an advanced AI algorithm for damage detection which provides shock alarm by subdividing the strength and part of the actual vehicle impact, excluding everyday impacts such as car door opening and closing impact, trunk opening and closing impact, and etc.
- HDR**: Clearly record video with FineVu's tuning technology under various illumination changes - backlight, night driving, entrance/exit of tunnels, parking lots and, etc.
- ADAS**: The ADAS (Advanced Driver Assistance System) supports functions like the front vehicle motion alert (FVMA) and lane departure warning system (LDWS) (It operates when GPS signals are received).
- Speed Camera Alert**: Provide voice guidance on seven types of traffic enforcement camera such as speed camera, red light camera and traffic sensor camera. *This feature may not be supported depending on the country.

- Even when LCD turns off for safe driving (set screen timeout time to 1 minute), if shock alarm, ADAS notification, and speed camera alert notification occur, the LCD turns on temporarily to inform the situation.

WARRANTY

Limited Warranty

This device is guaranteed against manufacturing defects for one(1) year(six(6) months for battery and accessories) from the original date of purchase. Finedigital's sole obligation in the event of such defects during this period is to repair or replace the defective part or device with a comparable part or device at Finedigital's sole discretion. Except for such replacement, the sale, or other handling of this device is without warranty, condition or other liability even though the defect or loss is caused by negligence or other fault. Damage resulting from use, accident, or normal wear and tear is not covered by this or any warranty. Finedigital assumes no liability for any accident, injury, death, loss or other claim related to or resulting from the use of this device. In no event shall Finedigital be liable for incidental or consequential damages relating to or resulting from the use of this device or any of its parts. Finedigital is not liable for the costs of installing and removing the device and its accessories regardless of the warranty period.

FCC Compliance Statement

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

FINE DIGITAL



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SPECIFICATIONS

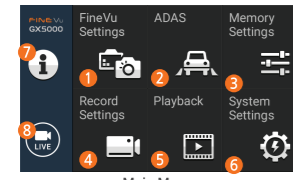
ITEM	SPEC.	REMARKS
Model Name	FineVu GX5000	
Dimension / Weight	Front : 98.5 x 64.8 x 31.04mm / 107.5g Rear : 53.4 x 30.3 x 41.5mm / 26.5g	Excluding cables and mounting bracket
Memory Capacity	Micro SD Card (32GB / 64GB / 128GB)	Class 10 or above recommended / SDXC compatible
Driving recording		1 min. Interval recording
Driving event (impact) recording		20 sec. recording (10 seconds before and after detection)
Manual recording		20 sec. recording (10 seconds before and after detection)
Parking (impact & motion detection) recording		20 sec. recording (10 seconds before and after detection)
Driving time lapse recording		30fps recording after impact detected
Parking time lapse recording		30fps recording after impact detected
Lens	Front : Full HD wide-angle lens Rear : Full HD wide-angle lens	
Image Sensor	Front : 2.13M pixels, 1/8" SONY Exmor R STARVIS Image Sensor Rear : 2M pixels, 1/3" CMOS Image Sensor	
Viewing Angle	Front: more than 145° of the opposite angle / 115° of the horizontal angle / 62° of the vertical angle Rear : more than 134° of the opposite angle / 105° of the horizontal angle / 80° of the vertical angle	
Video	Front : 1920X1080p@30fps Rear : 1920X1080p@30fps	
Encoding	Voice : PCM	.avi(2Video-1Audio)
Display	3.5" IPS LCD (800 x 480) with Touch	
Microphone	Built-in	
Speaker	Built-in	
Acceleration sensor	3-axis acceleration sensor	+2g / -2g
Input power	DC 12V - 24V	
Battery	Super capacitor	Supply power to safely store video recording in case of external power shutdown
Power consumption	4.1W	Based on 2ch, LCD Off, GPS Off
Operation / Storage temperature	Operation temperature -10℃ ~ 60℃ / Storage temperature -20℃ ~ 70℃	
Interface	Power port (3.5Φ), Rear Camera Connection Port (2.5Φ), External GPS Port (2.5Φ)	Vehicle speed, ADAS and Speed Camera Alert operate under GPS reception

