SMARTWITNESS

CP2

2 Channel HD Recorder

Installation Guide

Model #: CP2-NA

v1.1.1

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.

All cellular-enabled CP2 devices must use the installation wizard for proper onboarding and activation, please visit install.smartwitness.com to register, login, and use the SmartInstall wizard.

1. Overview:

The SmartWitness CP2 is the world's most advanced incident camera with powerful 3G video transmission, built-in GPS tracking and drive data. Developed to provide evidence of events leading up to and during a road traffic accident, the CP2 provides instant notifications and videos of incidents in less than a minute.

CP2 features a 1080p wide angle HD camera, 3-Axis G-Sensor, Microphone, SD storage, SIM card slot, integrated GPS receiver, integrated 3G cellular modem, permanent power cable with optional vehicle input sensors, and a tamper-resistant design.

a. Benefits:

The CP2 features a 1080p HD wide angle (170°) lens to provide a comprehensive view of any road event. CP2 will record exactly what happened before, during and after an incident. It does this by recording the following information: Drivers view of the road, Vehicle Location, Impact Force of Accident, Audio, and Driving Style (speed, acceleration, braking, and steering)**.**

This evidence can protect a driver from many of the issues faced on the roads today: Insurance fraud, Staged Accidents, False/Exaggerated Whiplash Claims, Conflicting Reports of Actual Events, Driving Offence Allegations (speeding, traffic signal violations, swerving, etc.).

When a SIM card is inserted, CP2 is able to send video and driving data via a cellular network (T-Mobile or AT&T in USA, Bell or Rogers in Canada). North American customers can use the CP2 to transmit safety critical video directly to a server (SmartWitness server software required), or integrate with Telematics Software (Please contact us for a list of compatible telematics software). CP2 can also be used as a stand-alone system utilizing only the SD cards to review video and data with SmartWitness' free PC analysis software.

b. Features

Recording	Playback & Analysis
170° Wide Angle Lens.	Mac & PC Analysis Software Included.
Full HD Recording: 1920x1080 (720p and VGA also supported)	Compatible with SmartMail, SmartView, and SmartGuard Solutions
30 Frames per second recording (FPS is adjustable).	Compatible with SmartWitness Smart API for AVL/Telematics Integration (RESTful/JSON API)
Dual Record mode (Continuous + Event).	Real-time notification of events and images during road incidents.
Optional Audio Recording.	Live tracking location and live streaming video available.
Connects directly to vehicle ignition power, automated operation.	Filter Data Search by Time/Date, Event, Vehicle Speed, G-Force level.
Tamper-Resistant Design, secure cover encloses SD card and SIM card.	MP4 Conversion Tool. Data Remains Watermarked.
GPS data records full time to provide location data, vehicle speed, and accurate time/date.	Privacy masking feature for blurring out faces or license plate numbers.
Built-in G-Shock Sensor and Gyro (adjustable sensitivity).	Google Maps Integration for Route Tracking.
Built-in temperature monitor and intelligence in high-temp environments.	Advanced Driver Behavior Analysis & Reporting Software.
Delay power shutdown feature enables recording for up to 24 hours after ignition off.	Save/Print Event Reports.
Integrated 3G Cellular Modem (2FF SIM size)	OTA Software & Firmware Updates.

c. Package Contents:

CP2 Vehicle Recorder

Power Adaptor
& Cables

SD/SIM Cover
(x1)

3M VHB Pads (x2)
(Double sided adhesive for
Windshield mounting)

Torx Screw and
Tool (x1 ea)

Cord Clips (x2)

Bracket Angle Lock &
Screw (x2 ea).
*One comes pre-installed in CP2

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2. CP2 Hardware Overview

Watch 360° Hardware Overview Video Online here: https://youtu.be/cYPIBZ9rGoU

a. Front View

Bracket (GPS/GLONASS inside)

Camera Lens

Cable (95cm)

b. Side View

SIM Slot (Mini SIM)

SD Memory Card Slot

Lock using Torx screw

c. Rear View

Warning LED
Red LED

Record LED
Blue LED

Communication LED
Green LED

PANIC Button

G-Sensor Calibration button

d. Top View

2nd camera port
Mini Stereo connector
5V camera, Analog (D1 resolution) camera only.

