



CP2-NA-LTE Video Telematics Camera

USER GUIDE

v1.0



WARNING: SmartWitness installations should be performed by a qualified individual or installation professional only. Working with a vehicle's power system can be dangerous to both you and your vehicle. This installation is intended only to be a guide since vehicle designs and power/input sources can vary significantly from vehicle to vehicle.

If you need to schedule a professional installation service in the USA for your SmartWitness device(s), please visit smartwitness.com/request-install and submit the online form.

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SAFETY ADVICE & FCC

FCC Part 15.19

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.

FCC Part 15.21

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment

FCC RF Radiation Exposure Statement: This equipment complies with FCC RF Radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER.
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



Please make sure you follow the safety advice/instructions given in the user guide.

Caution

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**
Battery for RTC(Real Time Clock) inside

Caution

Install the product where it does not block driver's visibility and where there is no airbag installed. This could cause an accident or might injure passengers in case of accident

Caution

Damages due to production malfunction, loss of data, or other damages occurring while using this product shall not be the responsibility of the manufacturer. Although the product is a device used for recording videos, the product may not save all videos in the case of a malfunction. In the case of an accident, the sensor may not recognize the shock when the impact is light and as a result it may not begin recording automatically.

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

GPS RECEPTION

1. Activate the product in an area without large buildings to improve GPS reception.

The commercial purpose GPS has the average range error of more than 15 meters and the range error could be more than 100 meters due to environmental conditions like buildings, roadside trees etc.

2. The temperature range for optimum operation of the GPS receiver in your car is -10 ~ 50°C.

3. When using the product for the first time or after a long period (more than three days), it may take a little longer to recognize your current location.

It may take between five and thirty minutes to get GPS reception.

GPS reception may be impaired under the following circumstances

- 1) If there is an object at the end of the GPS antenna
- 2) If your vehicle has metallic elements on the windshields
- 3) If equipment generating electromagnetic waves that interfere with the GPS signal is installed in the vehicle e.g.: Other GPS devices such as a certain type of wireless activated alarms, MP3 and CD players and camera alarms using GPS.
- 4) If you are using a receiver connected by cable, electric interference can be avoided by simply changing the location of the receiver (antenna).
- 5) On heavily overcast or cloudy days, if the vehicle is in a covered location such as under a bridge or raised roadway, in a tunnel, an underground roadway or parking area, inside a building or surrounded by high-rise buildings.
- 6) If GPS signal reception is poor, it may take longer to locate your current position when the vehicle is moving than when it is stationary.

CONTENTS



**CP2
Vehicle Recorder**



**3M VHB Sticker for Windscreen
mounting**
(One adhered to bracket, plus one extra)



Power adaptor and camera cable



Alcohol Prep pad (x2)



Wiring harness (BAT+, IGN +, GND, I/O)



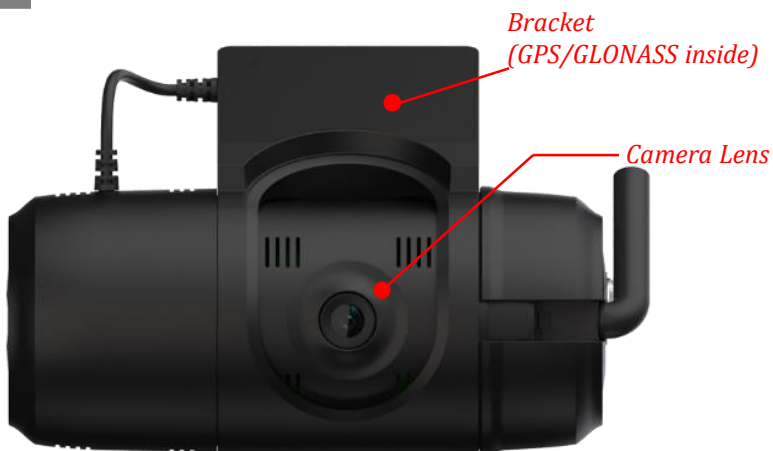
**Black zip ties (x5) &
Square cable adhesives (x5)**



Keys (x1)

INTRODUCTION

FRONT

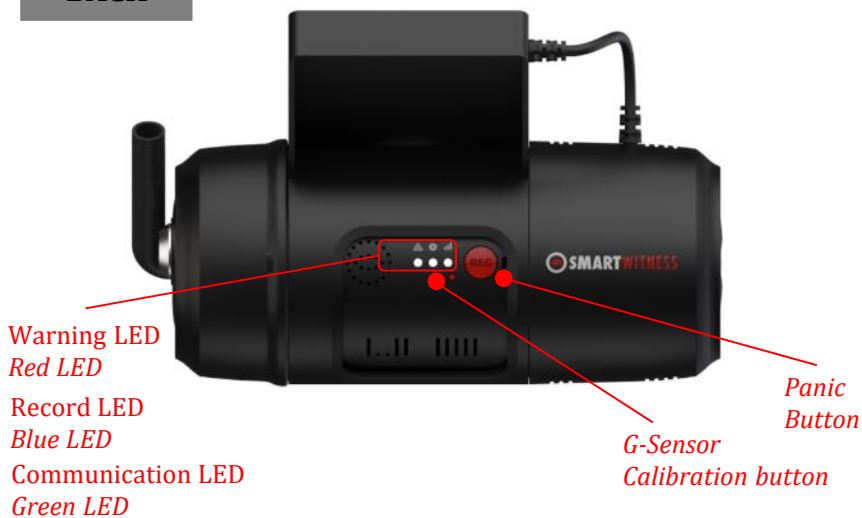


SIDE



INTRODUCTION

BACK










INTRODUCTION

POWER ADAPTOR



POWER CABLE

-  Black (Ground)
-  Red (Power Battery +)
-  White (Power IGN +)
-  Green (Alarm In, NC/NO), (External panic button+)
-  Black (Ground), (External panic button-)
-  Orange (Alarm In, Voltage on/off (3~70V))
-  Yellow (Alarm out), Low(0V) to High (5V)

Power Specifications

Input: DC 10~32V, 2A

Output: DC 5V, 3A

External Panic Button (optional Item)

Cable length: 2m90cm

Button Case Size: 18 x39x10 mm



FUNCTIONS

Automatic Booting

Once the CP2 has been wired to your car power source the CP2 will be boot up, this will take around 1 minute for the unit to be ready to record.

The default setting for record is the continuous recording at 10fps, 720P resolution. On this setting the SD card storage may be used up quicker and depending on the settings, overwrite or stop recording when full. To avoid losing valuable data, back up data to a separate storage or PC device after any incidents.

NOTE: The unit will not start recording immediately after power on. It takes around 1 minute for the built-in power backup system to charge. Thereafter, the internal flash memory will be ready to record.

Continuous Record (When Record mode set as “Continuous”)

This is the default mode for recording. In this setting the unit will begin recording after boot up and record the entire time the unit is powered.

The resolution and frame rates can be set as per your requirements. You can change the configuration of the recording using the CP2 Software. To do this, please see the ‘Settings’ section on page 16.

Event Record (When Record mode set as “Event”)

The unit will record when triggered by either an impact or a push of the ‘PANIC’ button. Each event file contains up to 20 seconds prior & up to 20 seconds post event. And the event file can be extended by 2nd trigger during event record.

When events are triggered continuously, for every event, 20 seconds post-recording from the time of the event will be added to the event data file with a maximum recording time of 3 minutes. When this 3 minutes is reached, the file will be split and a new file will be created but the data will be continuous.

Dual Record (Continuous & Event Record)

The continuous record fps is 1fps and the file will be stored on the “Normal” folder. Event record will work according to the Fps setting for example 30frames per second recording and the file will be stored on the “Event” folder

Drive Data (DRV file)

The DRV (Drive Data) file will be recorded during driving even if there are no events or video. The DRV file consists of GPS and G-sensor data and it helps to find specific data or driving behaviors. The DRV file overwrites the oldest data. The DVR files will be made every 10 minutes.

FUNCTIONS

G-Sensor Calibration

G-Sensor Calibration is needed after installing the CP2.

1. Install the unit and park the vehicle on a flat surface .
2. Turn on the unit and press the small red button three seconds.
3. Then calibration will be done with “beep” sound.

Built-in power backup (Super Capacitor)

When power to the unit is interrupted, CP2 creates the last file using the internal Super Capacitor.

