



AKY-NV-X2

Super Night Vision Dashcam Generation II

Product Manual



Notes:

- Please read this manual to ensure correct connection and usage methods.
- After reading, store it with the warranty card and consult it again when required.

Contents

Safety Precautions (Please observe strictly).....	[E-1-3]
Important Notes.....	[E-4-9]
Packing List.....	[E-10]
Component Names and Functions.....	[E-11]
Installation Steps.....	[E-12-21]
Memory Card.....	[E-22-23]
Display Function Overview.....	[E-24-28]
Video Recording mode Description.....	[E-29-32]
Main Unit Settings Menu Functions.....	[E-33-38]
Introduction to Wi-Fi and the App.....	[E-39-45]
Settings Available Within the App.....	[E-46]
Playing Back Recorded Videos or Photos.....	[E-47]
Software Version Updates.....	[E-48-49]
Reset and Factory Reset.....	[E-50]
Specifications.....	[E-51]
Frequently Asked Questions.....	[E-52-54]
Warranty and Customer Service.....	[E-55-56]

Safety Precautions (Please observe strictly)

 Mandatory	Strict compliance with the matters
 Caution	Matters that must be observed to avoid danger of death or serious injury
 Notice	Precautions to avoid risk of minor injury or property damage
 Prohibition	Prohibited matters

- For your safety, please be sure to follow these instructions to prevent traffic accidents.

Caution

-  **Use the designated fuse only and ask an engineer to replace it.**
Be sure to use Hughes with the specified capacity, and exchange the wire, such as the steering shift lever plugs pedals. To avoid accidents and injuries.
-  **Do not install in a position that hinders driving.**
Installing in a location that hinders driving (near the steering wheel, etc.), blocks front and rear visibility, or poses a danger to passengers may result in traffic accidents or injuries.
-  **Do not use bolts for installation in vehicle operating areas.**
Installing this product in vehicle operating areas such as steering and brakes using bolts and nuts may result in accidents.
-  **Drivers please do not operate the screen/monitor while driving.**
Operating or viewing the screen/ monitor while driving may result in an accident due to inattention to traffic ahead. Please stop safely before use.
-  **Please make sure that the car parts are working properly after installation.**
If car parts (brakes, lights, horn, turn signals, etc.) do not work properly, it could cause a fire or accident.
-  **Cable installation does not hinder driving or getting in and out of the car.**
Do not wrap the cable around the steering wheel, gear lever, brake pedal, etc. Failure to do so may result in accident or injury.
-  **Please check the location of the vehicle pipeline, fuel tank, etc. before installation.**
When drilling installation is required, please avoid places such as fuel tanks. And increase the measures to prevent the parts from rusting. Failure to do so may result in electric shock or accidents.

Safety Precautions (Please observe strictly)

Caution



Only suitable for DC12/24V negative grounded vehicles.

Cannot be used for vehicles other than the above. Failure to do so may result in fire or malfunction



Do not use if the product is damaged or appears abnormal.

Using this product in an abnormal state (such as smoke or strange smell) may cause a fire, etc.

- Immediately stop using and contact the store where you purchased it.



Do not disassemble or modify.

There are high-voltage parts inside the product, which may cause fire or electric shock.

- Ask engineers to check and repair internal parts.



Please keep small parts out of reach of babies.

Small parts may be accidentally swallowed. In case of accidental swallowing, consult a doctor



Prevent water or foreign matter from entering the host.

If combustible materials such as metal or water enter the main unit, it may cause malfunction, short circuit or heat due to poor insulation, resulting in fire, smoke, etc.



Cable and host installation/removal should be done by engineers.

Wiring and installation/removal require specialized skills and experience.



Do not use for anything other than in-vehicle use.

Using the product for purposes other than inside a vehicle (such as a boat) may result in smoke, fire, injury or malfunction.



Avoid strong impact on this product.

Dropping or hitting the product may result in malfunction or fire.



Be sure to use specified accessories and parts

Use of parts other than those specified may damage the inside of the main unit and cause an accident, malfunction or fire.



Do not install the product in a high temperature environment.

Prolonged exposure to direct sunlight or hot air may cause the internal temperature to rise, resulting in fire or malfunction.



Do not install the product in damp, water or dusty places.

If water, dust, oily smoke, etc. get inside this product, it may cause smoke, fire, electric shock, injury or malfunction.

Safety Precautions (Please observe strictly)

Caution



Do not install in places with strong vibration or instability.

If it is mounted on a hard curved surface, it may come off while driving, causing an accident or injury.



Do not touch the cigar adapter during a thunderstorm.

If you hear thunder, don't touch the cigar adapter. Failure to do so may result in electric shock.



System limitations.

The camera cannot completely cover the blind spot. Before reversing, please be sure to confirm the safety of the rear and surrounding areas.



The images displayed on the LCD and the rearview mirror are different.

The images displayed on the LCD screen and the rearview mirror are different, please check the differences in advance.



Do not kink, pull or damage the power cable.

A short circuit or disconnection may cause smoke, fire or malfunction.



Do not block the ventilation holes of the host.

Otherwise heat will build up inside the main unit, resulting in fire or malfunction.



Be sure to disconnect the negative battery terminal before installation.

Installing with the negative battery terminal connected may result in electric shock or injury due to short circuit.

Important Notes

- ☆ We are not responsible for any traffic accidents or traffic violations that occur while using this machine. Please drive safely.
- ☆ We are not responsible for any damages caused by corrupted images or data.
- ☆ This unit does not guarantee that images can be recorded under all conditions.
- ☆ We do not guarantee that the images recorded by this unit can be used as valid accident evidence.
- ☆ We are not responsible for any damages caused by accidents, vehicle malfunctions, etc. caused by installing this product.

Caution



Turn off the engine while installing.

Be sure to turn off the vehicle engine before installing this unit. Failure to do so may result in electric shock or malfunction.



Keep away from magnetic objects.

Do not place magnetic objects near this product. Failure to do so may result in machine failure or failure.



Image quality may be reduced.

When entering and exiting the tunnel, if the brightness changes suddenly, the backlight is strong, or there is no light source at night, the video quality may decrease.



Clean the surface of the windshield and lens.

Cleans the surface of car windshields and dash cam lenses. Avoid refraction caused by dust and foreign matter, which cannot be recorded clearly.



May not recognize the color of traffic lights

The screen may flicker at LED traffic lights. Colors may not be recognized.



When the memory card is full.

Please clean up the memory regularly, otherwise the file with the earliest date and time will be overwritten among the loop-recorded files.

- Depending on the environment, GPS reception time may become longer, and in rare cases, GPS reception may not be possible for a long time.
- GPS signals may not be received in tunnels, mountainous areas, etc. Depending on satellite reception conditions, there may be an error of about 50m -100m.
- If your vehicle's windshield is coated or specially treated, GPS reception may be affected.
- In places where GPS reception is not possible, the vehicle cannot be fully positioned.

Important Notes

- GPS is a system for measuring the current position on the ground using satellites of the U.S. Department of Defense.
- The date and time, vehicle speed and location information recorded by this device are calculated based on GPS and may be different from the actual values.
- Do not paint or apply stickers on GPS parts. Otherwise GPS performance will degrade.
- If the front windshield of the vehicle is specially treated, GPS reception may not be possible.
- GPS reception may not be possible due to radio wave leakage from in-vehicle electronic equipment such as navigation units.
- It may take some time to receive GPS data if there is a long distance between the last time power off and the next time the power on.
- Due to different speed measurement methods, the displayed vehicle speed may be different from the speedometer. Also, even if the vehicle is stopped, the speed display may not be "0km/h", this is due to a GPS reception error and is not a malfunction.
- When GPS is installed in a vehicle equipped with various sensor devices and collision avoidance assist systems, noise may interfere with the GPS depending on the location. Orientation can become difficult.
- When installing the GPS, please keep it as far away as possible from each vehicle-mounted device (*1) and each antenna (*2). Otherwise the GPS may not work properly, or cause malfunctions of this unit and each vehicle-mounted device. *1: Navigation units, ETC in-vehicle equipment, terrestrial digital tuners, beacon units, car audio equipment, radar detectors, etc. *2: TV antenna, ETC antenna, etc.