SCREEN LAYOUT

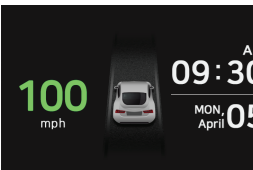
Live view and Menu screens



Live View



Main Menu



Speed Camera & Safety Screen



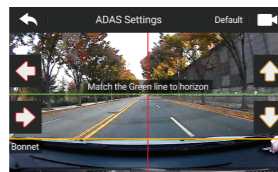
AI Damage Detection 2.0

1 FineVu settings	Aspect Ratio(Standard/Front Zoom/Rear Zoom/Full Zoom), Rear Camera Display(Standard/Flip Horizontal), HDR(ON/OFF), Installation Angle Guide, Speed Unit(km/h / mph).
2 ADAS	Lane Departure Warning System, Front Vehicle Motion Alert, Speed Camera, ADAS Speaker, ADAS Settings.
3 Memory Settings	Memory Partition Information, Memory Partition(Drive Priority/Event/Parking), Memory Format.
4 Recording Settings	Driving Recording Method(Standard/Smart Time Lapse), Parking Recording Method(Motion/Smart Time Lapse/Power Saving), Sensitivity Settings(Driving Event/Parking Event/Front Camera Parking Motion/Rear Camera Parking Motion), Low Voltage Settings, Cut-off Time Settings.
5 Playback	Playback the recorded video of each recording mode.
6 System Settings	LCD(OFF/Screen saver/Always ON), LCD Brightness(Auto/Dark/Mid/Bright), Show Menus(OFF/ON), Front Camera Security LED(OFF/ON), Date and Time Setting, Menu Lock(OFF/ON)
7 Setting information	Display the current setting values.
8 Live view	Display live view.
9 AI Damage Detection 2.0	Display AI Damage Detection 2.0

- When you change dashcam settings, the memory card may be reset. In that case, a popup shows up on the screen. Please read it carefully.
- Vehicle speed, ADAS, Speed Camera Alert operate under GPS reception.
- Do not operate the device while driving.
- When using Menu settings, the recording will be disabled.
- Front Vehicle Motion Alert will be notified in 3 seconds after the departure of front vehicle.
- When using the vehicle's ISG(Idle Stop & Go) function, it is recommended to change the Low Voltage Setting of the black box to hybrid.

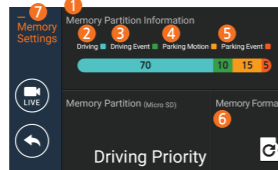
ADAS Settings

- Before using ADAS features, settings must be calibrated on calibration settings are required [Menu → ADAS → ADAS Settings].
- Align the green line with the horizon, and align the red line with center of the bonnet by pressing the left/right arrows.
- Then, align the orange line with the front edge of the bonnet with the up/down arrows.
- Press live button to start recording.



Memory Settings

- Sets how storage space on the memory card will be allocated for each recording mode.



Item	Driving	Driving Event	Parking Motion	Parking Event	Total
Driving Priority	70	10	15	5	100
Event Priority	45	20	20	15	100
Parking Priority	40	10	45	5	100
Driving Only	85	15	0	0	100

- Parking mode operates only when the hardwiring Power Cable is connected. The hardwiring Power Cable must be professionally installed to the vehicle by a trained mechanic.
- Using cables from other manufacturers may damage the product or result in fire or electric shock due to the different voltage.
- Use genuine Finedigital accessories.
- Use constant power during parking recording and the power should be connected separately except some vehicle types. In this case, please ask for help from an installation specialist. (using regular power is recommended to prevent battery discharge of the vehicle.)
- When connecting a hardware power cable, please be careful about connecting location of each wire.
- Do not cut or modify the dedicated cable yourself.

