



SmartWitness KP1S + SVC400

Installation Guide

v.1.2



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 <http://smartwitness.com/scheduleinstall> and submit the online form.



KP1S Contents & Diagram:



KP1S Recorder with
locking cover



Power Adaptor
(model # INT1S)



3M Windshield
Adhesive



Key set for
Locking cover



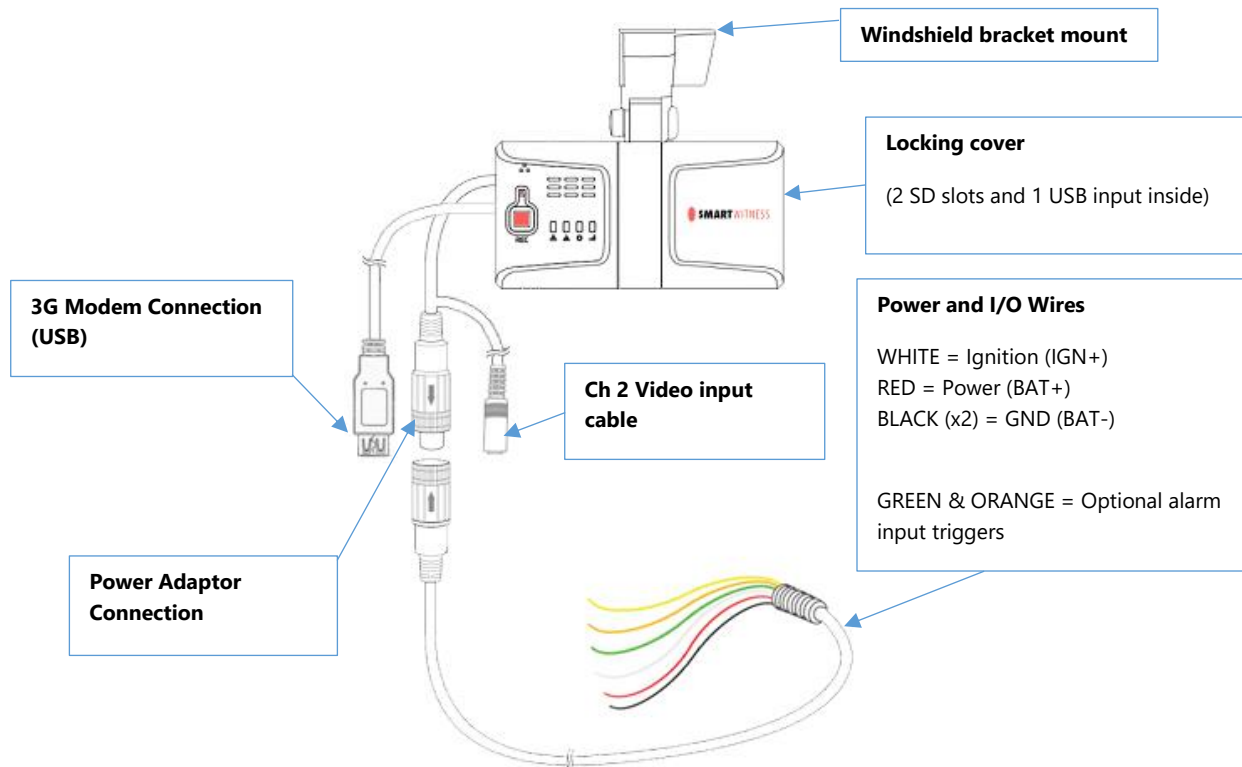
3G Cellular
Modem*



SD Card(s)*

*Depending on the order, the 3G Modem and/or SD card may or may not be included.

**SD Cards, Secondary camera, Power Adaptor, and 3G modems may be in a separate package from the KP1S (common in large, bulk orders).





SVC400-S Contents & Diagram



SVC400

12V recorder/cam hub



SVC400-PC

Power Cable



KP1- SVC400-AV
Video Output
cable



SD-32
SD Card

(PC Viewer software is
on the provided SD card.)