About Idle Stop System

- In some vehicles when idling to a stop, the power supply voltage may drop due to voltage fluctuations that occur when restarting. In this case, the power of the unit may turn off.
- Depending on the condition of the vehicle's battery, the power may turn off when restarting the engine. In this case, check the voltage of the vehicle battery.

About Recording

- We do not guarantee the effectiveness of this device as evidence in traffic accidents.
- This unit does not guarantee recording under all conditions.
- We are not responsible for any damage to recorded images caused by malfunction or use of this unit.

Important Notes

- In order to maintain the operation of the machine, please do not perform dangerous driving such as sudden braking.
- Do not operate the unit or check the display while driving.
- Before operating the monitor, be sure to check that the surrounding environment is safe.
- After turning on the power, it may take some time to start recording due to reading the SD card. Please make sure the recording has started before use.
- Images taken at night may have noise or a momentary tinge of red. This is due to camera performance and is not a malfunction.
- The recording frame rate may vary depending on the recording conditions.
- If the images recorded by this camera will violate privacy, please handle them with care.

About installation

- Please install correctly according to "About Installation" in this manual.
→ **[P13 About Installation]**
- This unit is not waterproof. Be careful not to let the unit or the cigar adapter get wet from rain, etc. Be sure to install it in the car.
- Please install it correctly so as not to conflict with the Road Traffic Law and related laws and regulations.
- Before installing the camera, be sure to wipe off any oil or dirt on the glass surface.
- Do not overlap with the vehicle inspection sticker when installing.
- Please properly handle the wiring so as not to affect driving.
- Do not install it where it hinders driving.
- Car roofs made of special materials may weaken the GPS signal, making it impossible to connect to the signal.
- Do not install in a place that obstructs the line of sight.
- Use near other car equipment, wireless equipment, TV, radio, computer, etc. may affect this product.
- Please do not pull hard when wiring, otherwise it may be disconnected or poor contact due to too tight, resulting in unstable operation of the host or sudden power off. Some slack is recommended when wiring.
- Install and wire at a location that does not interfere with various vehicle sensor devices and collision avoidance assist systems.
- Do not use items other than specified accessories.
- Please install it within the wiping range of the wiper. Otherwise you won't be able to record clearly when it rains.

Important Notes

- Do not install it in a position that interferes with safety devices such as seat belts and airbags. Otherwise the safety device may not work properly, resulting in injury.
- The host and camera are precision instruments, please do not subject them to strong impacts. Failure to do so may result in malfunction or damage.

About LCD display

- Due to the characteristics of LCD monitors, image burn-in may occur if the same image is displayed for a long time or repeatedly. You can reduce burn-in by adjusting the brightness of your monitor.
- If the temperature is lower than -10°C or higher than 60°C, the entire monitor may go black and image display may be delayed. This is a characteristic of the LCD screen and is not a malfunction. When the ambient temperature reaches the temperature at which the monitor can work stably, it will return to its original state.
- Although the liquid crystal display has more than 99.99% effective pixels, there may be some pixels that are not bright or always bright. Note that these are not malfunctions.
- If the temperature of the main unit is too high or too low, the camera image may be distorted. Once the unit returns to the correct operating temperature range, the display will return to normal.
- Noise may appear when the brightness changes suddenly, such as when moving from a bright place to a dark place, but this is a characteristic of the lens and is not a malfunction.
- Direct light such as sunlight or lamps is reflected in the camera's field of view, and the LCD monitor may become blurred.
- Actual colors may vary in dark environments such as at night.
- When wearing polarized sunglasses, the display may not be visible.
- In dark places such as at night, the following phenomena may occur.
 - There is a color difference between the picture color and the actual color.
 - Depending on the height of the rear lights, white and haze may appear around the rear car.
 - Automatic image adjustment causes flickering
- The host may become hot, but this is not a malfunction.
- If passengers stare at the monitor, it may cause motion sickness.
- Depending on your physical condition, etc., it may take some time for the displayed image to focus.
- The image displayed on the LCD monitor may differ from the actual scene.

Important Notes

- The image displayed on the LCD monitor may be affected by the frame rate, resulting in slow response speed and unsmooth display.
- Please use the supplied cleaning cloth to clean the LCD monitor.

About the rear camera

- When wiring the rear camera, be careful not to let the cable interfere with the door switch. Otherwise, a disconnection, etc. may occur, resulting in a malfunction.
※If the wiring is difficult, please contact the engineer for installation. → **「Please refer to P40」**
- The dedicated rear camera for this product. Do not connect to other products, otherwise it may cause malfunction.

About the front camera

- Please install it where it does not obstruct the driver's field of vision.
- Installed on 20% of the windshield and within the wiping range of the wiper, or at a position that does not block the driver's front line of sight (hidden behind the rearview mirror). Please avoid the overlapping of the installation position with the vehicle detection label, etc., so as not to affect the operation of the rearview mirror. Dirt, raindrops, etc. on the glass may cause blurred images.

About the cigar adapter

- Do not connect cigar adapters with branches. Otherwise, it will not work properly due to insufficient power supply of the host, and the camera image may flicker.
- Connect the included cigar adapter directly to the car's cigar socket.
- If you will not use the unit for a long time, please disconnect the cigar lighter.

About the date and time

- If "GPS Settings" is set, the date and time will be automatically synchronized when receiving a GPS signal.
※ The date and time cannot be acquired in environments where GPS cannot be received, such as tunnels and mountains.

About lens

- Since the rear camera of this unit is not equipped with a super night vision system and uses a wide-angle lens, some images may be distorted or have shadows.
※The characteristics of the wide-angle lens will be different from the actual viewing angle, these are normal.

Important Notes

- The front camera is equipped with a super night vision system and uses a narrow-angle lens. **Viewing angle: D: 67° H: 56° V: 35°**

About reversing assist

- When the vehicle is in reverse state, you can view the rear of the vehicle on the display screen of this unit (reversing assist function).
- Please note that even if you adjust the the rear camera angle on the LCD, the angle displayed on the screen will be different during reverse assist.
- The viewing range of the camera in the reverse assist function is limited.
- Do not reverse the car just by looking at the backup image.
- The vehicle width and distance guide displayed on the reverse assist screen may differ from actual ones.
- The screen displayed by the reverse assist function is only used as an auxiliary means for checking the rear. The screen displayed by the reverse assist function is only used as an auxiliary means for checking the rear.
- This auxiliary function is for reference only.
- Image quality may deteriorate due to usage conditions such as bad weather at night.
- Since the rear camera uses a wide-angle lens, there is a difference from the actual distance.
- Before adjusting the reverse assist display or angle, please ensure parking safety.

Packing List

Main Unit



Accessories



Main unit
platform bracket



Front camera



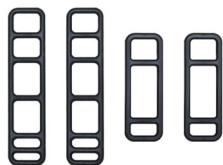
Rear camera



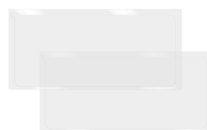
AHD camera



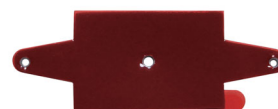
Pry tool



Straps
(long straps ×2,
short straps ×2)



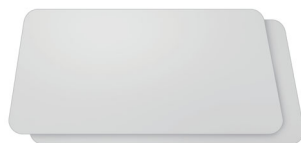
Anti-static
stickers ×2



Front camera double-
sided tape ×2
(one for front camera
assembly, one spare)



Rear Camera Double-
Sided Tape ×2
(one for rear camera
assembly, one spare)



Main Platform Bracket
Double-Sided Tape ×2
(one for main platform bracket
assembly, one spare)



Rear Camera
Fixing Screws
×4



Phillips
Screwdriver



Power &
GPS Cable



Cigarette Lighter
Charger



Voltage reduction
cable: Dedicated
parking monitor
cable.