Time and Date

There are no time and date settings as the CP2 get's this information from the GPS satellite's.

SD Memory Card Format

Please format [initialize] the SD card using the “Configuration Tool CP2” software.




Safely Removing the SD Card

Power off vehicle and take out SD memory card

Turn off the power and then check the BLUE LED light. Once the LED light is OFF, you can safely remove the SD memory card.

LEDS & BUZZER SPECIFICATION

RED LED (Warning), BLUE LED (Record), GREEN LED (Communication)

| Status/Step | | LED | | | Sound | |
|----------------------|----------------------------------|---|---|---|------------|-------------------------|
| | | Warning | Record | Communication | | |
| | | (Red) | (Blue) | (Green) | | |
| | |  |  |  | | |
| Start-up & Power off | Booting step1 | | On | Off | Off | |
| | Booting step2 | | On | On and Off | Off | |
| | Booting step3 | | On | On | On and Off | |
| | Booting finished | | On | On | On | Beep No.2 |
| | Power off | | Off | Fast Simultaneous On and Off | | |
| | Power off finished | | Off | Off | Off | |
| Record | Continuous Record | Recording | | On | | |
| | Event Record | Stand by | | On | | |
| | | Recording | | Fast On and Off | | |
| | Dual Record | Continuous Recording | | On | | |
| | | Event Recording | | Fast On and Off | | |
| No record | No recording | | Off | | | |
| Communication | 3G Network Device Ready | | | | On | |
| | Communication | | | | On | |
| Function | SD Format | | Off | Sequence On and Off | | Continuously Beep No. 2 |
| | G-Sensor Calibration | | | | | Beep No. 2 |
| | FW Upgrade | | | Double Sequence On and Off | | |
| | | | | | | |
| Warning | System Warning | SD Card Full | Fast On and Off | Off | | Beep No. 3 |
| | | Video loss | On | | | |
| Error | Record Error | SD error, No SD, Write fail | Slow On and Off | Off | | Beep No. 3 |
| | Communication Error | 3G Network Device error SIM error | | | Off | |
| | | Data Network connection error | | | | Slow On and Off |
| Event Trigger | G-Sensor, Panic button, Alarm-In | | | | | Beep No. 1 |
| | Over Speed | | | | | Beep No.4 (2times) |

INSTALLATION

WARNING: SmartWitness installations should be performed by a qualified individual or installation professional only. Working with a vehicle's power system can be dangerous to both you and your vehicle. This installation is intended only to be a guide since vehicle designs and power/input sources can vary significantly from vehicle to vehicle.

If you need to schedule a professional installation service in the North America, please smartwitness.com/request-install and submit the online form.

Installation Guides can be viewed/downloaded at:
install.smartwitness.com

Configuration Tool CP2 Software



PC SYSTEM REQUIREMENT

Recommended PC specifications for Configuration Tool Software

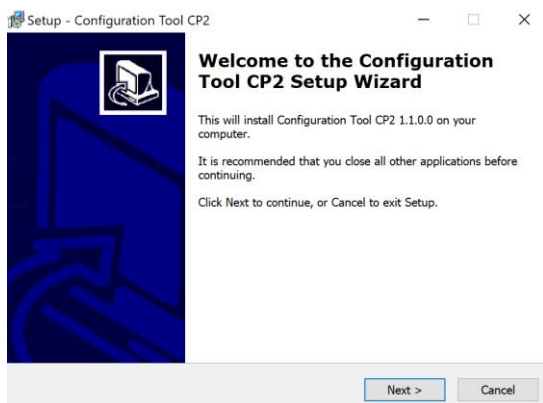
| | |
|-------------------|--|
| OS | Windows 7/8/8.1/10 |
| CPU | Core 2 Duo 2.5GHz or Higher |
| RAM | 2GB or Higher |
| Interface | SD Memory Card Reader |
| HDD Free space | Install : 55MB or Higher Backup : 4GB or Higher |
| Display | 1024 x 768 pixel/True Color or higher |

If the PC does not meet the minimum system requirement, the Configuration Tool Software may not function properly.

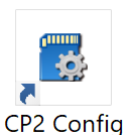
SOFTWARE INSTALLATION

The CP2 Configuration Tool Software is on the provided SD card. (Also available on our website: support.smartwitness.com)

1. Connect the SD card into your PC (if your computer does not have and SD card slot use the USB SD card reader) and open the “My Computer”
2. Right-click the “FHDRM” drive and select [Open]
3. Double click [configtool.EXE] in the [pcsw] folder.
4. Select the language and then follow the dialog box prompts.



5. The CP2 Config Tool icon will be displayed on your desktop.



NOTE: To Un-install the CP2 Configuration Tool Software

Make sure the program is not running and open the 'Control Panel'
Select 'Remove Program' and remove the CP2 Configuration Tool Software.

INITIALIZE SD CARD

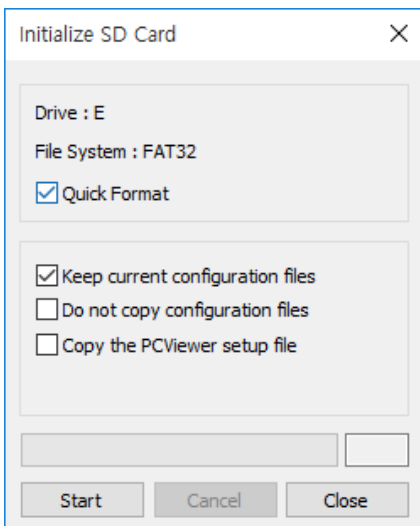
Initialize SD Card

This icon is located at the bottom of the configuration tool software.

To initialize the SD card quickly, click on the above icon and you will be presented with the following screen to choose the SD card to initialize. Click 'OK' when selected.



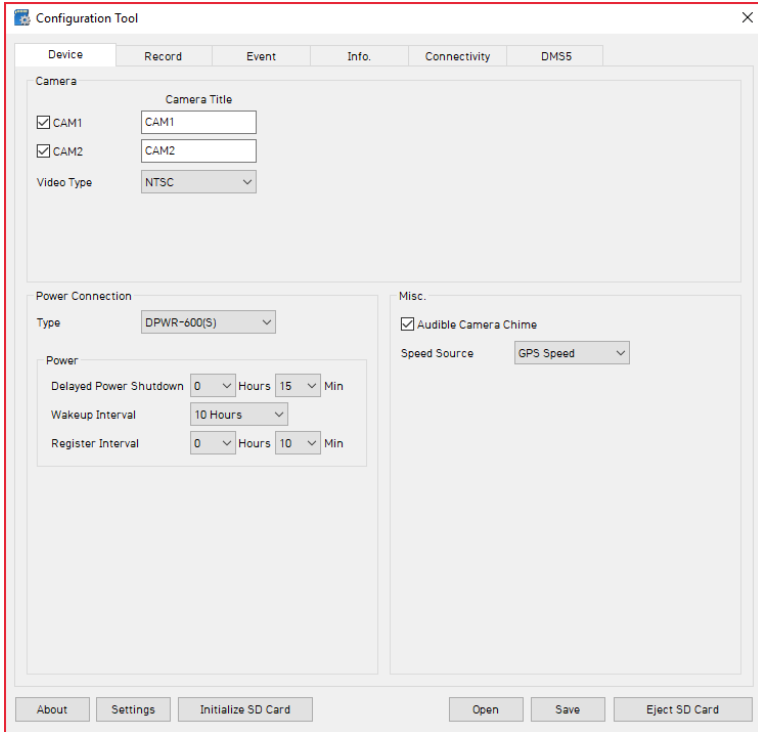
On the following screen, check the 'Quick Format' button and check options and Click 'Start' to begin initialization.



Options

- Keep current configuration files (Use setting.ini file from SD after Initialize SD card)
- Do not copy configuration files (There is no setting.ini file at config folder after Initialize SD card)
- Copy the PCViewer setup file (copy setup.exe file into software folder)

DEVICE SETTINGS



Camera check box

Check all the cameras you wish to use.

Video Type: Set the video type for 2nd camera and external monitor "NTSC or PAL"

Cam Title

Use the alphabet and numbers to rename (max 10 digits) the cameras. The new names will be displayed on the live screen and all recordings.

Connection Type : Set the power supply type. Default power supply is DPWR-600.

Delayed Power Shutdown: Set delayed power shutdown time.