RCA-CNVRT

RCA to 2.5mm stereo
adaptor (3ea)

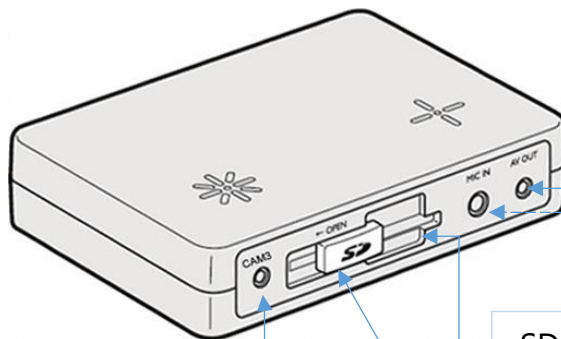


SVC400-LC

Locking enclosure/mount
(optional)



RCA-Y-SPLT



Camera 3 Input

SD Door

SD Card Slot

Video Output to
KP1 ch2 input

External MIC Input
(optional)

Rear View
Camera 4 Input

Camera 1 input

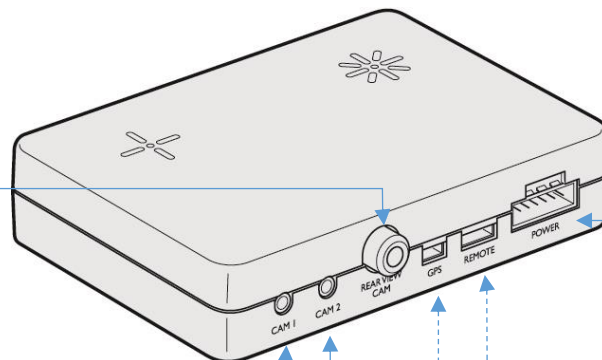
Camera 2 input

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GPS Input (optional)

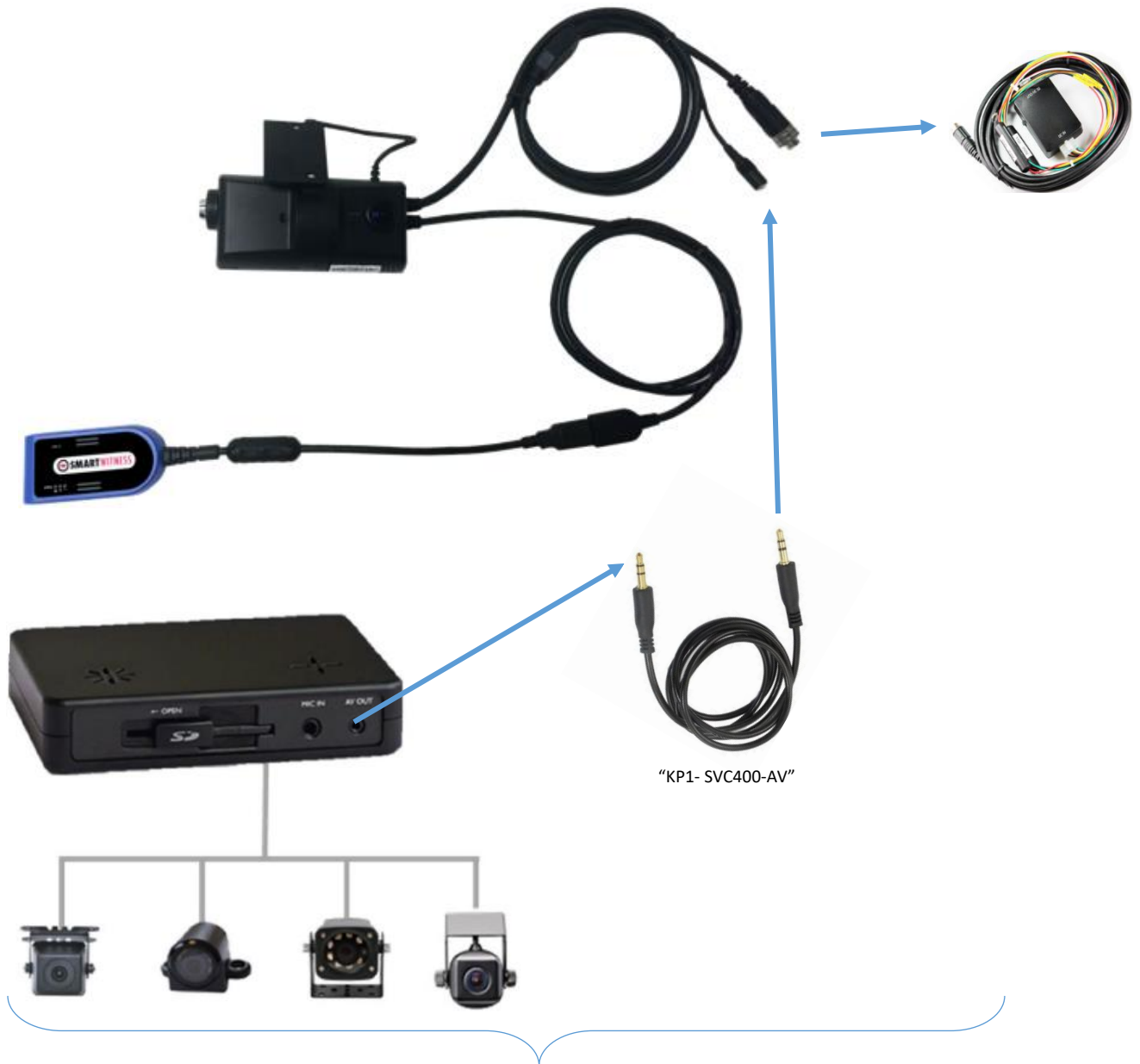
Power Input (Red =
IGN+, Black = GND)
& 12v Alarm Input
Triggers (optional)