GPS module

Component Names and Functions



1. Power button: Power on: Press and hold for 3 seconds, blue light remains steady; Power off: Press and hold for 3 seconds, blue light turns off; Press once briefly to toggle screen on/off. If the unit is not powered off, the blue light remains steady.
2. Memory card slot: Insert memory cards with care; do not force insertion or removal. If insertion proves difficult, check the card's orientation and reinsert vertically or horizontally.
3. Third AHD Camera Port: Connects an AHD camera
4. Front Camera Port: Connects the front camera
5. Rear Camera Port: Connects the rear camera
6. Charging Port: For connecting power & GPS cables
7. Heat Sink: Dissipates heat generated during operation
8. Speaker: Outputs audio
9. Strap mount: For securing the unit to the rear-view mirror
10. Microphone: For audio recording
11. Reset hole: When the unit freezes or crashes, insert a pin into the hole and press the reset button to force a shutdown
12. Flat mount: For securing the unit to the dashboard
13. LED LCD display: Note: Protective film is applied at the factory.
14. Ambient light sensor: Captures surrounding light levels to automatically adjust display brightness

Installation Steps

1. Install the host

This product is supplied with two mounting brackets. The strap mount is pre-fitted to the rear of the unit for installation on the rear-view mirror. The platform mount is included as a spare within the packaging for mounting the unit on the dashboard.

Installation on the rear-view mirror: Use the strap mount and straps to secure the unit to the vehicle's original rear-view mirror. The spare parts include two long straps and two short straps, allowing selection of the appropriate length based on the mirror's dimensions. During installation, ensure both the unit and mirror are firmly supported to prevent undue stress on the mirror surface.



Installation Procedure

1. Hook the strap bracket onto the upper section of the original vehicle rear-view mirror. While lowering the mirror, clamp the main unit securely beneath it. (Fig. 1)
2. Install the opposite side using the same method, adjusting the main unit's position as required.
3. After securing the main unit to the original rear-view mirror, hook the strap onto the bracket's attachment point. (Fig. 2)
4. Adjust the original rear-view mirror to achieve the optimal viewing angle from the driver's seat.
5. While holding both the original rear-view mirror and the main unit, gently wiggle to ensure the main unit is securely installed.



Image 1



Image2



Image3

Installation Steps

Important Notes

- Ensure this product is securely fitted to the vehicle's original rear-view mirror prior to use.
- For models with weaker rear-view mirror adhesion, suspending the main unit may cause damage or instability. Please take note of this.
- During installation, ensure the rear-view mirror is securely supported to prevent excessive strain. On certain models with weaker adhesive strength, this may cause damage.
- Please note that this device's field of view differs from the original vehicle rear-view mirror. As it is mounted directly onto the original mirror, contact between the mirror surfaces may occur due to vibration or tilting of the mirror itself. Do not adjust or manipulate the mirror angle while driving.
- Please note that the distance and field of view of this product differ from the original vehicle rear-view mirror. During installation, use both hands to ensure no load is applied to the original rear-view mirror. Installation must not obstruct the driver's line of sight. Confirm that the rear-view mirror with this device installed provides a clear view to the rear. This is to prevent accidents and other incidents.
- During installation, avoid pressing or applying force to the LCD display of this device. When adjusting the angle, hold and adjust in coordination with the vehicle's original rear-view mirror.
- The main unit may fade due to exposure to ultraviolet light.
- Ensure that the installation does not interfere with any sensors or equipment (safety assistance systems, collision avoidance systems with cameras or sensors, airbags, etc.).
- If the original vehicle rear-view mirror is thin, it may become trapped within the mounting section of this device, potentially causing scratches. Ensure secure installation using the rubber mounting sections.
- Our company shall not be held liable for any consequences arising from failure to observe the above warnings and precautions, misuse, disassembly, modification, accidents, malfunctions, or damage.

Installation Steps



To mount the unit on the vehicle dashboard, first peel off the anti-slip pad from the strap bracket. Then, using the supplied Phillips screwdriver, remove the four fixing screws securing the strap bracket. Align the platform bracket with the four screw holes originally used to secure the strap bracket, and fasten it using the same four screws. To ensure secure mounting, opt for a flat surface installation where possible. Peel off the protective film from the double-sided adhesive tape on the base of the bracket. Position the main unit on a suitable location on the dashboard and press down firmly for 2 minutes to ensure the adhesive bonds securely. Adjust the ball joint on the platform bracket to achieve the optimal viewing angle. Finally, tighten the ball joint nut to prevent any wobbling of the main unit's display screen.

Please install it in a position that does not obstruct the line of sight.

※ Do not install the device or its power cord near television reception antennas or electrical equipment. This may cause television signals to weaken, flicker, or produce noise.

Installation Steps

2. Install the front camera

Note: Double-sided adhesive tape possesses strong adhesive properties and is difficult to remove once applied. Please confirm the position before affixing.

Apply the double-sided adhesive tape in an environment with temperatures between 21°C and 38°C. Following installation, periodically inspect whether the adhesive strength has diminished.

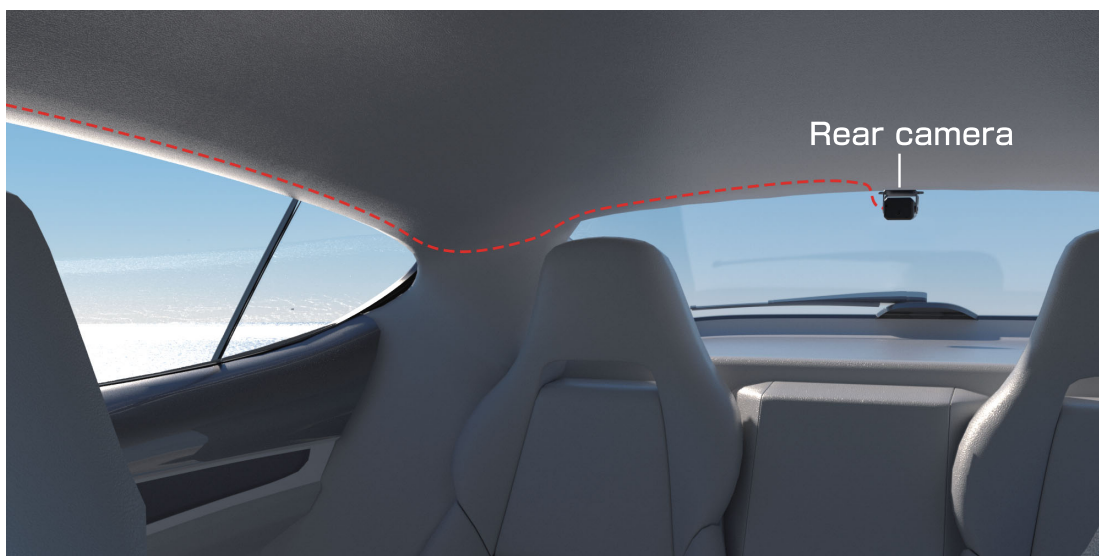
Installation Steps

1. Clean the windscreen by applying a small amount of water or alcohol to a soft cloth, then wipe away dirt, grease, wax and coatings.
2. Verify the installation position while aligning the bracket. Peel off the protective film from the static cling sticker and select a flat, smooth area of the windscreen for application, ensuring no air bubbles form between the sticker and glass. Recommended areas are shown below.



Installation Steps

3. Peel the protective film from the double-sided adhesive tape on the top of the front camera mount, then affix the mount to the static cling film.
4. Press firmly on the mount for approximately 5 seconds to secure it; maximum adhesive
5. Strength is achieved 24 hours after installation. Remove the lens protective film. Adjust the bracket angle vertically to achieve the optimal recording field of view. Finally, tighten the bracket screw using a Phillips screwdriver to prevent loosening during impacts or vibrations, which could alter the shooting perspective.



Note: Please select a suitable location for installation and ensure it does not obstruct the driver's normal field of vision. Fitting the device in an incorrect position may contravene the Road Transport Vehicle Act or interfere with driving, thereby causing traffic accidents.

Installation Steps

3. Install the rear camera

Note: This rear camera incorporates an IP67 waterproof design, suitable for both interior and exterior use, though installation outside the vehicle yields superior results.