Audible Camera Chime: Turn the Chime on or off

Speed Source: Set a speed when you use Junction box as a power supply.

RECORD SETTINGS

| Device | Record | Event | System | Network | DMS5 |
|---------|------------|-------------|----------|---------|------|
| Channel | | | | | |
| | Resolution | NTSC FPS | Quality | | |
| CH1 | HD | 10 | Standard | | |
| CH2 | D1 | 10 | Standard | | |

Resolution

CH1: VGA (640x480), HD (1280x720), FHD (1920x1080)

CH2: NTSC D1 (720x480), PAL D1 (720x576)

Frame Rate

CH1 only: Adjust the frame rate from 30fps, 15fps, 10fps, 5~1fps

When you use 2 Channel (NTSC)

CH1: FHD 15fps, 10fps, 5~1fps

HD 30fps, 15fps, 10fps, 5~1fps

VGA 30fps, 15fps, 10fps, 5~1fps

CH2: 30fps, 15fps, 10fps, 5~1fps

When you use 2 Channel (PAL)

CH1: FHD 15fps, 10fps, 5~1fps

HD 30fps, 15fps, 10fps, 5~1fps

VGA 30fps, 15fps, 10fps, 5~1fps

CH2: 25fps, 12fps, 10fps, 5~1fps

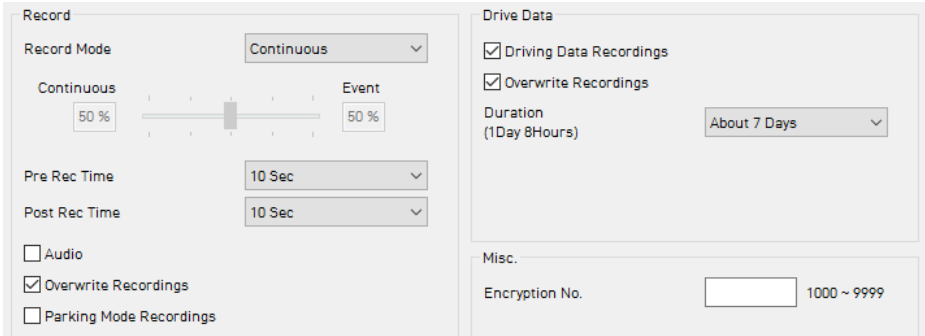
Quality

Adjust the picture quality from Standard, High, Super

Maximum bitrate (Video Quality)

| Resolution | FPS | Bitrates (bit/sec) | | |
|------------|-----|--------------------|---------|----------|
| | | Super | High | Standard |
| Full HD | 30 | 6Mbps | 5Mbps | 4Mbps |
| HD | 30 | 3Mbps | 2.5Mbps | 2Mbps |
| D1 | 30 | 2Mbps | 1.5Mbps | 1Mbps |

RECORD SETTINGS



The screenshot shows a software interface for recording settings. It is divided into two main panels: 'Record' and 'Drive Data'.
In the 'Record' panel:
- 'Record Mode' is set to 'Continuous'.
- A slider between 'Continuous' and 'Event' is positioned at 50% for both.
- 'Pre Rec Time' and 'Post Rec Time' are both set to '10 Sec'.
- Checkboxes for 'Audio', 'Overwrite Recordings', and 'Parking Mode Recordings' are present, with 'Overwrite Recordings' checked.
In the 'Drive Data' panel:
- Checkboxes for 'Driving Data Recordings' and 'Overwrite Recordings' are checked.
- 'Duration' is set to 'About 7 Days'.
- Under 'Misc.', there is an 'Encryption No.' field with the value '1000 ~ 9999'.

Record Mode

- Continuous (Always recording when powered by DC 12/24V.)
- Event (Automatically starts recording by G-sensor or Panic button or Alarm In.)
- Dual (The continuous record fps is 1fps and Event record will work according to the Fps setting.)
- Do not record

Pre Rec Time / Post Rec Time

Adjust the Pre/Post Event time from 5 seconds to 20seconds

Audio: Check it for record audio

Overwrite Recordings

This function allows the unit to overwrite old files on the SD Card automatically. You can overwrite the continuous, panic or G-Sensor recorded files.

Parking Mode Recordings

If your vehicle is parked for more than 5 minutes, recording FPS will be at 1fps. When the vehicle starts moving again, the recording FPS will return to its original setting.

Drive Data

GPS data & G-Sensor data will be recorded with videos and at the same time, GPS data & G-Sensor data will be recorded separately, we call it as 'Drive data (DRV file)'. Check 'Driving Data Recordings' for this feature.

Adjust Drive Data duration from "8 Hours" to "240 Hours".

Encryption No. (Stream password)

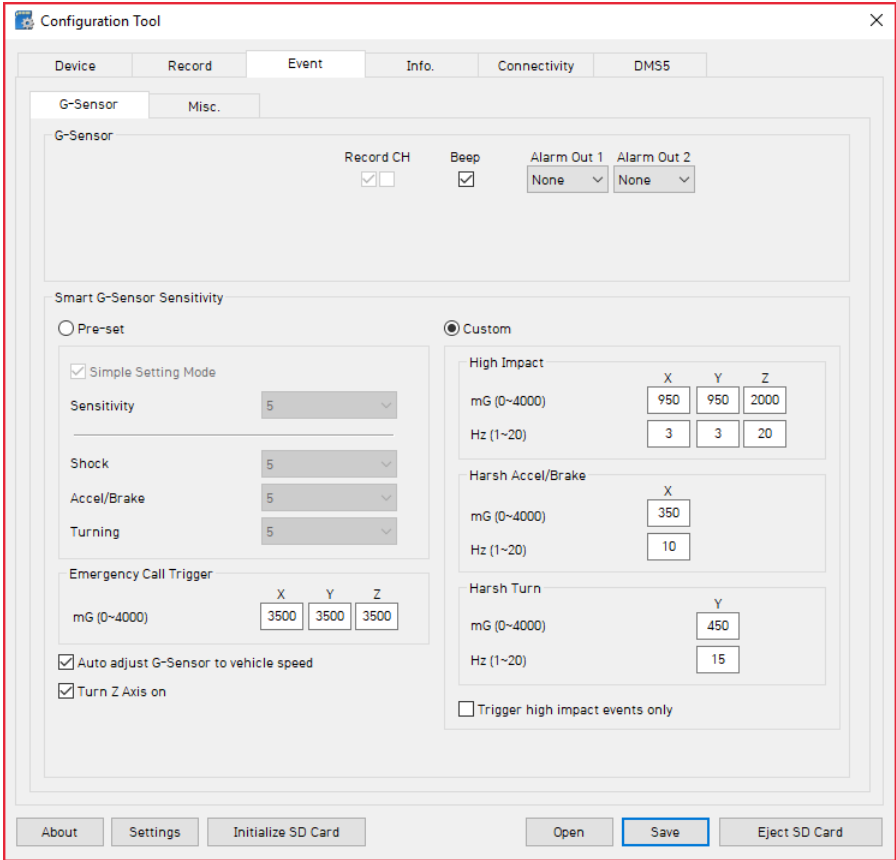
An Additional password can be set for the recorded data using a 4 digit password from 1000~9999. If a password is set, keep a record in a safe place, Without the password, you will not be able to view the recorded video.

EVENT SETTINGS

Event settings

You can set the unit to record when triggered by the G-Sensor, Panic Button and GPS Speed Limit and Alarm Inputs.

And you can set the Alarm out duration per each event.



G-Sensor Sensitivity: The shock sensor sensitivity can be set to 'Simple setting Mode' or 'Custom'. Set to easy allows you to set the sensitivity to 9 (High), 5 (Medium) or 1 (Low).

In custom set, you can set 3 different shock sensor values individually.

Auto adjust G-Sensor to vehicle speed

Once it checked, CP2 will automatically decrease the G-Sensor sensitivity at higher vehicle speeds to compensate for the naturally added G-forces that are experienced due to velocity.

