Sensata Technologies | SMARTWITNESS®

KP2

PRO INSTALLATION GUIDE

Version 5.1
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KP2

PRO INSTALLATION GUIDE

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Please follow along with this guide for details on proper device installation and calibration.

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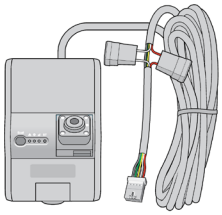
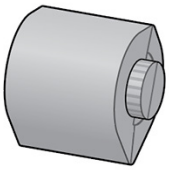
PACKAGE CONTENTS

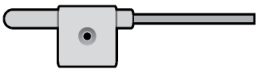
KP2 Vehicle Recorder



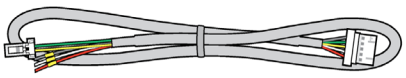
Mounting Bracket & Attached Power Cable
(Connects to Adapter Cables)



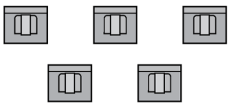
Removable Wedge Block
(Driver-Facing Camera Ordered Separately)



Torx® Wrench



8" 3-Wire Adapter Cable
(Connects to Bracket Cable)

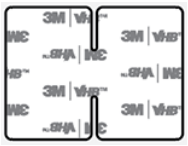


Square Adhesive
Cable Clips (x5)

*64GB MicroSD Card (Pre-Installed)

*128GB MicroSD Available
Upon Request

Nano SIM Card (Pre-Installed)



Double-Sided 3M™ Tape
(One Adhered to Bracket, One Extra Piece)

Alcohol Prep Pad (x2)

KP2
FEATURE REFERENCE

FRONT

SIDE

Unscrew the right-side bracket. Remove the KP2 from the bracket to adjust camera angle or insert/remove SIM/SD card.

Applied screws for design purpose only.

KP2
FEATURE REFERENCE

SIDE COVER OPEN

BACK

HOW TO INSTALL YOUR KP2

Prepare Your KP2

DISCLAIMER

The KP2 installation featured in this guide is designed for professional installation. SmartWitness assumes installers possess knowledge of current, generally accepted industry installation standards and practices.

The process outlined in this document accounts for driver positioning on the left side of the vehicle. Please adjust the installation accordingly if you're working with driver positioning on the vehicle's right side.

1. Use the Torx® wrench provided in the package contents to open the side cover of the device. You'll notice that both the microSD and SIM cards come pre-installed. See **Diagram A**.
2. Keep the side panel open. It allows you to remove the KP2 from its mount and adjust the driver- and road-facing cameras. Prep the cameras for adjustments.
   • Loosen the KP2's top screw (for the road-facing lens) with the Torx wrench.
   • The driver-facing camera has a release tab next to the lens.
   Note: You must order the KP2's driver-facing camera as a separate accessory. White-label KP2s are exceptions.
3. Go to your vehicle, and hold your KP2 where you'll mount the bracket. Your KP2 placement should reduce the windshield's blind-spot footprint. The device should reside close to the center of the windshield. See **Diagram B**.
   Note: The driver-facing lens needs complete visibility of the driver, without any physical or visual obstructions. Ensure your vehicle's sun visor doesn't complicate camera visibility.
4. While holding the KP2 in place, rotate each camera until they're at the desired angle.
5. Remove the protective decals from each lens.
6. Use the Torx wrench to tighten the top screw on the KP2 and lock the road-facing camera's position.

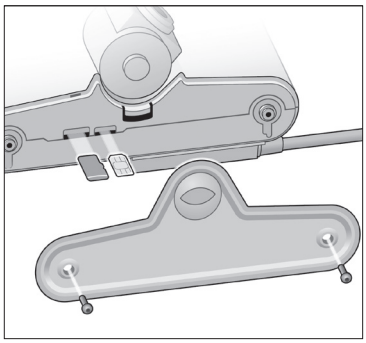


Diagram A

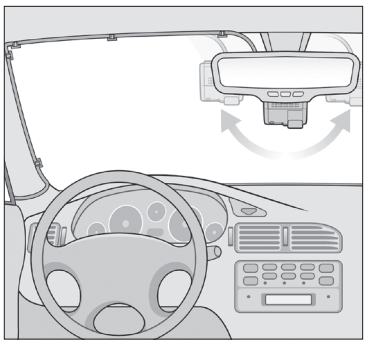


Diagram B

Once you've secured the road-facing camera, please go on to **Attach Your Camera to the Windshield**.

HOW TO INSTALL YOUR KP2

Attach Your Camera to the Windshield

Your vehicle's windshield temperature shouldn't be too hot or cold. SmartWitness recommends installing your KP2 in moderate temperatures (50°F~80°F).

If in severe cold weather, use the vehicle defrosters to warm and dry out the windshield.