RS-232C port for an external device like OBD2, Driver RFID.

Angle Stopper
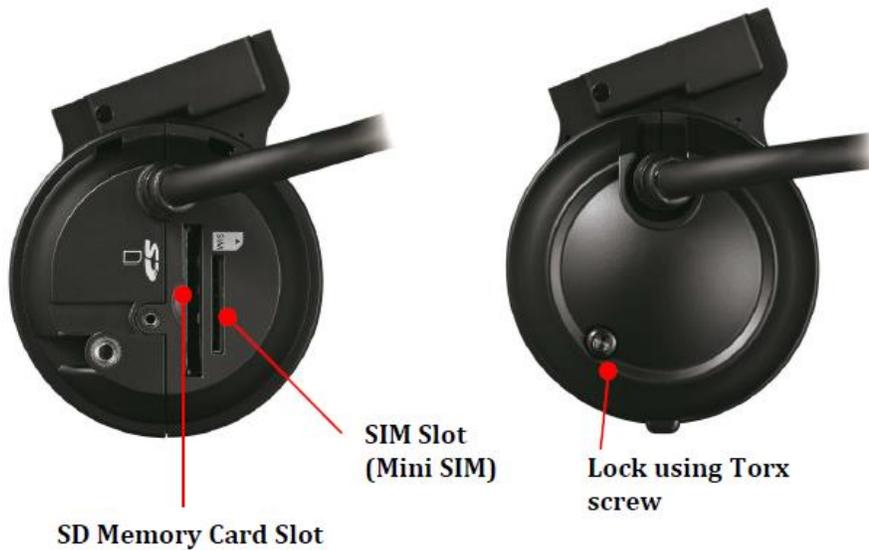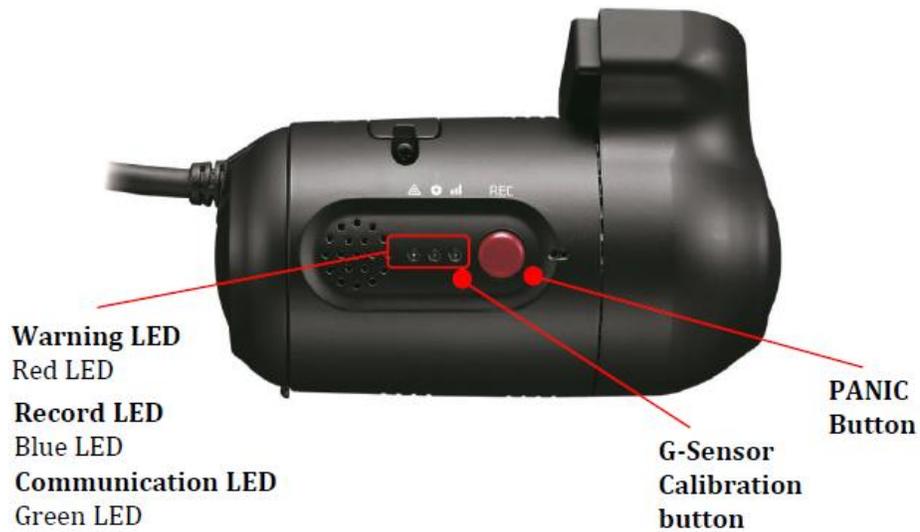
3. Installation: First Steps