EVENT SETTINGS

Select record channel

Channel1
(Camera1)

Channel2(Camera2)

The screenshot shows the 'Event' tab in a configuration interface. It contains several event categories: G-Sensor, Misc., Panic Button, Overspeed, System Warning, and Alarm In. Each event has a 'Record CH' field with two checkboxes. Red arrows indicate that the first checkbox is selected for 'Channel1 (Camera1)' and the second is selected for 'Channel2 (Camera2)'. The 'Panic Button' event also has 'Beep' checked and 'Alarm Out 1' set to 'None'. The 'Overspeed' event has a 'Speed Limit' of 100 km/h, 'Beep' checked, and 'Alarm Out 1' set to 'None'. The 'System Warning' event has 'Alarm Out 1' set to 'None'. The 'Alarm In' section lists two alarms: 'ALARM1' (V-Off) and 'ALARM2' (N-O), both with 'Beep' checked and 'Alarm Out 1' set to 'None'.

| Device | Record | Event | System | Network | DM |
|--------------------------|---------------|--|---|-------------------------------------|-------------|
| G-Sensor Misc. | | | | | |
| Panic Button | | | | | |
| | | Record CH | Beep | Alarm Out 1 | |
| | | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> | None | |
| Overspeed | | | | | |
| | Speed Limit | Record CH | Beep | Alarm Out 1 | |
| | 100 km/h Over | <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> | None | |
| System Warning | | | | | |
| | | | | Alarm Out 1 | |
| | | | | None | |
| Alarm In | | | | | |
| Use | Title | Type | Record CH | Beep | Alarm Out 1 |
| <input type="checkbox"/> | ALARM1 | V-Off | <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> | None |
| <input type="checkbox"/> | ALARM2 | N-O | <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> | None |

Over Speed: When the vehicle speed over the speed limit more than 5seconds.

System Warning: SD card error, Video loss, Video Standard error

SYSTEM SETTINGS

This option allows you to adjust the Time Zone, GPS Time synchronization, set your Vehicle No and also the Driver ID.

| Device | Record | Event | System | Network | DMS5 | | | |
|---|----------------------|-------|------------|-----------------------------------|--------|---|-----------|---|
| Date / Time | | | | | | | | |
| Time Zone | UTC | | ▼ | Retrieve time settings from my PC | | | | |
| GPS Time Sync | On Boot | | ▼ | | | | | |
| <input type="checkbox"/> Daylight Saving Time | | | | | | | | |
| Start | Jan. | ▼ | 1st | ▼ | Sunday | ▼ | 0 o'clock | ▼ |
| End | Jan. | ▼ | 1st | ▼ | Sunday | ▼ | 0 o'clock | ▼ |
| <input type="checkbox"/> Manual Time Setting | | | | | | | | |
| 2017-07-11 | | ▼ | 오후 3:22:10 | | ▼ | | | |
| Service | | | | | | | | |
| <input checked="" type="checkbox"/> SD Card Auto Format Feature | | | | | | | | |
| User Management | | | | | | | | |
| Vehicle No | <input type="text"/> | | | | | | | |
| Driver ID | <input type="text"/> | | | | | | | |

SD Card Auto Format Feature: When the SD card has an error and cannot record, the card will be formatted and all data will be erased.

NETWORK SETTINGS

Device Record Event System **Network** DMS5

Network

Enable

Mobile Network

Dial No.

APN

User ID

Password

Authentication **None** ▾

SMS Center Number

Check 'Enable' to use cellular connection.

Adjust the settings like Dial No., APN, password, User ID, Authentication etc.

Please refer to the cellular service provider for these settings.

Wi-Fi

Enable

AP **1** ▾

SSID

Password

Passwords must be at least eight characters.

Support 10 x AP (Access Point)

SSID: The SSID of any wireless adapters must match the SSID you configure in here. If they do not match, you will not get a wireless connection.

Password: add AP password.

*AP must have a password and must be secure WPA/WPA2

Support only 3G or only Wi-Fi

CP2 doesn't have 3G/Wi-Fi switching function yet.

You must select either Wi-Fi or cellular for networking.

DMS5 SETTINGS

| Device | Record | Event | System | Network | DMS5 |
|---|--------|--|---|--|------|
| DMS5 | | | | | |
| <input checked="" type="checkbox"/> Enable | | | | | |
| Domain/Static IP and Port # | | <input type="text"/> | | ex) http://DomainName:5000 | |
| License Key | | <input type="text"/> | | | |
| Transmit | | | | | |
| Tracking Data | | | Telematics Data (DRV) | | |
| <input type="checkbox"/> Transmit Live Tracking Data | | | <input type="checkbox"/> Transmit Telematics Data (DRV) | | |
| Live Tracking Data Type <input type="text" value="LiveTrack2"/> | | | G-Sensor/Gyro Data <input type="text" value="None"/> | | |
| Event Data | | | eCall | | |
| <input type="checkbox"/> Transmit Event Data | | | <input type="checkbox"/> Transmit ECall Notification | | |
| <input type="checkbox"/> Include G-Sensor/Gyro Data | | | | | |
| Event Images | | | | | |
| <input checked="" type="checkbox"/> CAM1 | | <input type="checkbox"/> CAM2 | | | |
| Pre-Event | | <input type="text" value="5 Sec"/> | | Event/Snapshot Quality | |
| Post-Event | | <input type="text" value="5 Sec"/> | | <input type="text" value="High"/> | |
| Event Triggered by | | | | | |
| <input type="checkbox"/> G-Sensor | | <input type="checkbox"/> eCall | | <input type="checkbox"/> Alarm1 | |
| <input type="checkbox"/> Panic Button | | <input type="checkbox"/> Alarm2 | | | |
| <input checked="" type="checkbox"/> Transmit Image | | <input checked="" type="checkbox"/> Transmit Image | | <input checked="" type="checkbox"/> Transmit Image | |
| <input checked="" type="checkbox"/> Transmit Image | | <input checked="" type="checkbox"/> Transmit Image | | <input checked="" type="checkbox"/> Transmit Image | |
| <input checked="" type="checkbox"/> Transmit Image | | <input type="checkbox"/> Transmit Image | | | |

Set Domain/Static IP and Port number

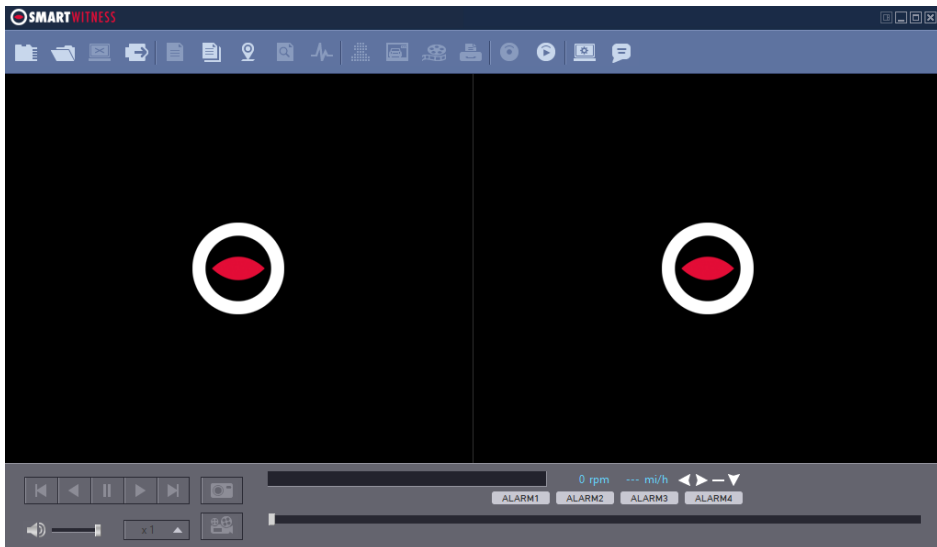
And check the options

- Transmit Live Tracking Data
- Transmit Telematics Data (DRV)
- Transmit Event Data.

And then select events

Please contact your distributor for the correct server settings on this tab.

PC Viewer Software



PC SYSTEM REQUIREMENTS

Recommended PC specifications for PC Viewer Software

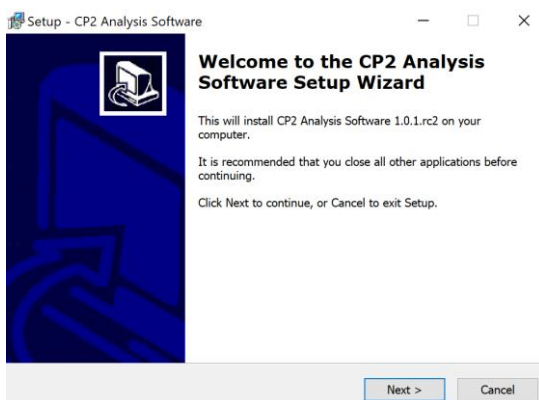
| | |
|-------------------|--|
| OS | Windows 7/8/8.1/10 |
| CPU | Core 2 Duo 2.5GHz or Higher |
| RAM | 2GB or Higher |
| Interface | SD Memory Card Reader |
| HDD Free space | Install : 55MB or Higher Backup : 4GB or Higher |
| Display | 1024 x 768 pixel/True Color or higher |

If the PC does not meet the minimum system requirement, the PC Viewer Software may not function properly.

