CP4/CP4S CONFIGURATION TOOL GUIDE v3.8.0

A jumpstart to video telematics configuration

Sensata IN

Table of Contents

1 Welcome to Your CP4/CP4S Configuration Guide

This guide aims to inform users of the appropriate processes involved in setting up your Sensata INSIGHTS CP4/CP4S device.

This step-by-step walkthrough will act as your teacher as you learn our product's layout, functionality, and configuration settings.

You can find an overview of the configuration tool's layout in **section 3**.

The fastest way to find information in this document is through the Table of Contents.

We hope this training document will remove common end-user pain points involved with the setup process. If you experience any issues with this guide, please lend us your feedback and/or contact our **support** teams.

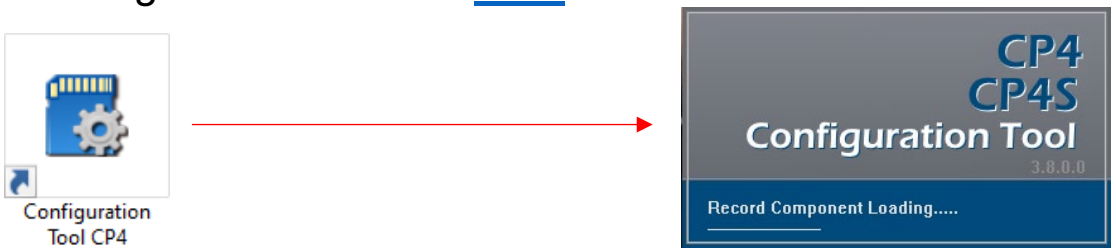
Note: Use this configuration guide with at least version 3.8.0.0 of the CP4/CP4S Configuration Tool. Content in this guide was released in coordination with CP4S firmware version 3.8.0.

2 CP4/CP4S Configuration Tool Installation

Goal: Find your configuration wizard and learn about your device's capabilities

2.1 Downloading & Installing Your Configuration Tool

Download configuration software **here**.



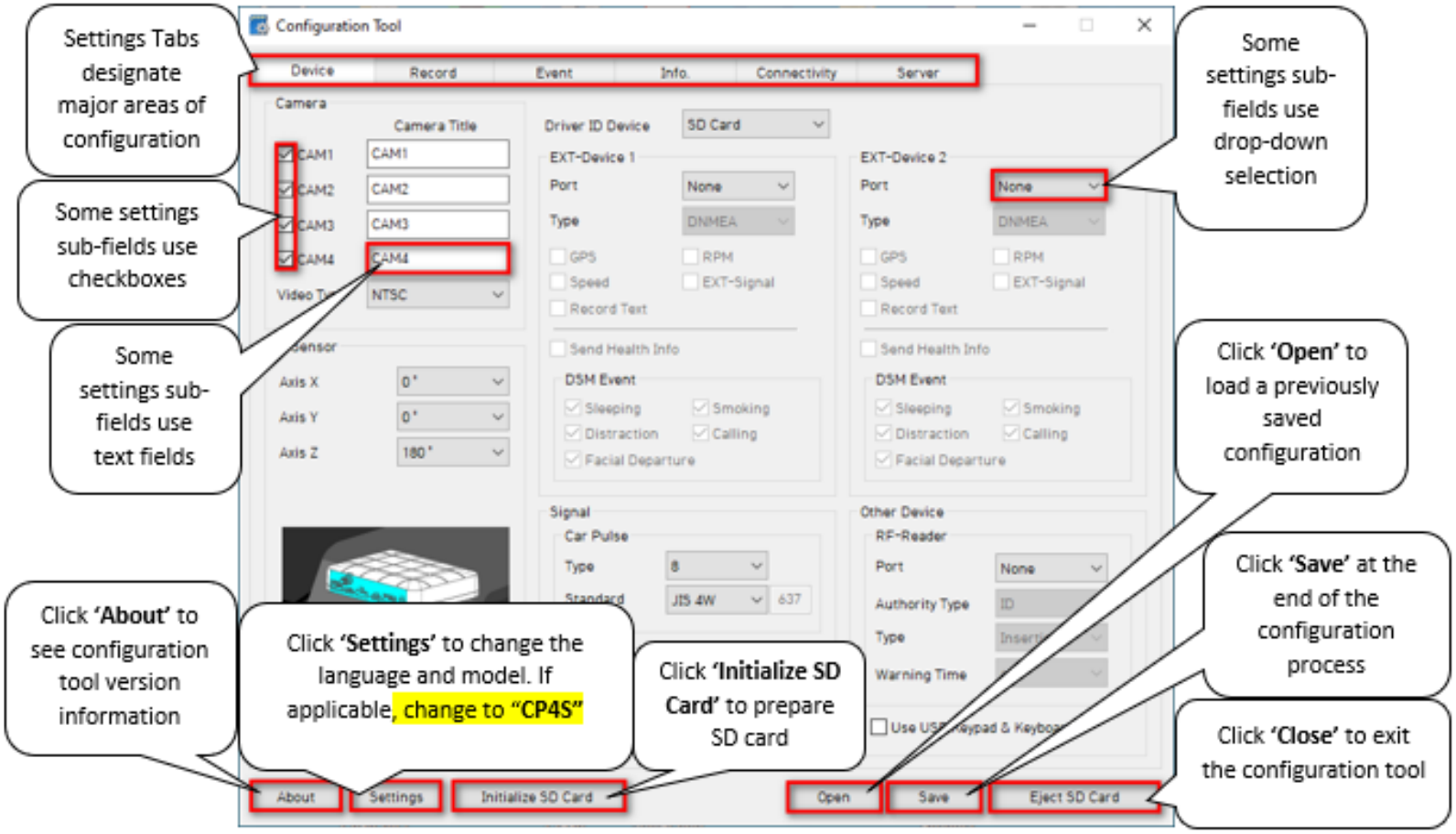
1. After downloading, proceed to installation.
2. Open the configuration tool and insert your SD Card*.
3. Click **Initialize SD Card**.
4. Select the **SD Card** from the preferred internet browser.
5. Click **Start** to initialize.