Ensure your windshield is dry and has no chips or cracks before installation. If the windshield is compromised, device application may cause chips or cracks to spread.

1. Clean the windshield with your alcohol wipe. See **Diagram C**. Allow time to dry.
2. Remove any film left over from the solution.
3. Remove the plastic from the tape on the mounting bracket.
4. When attaching the KP2 to the windshield, position the bracket so it's flush with the windshield.
   Note: Ensure your device placement abides by current FMCSA mandates for your type of vehicle.
5. Apply your KP2 to the windshield, and maintain pressure for at least 30 seconds.
6. After mounting your KP2, use the Torx® wrench to re-secure the device's side cover. This locks both camera positions in place.
7. Go outside the vehicle, and check whether 80%–90% of the tape's surface area connects with the glass. Momentarily apply pressure where the camera doesn't connect to the glass (if necessary).

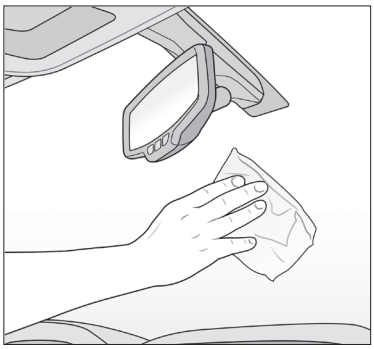


Diagram C

Once the device is correctly attached to the windshield, continue to **Connect the KP2 to Your Vehicle's Power Source**.

HOW TO INSTALL YOUR KP2

Connect the KP2 to Your Vehicle's Power Source

If you are not a professional technician, click **here** to request installation from an approved SmartWitness installer. By continuing this process without a certified installer, you accept the ramifications of tampering with your vehicle's power source.

1. Turn off your vehicle.
2. Take your main power cable, and place it where it'll reside alongside the vehicle's headliner and A-pillar. This shows you where to route the cable and how much slack to leave to connect the adapter cable to the vehicle's power source.
3. Clean the space where the cable clips will reside with an alcohol wipe. Allow time to dry.
4. Once the windshield is dry, attach clips where you'll place the cable. Ensure the clips are evenly spaced, around 6" apart. Keep the opening of the clips face up, and ensure the cable remains taut.
5. Slide the power cable from the bracket into the clips. Your cable should look like **Diagram D**.
6. Route the power cable around the side and behind interior panels or weather stripping to secure it. See **Diagram E**. The cable should fall near the vehicle's fuse box/power source.
7. Attach the KP2 main power cable to one of the compatible power adapter options. Let's use the bare 3-wire connection adapter provided in the box for this walk-through. Disregard the black connector at the exposed end of the 3-wire adapter. This connection allows you to pair additional devices with your KP2 in the future. See **Diagram F**.
   Note: SmartWitness provides optional power adapter accessories separately.
8. Identify each connection wire on the 3-wire adapter: black, white and red.
   Note: Ensure your 3-wire connection has fuses attached to the red and white wires within 4" of the power source. This is a requirement that protects both your device and your vehicle.
9. Connect each wire to its associated power source.
   - Black – ground or battery (-)
   - White – true ignition or ACC
   - Red – power or battery (+)

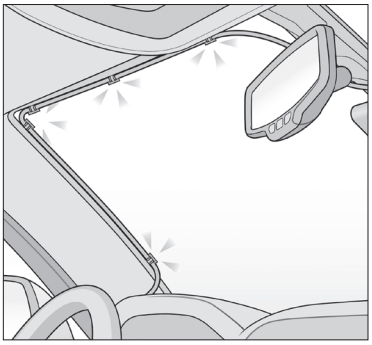


Diagram D

Diagram E

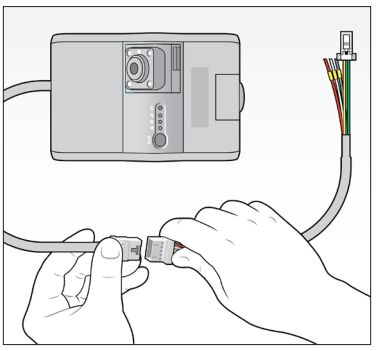


Diagram F

Go to **How to Test Your Installation** to ensure you've properly applied power to your device.

HOW TO TEST YOUR INSTALLATION

After installing the KP2 in your vehicle, test whether it is operational.

1. Turn on your vehicle. Your camera should power on.
2. You'll see a **Red**/**Blue**/**Green** light sequence during your camera's boot-up process (see **LED Reference Table**).
3. After your camera completes the boot-up process, check for a solid **Blue** light. This indicates proper operation and recording.
4. Check for a **Green** light that remains on, indicating connectivity.
5. Watch for a **Blue** light. After 5 minutes, if both the **Green** and **Blue** lights don't remain on, an error has occurred. See **Diagram G**.