SOFTWARE INSTALLATION

The PC Viewer Software is on the provided SD card. (Also available on our website.)

1. Connect the SD card into your PC (if your computer does not have an SD card slot use the USB SD card reader) and open the “My Computer”
2. Right-click the “FHDRM” drive and select [Open]
3. Double click [setup.exe] in the [pcsw] folder.
4. Select the language and then follow the dialog box prompts.



5. The CP2 PC Viewer icon will be displayed on your desktop.



NOTE: To Un-install the PC Viewer Software

Make sure the program is not running and open the 'Control Panel'
Select 'Remove Program' and remove the PC Viewer Software.

PC VIEWER SOFTWARE SETTINGS



Viewing settings

This setting is for the PC Viewer Software itself. To set the Recorder, refer to page 16.

A screenshot of the 'Settings' dialog box for PC Viewer Software. The dialog has a title bar with 'Settings' and a close button. It is divided into three main sections: 'Login Password', 'Viewer Settings', and 'Drive Data Settings'.
1. 'Login Password' section: Contains a text input field labeled 'Password (1000-9999)' and a 'Set Password' button.
2. 'Viewer Settings' section: Contains several dropdown menus:
- 'Language' set to 'English'
- 'Speed Format' set to 'km/h'
- 'Speed Type(Play Info Bar)' set to 'GPS'
- 'Time Format' set to '24HR'
- 'Date Format' set to 'YYYY/MM/DD'
- 'Deinterlace' set to 'Auto'
- 'Display Time' set to 'From Camera'
Below these are a 'Save Layout' button and a 'Last Layout' dropdown menu.
3. 'Drive Data Settings' section: Contains three controls:
- 'Max Speed' with a text input field containing '100'
- 'Max G-Sensor' with a dropdown menu set to '+-1G'
- 'Max RPM' with a dropdown menu set to '4000'
At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Click the 'Password' button. Password for the PC Viewer Software can be set with any number between 1000-9999.

The 'speed' & 'date' formats will be set automatically according to the PC Windows setting. However it can be changed with this software setting menu.

Display time: Select time to see. Recorded time by CP2 or your PC local time

Last Layout: The program will launch with the same layout as it was when it was closed.

Default Layout: The program will launch with the Default Layout

Drive Data Settings

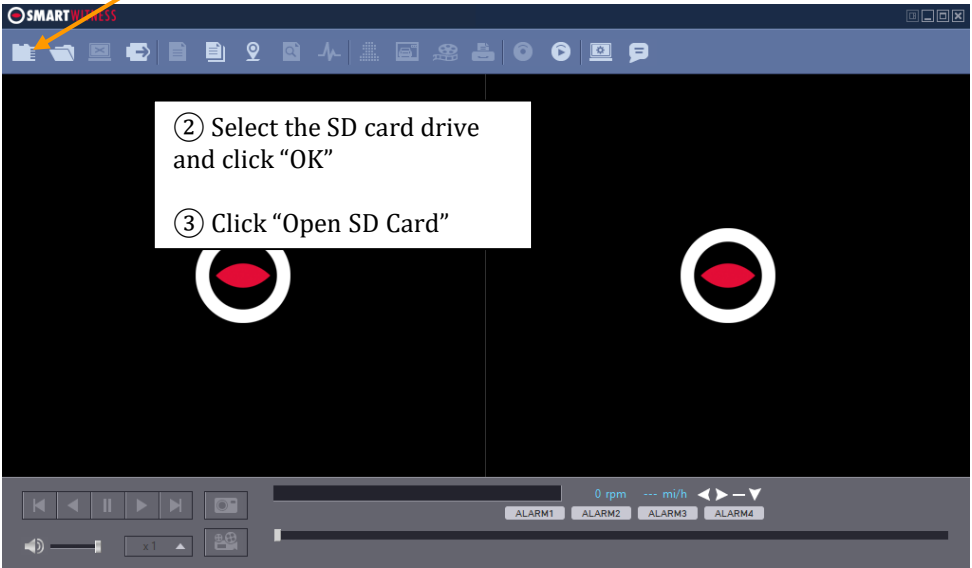
The graph scales for the Drive Data Window will be modified according to the Settings.

OPEN THE SD CARD

Insert the SD card into your PC



① Click "Select SD Card" icon



The playback file list and "Continuous" and "Event" tap is displayed on the right side of the screen.

You can hide the playback list by clicking the close icon.

The playback list can be displayed on the screen again by clicking the "File List" icon.



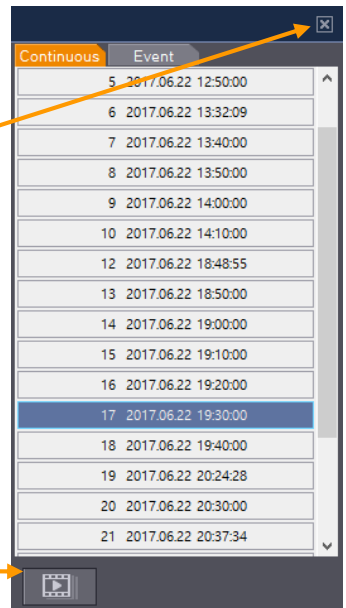
"Select SD Card" icon

You can end the video playback by clicking the "Close files" icon.



"Close files" icon

Continuous Play next file.

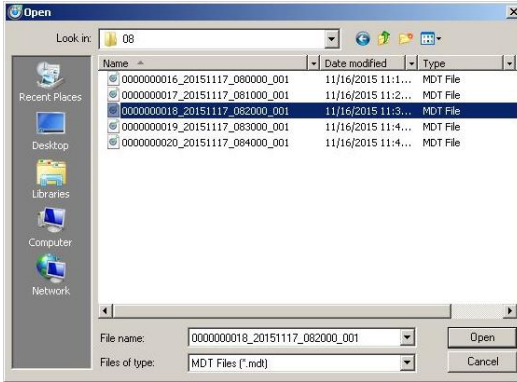


OPEN FILES

If you want to play a specific file that has been backed up on the PC or SD Card, Click the “Open files” icon



“Open files” icon




Select the MDT file you want to play and click “Open”.

The image of the selected file will then be displayed and you can click the “Play” button to play the file.



“Eject SD Card” icon

When finished, click “Eject SD Card” icon and remove the SD card from your PC.

Or please use  “Safely Remove Hardware and Eject Media” button in your PC.

PLAYBACK

Camera title - Resolution

Record Mode

CAM1 - FHD

NOR CAM2 - D1

NOR

X : -0.024
Y : -0.046
Z : -0.062
2017.04.05 09:40:00.020

36 km/h
1 / 9000

X : -0.024
Y : -0.046
Z : -0.062
2017.04.05 09:40:00.005

36 km/h
1 / 18000

1234AB Hank

0 rpm 36 km/h

ALARM1 ALARM2 ALARM3 ALARM4

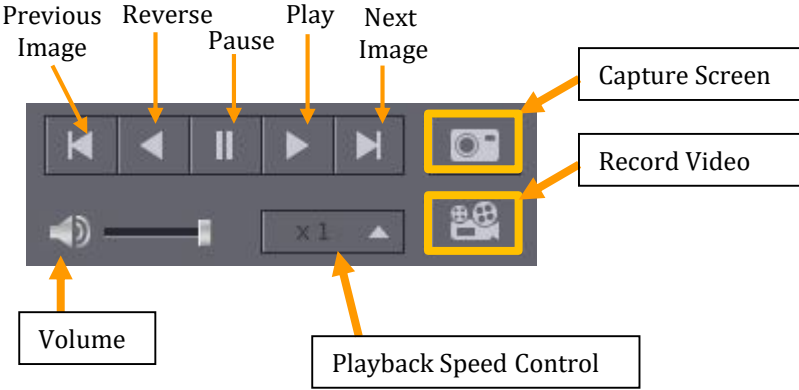
09:40:00 (00:00) 09:40:00 (00:00) 09:40:59 (09:59)