Note: SD cards from Sensata INSIGHTS come pre-installed and initialized.

*The maximum size supported for your SD card is 256 GB.

3 Configuration Tool Layout & Settings

Goal: Understand your tool's main features

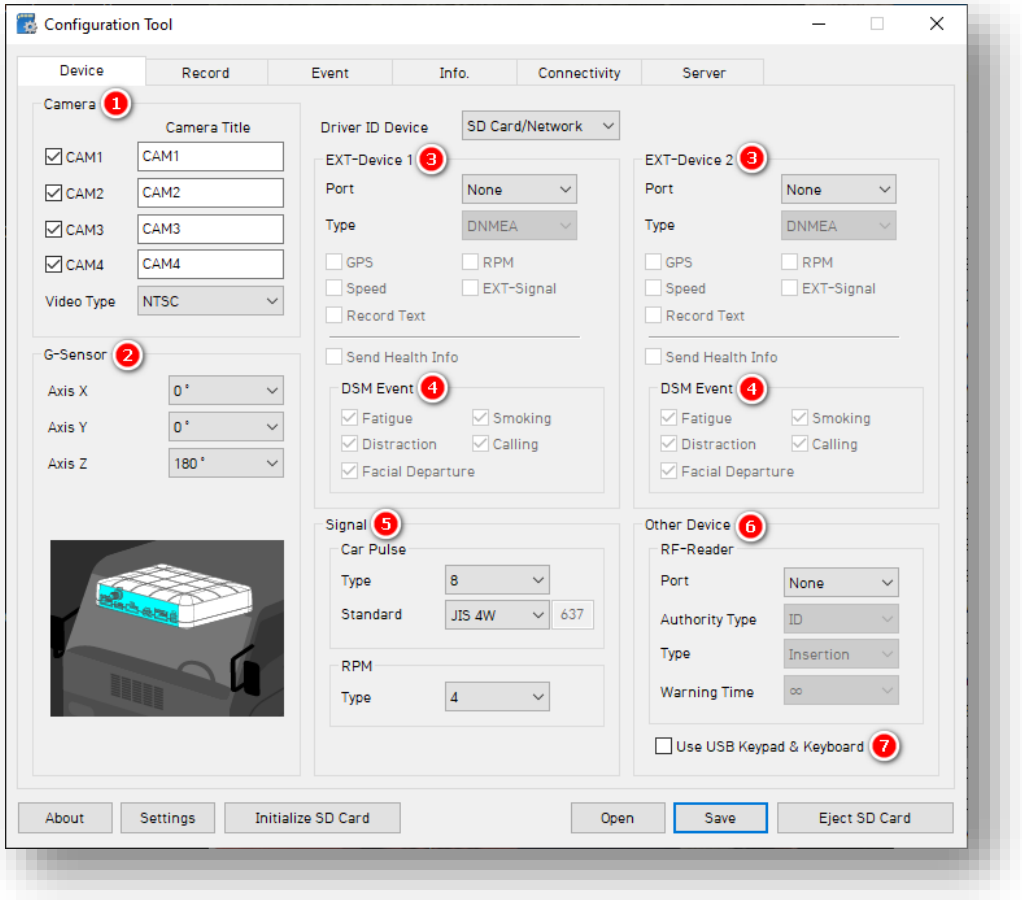


4 Configuring Your Device

Goal: Personalize and optimize your device's settings

4.1 How to Configure Device Tab

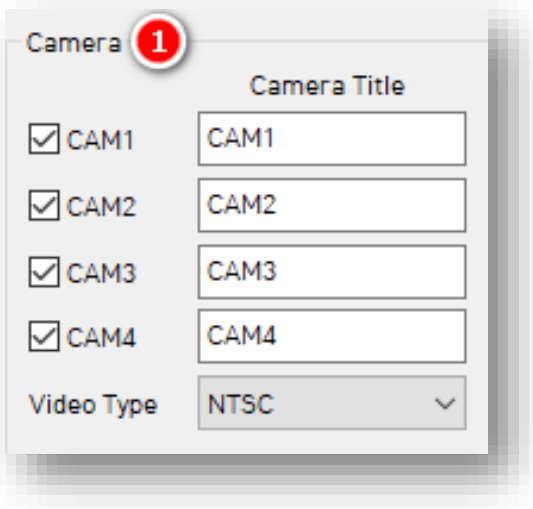
Device Tab Layout: At a Glance



Device

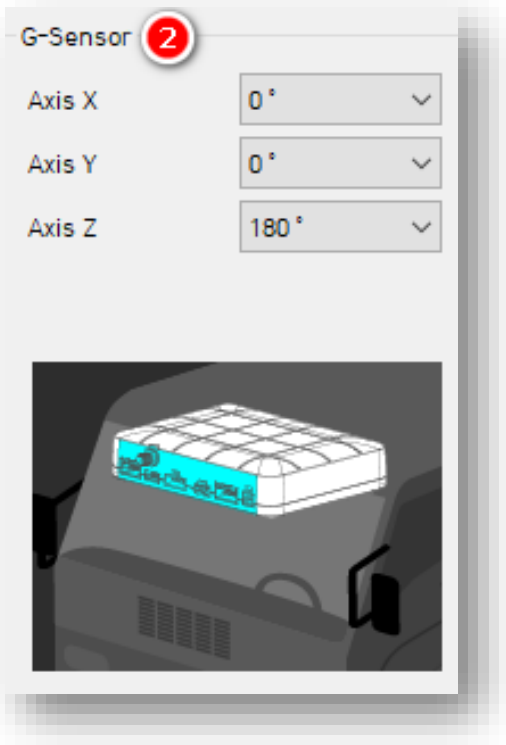
Camera

1. Activate your desired cameras, label them and select your preferred video standard via **Video Type.**
   - Ensure **Video Type** matches the video standard of your accessory cameras.
   - Typically, North America is **NTSC** and EMEA is **PAL.**



G-Sensor

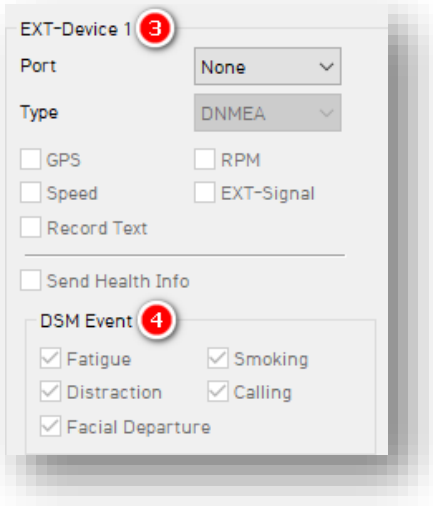
2. To designate the device's install position, select from each option. This allows for G-Sensor calibration and accurate drive data reporting. See all orientations and corresponding axis values **here**.