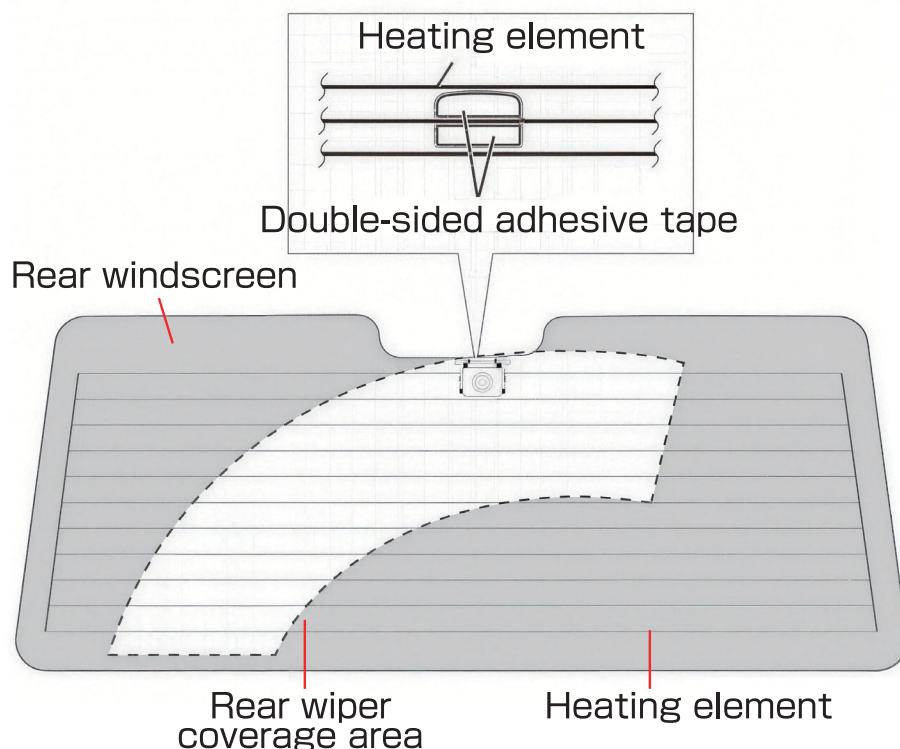
Do not install upside down.

Installation Steps

Position 1: Mount the rear camera on the rear windscreen.

1. Clean the rear windscreen. Apply a small amount of water or alcohol to a soft cloth and wipe away dirt, grease, wax, and coatings.
2. Verify the mounting position while aligning the bracket. Peel the protective film from the static cling pad and apply it to a flat, smooth section of the windscreen, ensuring no air bubbles remain between the pad and glass. The recommended area is shown below. For more accurate blind spot detection, centre the installation at the top within the windscreen area reachable by the wiper blades.
3. Remove the protective film from the double-sided adhesive tape at the top of the front camera mount and affix the mount to the static cling film.
4. Press firmly on the mount for approximately 5 seconds to secure it. Maximum adhesive strength is achieved 24 hours after installation.
5. Remove the lens protective film. Adjust the bracket angle vertically to achieve optimal recording visibility. Finally, tighten the bracket screws using a Phillips screwdriver to prevent loosening during impacts/vibrations, which could alter the shooting perspective.

Note: If the rear window features heating wires, avoid affixing the double-sided tape directly onto these wires. Failure to do so may result in damage to the heating wires when the tape is subsequently removed.



Installation Steps

Position 2: Mount the rear camera near the number plate.

For optimal use of the reversing assistance function, it is strongly recommended to install at Position 2, where the field of view remains unobstructed, ensuring clearer and sharper rear and reversing images.

1. Clean the installation area by applying a small amount of water or alcohol to a cloth, then wipe away dirt, grease, wax, and coatings.
2. Peel off the protective film from the double-sided adhesive tape on the rear camera bracket. Apply the tape to the vehicle body and press the bracket firmly for approximately 5 seconds to secure it. Maximum adhesive strength is achieved 24 hours after installation.
3. Once the camera is centred, secure the bracket to the vehicle body using the provided fixing screws through the pre-drilled holes. This prevents the double-sided tape from losing adhesion due to prolonged exposure to sunlight and rain, which could cause the camera to detach.
4. Remove the lens protective film. Adjust the bracket angle vertically to achieve optimal recording visibility. Finally, tighten the bracket screws using a Phillips screwdriver to prevent loosening during impacts or vibrations, which could alter the shooting perspective.

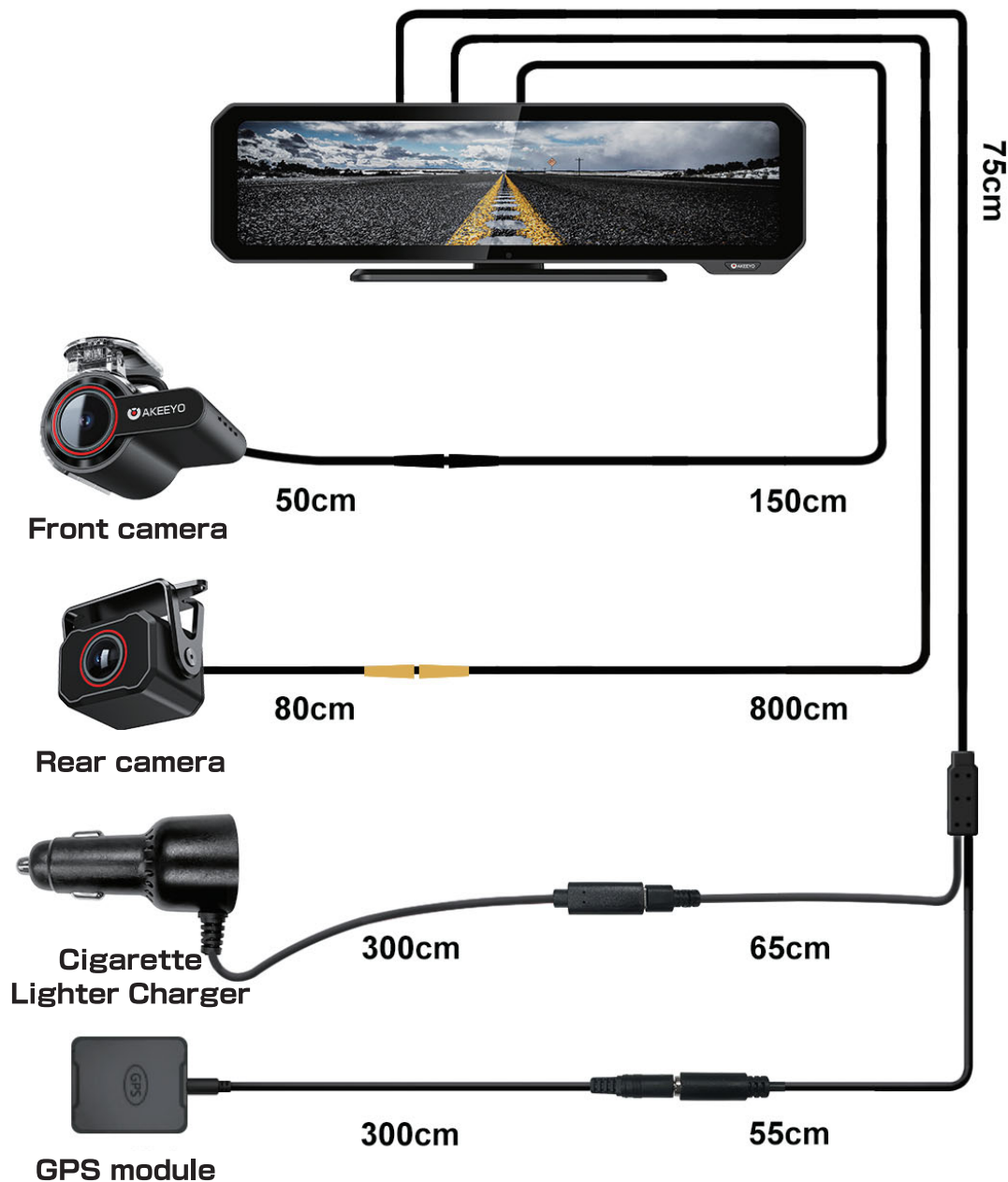


Installation Steps

4.Wiring Instructions:

After confirming the main unit, front camera, and rear camera are correctly installed, connect the front and rear cameras, GPS, and power cable to the main unit in sequence according to the wiring diagram. Then connect the dashcam to the power supply using a car charger or step-down cable. Use a pry tool to conceal the power cable, ensuring it does not obstruct the driver's view and cause danger. Once powered, the dashcam will automatically switch on and commence recording. The wiring diagram is as follows:

NV-X2 Wiring Instructions



Installation Steps

5.Cigarette lighter power socket

Please ensure you use the cigarette lighter power plug supplied with the product. Using any cigarette lighter power plug other than the accessory provided may damage the product or your vehicle. Even if it functions normally, recording may fail, or issues such as display flickering or frequent device reboots may occur due to unstable voltage.