G-Sensor value
Time

GPS Speed
Display Frame / Total frames number

Vehicle No & Driver ID

PLAYBACK



Alarm Indicator

ALARM1 ALARM2 ALARM3

Playback control bar

19:30:00 (00:00)

19:31:14 (01:14)

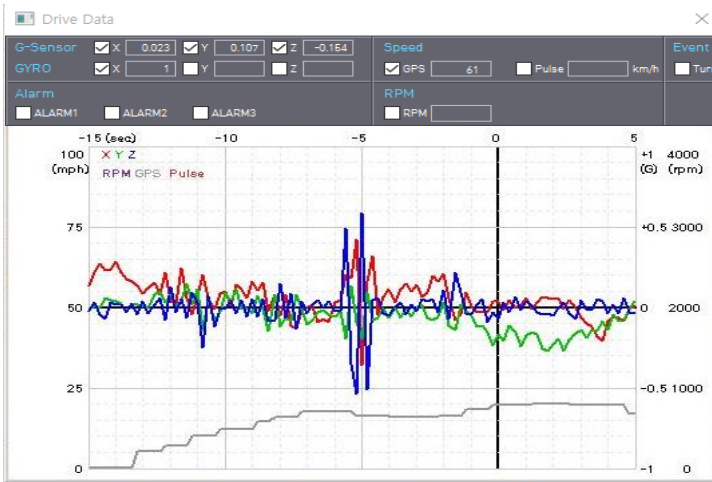
19:39:59 (09:59)

DRIVE DATA



“Drive Data” icon

The default setting only displays the G-sensor graphs but other information may be added by checking the boxes in the upper part of the screen.



G-Sensor: (X axis: red, Y axis: green, Z axis: blue, based on the positioning of the main unit) is shown with the data reference point zero-point calibrated and positive shocks as (+) and negative shocks as (-).

G sensor X value: Front & Back (like Quick brake or Quick Start)

G sensor Y value: Left & Right (like Quick Turn)

G sensor Z value: Up & Down (like prominence and depression)

GYRO: display the gyro value

Speed: GPS measured speed is displayed in grey. .

RPM: The RPM is displayed in purple.

ALARM: The alarms are displayed on the bottom of the screen with the grey bar meaning the trigger is activated.

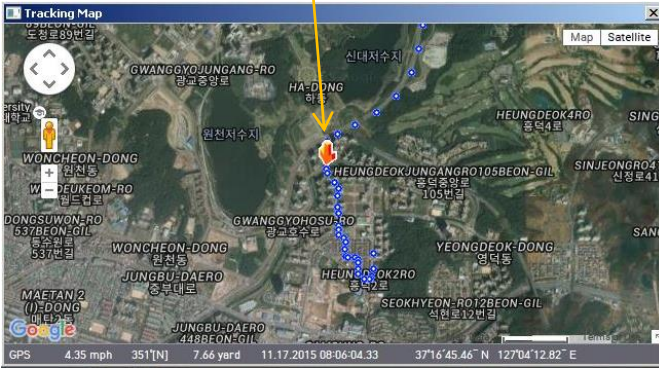
TRACKING MAP



“Tracking Map” icon

The route taken will be displayed on the Google map.

The playback position will be shown on the map with the orange arrow.



The blue markings show the route taken.

To see the route and position on the Google map, the GPS data should be recorded with video.

To see the map, the PC should be connected to the internet.

EVENT SEARCH



“Event Search” icon

The “Event Search” help to find a specific data quickly.

Event Search

Search Range: 2017-06-22 오후 12:32:55 ~ 2017-07-11 오후 4:13:25

G-Sensor: Turn Accel Brake Shock

Record: Panic Button Parking Mode

Speed: 50 km/h GPS Speedometer

Alarm: ALARM1 ALARM2 ALARM3

Sudden Accel/Stop +/-0.4G

| No. | Date/ Time | G-Sensor | Panic Button | Alarm | Speed | Sudden Accel/Stop | |
|-----|---------------------|-------------|--------------|-------|-------|-------------------|---|
| 13 | 2017.06.22 13:59:55 | | | | 53/0 | 0.0000 | C |
| 14 | 2017.06.22 14:00:05 | | | | 52/0 | 0.0000 | C |
| 15 | 2017.06.22 14:03:42 | | | | 50/0 | 0.0000 | C |
| 16 | 2017.06.22 14:04:02 | | | | 50/0 | 0.0000 | C |
| 17 | 2017.06.22 14:04:09 | Accel,Shock | | | 66/0 | 0.0000 | C |
| 18 | 2017.06.22 14:09:52 | | | | 50/0 | 0.0000 | C |
| 19 | 2017.06.22 14:12:10 | | | | 50/0 | 0.0000 | C |
| 20 | 2017.06.22 18:53:14 | | | | 50/0 | 0.0000 | C |
| 21 | 2017.06.22 18:53:21 | | | | 50/0 | 0.0000 | C |
| 22 | 2017.06.22 18:57:11 | | | | 52/0 | 0.0000 | C |
| 23 | 2017.06.22 19:06:00 | | | | 50/0 | 0.0000 | C |
| 24 | 2017.06.22 19:09:20 | | | | 52/0 | 0.0000 | C |
| 25 | 2017.06.22 19:12:11 | | | | 51/0 | 0.0000 | C |
| 26 | 2017.06.22 19:13:33 | | | | 50/0 | 0.0000 | C |

Search Go to Video Close

Select “Search Range” and select “Search Conditions”

And then click Search button.

Choose an event from the searched list and click “Go to Video” to see the video.

PRIVACY SETTINGS



“Privacy Settings” icon

Set the mosaic area on the video for privacy protection.



When backing up the data as a JPG or AVI format and playing in the Viewer software, you are able to make a mosaic processing on the area you have set.

To do this, put the pause the video and click the ‘Privacy settings’ button. The privacy setting screen will pop up.

Blur out the area you wish to protect by left-clicking on the sections. You can select multiple areas.

You can also unselect, selected areas by right-clicking the blurred areas.

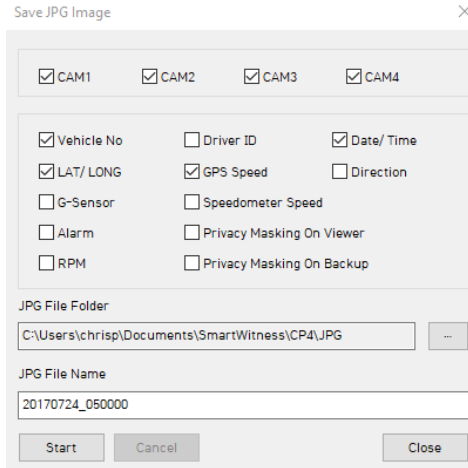
To select all or clear all, click on the ‘Select all’ or ‘UnSelect All’ buttons on the bottom, respectively.

SAVE JPEG AND MP4 FILE

Pause the playback and click “Save JPG” icon to make JPG images.



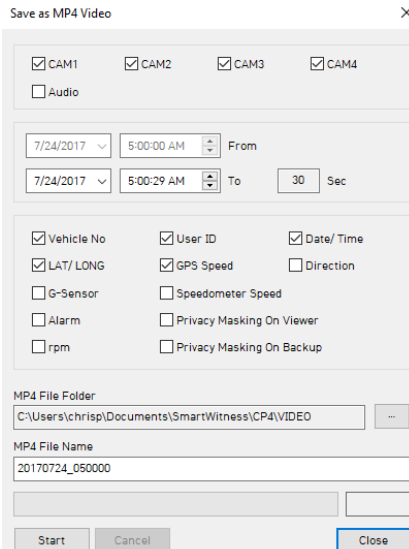
“Save JPG” icon

A dialog box titled "Save JPG Image" with a close button (X) in the top right corner. It contains several sections: a row of four checkboxes for CAM1, CAM2, CAM3, and CAM4, all of which are checked; a second row of checkboxes for Vehicle No, Driver ID, Date/ Time, LAT/ LONG, GPS Speed, and Direction, with Vehicle No, LAT/ LONG, and Date/ Time checked; a third row of checkboxes for G-Sensor, Speedometer Speed, Alarm, Privacy Masking On Viewer, RPM, and Privacy Masking On Backup, all of which are unchecked; a text field for "JPG File Folder" containing the path "C:\Users\chrisp\Documents\SmartWitness\CP4\JPG" and a browse button (...); a text field for "JPG File Name" containing "20170724_050000"; and three buttons at the bottom: "Start", "Cancel", and "Close".