Device

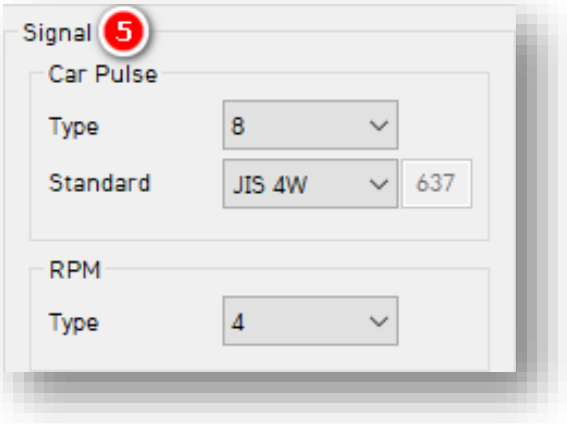
EXT – Device 1 & 2

3. Allow external devices to work with your CP4/CP4S by selecting from **EXT – Device's** list of accessory devices and relevant data points.
   - Add-ons connect to the device's serial CP4/CP4S input once the **S3** port is activated.
4. **DSM Event** access requires specific "Driver State Monitoring" AI camera models like KP2.



Signal

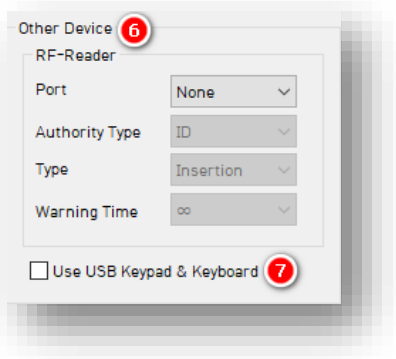
5. **(Optional)** Select from **Car Pulse Type, Standard,** and **RPM Type** options. Configure the input wires attached to the CP4/CP4S I/O harness. Connect to the tachometer to receive vehicle RPM and/or speed.
   - **Pulse Signal:** pull up, pull down.
   - **Type:** 1 – 25.
   - **Standard:** JIS 4W/JIS 2W, 3W/SAE/DIN/BNA/MANUAL.
   - **RPM Type:** 1 – 10.



Device

Other Device

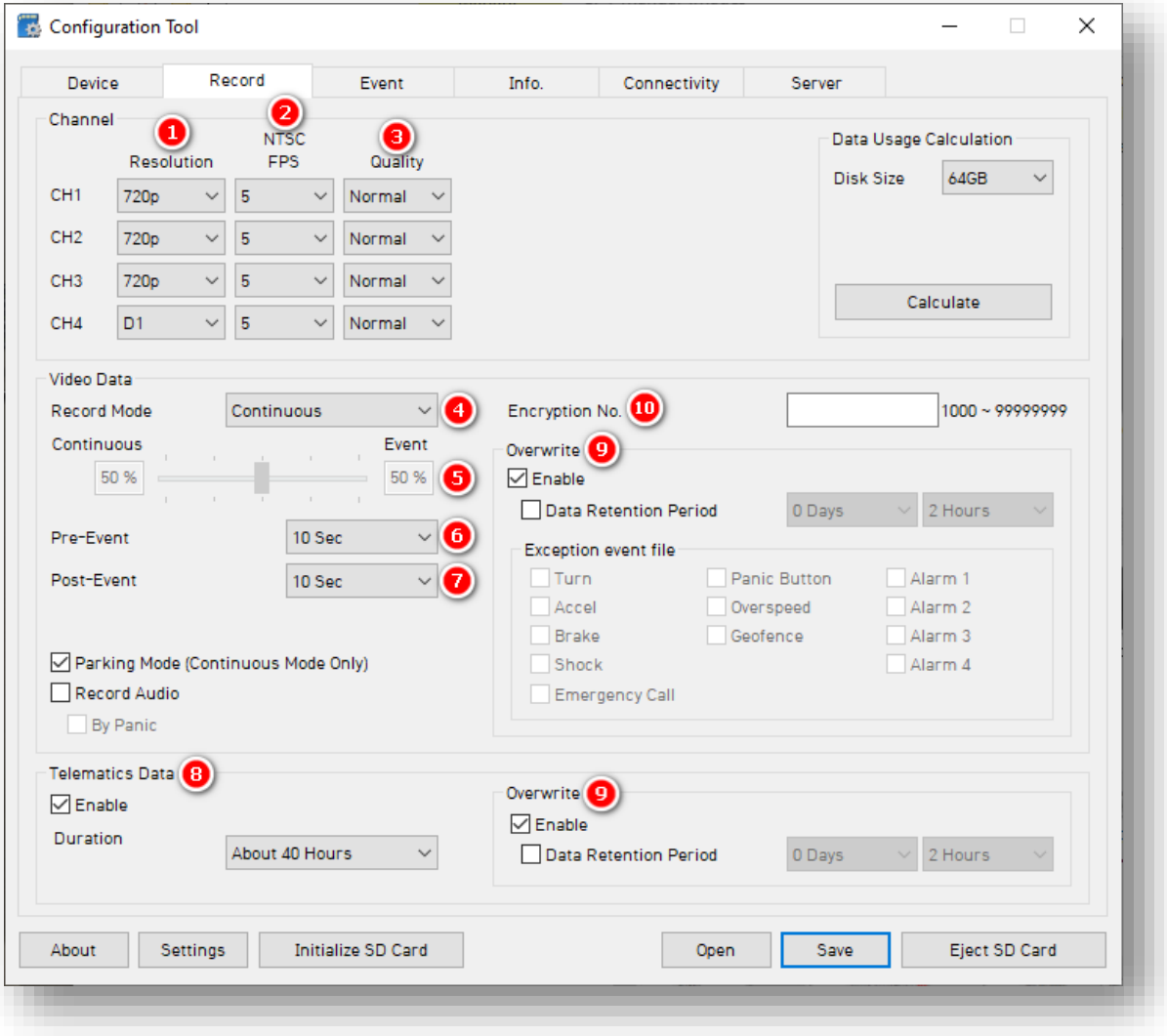
6. **(Optional)** Set up an accessory device (RF-Reader or Radio Frequency Reader) that connects to the serial input. Designate the reader **Type** and **Warning Time**.
7. Allow a connection for these devices by clicking **Use USB Keypad & Keyboard.**