Panic Button
(optional)





KP1S connected with SVC400



"KP1- SVC400-AV"





Connecting Camera 4: (RCA input) to SVC400

1. Rear backup camera (any SmartWitness camera ending in "-C", (i.e. SVA036-C)
2. Extension cable for rear backup camera.
3. RCA adaptor cable.
4. 12V power and ground for rear backup camera connect to IGN (+) and GND (Bat-).
5. RCA input on SVC400 recorder.
6. SVC400 recorder.
7. Video output cable.
8. Video output to KP1S ch2 input.

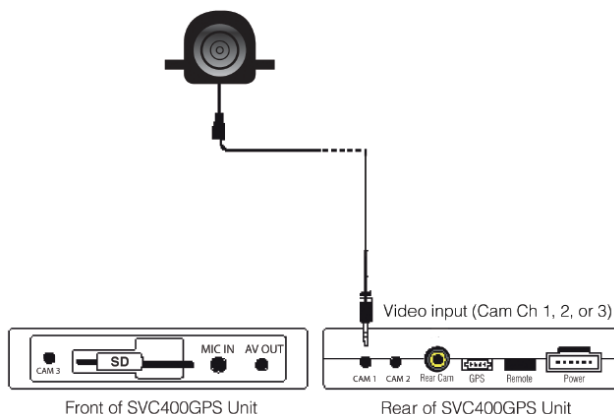


Connecting Cameras 1, 2, & 3 (5V, 2.5mm stereo) to SVC400

1. All SmartWitness 5V cameras can plug n play into camera channels 1, 2, & 3 on SVC400
2. Compatible camera models end in "-S", such as the SVA033-S
3. All "-S" cameras have a 1ft. lead from the camera lens and include a 16ft. extension cable (33ft cable also available)
4. Simply plug the 2.5mm stereo cable into the desired camera input.
 - Camera ch1 must be used with a camera, otherwise SVC400 will have an error (for example, you can connect cameras to ch1 & ch4 only, but NOT to ch2 & ch4)

NOTE: You can use any analog camera with Ch 1,2, & 3, but you will need to use the provided RCA adaptors →

