SAFETY INSTRUCTIONS

Precautions for Installation

- Do not use damaged, modified, or unauthorized parts and accessories.
- Use the device within the rated voltage range.
- Make sure the power cable is connected to the cigarette lighter socket or a proper terminal in the fuse box.
- Ensure the power cable plug is inserted to the right power inlet on the device tightly.
- Place the external GPS about 20cm (8 inch) or more away from the device.
- Do not install the device at the location where it obstructs the driver's view.

Precautions for use

- Do not operate the device while driving.
- Avoid placing the device near from 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.
- Avoid using the device under extreme conditions such as direct sunlight, high temperature and/or high humidity.
- 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.

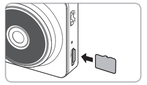
- For user's safety and to avoid property damages, read through this manual and follow the instructions correctly.
  Finedigital is NOT responsible for any problems and/or damages that may occur from the failure to observe the instructions.

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 locks into the place.

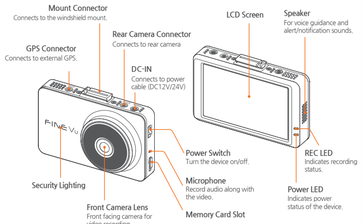


Install the External GPS Antenna on the upper left or right corner of the windshield.

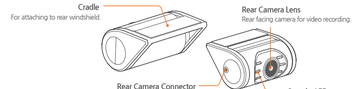
- It is strongly recommended that FineVu memory cards are used to minimize memory card error.
- Do not apply excessive force on the MicroSD card or attempt to insert it in the wrong direction as it may cause damage to the MicroSD card and the card slot.
- To prevent loss of important data, frequently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

PRODUCT OVERVIEW

Main unit and front camera



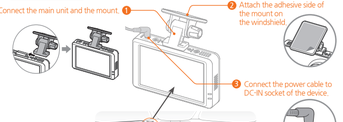
Rear camera



INSTALLATION

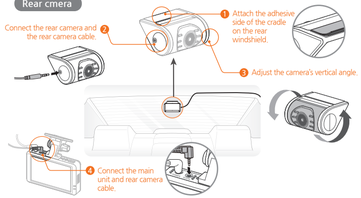
Front Camera

Connect the main unit and the mount. ❶



Rear camera

Connect the rear camera and the rear camera cable. ❷



KEY FEATURES

Dual Full HD resolution
Front & Rear Full HD (1920 x 1080 @30fps) cameras record outstanding video clarity under any circumstance.

3.5" IPS Touch LCD
Get an instant video playback, ADAS warnings and change settings on super clear high resolution (800x400) IPS LCD.

Auto Night Vision
Automatically to tune and enhance the video quality according to the brightness of light in any environment.

Smart Time Lapse
Automatically reduces the recording file size and increases memory efficiency by 50% on average when there is no impact, and saves the files at 30 frames per second when detects any impact.

ADAS PLUS (Advanced Driver Assistance Systems)
The Lane Departure Warning System (LDWS) and Front Vehicle Motion Alert (FVMA) ensure driver safety with warnings of voice and alert on LCD screen.

Wide Viewing Angle
A wide view of diagonal 155° angle minimizes blinds spots to assure recording of all events without fail.

Secret Mode
Protect your important video proof with password, only you can access to FineVu by secret mode.

Format Free Max
The most advanced format free technology of FineVu eliminates the need for periodical manual formatting of micro SD memory card, extending memory card life and improving reliability.

Event Notice
When you get in the car, FineVu notices event history that is detected during parking surveillance mode, making it easy to check the number of impact while parking, and if your car has been safe overnight and what happened.

WARRANTY

Limited Warranty

This device is guaranteed against manufacturing defects for one(1) year(s)(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 negligene 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.

FCC ID : PWS-FINEVULX2000

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

A digital device that is marketed for use in a residential environment notwithstanding use in commercial, business and industrial environment.
Examples of such devices included, but are not limited to, personal computers, calculators, and similar electronics devices that are marketed for use by the general public.