Note: Contact Sensata INSIGHTS about RFID system compatibility. Sensata INSIGHTS SmartID replaces the need for RFID systems to manage driver identification.

4.2 How to Configure Record Tab

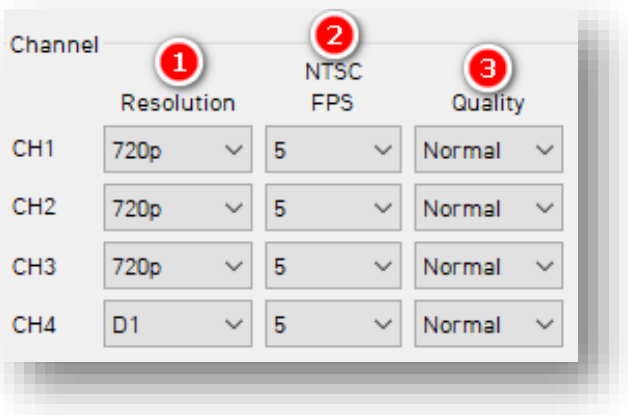
Record Tab Layout: At a Glance



Record

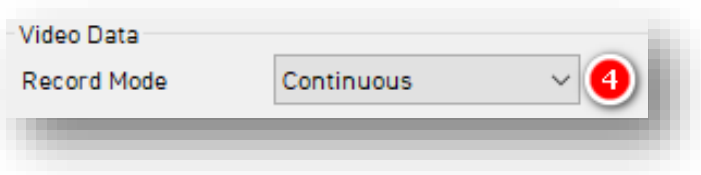
Channel

1. Select the **Resolution** for your enabled camera channels:
   - **D1** (720 x 480)**, 720p** (HD)**, 1080p** (FHD).
2. Select a **Frame Rate** (**FPS**):
   - **30, 15, 10, 5, 4, 3, 2, 1** and **0.**
3. Choose your default video **Quality:**
   - **Normal**, **High** or **Super** Bitrate. Higher-quality video contains more detail but consumes more storage space on the SD card.



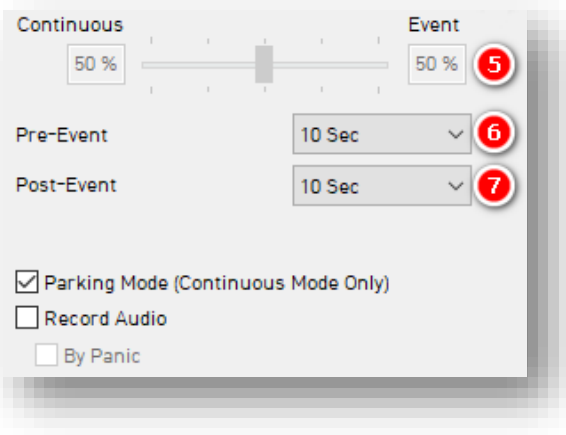
Video Data

4. Select your preferred **Record Mode**:
   - **Event:** Events only. Settings are determined by the pre & post-event setting.
   - **Continuous** (Default)**:** Video continuously records, with no events recorded separately on the SD Card (Events are still sent to Smart API if configured in the **Server** tab). This setting renders pre and post event capture settings void.
   - **Continuous+Event:** Video continuously records at 1 FPS. Events will record at your specified FPS.