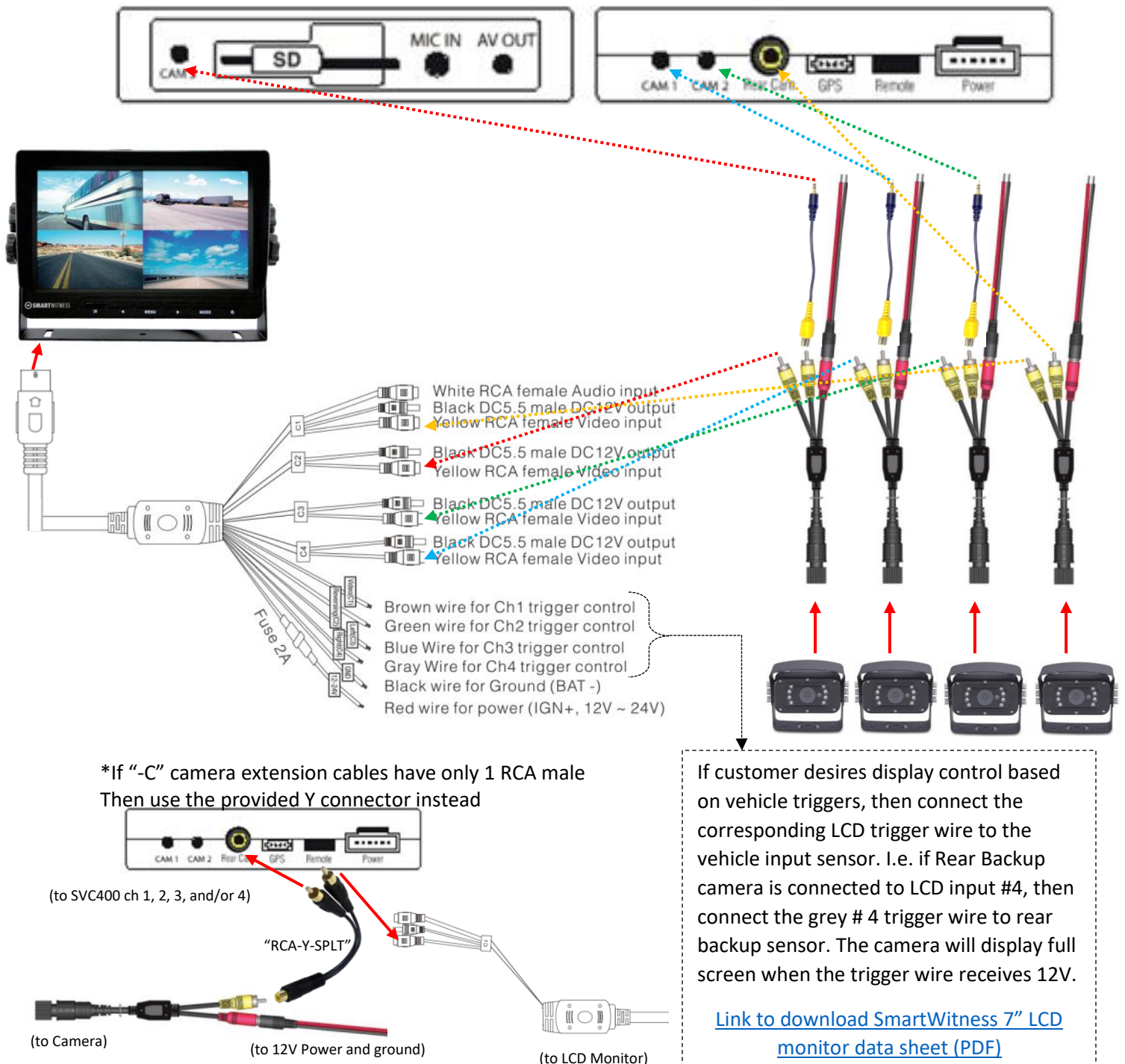
SmartWitness "-S" cameras are powered from the SVC400 recorder cam inputs 1, 2, & 3 only





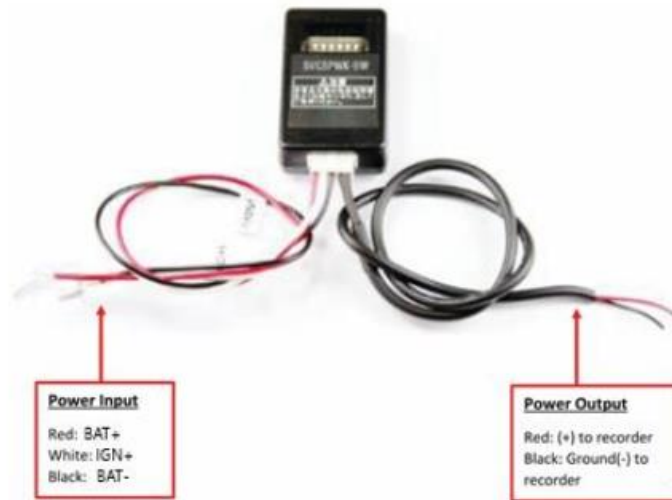
Connecting 12V camera (cameras ending in "-C" such as SVA025-C) & LCD Monitor stereo)

- For customers requiring the SVC400 connected cameras to also display on LCD monitor, Connect the male USB port from the 3G Modem into the female USB port as seen in picture below. Secure the male/female USB connection with the provided silicone cold shrink tape. The tape is self-fusing and does not require heat to be applied. It stretches 300% and is fully fused within 24 hours after application.