FINE DIGITAL

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www.finevu.com | Customer Support : support@finedigital.com | Made in Korea

SPECIFICATIONS

ITEM	SPEC.	REMARKS
Model Name	FineVu LX2000	
Dimension / Weight	Front : 98.5 x 60.9 x 31.0mm / 96g Rear : 53.4 x 29 x 42.3mm / 30g	Excluding cables and cradle.
Memory Capacity	Micro SD Card (16G/32G/64G)	MLC, Class10 or above recommended / SDXC compatible
Recording Mode	Driving recording mode	1 min. interval recording
	Event (impact) recording mode	20 sec. recording (5 sec. before / 15 sec. after impact)
	Emergency recording mode	20 sec. recording (5 sec. before / 15 sec. after impact)
	Parking (impact & motion detection) recording	20 sec. recording (5 sec. before / 15 sec. after impact)
	Driving time lapse recording	30fps recording after impact detected
	Parking time lapse recording	30fps recording after impact detected
Lens	Full HD wide angle lens	
Image Sensor	Front/Rear : 2M pixels CMOS Image Sensor	
Viewing Angle	Front : 155° / Rear : 140°	
Resolution	Front : Full HD 1920x1080@30fps Rear : Full HD 1920x1080@30fps	
Encoding	Video : H.264 / Audio : PCM	AVI (2Video+1Audio)
Display	3.5" IPS LCD (800x480) with touch	
Mic	Built-in	
Speaker	Built-in	8 ohm
Acceleration Sensor	3-Axis Acceleration G-Sensor	
Input Voltage	DC 12V ~ 24V	
Backup Battery	Built-in Super Capacitor	
Power Consumption	3.5W	Based on 2CH, LCD off, GPS off
Temperature	Operation Temperature : -10℃ ~ 60℃ (14℉~140℉) Storage Temperature : -20℃ ~ 70℃ (-4℉~158℉)	
Interface	Power Port(3.5 Ø), Rear Camera Port (2.5 Ø), External GPS Port(2.5 Ø)	
Certificate	KC (R-R-FDK-FineR018), FCC (PWS-FINEVULX2000)	

SCREEN LAYOUT

Live view and Menu screens

❶ Camera settings	Night Vision (Auto Night Vision), Video Quality (High/Normal), Rear camera connection notice.
❷ ADAS	Lane Departure Warning System, Front Vehicle Motion Alert, ADAS speaker, ADAS guide.
❸ Memory settings	Memory partition (Drive/Event/Parking), Memory format.
❹ Recording settings	Driving recording (Normal/Time Lapse), Sensitivity (Driving/Parking/Motion), Parking mode On/Off, Parking recording (Motion/Time Lapse), Rear camera, Low voltage value, Cut-off time.
❺ Replay	Playback the recorded video of each recording mode.
❻ System settings	LCD display, LCD brightness, Menu display, security LED, time, secret mode settings.
❼ Setting information	Display the setting values that has changed by user.
❽ Live view	Display live view.
❾ Safety screen	Display speed, date and time information.

- The external GPS (optional accessory) is required to enable the ADAS features.
- Do not operate the device while driving.
- When using menu settings, the recording will be disabled.
- When reset the device settings to factory default settings on "Setting information" menu, if memory setting is changed, entire Micro SD card will be formatted.
- Front Vehicle Motion Alert will be notified in 3 seconds after the departure of front vehicle.

ADAS Settings

- Before using ADAS features, settings must be calibrated on [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 the live button to start recording.

Memory Settings

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

❶ Memory partition information
❷ Driving
❸ Event
❹ Parking motion
❺ Parking event
❻ Camcorder
❼ Memory format
❽ Memory settings

Item	Driving	Event	Parking Motion	Parking Event	Camcorder	Total
Driving Priority	60	15	15	5	5	100
Event Priority	40	20	25	10	5	100
Parking Priority	35	10	45	5	5	100
Driving Only	80	15	0	0	5	100

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

Driving mode

Driving recording	Driving recording starts automatically after booting of the device. A video is recorded in 1-minute segments and stored in "Normal" folder of memory card.
Event (Impact) recording	When an impact to the vehicle is detected during driving, a video is recorded for 20 seconds (5 seconds before the detection and 15 seconds after the detection), and stored in "Event" folder of memory card.
Emergency recording	When you tap the Emergency Recording button, a video will be recorded for 20 seconds (5 seconds before/15 seconds after pressing the button), and stored in "Camcorder" folder of memory card.
Driving time lapse recording	Change the smart time lapse settings in [Menu→Recording Settings→Driving Recording]. A video is stored in "Normal" folder of memory card. (Audio recording will be disabled.)
Event recording during driving time lapse mode	When an impact is detected during driving time lapse mode, a video is recorded for 20 seconds (5 seconds before the detection and 15 seconds after the detection), and stored in "Event" folder of memory card. The video will be recorded at 30fps.