Driving mode

Driving recording	<ul style="list-style-type: none"> After the product is completely booted up, the driving recording mode starts. During driving, videos are recorded in 1 minute segments and stored in the "normal" folder in the memory card.
Driving time lapse recording	<ul style="list-style-type: none"> Change the smart time lapse settings in [Menu → Recording Settings → Driving Recording → Smart Time Lapse]. The recorded videos are stored in the "normal" folder in the memory card. (Audio recording will be disabled.)
Event (impact) recording	<ul style="list-style-type: none"> When an impact is detected in driving recording mode, the event detection recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before detection to 10 seconds after detection, and stored in the "event" folder in the memory card.
Event (impact) recording in driving time lapse recording mode	<ul style="list-style-type: none"> When an impact is detected in driving time lapse recording mode, the event detection recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before detection to 10 seconds after detection, and stored in the "event" folder in the memory card. The recorded video is automatically recorded and stored at a rate of 30fps, not time lapse.
Manual recording	<ul style="list-style-type: none"> When you press 'Manual recording button', it turns red and the manual recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before pressing the button and to 10 seconds after pressing the button, and stored in the "camcorder" folder in the memory card.

Parking mode

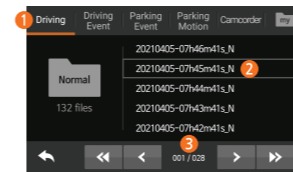
Switching to Parking Mode	<ul style="list-style-type: none"> If you turn off the vehicle with regular power connected, the parking recording mode starts. If you turn on the vehicle, the driving recording mode starts again.
Parking mode (Impact detected)	<ul style="list-style-type: none"> When an impact is detected during parking, the event detection recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before detection to 10 seconds after detection, and stored in the "parking" folder in the memory card.
Parking mode (Motion detected)	<ul style="list-style-type: none"> When motion is detected in parking recording mode, the event detection recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before detection to 10 seconds after detection, and stored in the "motion" folder in the memory card.
Parking time lapse recording	<ul style="list-style-type: none"> Change the smart time lapse setting in [Menu → Recording Settings → Parking Recording → Smart Time Lapse]. The recorded videos are stored in the "motion" folder in the memory card. Continue to record video in time lapse regardless of motion detection.
Event (impact) recording in parking time lapse recording mode	<ul style="list-style-type: none"> When an impact is detected in parking time lapse recording mode, the event detection recording mode starts. A video is recorded for 20 seconds, from the moment 10 seconds before detection to 10 seconds after detection, and stored in the "parking" folder in the memory card. The recorded video is automatically recorded and stored at a rate of 30fps, not time lapse.

Recording Modes	Driving (Driving Time Lapse)	Driving Event	Parking Event	Parking Motion (Parking Time Lapse)	Manual	My Folder
Folder Name	normal	event	parking	motion	camcorder	my folder

- Entire Micro SD Card will be formatted when the memory partition settings is changed.
- It is recommended to back up data before changing memory partition settings.
- Memory format type is FAT32. If the format is different, the device will automatically start memory format.
- If select "Driving Only", the device will record on drive mode only and parking recording will be disabled. When the engine is turned off, the device will also be turned off.

Playing video

On live view screen, tap [Menu→Replay]. The recorded videos are categorized and displayed by the recording mode. Select a recording mode, and tap the video you want to play.



Video file list



Playback screen

1 Video category	The video files are categorized by the recording mode - Driving, Event, Parking event, Parking motion, Camcorder, My folder(View folder/Save video). *AI Damage Detection 2.0 videos are stored in "parking" folder.
2 Video list	Display the video from the latest file.
3 Video list pages	<ul style="list-style-type: none"> ◀◀ : Move backward 3 pages ◀ : Move backward 1 page ▶▶ : Move forward 3 pages ▶ : Move forward 1 page
4 Playback screen	Playback the selected video file. (Tap the screen to hide or re-display the function buttons.)
5 Switch front/rear view	1ch : Play video of front camera 2ch : Play video of rear camera
6 Play button	<ul style="list-style-type: none"> ◀▶ : Play the previous/next file. ◀◀ : Rewinds the current file by 5 seconds ⏸ : Plays the recorded file/ temporarily pauses playback
7 Previous menu	Move to the previous menu screen.