Pause the playback and click “Save MP4 Video” icon to make a MP4 file.



“Save MP4 Video” icon

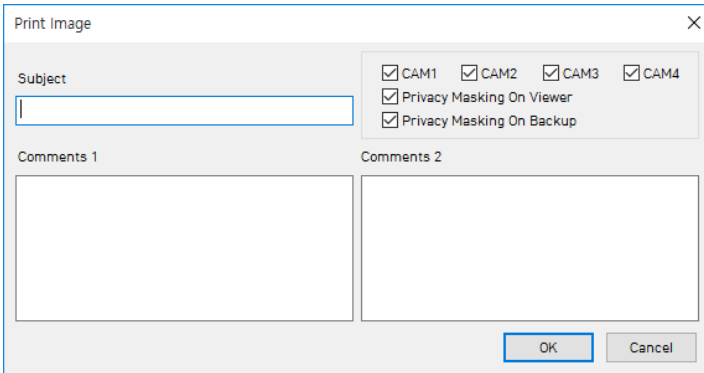
A dialog box titled "Save as MP4 Video" with a close button (X) in the top right corner. It contains several sections: a row of four checkboxes for CAM1, CAM2, CAM3, and CAM4, all of which are checked; a checkbox for "Audio" which is unchecked; a time selection section with "From" and "To" fields, both set to "7/24/2017" and "5:00:00 AM", and a "30" second duration field; a second row of checkboxes for Vehicle No, User ID, Date/ Time, LAT/ LONG, GPS Speed, and Direction, with Vehicle No, LAT/ LONG, User ID, and Date/ Time checked; a third row of checkboxes for G-Sensor, Speedometer Speed, Alarm, Privacy Masking On Viewer, rpm, and Privacy Masking On Backup, all of which are unchecked; a text field for "MP4 File Folder" containing the path "C:\Users\chrisp\Documents\SmartWitness\CP4\VIDEO" and a browse button (...); a text field for "MP4 File Name" containing "20170724_050000"; and three buttons at the bottom: "Start", "Cancel", and "Close".

PRINT IMAGE

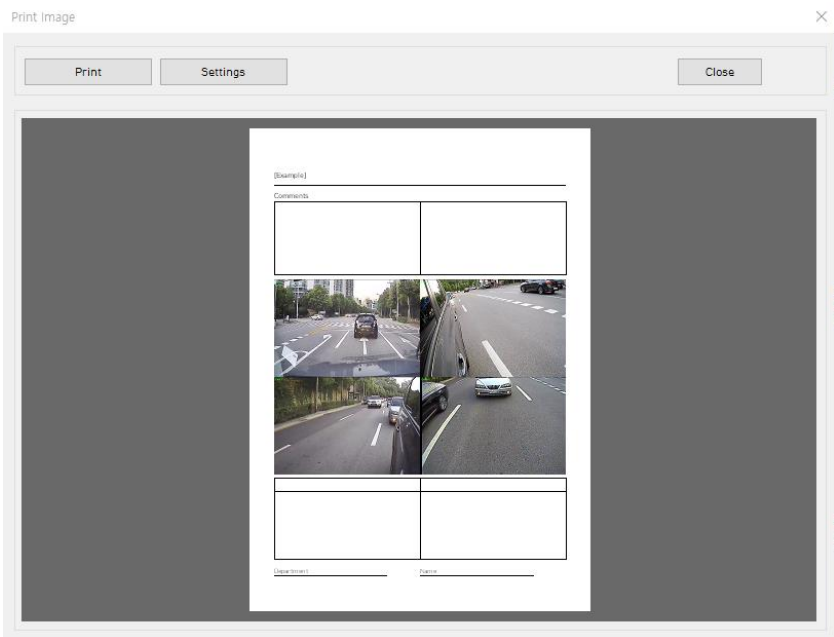
Pause the playback and click “Print Image” icon.



“Print Image” icon

A screenshot of the 'Print Image' dialog box. It features a title bar with a close button (X). The main area contains a 'Subject' text field, two 'Comments' text areas (labeled 'Comments 1' and 'Comments 2'), and a settings section with four checked checkboxes: 'CAM1', 'CAM2', 'CAM3', and 'CAM4', along with 'Privacy Masking On Viewer' and 'Privacy Masking On Backup'. At the bottom right are 'OK' and 'Cancel' buttons.

Type Subject and Comments1 and Comments 2



Alter the printer settings to change paper size/orientation etc.

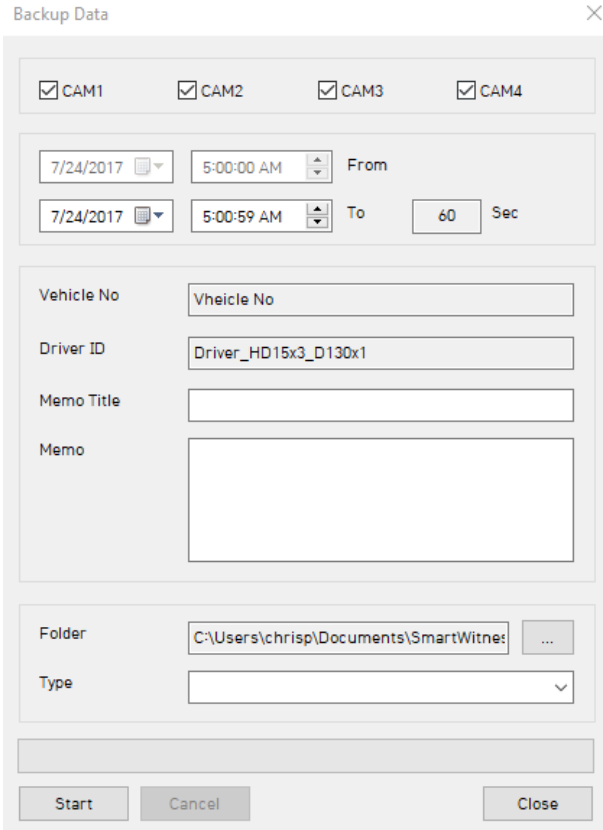
BACKING UP FILES

Back up the recorded data on your PC.

There is an option to store data by type to easy management of data.



“Backup Data” icon

A screenshot of the 'Backup Data' dialog box. The window title is 'Backup Data' with a close button (X) in the top right corner. The dialog contains several sections: 1. Camera selection: Four checkboxes labeled 'CAM1', 'CAM2', 'CAM3', and 'CAM4', all of which are checked. 2. Time range: 'From' and 'To' fields. Both are set to '7/24/2017' with a calendar icon and '5:00:00 AM' with a time spinner. The 'To' field is set to '5:00:59 AM' with a time spinner. A 'Duration' field is set to '60' with the unit 'Sec'. 3. Identification: 'Vehicle No' (text field with 'Vheicle No'), 'Driver ID' (text field with 'Driver_HD15x3_D130x1'), 'Memo Title' (empty text field), and 'Memo' (empty text area). 4. Storage: 'Folder' (text field with 'C:\Users\chrisp\Documents\SmartWitness' and a browse button '...') and 'Type' (dropdown menu). 5. Action buttons: 'Start', 'Cancel', and 'Close' at the bottom.

The start time is when the video was paused and cannot be changed once you start this process.

Set the time you wish to backup and input Title and Memo.

And input Type and then click [Start].