Note:

- Do not use the cigarette lighter power plug to power multiple devices simultaneously. This may prevent recording or cause display flickering/frequent host reboots due to voltage instability.
- The power terminals may become extremely hot immediately after using the cigarette lighter. Allow sufficient time for cooling before connecting the cigarette lighter power plug. Failure to do so may cause melting or short-circuiting of the connectors. When routing cables, ensure they do not obstruct or interfere with driving (use cable ties or similar if necessary).
- Should the device remain unused for extended periods, disconnect the cigarette lighter power plug to prevent potential fire hazards or battery depletion.
- For certain vehicle models where the cigarette lighter power supply remains active when the ignition is off or the key removed, ensure the cigar lighter power adapter is disconnected when the engine is stopped to protect the battery.

Installation Steps

6. Optional step-down power cable

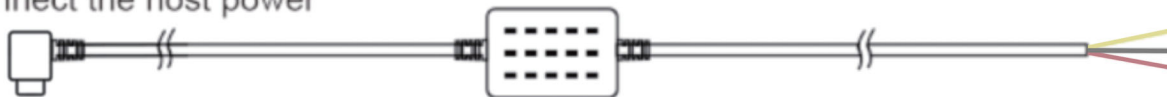
By connecting the dedicated AKY-NV-X2 power cable, the parking monitor mode can be activated. When the sensor detects an impact, the device will automatically activate and record a 30-second video clip, which will be saved to the **【Parking monitor】** folder.

Ensure the parking monitor mode is set to [On] on the main unit, with sensitivity set to [High]. Otherwise, the parking monitor mode will not activate.

Prolonged use of this power cable may accelerate vehicle battery deterioration. Please use judiciously.

During Parking Monitor mode, should the 12V vehicle battery voltage drop below 11.6V or the 24V vehicle battery voltage fall below 22V, the device will trigger vehicle battery protection mode. The main unit will automatically power down and cannot be restarted.

Connect the host power



Yellow (Battery Positive): Connect to the positive terminal of the battery.

Black (GND): Connect to the earth wire.

Red (ACC): Connect to the positive terminal of the engine ignition.

7. Regarding the collision detection recording function in parking surveillance mode

Within one minute of the engine being switched off, the vehicle enters parking monitoring mode. Should the installed G-sensor detect an impact, it will automatically record approximately 30 seconds of footage. Please note that even if multiple impacts occur, only one 30-second recording will be made during this period. Upon completion of the recording, the vehicle will revert to parking monitoring mode. The recording cycle resumes upon engine start-up.

※ Recording commences only upon collision detection.

Parking monitoring mode is not supported when connected to a cigarette lighter power lead.

Memory Card

Inserting and removing cards



Please format your memory card regularly to ensure stable operation.

The 64GB memory card is correctly installed in the host unit at the time of manufacture.

Installation and Removal Procedure:

1. (When installing, verify the orientation of the memory card and insert it with the power disconnected. Insert until a click is heard, ensuring the memory card is flush with the housing.)



View from the front of the unit



View from the rear of the unit

2. When the host device is powered off, you may gently press the top of the memory card. Upon hearing a click, the card will eject; at this point, remove it by hand.

Note: The memory card slot contains a spring mechanism. Exercise caution during removal to prevent loss due to the card springing out.



View from the front of the unit



View from the rear of the unit

1. Before using the memory card, please check the following points.
2. Do not use non-specified memory cards. Failure to do so may result in data corruption or recording failure.
3. Use memory cards with a capacity of 64 to 256GB (branded cards of 256GB or higher capacity are recommended).

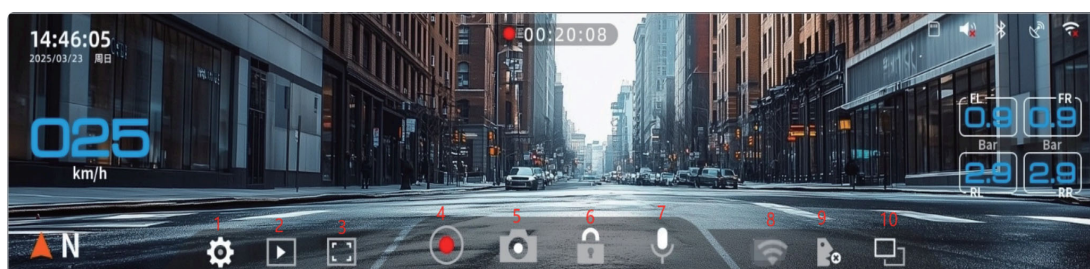
Memory Card

4. Use high-speed memory cards rated at 'UHS U3' or higher. Using a UHS U3 or lower-grade memory card may result in recording files failing to save properly or screen flickering occurring.
5. Format the memory card on the main unit or a computer before use.
6. Formatting the memory card will erase all recorded data. Please ensure backups are
7. made beforehand.

In the event of an incident, always remove the memory card after powering off to prevent damage to recorded data.

Display Function Overview

1.Homepage Preview Interface Usage



1. Settings menu: Access the settings menu to modify configurable values.
2. Local playback: Access video/photo files stored on the SD card.
3. Zoom button: Supports three zoom levels (X1/X2/X4), allowing adjustment of the field of view for the preview image displayed on the screen.
4. Recording button: Single press to toggle between recording and pause states.
5. Capture button: Single press to take a photograph.
6. Lock button: Click to lock the currently recorded video. Once locked, the video will not be automatically overwritten.
7. Recording toggle: Click to switch between recording and pausing the recording session.
8. Wi-Fi Switch: Click to toggle Wi-Fi on/off. When Wi-Fi is active, the network name and password will be displayed.
9. Voice Control Switch: Click to toggle voice control on/off.
10. Display Mode Switch: Click to switch the display mode of the screen.

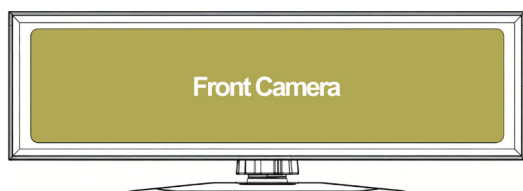
Display Function Overview

2.Display Mode Explanation

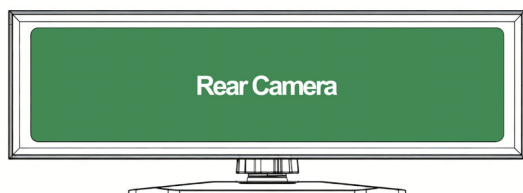
Whilst the recorder is operating normally, you may switch between display modes by swiping left or right, or by pressing button 10.



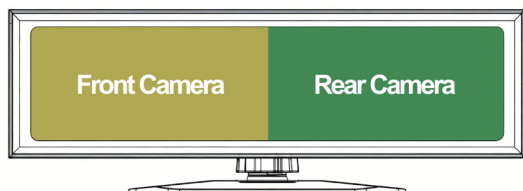
When both the front and rear cameras are connected to the host device, three display modes are available.



The front camera preview occupies the entire display.

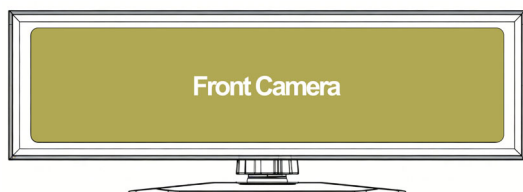


The rear camera preview occupies the entire display.



The front and rear camera previews each occupy half of the display.

When the host unit is connected to the front camera, interior camera, and rear camera, there are four display modes.