➤ Advanced Power Adaptor Accessory (Optional)

- For recording after ignition, such as security/surveillance purposes, the SVCSPWK-BW2 device provides a 3-wire connection between the SVC400 recorder and the vehicle (IGN +, BAT+, and BAT-)
- It will automatically cut off the battery power when battery voltage drops below 12v or 24v, or via timed delay shutoff (times are adjustable via dip switch setting on the adaptor)

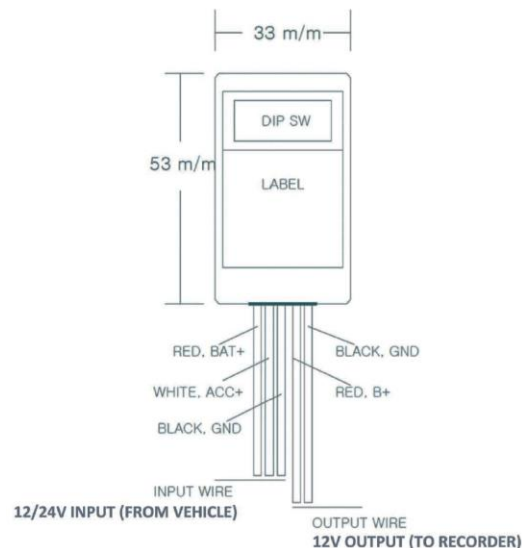


SmartWitness Model # **SVCSPWK-BW2**

Technical Specification

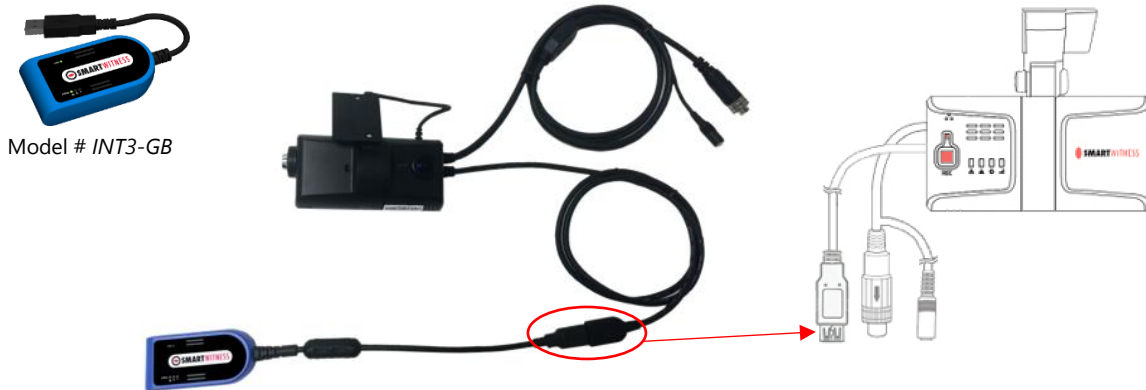
| | |
|-----------------|---------------------------------------------------------------------------|
| Input Voltage | 9V~38V (± 5% V) |
| Output Voltage | 12V or 24V (Same with input voltage), Max capacity: 12V 1.5A or 24V 1A |
| Operation Temp. | -20 °C ~ 80 °C |

[Link to download SVCSPWK-BW2 datasheet \(PDF\)](#)

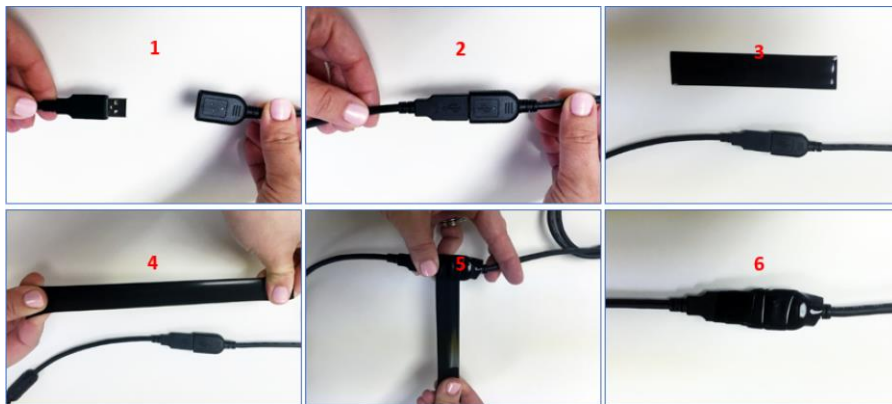


Connecting 3G Cellular Modem (optional)