➢ Insert the provided SD card into the Sd card slot, as shown below. Make sure the yellow SD lock is set in the "unlocked position"
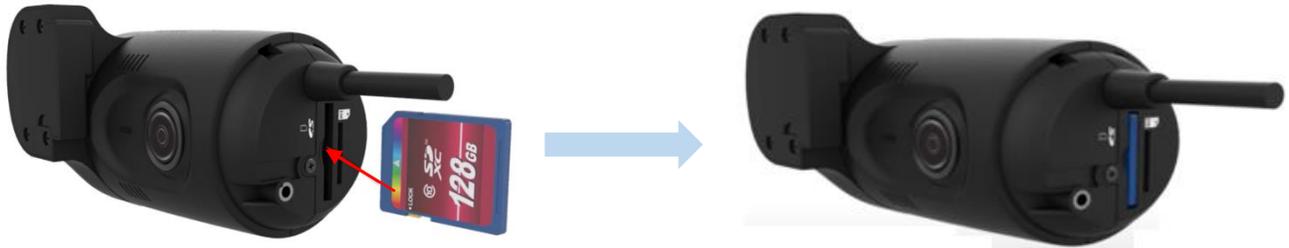
➢ Then insert the provided Sim card into the second, smaller slot as seen below
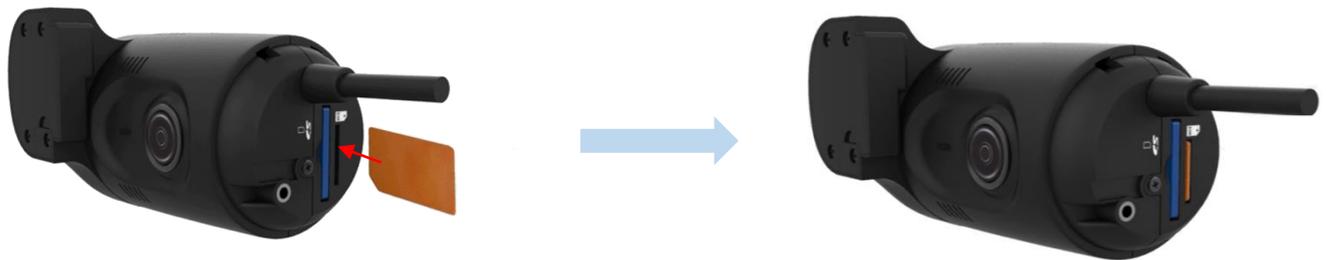
➢ After instructing the SD & SIM cards, attach the side cover plate as seen below. Use the provided torx screw & key to secure the side cover plate to the CP2:

➢ Adjust the bracket by unscrewing the angle bracket lock and removing it. Then you can slide out the bracket and rotate it to the desired angle (use the windshield as a guide to determine the angle (see the image in step F). The bracket can be adjusted up or down based on specific slope of the vehicle's windshield:

➢ Place the angle lock back into the bracket and secure with the provided screw. Then attach the provided 3M adhesive pad to the CP2 bracket and press firmly as shown below:
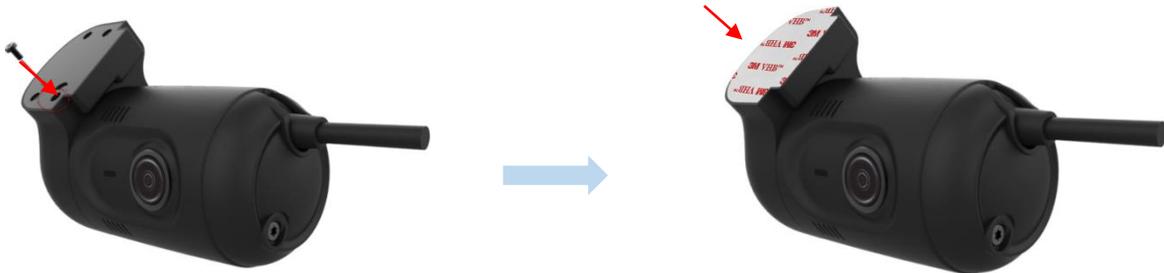
➢ Secure the CP2 to the windscreen behind the rear view mirror, <u>below the AS1 line</u>. The camera lens should be as high on the windshield as possible, but still within the windshield wiper zone. **If installing CP2 into a truck, FMCSA mandates that the camera portion of the device should reside in the top 2 inches of the vehicle wiper sweep.**