Front camera preview occupies the entire display screen

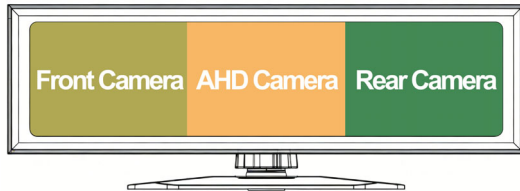


Interior camera preview occupies the entire display screen

Display Function Overview

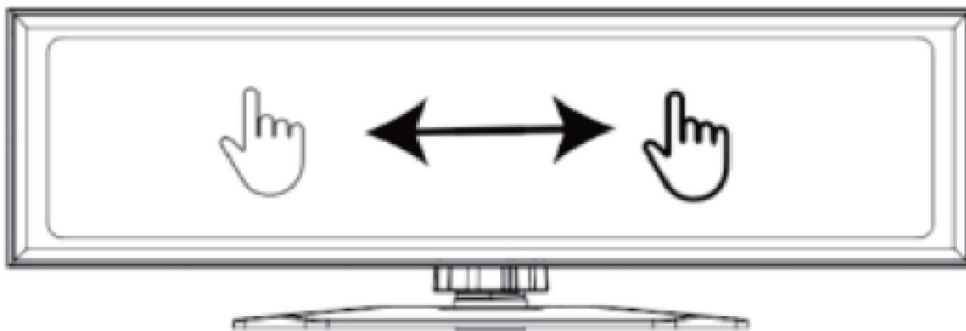


Rear camera preview occupies the entire display screen



The front, interior and rear camera previews each occupy one-third of the display.

Note: When a single camera preview occupies the entire display, the preview only covers a portion of the actual recording area. Adjust the preview viewing angle by swiping the display up or down.



Display Function Overview

Voice Recognition Command Guide: When the voice recognition switch is activated, utter the following commands to activate the corresponding functions.

Voice Recognition Commands	
Turn off screen	Turn on screen
Turn off Wi-Fi	Turn on Wi-Fi
Stop recording	Start recording
Lock video	Take photo
Open front camera	Show rear camera
Show all	

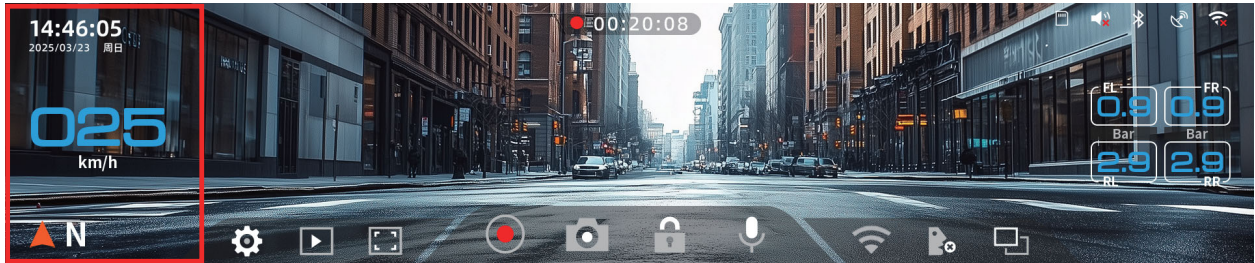
Voice Announcement Entry Description: When the host executes the following entry function, the microphone will automatically announce the entry.

Voice Announcement
Activate Parking Monitoring
Commencing Recording
Ceasing Recording

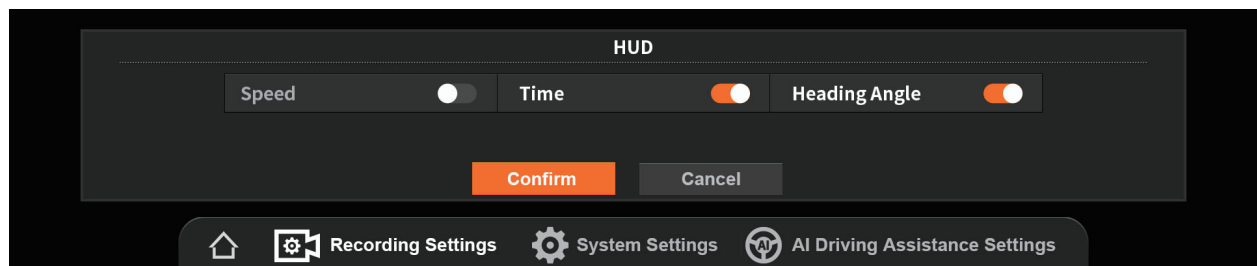
Display Function Overview

3.HUD mode

1. By connecting a GPS device, the Head-Up Display (HUD) mode can be activated. Speed, direction, and date information will be projected directly into your field of vision.



2. Access the settings page by clicking the settings menu button (change to icon) on the home screen.
3. Select System Settings.
4. Click the HUD settings option
5. Tick the box to display the content.



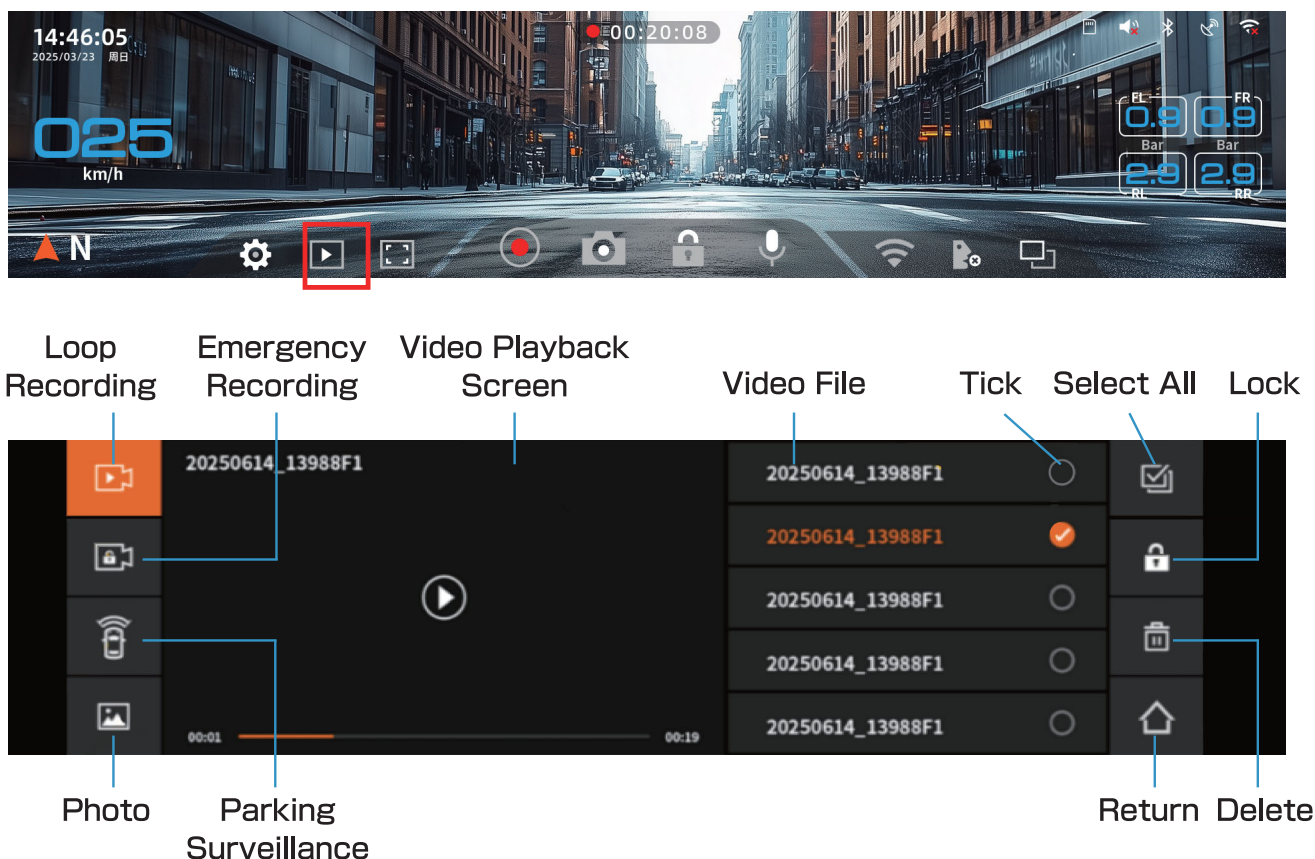
Note: The heading angle and speed display require a GPS connection. When GPS positioning fails, the speed and heading angle will not change.

- When the vehicle speed is within the range of 1 km/h to 119 km/h, the speed display appears in light blue.
- When the speed exceeds 120 km/h, the speed display changes to orange.

Display Function Overview

4.View local videos / images

1.Click the Local Playback icon on the home screen to display the file management menu. You may play recorded videos or view photographs on the host device.



2.Click the video file to select it, then press the play button to start or pause playback.