- Connect the male USB port from the 3G Modem into the female USB port as seen in picture below. Secure the male/female USB connection with the provided silicone cold shrink tape. The tape is self-fusing and does not require heat to be applied. It stretches 300% and is fully fused within 24 hours after application. It is best to stretch the tape, start from one end and overlap at an angle until you reach the other end of the connector.



- Secure the male/female USB connection with the provided silicone cold shrink tape. The tape is self-fusing and does not require heat to be applied. It stretches 300% and is fully fused within 24 hours after application. It is best to stretch the tape, start from one end and overlap at an angle until you reach the other end of the connector.





- Remove the 3M adhesive backing and secure the modem to the windshield. The excess USB cable and KP1S cable should be tucked neatly in the roof lining or along the edge of the windshield. **It is recommended to adhere the modem above the AS1 line, in the “blue zone” of the windshield to reduce the amount of direct sunlight/heat. The modem should not be touching any part of the vehicle frame or metal. DO NOT HIDE THE MODEM IN THE ROOF LINING OR A-PILLAR, this will affect the cellular signal and hinder performance.**



Final Steps

After installation of the KP1S and accessories into the vehicle (2nd camera, panic button, & 3G modem), you can turn on vehicle ignition and the KP1S will power on. There will be a sequence of LED lights cycling during boot process. **Once boot up is complete, there will be a solid blue light. This indicates proper operation and recording. If 3G modem is installed, the Green LED should also be solid on. If Green light is blinking, then there is a server error or network error. If a red led comes on after bootup, there is an error and you should contact your supplier. Please see step 8 for more details on LED status indicators.**

- 1) After you've set the camera angle, locked the cover and removed the key, press the G-Sensor calibration button once (small red button ABOVE the panic button). This will also capture an image from each camera and send to the server to confirm camera operation and proper camera field of views.



The blue LED will flash rapidly for a few seconds when the calibration button is pressed.

- 2) Verify the Blue and Green LED lights on the camera are solid and not blinking. Once the camera makes successful connection to the server, it may apply updated configuration file and/or firmware. In this case, the camera will automatically re-boot to apply the new settings/firmware. Please make sure the camera reboots and goes back to solid blue and green LED. *NOTE: only the Blue and Green LEDs should be on. If Red LED is on, see Troubleshooting/FAQ section for more information.

- 3) Verify the 3G Modem “Link” LED light is on and blinking slowly



- 4) Please visit <http://install.smartwitness.com> to complete the installation form and click submit.
- 5) Give the provided keyset and any extra parts/accessories to the fleet owner/administrator as well as a copy of the installation report.

Troubleshooting

- **The KP1S has a solid RED light on as well as solid GREEN and Blue**
 - Solid RED LED indicates the 2nd camera channel is not receiving video signal. Please check the camera connection.
- **The KP1S Blue light is solid but the Green light is blinking or off**
 - Check the "Link" LED on the modem.
 - If Link LED is solid, check to make sure the SIM card is inserted properly
 - If Link LED is OFF, check the USB connection of the cable and modem
 - If Link LED is blinking and the KP1S Green LED is also blinking, it may be a camera configuration issue or server issue. Please contact SmartWitness.
- **The 3G modem Link LED is solid on**
 - The SIM card is not registering with the cellular network. Please verify the SIM is inserted correctly, as seen on page 7.
 - If it looks to be inserted correctly, please remove and re-insert the SIM card and try again
 - Power cycle the camera
- **The KP1S RED LED is blinking**
 - There is an SD card error/corruption. Please replace the SD card or contact SmartWitness

- **3G Modem LED specification**

| Link Status | Description | |
|-------------|---------------------|------------------------|
| Off | No power to unit. | |
| On | Continuously lit | Powered on. |
| | Slow blink (-0.2Hz) | Registered on network. |



For Technical Support, please visit support.smartwitness.com