Windshield

Camera lens
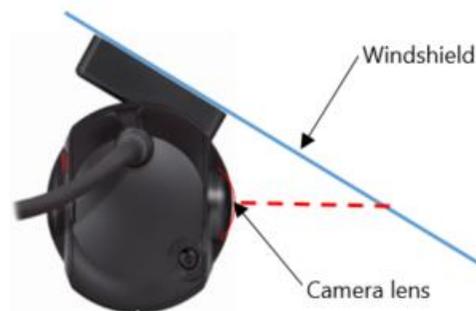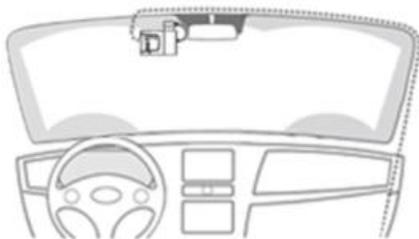
IMPORTANT: Make sure that the glass is clean and dry before attaching. Hold the camera in position with firm pressure for 30 seconds. The glass temperature should not be too hot or cold. Please install in moderate temperature (recommended between 50°F ~ 80°F).

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4. CP2 Power Adaptor and Wiring

> To connect the CP2 lead cable to the power adaptor (DPWR-600), lining up the arrows on the silver cable connectors and then push together. Twist the silver plate as shown below to secure the connection.
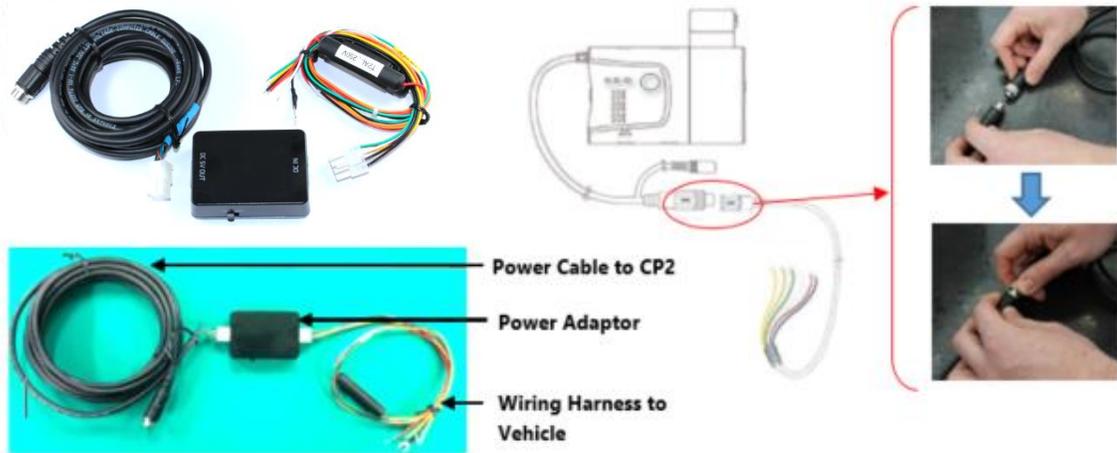
> After Connecting the power cable to the CP2 power lead, lay out the power cable roughly where it will run once hidden behind the vehicle's interior panels. This gives you an idea of where to route the cable and how much slack to leave on the way down to the vehicle's power source.
> Secure the power cable extension into the headliner and down the A-Pillar. Route the power cable around the side and behind the rest of the interior panels down towards the fuse box / power source. Make sure the vehicle is off and then connect the 4 required wires to the vehicle, as shown below in the wiring diagram.