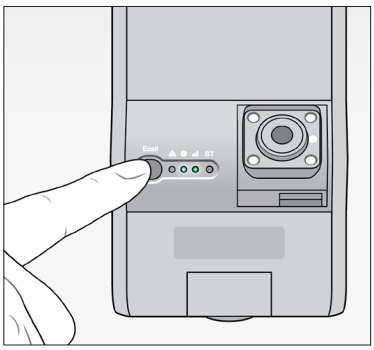


Diagram G

TROUBLESHOOTING ERROR SCENARIOS

If your KP2 has:

- Solid **Red**, **Blue** and **Green** lights, then a camera isn't receiving a video signal. Check your camera's connection.
- A solid **Blue** light, but the **Green** light is blinking or is off, then clean and correctly reinsert your SIM card.
  - If the **Green** light still blinks, this is a configuration or server issue that requires **SmartWitness support**.
- A **Red** blinking light, then there is an SD card error or corruption. Contact your local distributor or **SmartWitness support** to repair or replace your SD card.
- A solid **Red** light, then your device isn't receiving enough voltage or amperage. Check the output of your power source or your ground (black wire) connection.

If your KP2 install is operational, please move on to **How to Calibrate Your G-Sensor**.

HOW TO CALIBRATE YOUR G-SENSOR

Park your vehicle on a flat surface for calibration.

After your camera boots up, press the G-sensor calibration button. This is the small **black** button to the right of the e-call/panic button.

You'll hear a beep, and the KP2 LED light will blink briefly to indicate that the G-sensor calibration has registered.

You've completed the first steps of your KP2 installation. To adjust your settings, continue to **How to Configure KP2 Settings**.

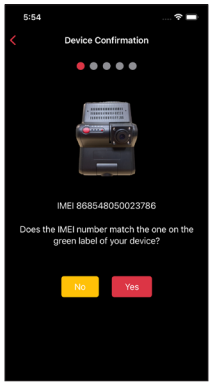
HOW TO CONFIGURE KP2 SETTINGS

To finalize your installation and onboard your device, scan the QR code. Download and open the app. Scan your device's IMEI label, and follow the walk-through featured below.

Access KP2 Installation App

Download on the App Store

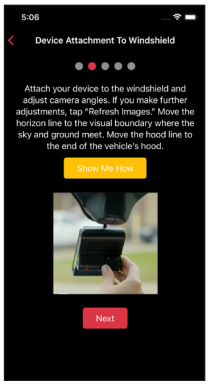
Google play



1. Ensure the IMEI code in the app matches your device's IMEI.

If there isn't a match, tap **No** and contact SmartWitness support.

If there's a match, tap **Yes** to continue.



2. Read the instructions to understand more about your vehicle's "Horizon" and "Hood" lines.

Tap **Show Me How** for a brief video walk-through of the device attachment process.

3. Select your KP2 camera configuration.

Choose the driver's side of the vehicle.

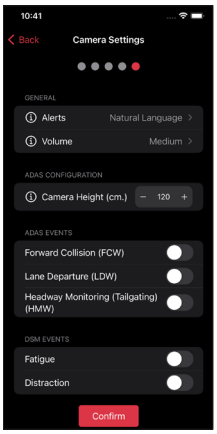
Tap **Next** to set your vehicle's "Horizon" and "Hood" lines.

4. If you adjust either camera, tap **Refresh Images** to update road- and driver-facing camera images.

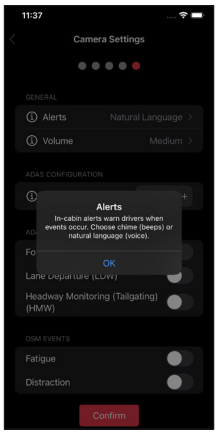
Use the arrows to adjust your vehicle's "Horizon" and "Hood" lines.

Ensure your "Hood" line is in the bottom one-fourth of your image.

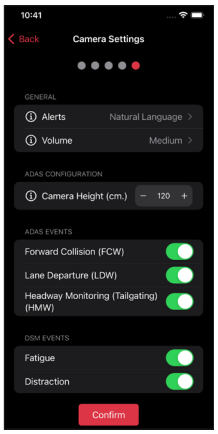
Scroll down and tap **Next** to save the "Horizon" and "Hood" lines.



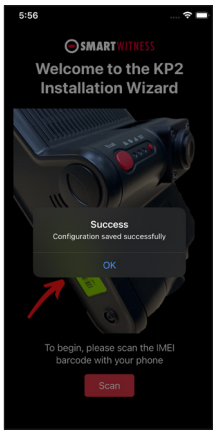
5. Choose preferences for in-cabin alerts, an alert's volume level or activation of different ADAS and DSM events.



6. If you're unaware of a setting's function, tap the **info** icon to learn more. Pay close attention to **Camera Height**. Enter an **even interval** value (e.g., 190 cm), not an odd interval value (e.g., 205 cm, 213 cm).