- Please operate the device after stopping your vehicle in a safe location.
- While you playback the video files, the device will stop recording.
- Play videos on the playback menu of the device or a computer only. If you play videos by inserting the memory card in devices such as a smartphone or a tablet PC, the video recordings may be lost.
- During playback, vehicle license numbers may not be identified due to the relative speed of a vehicle or light conditions.
- A file name is composed of the recording start date and time, and the recording mode.
- If the memory card reached full capacity, the previously recorded videos are deleted for the sufficiency of storage. (To prevent data loss, back up important videos on additional storage devices.)

FineVu PC PLAYER

FineVu Player is software that you can play the videos recorded by the FineVu dashcam. You can download it at the FineVu website(<http://www.FineVu.com/en>).

Main screen

After the installation is complete, run the FineVu player. The following provides brief information about the PC player's screen layout.



- Main screen that plays back a recorded video.
- If GPS data are included in the recorded video, the location is displayed in the map.
- If GPS data are included in the recorded video, the speed is displayed.
- Display G-Sensor values or speeds in a graph.
- Menu for playing and backing up video and setting the player
- Menu for analyzing recorded videos
- Display the video list.

System requirements

Windows	Minimum	Recommended
OS	Windows 7 or higher	Windows 10, 64bit OS
HDD	70MB or greater	150MB
CPU	Intel Dual Core 3.4GHz or higher (32bit)	Intel Dual Core 3.4GHz
VGA	256MB or greater	1GB
RAM	2GB or greater	4GB
DirectX	DirectX 11 or higher	DirectX 12
Monitor	1280 x 1024 or greater	1920 x 1080
Mac	Minimum	Recommended
OS	10.14	10.15
HDD	1GB of available storage	10GB of available storage
CPU	64bit Inter Processor	64bit Inter Dual Core Processor
VGA	Inter Iris Graphics 4000 series or later	External VGA card
RAM	2GB	4GB
Monitor	12 Inch 1280x800	1920x1080

- The FineVu player supports both Mac and Windows.
- Please use the "FineVu player", or the video playback may be limited.

Viewing recorded video on PC

- Remove the Micro SD card from the device, and insert it into the adapter. Connect the card to the PC using the Micro SD card reader.
- When the Micro SD card reader is connected to the PC, a USB drive or new disk drive will be created.
- Click the relevant folder and select video files you want to play back or view.
- FineVu Player or other players can be used to watch recorded video. (You should use FineVu Player to check the GPS and G-Sensor information of the recorded video.)

Upgrading Firmware

- Download the latest firmware at FineVu website. (<http://www.FineVu.com/en>)
- Remove the Micro SD card. Insert it into Micro SD card reader and connect the reader to the PC.
- When the reader is connected to the PC, a USB drive or new disk drive will be created. (It's recommended to format the Micro SD card used for another device before you upgrade the firmware.)
- Unzip the downloaded file, and copy it to the top-level root of the memory card.
- Insert the copied Micro SD card into on the device. Turn on the vehicle (ACC On) or start the engine to turn on the device.
- The firmware update starts automatically.
- The system will automatically restart once the firmware update is completed.

Tips for using Micro SD card

- A firmware upgrade is provided to enhance the device's features, operation or to increase stability. For optimal operation of the device, ensure that you keep the firmware up to date.
- To prevent loss of important data, frequently copy recorded videos from Micro SD card to other storage devices.
- The Micro SD card should be tested for errors on a regular basis. And as the memory card is a consumable item, it should be replaced periodically.
 - The warranty period of memory card is 6 months.
 - The memory card should be formatted every 2 weeks to maximize the lifetime of the memory card.

- Do not disconnect the power or remove the memory card from the device during the firmware upgrade. Doing so may cause serious damage to the device, or to the data stored in the memory card.
- The firmware must be upgraded on Micro SD card.
- The firmware files will be deleted automatically after upgrade is completed.
- It's recommended to backup important video files and format the Micro SD card before starting firmware upgrade.
- If the Micro SD card is 64GB or more, change the file system to FAT32 before formatting the memory card.

GX5000