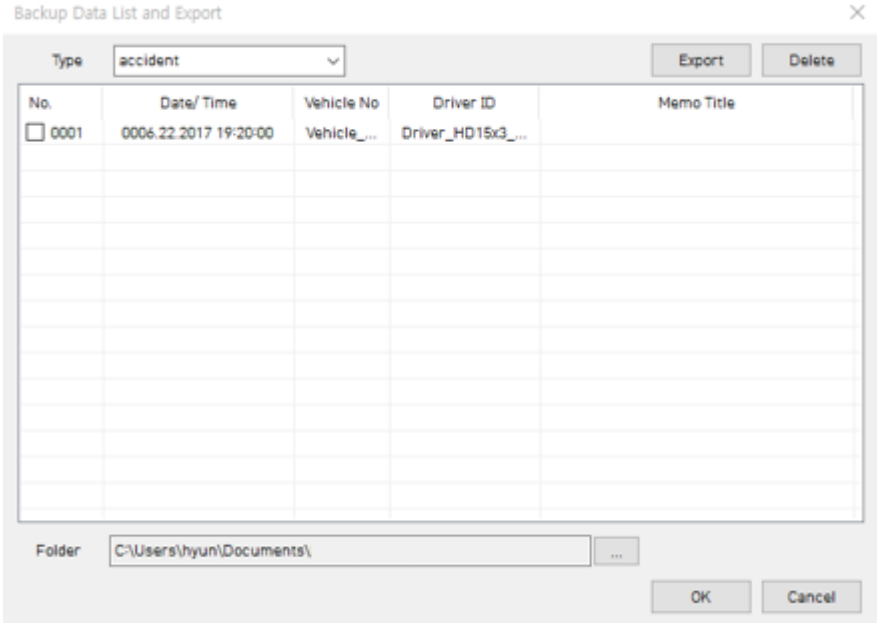
The maximum amount of time you can back up is one hour.

BACKUP DATA LIST AND EXPORT

You can use the data backup list to play data files easier that have been backed up.



“Backup Data List and Export” icon



Choose the folder where the backup files are at the bottom of the screen.

(It will automatically show the last folder that was accessed.)

Then, select the type by scrolling down the options.

The files are listed showing the “Date/Time, Vehicle No, Driver ID, Memo Title”.

Check the box next to the file you wish to play back and click ‘OK’.

TECHNICAL SPECIFICATIONS

| | |
|--------------------------|--|
| Image sensor | 2 Megapixel CMOS Sensor |
| Angle of View | 150° (H : 121.1°, V : 62.4° ±5%) |
| Wireless | LTE CAT1 B2(1900),B4(AWS),B5(850),B12(700AC),B3(700C); [3G] B2(1900),B5(850) WiFi (802.11 b/g/n) and Bluetooth (4.2) |
| Max Data Rate | UL:5.76Mbps, DL : 7.2Mbps |
| Video resolution | 1080p(1920x1080), 720p(1280x720), VGA(640x480) 2nd camera: D1(720x480) |
| Recording Speed | CH1: FHD (30fps) CH1 + CH2: FHD (15fps) +D1 (30fps) |
| Recording Mode | Continuous , Event, Dual Mode |
| Memory | Supports SD Cards up to 128GB (FAT32) |
| GPS/GLONASS | Internal GPS /GLONASS |
| G-Sensor | Internal 3-axis G-sensor |
| Gyro | 3Axis(X,Y,Z), output rate:100 Hz, |
| RTC | Internal super capacitors |
| Speaker | Recording start, error |
| Audio | Internal Microphone |
| Alarm In/Out | 2 x Alarm In, 1 x Alarm Out |
| LED | 3(Red, Blue, Green LED) |
| Super Capacitor | Enables recording of last file & safe shut down |
| PC software | Included |
| Power input | 12V to 24V DC permanent wiring kit Input Voltage: DC 5V, 3A |
| Power consumption | 15W |
| Size / Weight | 164mm x 64Ø , 180g (w/o cable) |
| Operation Temp. | -10°C~55°C |
| Storage Temp. | -20°C~85°C |

APPENDIX: Recording time table

| Channel1 Resolution | Channel2 Resolution | Quality | CH1 FPS | CH2 FPS | 128GB | 64GB | 32GB |
|---------------------|---------------------|----------|---------|---------|-----------|-----------|----------|
| 1080p HD | D1 | Standard | 10 | 0 | 124 hours | 62 hours | 30 hours |
| | | | 10 | 15 | 94 hours | 47 hours | 23 hours |
| 1080p HD | D1 | High | 10 | 0 | 101 hours | 50 hours | 25 hours |
| | | | 10 | 15 | 73 hours | 36 hours | 18 hours |
| 1080p HD | D1 | Super | 10 | 0 | 85 hours | 42 hours | 21 hours |
| | | | 10 | 15 | 60 hours | 30 hours | 15 hours |
| 720p HD | D1 | Standard | 10 | 0 | 167 hours | 114 hours | 56 hours |
| | | | 10 | 15 | 145 hours | 72 hours | 35 hours |
| 720p HD | D1 | High | 10 | 0 | 167 hours | 94 hours | 46 hours |
| | | | 10 | 15 | 111 hours | 55 hours | 27 hours |
| 720p HD | D1 | Super | 10 | 0 | 161 hours | 80 hours | 39 hours |
| | | | 10 | 15 | 90 hours | 44 hours | 22 hours |
| VGA | D1 | Standard | 10 | 0 | 167 hours | 161 hours | 79 hours |
| | | | 10 | 15 | 167 hours | 88 hours | 44 hours |
| VGA | D1 | High | 10 | 0 | 167 hours | 116 hours | 57 hours |
| | | | 10 | 15 | 125 hours | 62 hours | 30 hours |
| VGA | D1 | Super | 10 | 0 | 167 hours | 90 hours | 44 hours |
| | | | 10 | 15 | 96 hours | 48 hours | 23 hours |

This table is a guideline only.

Actual results may vary depending on a variety of factors on the road.

CP2 Firmware Update Instructions via SD card

NOTE: If you're using CP2 with a SIM and connected service, please consult your telematics provider or SmartWitness before attempting to update your device firmware. In this case, the firmware update can be much more easily applied to your device using Smart API over-the-air update service.

1. Prepare Firmware

Create a folder called [program] on the SD root as shown below,



Save the "XXXXXX_x.x.x.img" file to the SD card inside the [program] folder.

2. Upgrading CP2

Insert the prepared SD card to CP2 unit and turn on the power.

The Blue & Red LED will blink while the unit is upgrading. It will also 'beep' continuously. Upgrading the unit usually takes about 30 seconds.

Warning: Do not turn off the power during upgrading. If the upgrade fails, the CP2 unit should be returned to your distributor.

Once the upgrading is finished, the unit will automatically reboot and power up as normal.

Technical Support & Warranty

TECHNICAL SUPPORT

For Technical Support, please contact your local distributor or visit support.smartwitness.com.

LIMITED WARRANTY

This product is supplied with 2 year warranty. The Warranty excludes products That have been misused, (including accidental damage) and damage caused by normal wear and tear. In the unlikely event that you encounter a problem with this product, it should be returned to the place of purchase.

Optional Item

| Model | Description |
|---|--|
| <p>SVA033-D</p>  | <p>1/3" Sony Exmor CMOS Sensor Resolution: 600TV lines, Angle of View: 120° Min. Illumination: 0.1 lux// IR LED On 0 lux Weather-proof Housing (IP68) Operating Temperature: -10°C ~ 55°C Input Voltage: DC 12V, 12pcs LEDs 63.5mm(W) x 57.7mm(D) x 56.00mm(H)</p> |
| <p>SVA040-D</p>  | <p>1/3" CMOS Sensor, DC 5V Camera, 9pcs LEDs Angle of View: 145° Min. Illumination: 0.1 lux / IR LED On 0 lux Operating Temperature: -20°C ~ 60°C Input Voltage: DC 5V 80.5mm(W) x 50.5mm(D) x 61.0mm(H) Connector: 300mm 2Ø Mini Stereo</p> |
| <p>DDC-200</p>  | <p>Dual-lens Driver Distraction Camera. CMOS Video Recording Lens: 1/3" WDR Sony CMOS sensor, 160° Viewing Angle, 12 IR LEDs, 600TVL Facial Recognition Lens: Recognizes facial patterns and alerts drivers who are fatigued or distracted to help avoid accidents, Alarm I/O to trigger recording of the Video Lens on the SmartWitness recorder.</p> |
| <p>RFRD-1000</p>  | <p>Driver ID card reader (RFID) Periodically(every 10 seconds) reads the card ID for easy driver identification. Uses CP2 Serial port (RS-232C, 5V) 6meter Cable</p> |
| <p>ELM327</p>  | <p>OBD2 ELM327 Serial port Records Speed, RPM, and signal information from vehicle OBDII port.</p> |
| <p>SW-PB</p>  | <p>External Panic button Cable length: 2m90cm Button Case Size: 18 x39x10 mm</p> |



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