3.Click the Lock button to lock selected files for preservation. Locked video files cannot be overwritten by ordinary video files.

4.Click the Select All button to select all files in the current folder at once for batch operations.

5.Click the left-hand menu bar to switch between folders. From top to bottom, these are: loop recording files, locked files, parking surveillance files, and photographs.

6.Add icon prompts and operation guidance diagrams.

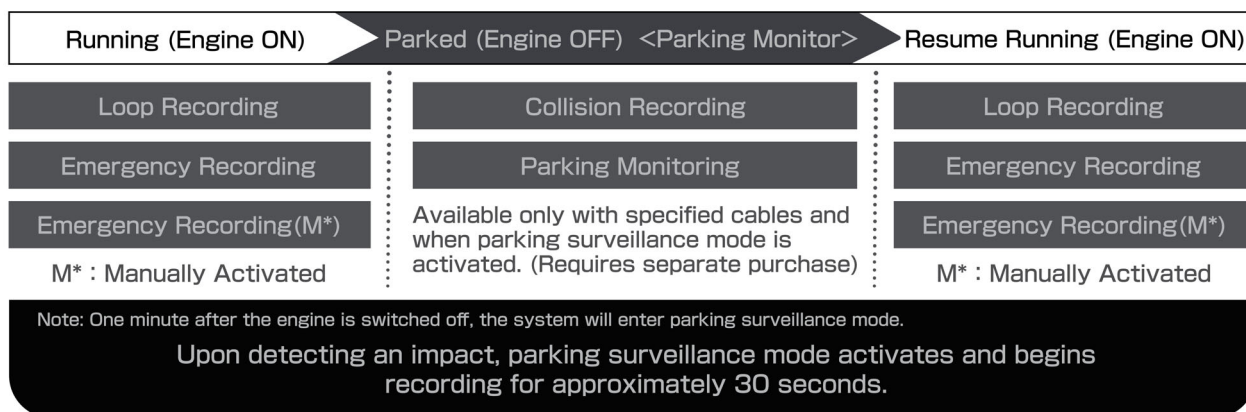
Video Recording Mode Description

1. Loop recording

Upon powering on, the unit automatically enters loop recording mode. When the SD card reaches capacity, the system will automatically overwrite the earliest files and continue recording. Video files generated during loop recording are stored in the <Normal> folder on the SD card. When SD card storage is exhausted, the most recent recordings will automatically overwrite the oldest videos in this folder.

Note: Forced Recording Function: Recording will pause when the host enters the settings or playback pages. It will automatically resume when switching back to the home screen. If the device remains on any page other than the home screen for 15 seconds without any operation, it will automatically return to the home screen and resume recording. If recording is manually paused for 15 seconds without any operation, recording will automatically resume.

Recording Modes



2. Emergency Recording

To utilise the emergency recording function, set impact sensitivity to High / Medium / Low. Upon detecting an impact while powered on, emergency recording commences, generating a locked file. Recording concludes automatically, reverting to loop recording.

Upon collision detection, the 15 seconds preceding the incident and the 15 seconds following it will be merged into a single file (totalling 30 seconds) and stored within the <Event> folder on the SD card.'



Video Recording Mode Description

If the device has just commenced recording and the recording duration is less than 15 seconds, only the current recording duration plus 15 seconds following the collision will be saved as a single video composite file. As illustrated below, only a 20-second emergency recording will be preserved.



Files saved via emergency recording are large in size and will not be overwritten by cyclically recorded footage. When the number of loaded files increases, please periodically back up files as required before deletion. (Accessible via mobile app/local playback on the main unit/card reader connected to a computer to read SD card footage for deletion.) When the <Event> folder storage is exhausted, the most recent locked video will automatically overwrite the earliest locked video.

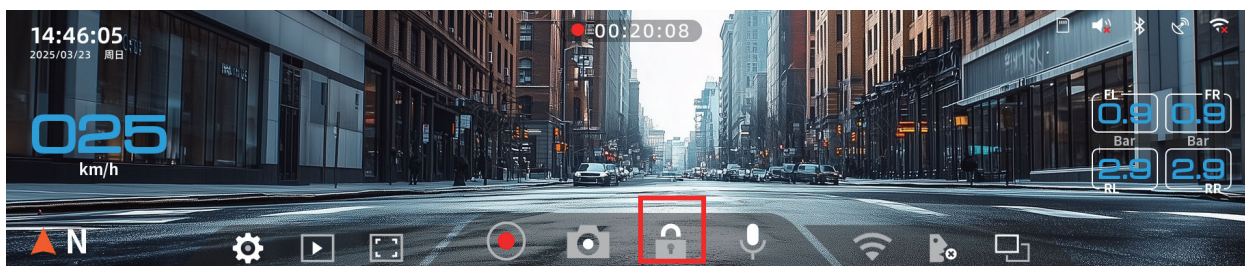
Precautions:

- When collision sensitivity is set to High, minor impacts will trigger emergency recording.
- When collision sensitivity is set to Low, only severe impacts will trigger emergency recording.

When collision sensitivity is set to Off, the unit will not detect impacts.

Manual Emergency Recording

During loop recording mode, manually press the lock icon on the main unit's home screen to initiate emergency recording.



3. Parking Monitoring Function Recording

Parking monitoring supports three surveillance modes:

Collision-activated start:

When ACC is disconnected, the unit automatically powers on upon detecting impact, records for 30 seconds, locks the video, then powers off automatically. Locked files are stored in the <Parking> folder on the SD card.

Video Recording Mode Description

Locked files are large in size and cannot be overwritten by regular videos. When the number of loaded files increases, please regularly back up files as needed before deletion. (Files can be deleted via the mobile app/local playback on the main unit/using a card reader connected to a computer to access videos on the SD card.) When the <Parking> folder storage is exhausted, the newest locked video will automatically overwrite the oldest locked video.

Note: Collision activation within the parking monitoring function must be enabled in the settings menu, with collision sensitivity set to High / Medium / Low. Failure to do so will prevent collision detection.

Time-lapse recording (requires separate purchase of a step-down cable)

Time-lapse recording employs 'low-frame-rate image capture + compressed video synthesis' to enable extended vehicle monitoring within limited storage and power constraints.

Upon disengaging the ignition, the main unit displays a black screen announcing "Parking monitoring activated", entering time-lapse recording mode at 1 frame per second. Subsequently, continuously captured frames are synthesised into video clips, recorded according to preset durations and stored within the <Normal> folder.

Note:

- Time-lapse recording requires an external power supply when the vehicle is switched off. Contact after-sales to purchase the official step-down cable.
- Enable time-lapse recording within the parking monitoring function on the settings page and select the monitoring duration according to actual requirements.
- The monitoring duration is a preset maximum; actual recording time is constrained by storage capacity and power supply conditions: storage will automatically loop and overwrite the earliest footage once full; recording ceases immediately upon power interruption.
- To ensure all monitoring files are saved correctly, please format the memory card beforehand to prevent storage anomalies
- Extreme environments such as high or low temperatures may affect recording stability; avoid prolonged exposure to such conditions.
- When using vehicle auxiliary power, ensure the battery protection function is enabled to prevent vehicle immobilisation due to battery depletion.

Collision activation and time-lapse recording may operate simultaneously.