Parking mode

Switching to Parking Mode	When the device is connected to the vehicle via the hardwiring cable (optional), the operating mode is switched to parking mode in 5 seconds after the engine is turned off. (The operating mode is switched to driving mode when the engine is turned on.)
Parking mode (Impact detected)	When an impact is detected while parking, a video is recorded for 20 seconds (5 seconds before the detection and 15 seconds after the detection), and stored in "Parking" folder of memory card.
Parking mode (Motion detected)	When a moving objects is detected while parking, a video is recorded for 20 seconds (5 seconds before the detection and 15 seconds after the detection), and stored in "Motion" folder of memory card.
Parking time lapse	Change the smart time lapse settings in [Menu→Recording Settings→Parking Settings→Parking Recording]. A video is stored in "Motion" folder of memory card.(Audio recording will be disabled.)
Parking time lapse (Impact detected)	When an impact is detected during parking time lapse mode, a video is recorded for 20 seconds (5 seconds before the detection and 15 seconds after the detection), and stored in "Event" folder of memory card. The video will be recorded at 30fps.

- Parking mode operates only when the hardwiring Power Cable (optional) is connected. The hardwiring Power Cable must be professionally installed to the vehicle by a trained mechanic.
- It is strongly recommended to use FineVu Power Cable only.
- Depending on the battery charging status of the vehicle, the duration of parking mode may differ. If you want to use parking mode for an extended period, check the battery level to prevent battery discharge.
- Make sure to connect the hardwiring cable to fuse box appropriately.
- The wrong connection of hardwiring cable and fuse box may cause the device and/or your car to be damaged.
- Do not modify or cut the power cable.

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

Playing video

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

Video file list

Playback screen

❶ Video category	The video files are categorized by the recording mode - Driving, Event, Parking event, Parking motion, Camcorder, My folder(View folder/Save video).
❷ Video list	Display the video from the latest file.
❸ Video list pages	« : Move backward 3 pages; < : Move backward 1 page; » : Move forward 3 pages; > : Move forward 1 page
❹ Playback screen	Playback the selected video file. (Tap the screen to hide or re-display the function buttons.)
❺ Switch front/ rear view	1ch : Play video of front camera 2ch : Play video of rear camera
❻ Play button	|◀ : Play the previous/ next file. ◀◀ : Rewinds the current file by 5 seconds ▶ : Plays the recorded file/ temporarily pauses playback
❼ Previous menu	Move to the previous menu screen.

- Stop your vehicle in a safe location before operating the device.
- 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 files 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 storage gets shortened while recording, the previously recorded videos are deleted storage sufficiency. (To prevent data loss, back up important videos on additional storage devices.)

FineVu PC PLAYER

FineVu player is a software that you can view and manage the recorded videos on your PC. You can download the latest PC viewer software from the FineVu website.

Main screen

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

❶ Main screen displays the current video playback.
❷ Play or control a video.
❸ Displays the GPS information at the time of recording.
(+ This screen will be disabled if there is no GPS information.)
❹ Indicates the G-Sensor value at the time of recording.
❺ Displays the playlist.

System requirements

	Minimum	Recommended
OS	Windows 7 or later	Windows 10, 64bit OS
HDD	70MB or more	150MB
CPU	Intel Dual Core 3.4GHz or higher (32bit) Intel Dual Core 2.8GHz or higher (64bit)	Intel Dual Core 3.4GHz
VGA/RAM	256MB or more / 2GB or more	1GB / 4GB
DirectX	DirectX 11 or higher	DirectX 12
Monitor	1280 x 1024 or higher	1920 x 1080

Viewing recorded video on PC

1. Remove the Micro SD card from the device, and insert it into Micro SD card reader. Connect the Micro SD card reader to the PC.
2. When connected to the PC, USB drive or new disk drive will be created.
3. Click the folder and select video file you want to play.
4. FineVu player or other media players can be used to watch videos recorded with the device. (FineVu player is required to check the GPS and G-Sensor information of the recorded video.)

Upgrading Firmware

1. Download the latest firmware at FineVu website. (www.finevu.com)
2. Disconnect power to the device and remove the Micro SD card. Insert it into Micro SD card reader and connect the Micro SD card reader to the PC.
3. When connected to the PC, USB drive or new disk drive will be created. (It's recommended to format the Micro SD card before you upgrade the firmware.)
4. Unzip the downloaded file, and copy the firmware upgrade file to the root folder of the memory card.
5. While the power is disconnected from the device, insert the memory card into the memory card slot on the device. Connect the power to the device and start the engine to turn on the device.
6. The firmware upgrade starts automatically.
7. The system will restart once the firmware update is completed.

Tips for using Micro SD card

1. A firmware upgrade is provided to enhance the device's features, operating or to increase stability. For optimal operation of the device, ensure that you keep the firmware up to date.
2. To prevent loss of important data, frequently copy recorded videos from Micro SD card.
3. 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 that 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.

MANUAL

LX2000

IPS LCD (800x480) | Full HD 2ch | Auto Night Vision | Smart Time Lapse | ADAS&Safe driving | Format Free