a. Wiring Harness Diagram

Power (BAT+)	
Ground (BAT-)	
Ground (BAT-)	Required
Ignition (IGN+)	
Alarm In 1 (12V)	
Alarm In 2 (NC/NO)	Optional (verify with customer if orange,
Alarm Out	green, or yellow wires will be used)
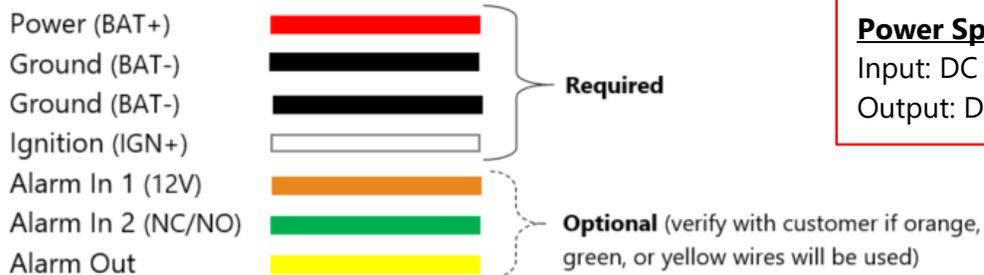
Power Specifications
Input: DC 10~32V, 2A
Output: DC 5V, 3A

OPTIONAL: remote switch installation (your CP2 may not include this accessory)

Model # *SW-PB*

| SW-PB power | → | Alarm In 2 |
| SW-PB ground | → | Ground (BAT-) |

5. **Connecting a secondary camera to CP2 ch2 input** (Optional)

The CP2 is equipped with a simple plug & play connection to a variety of SmartWitness 5V cameras. Simply connect the 2.5mm male stereo connector of the SmartWitness camera (any model ending in "-S", such as the SVA030-S) into the female stereo input on the CP2 and mount the camera to the customer-specified location in or around the vehicle. The most common installation of the secondary camera is inside the main cabin and facing the driver. Use a securing tape on the 2nd camera stereo connection, such as the silicone cold shrink. A service loop is also recommended.

1 ft. lead from camera.
2.5mm stereo - *male*

16' extension cable (optional)

3 ft. input cable from CP2
2.5mm stereo - *female*
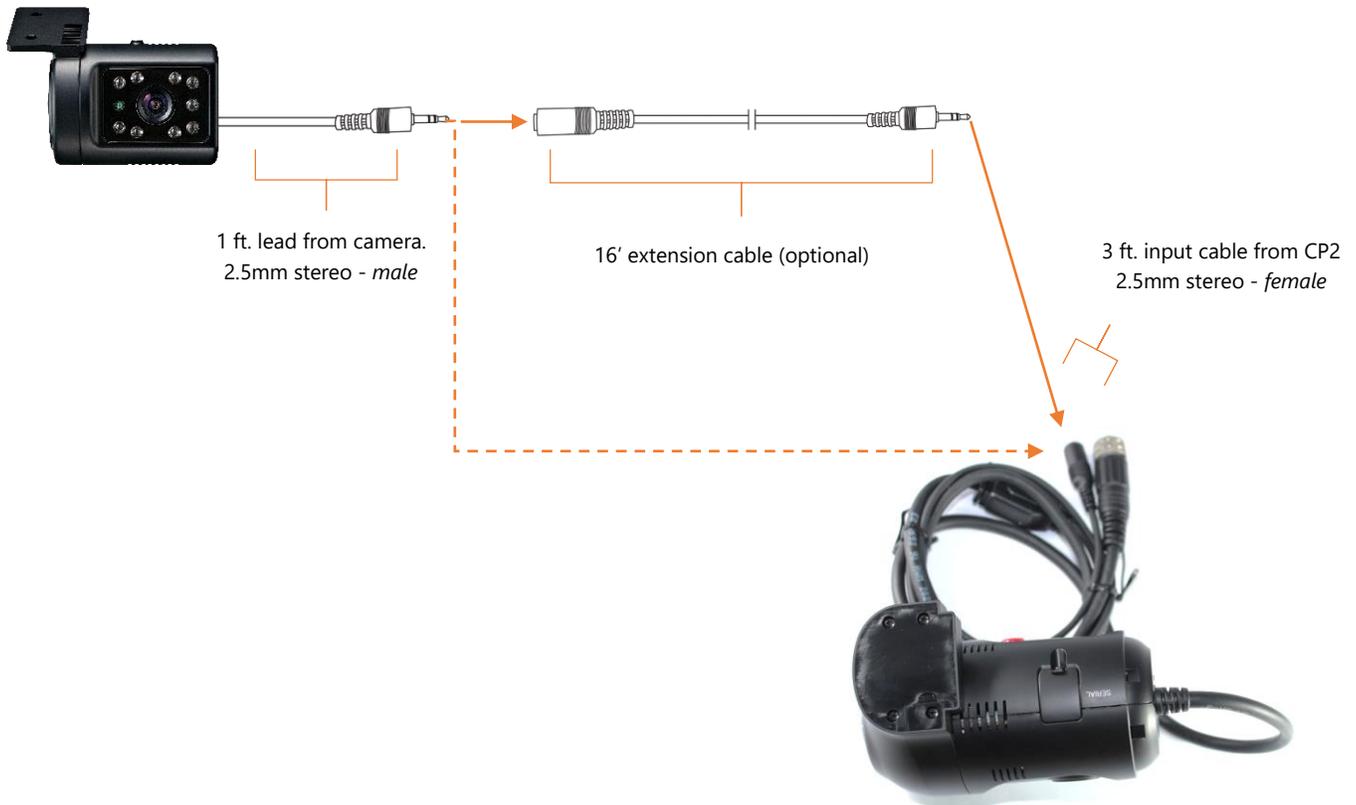
6. Final Steps