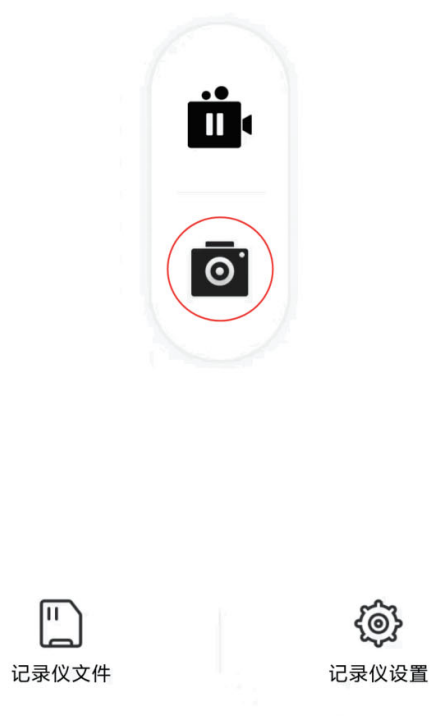
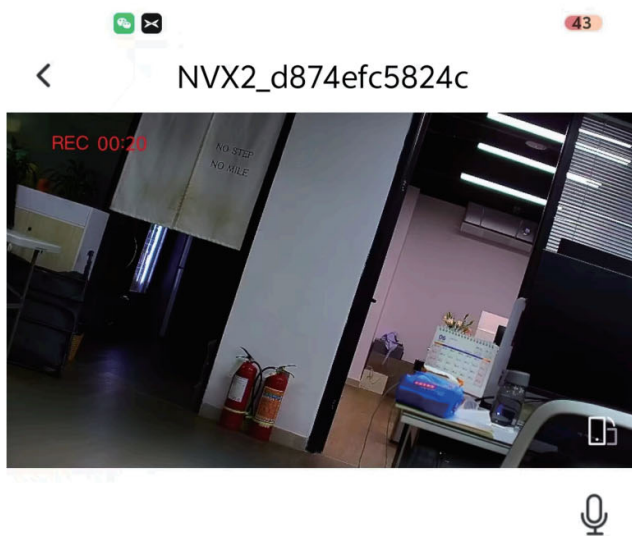
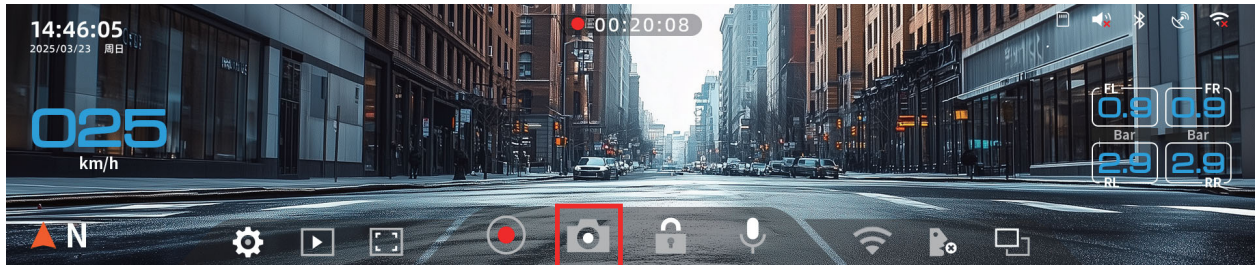
The product supports the 'Time-lapse Recording + Collision Activation' linkage: under normal conditions, recording proceeds at the preset 1 frame per second. Upon detecting anomalies such as collisions or vibrations, it automatically switches to 30 frames per second for 30 seconds of critical video capture, then resumes time-lapse recording mode.

Note: Upon completion of time-lapse monitoring duration, extended monitoring ceases. The device will only activate recording upon collision detection.

Video Recording Mode Description

4.Photo Capture

Tap the photo capture button on the home screen/app to take a photograph. Images will be stored in the <Photo> folder.



Main Unit Settings Menu Functions

Recording Settings

1.The Recording Settings page allows configuration of options related to camera recording:

Function Item	Default Value	Configurable Item
Resolution	2K30fps+2K30fps	2K30fps+2K30fps 2K28fps+2K28fps 1080P30fps+1080P30fps 1080P28fps+1080P28fps 1080P55fps+1080P55fps 1080P60fps+1080P60fps
Rear Camera Mirroring	Off	On / Off
Pre-Recording Function	On	On / Off
Loop Recording	1 minute	5 minutes / 3 minutes / 1 minute
Collision Sensitivity	Medium	High / Medium / Low / Off
Audio Recording	On	On / Off
Date Watermark	On	On / Off
GPS Watermark	On	On / Off
Parking Monitoring	Off	Time-lapse Recording / Collision
Reverse Link	On	On / Off

System Settings

The System Settings page allows configuration of host-related functional options:

Function Item	Default Value	Configurable Item
WIFI	Off	On / Off Note: When WIFI is enabled, the SSID and password will be displayed. These can be modified within the app
Touchscreen Sound	Medium	High / Medium / Low / Off
Language Settings	First activation when,User-configurable	Simplified Chinese / Traditional Chinese/ Japanese / English / Korean / German

Main Unit Settings Menu Functions

Speed Unit	km/h	km/h, mph
Light Source Frequency	60Hz	50Hz/60Hz
HUD Mode	Default Fully On	Speed, Time, Heading Angle
Screen Saver Activation Time	Off	1 min / 3 min / 5 min / Off
Time & Date Settings	Upon initial activation, Set by user	Adjustable year / month / day / hour / minute / second
Time zone setting	Upon initial activation, Set by user	Covers 38 time zones ranging from -12 to +12.75
Date Format	Year-Month-Day	Year/Month/Day, Month/Day/Year/, Day/Month/Year
Display Brightness	Auto Adjust	Auto Adjust / Manual Adjust
Format Reminder	On	On / Off Note: When enabled, alerts will appear when storage card space is exhausted
Restore Factory Settings	/	Confirm / Cancel
Format Storage	/	Confirm / Cancel
GPS Information	/	Real-time display of satellite count, time, latitude/longitude, speed, direction, etc.
Electronic Manual	/	Scan QR code to view digital manual
Version Number	/	Current firmware version

Main Unit Settings Menu Functions

AI Driving Assistance Settings

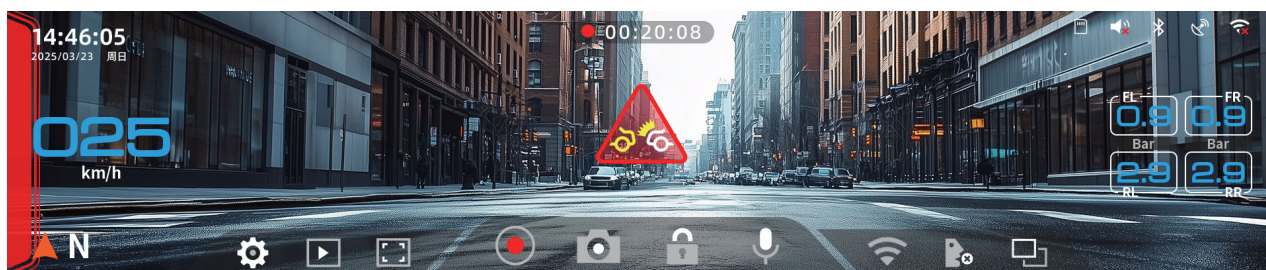
Within the AI Driving Assistance Settings page, configure driving guidance-related functional options:

Function Item	Default	Configurable Options
Voice Recognition	On	On / Off Note: Enabling this feature activates voice control for specific commands
Fatigue Driving Alert	4 hours	4 hours / 2 hours / 1 hour / Off
BSD Volume	Medium	High / Medium / Low / Off
BSD Calibration	/	/

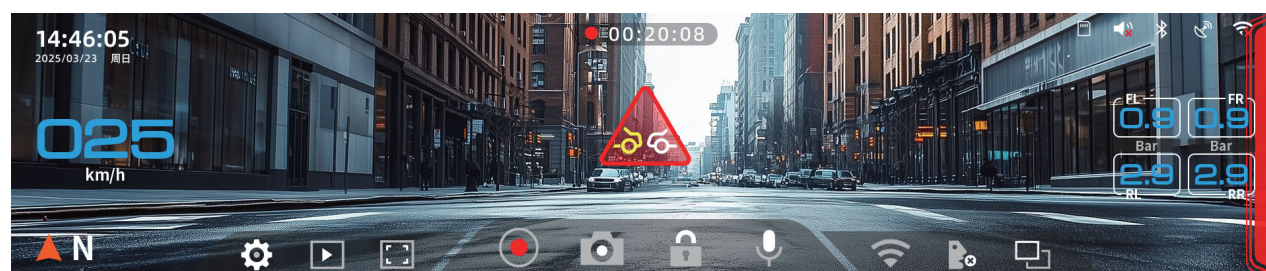
BSD Function Description

Whilst driving (with BSD function activated) and when a concealed vehicle is detected within the left/right rear blind spot, the main unit's LCD display will alert the driver via a red warning bar and audible warning.

Should other vehicles be detected within the left/right/rear detection zones (e.g.), the red warning bar will flash on both sides of the LCD display. A 'whoosh' sound will simultaneously be emitted.



Left-side Collision Warning



Right-side collision warning