7. After you've made changes and activated the appropriate features, tap **Confirm** to save your configuration.



8. On the home screen, you'll see a success message validating your saved configuration.

Congratulations. You've configured your device settings.

COMPLETE YOUR INSTALLATION/SUPPORT

You've finished your KP2 installation and device calibration. Your KP2 is ready to go.

If you have any complications during the installation process or have any questions, please contact our support team at **support@smartwitness.com** or call us.

North America, South America, APAC
+1 (312) 981-8774

EMEA
+44 (0) 1483 397005

NOT AN INSTALLER?

Once you complete the training (about a 30-minute webinar), SmartWitness will provide you with login credentials for the SmartOPS portal.

To schedule training, please complete the online form **here**.

LED & BUZZER SPECIFICATIONS

Status/Step			LED			SOUND
			Warning	Record	Communication	
			Red	Blue	Green	
Startup & Power Off	Booting Step 1		On	Off	Off	-
	Booting Step 2		On	On and Off	Off	-
	Booting Step 3		On	On	On and Off	-
	Booting Finished		On	On	On	-
	Power Off		Off	Fast Simultaneous On and Off		Beep No. 2
	Power Off/Finished		Off	Off	Off	-
Record	Continuous Record	Recording	-	On	-	-
	Event Record	Standby	-	On	-	-
		Recording	-	Fast On and Off	-	-
	Dual Record	Continuous Recording	-	On	-	-
		Event Recording	-	Fast On and Off	-	-
	No Record	No Recording	-	Off	-	-
Communication	4G LTE 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	4G LTE 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 (2 Times)
ADAS	Lane Departure Warning (LDW), Forward Collision Warning (FCW), Headway Monitoring Warning (HMW)		-	-	-	Warning Beep or Voice
DSM	Driver Fatigue Warning (DFW), Driver Distraction Warning (DDW)		-	-	-	Warning Beep or Voice

TECHNICAL SPECIFICATIONS

NAME	VALUE
Image Sensor	2 Megapixel CMOS Sensor
Angle of View	Main, Road-Facing Camera (Forward-Facing): 140° (115°(H), 60°(V))
	2nd Camera (Optional, Driver-Facing): 130° (104°(H) x 56°(V))
ADAS Event Types	- Headway Monitoring Warning (Tailgating) - Forward Collision Warning - Lane Departure Warning
DSM Event Types	- Fatigue - Distraction
Wireless	LTE CAT6 (KP2-NA): B2/B4/B5/B7/B12/B13/ B14/B17/B25/B26/B41/B66/B71 3G Bands: B2, B4, B5
	LTE CAT6 (KP2-GB): B1/B2/B3/B4/B5/B7/B8/ B20/B28/B38/B40/B41 3G Bands: B1, B2, B4, B5, B8
	Wi-Fi: 2.4/5GHz, 802.11 a/b/g/n/ac
	Bluetooth: 4.2 BLE
Connectivity	4G/LTE (CAT6)
Max Data Rate	UL: 50Mbps, DL: 300Mbps
Video Resolution	Main Camera: 1080p (1920 x 1080), 720p (1280 x 720)
	2nd Camera: 1080p (1920 x 1080), 720p (1280 x 720)
Recording Speed	60FPS (30FPS per Channel)
Recording Mode	Continuous, Event, Dual Mode
Memory	16GB eMMC + 2GB LPDDR3, 64GB MicroSD Card Included. Supports up to 256GB (FAT32)
GNSS	Internal GPS/GLONASS/BeiDou

NAME	VALUE
G-Sensor	Internal 3-Axis G-Sensor
Gyro	3 Axis (X, Y, Z), Output Rate: 100Hz
Time	GPS Time Sync + Built-In Real-Time Clock (RTC)
Speaker	Audible Alerts for Events and Audio for ADAS and DSM. Natural Language or Beep Sounds (Selectable)
Audio	Internal Microphone
Serial	RS232 RX/TX
LED	3 (Red, Blue, Green LED)
Supercapacitor	Enables Recording of Last File and Safe Shutdown
PC Software	MSM8953, Octa-Core ARM Cortex-A53
Power Input	Input Voltage: DC 12V/24V, 1.5A
Delayed Power Shutdown	Supports Delayed Power Shutdown and Automated Wake-Up Feature (Selectable Intervals)
Power Consumption	4W (6W with ADAS and DSM Enabled)
Size/Weight	126 x 82 x 64 mm/232.4g (Including 2nd Camera, Excluding Power Cable)
Operational Temp.	-10°C~55°C
Storage Temp.	-20°C~70°C
Certification/ Regulatory	FCC, CE, E-Mark, UKCA, RoHS, IC, PTCRB, RCM, AT&T, Verizon and FirstNet
Warranty	2-Year Standard

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