After installation of the CP2 into the vehicle, you can turn on vehicle ignition and the camera will power on. There will be a sequence of RED/BLUE/GREEN LED lights cycling during boot process. **Once boot up is complete. There will be a solid blue light. This means proper operation and recording. The Green light should become steady shortly after. If blue and green LEDs are not both solid after 5 minutes, there is an error. Please refer to the LED reference table in section 9. If you still cannot resolve the issue, contact your supplier or SmartWitness.**

- After the camera has been booted completely, press the G-Sensor calibration button once (small red button to the right of the panic button).
- The vehicle should be parked and on a flat surface when pressing the G-Sensor Calibrate button.
  There will be a beep and the CP2 LED light will blink briefly to indicate the G-Sensor calibration has registered.

- Login to install.smartwitness.com and complete the installation wizard to validate the installation and generate the installation report.

- Give the provided torx screwdriver and any extra parts to the fleet owner/administrator as well as a copy of the installation report.

  NOTE: To access install.smartwitness.com, you must first go through mandatory training with SmartWitness. One you complete the training (about a 30-minute webinar), you will be provided login credentials. To schedule training, please complete the online form here: https://www.smartwitness.com/become-installer

7. **Troubleshooting**

- **The CP2 has a solid RED light on as well as solid GREEN and Blue**
    a. Solid RED LED indicates the 2nd camera channel is not receiving video signal. Please check the camera connection.
- **The CP2 Blue light is solid but the Green light is blinking or off**
    a. Check to make sure the SIM card is inserted properly.
    b. If CP2 Green LED is also blinking, it may be a camera configuration issue or server issue. Please contact SmartWitness.
- **The CP2 RED LED is blinking**
    a. There is an SD card error/corruption. Please replace/repair the SD card after contacting SmartWitness Support for instructions. https://support.smartwitness.com

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8. CP2 LED Specifications

Status/Step			LED Warning (Red) ⚠	LED Record (Blue) ○	LED Communication (Green) ⏻	Sound
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	
		DMS Communication error			Slow On and Off	
Event Trigger	G-Sensor, Panic button, Alarm-In					Beep No. 1
	Over Speed					Beep No.4 (2times)