Record

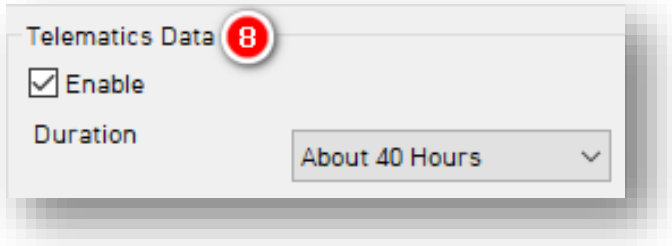
5. If you chose **Continuous+Event** mode, specify the SD card's ratio of video data recording.
6. To set the amount of time video records before an event, select your **Pre-Event Setting.**
7. To set the amount of time video records after an event, choose your **Post-Event Setting.**



Note: Pre/post-time settings do not apply to the "Continuous" record mode. **Parking Mode** reduces FPS to 1 when the vehicle idles for 5 min.

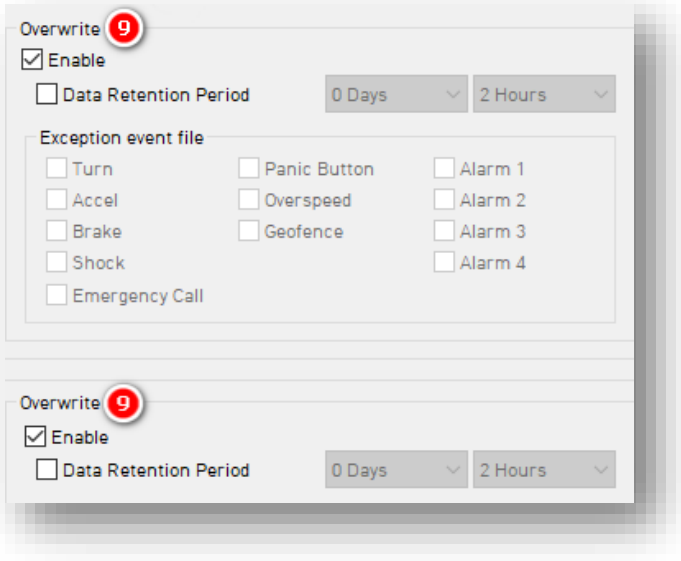
Telematics Data

8. Set the duration of your DRV Storage by clicking **Enable** and selecting **Duration**. DRV files record and are stored from video/event logs separately.

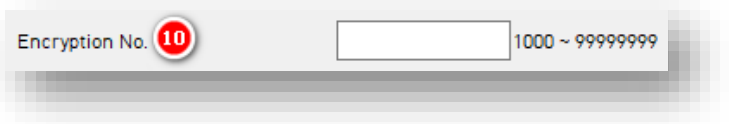


Record

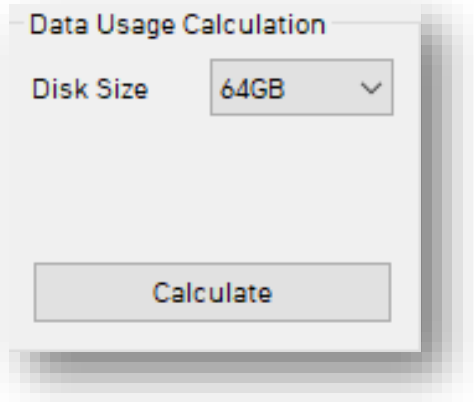
8. To turn on your device's overwrite feature, click **Enable.** This automatically rewrites SD card video footage and telematics data.
   - **Data Retention Period** determines how long video and telematics data remains on the SD card before being rewritten.
   - Select a list of **Exception event files** to remain on your SD card for longer periods.



10. To protect SD card data from being easily accessible, enter an 8-digit **Encryption No**.



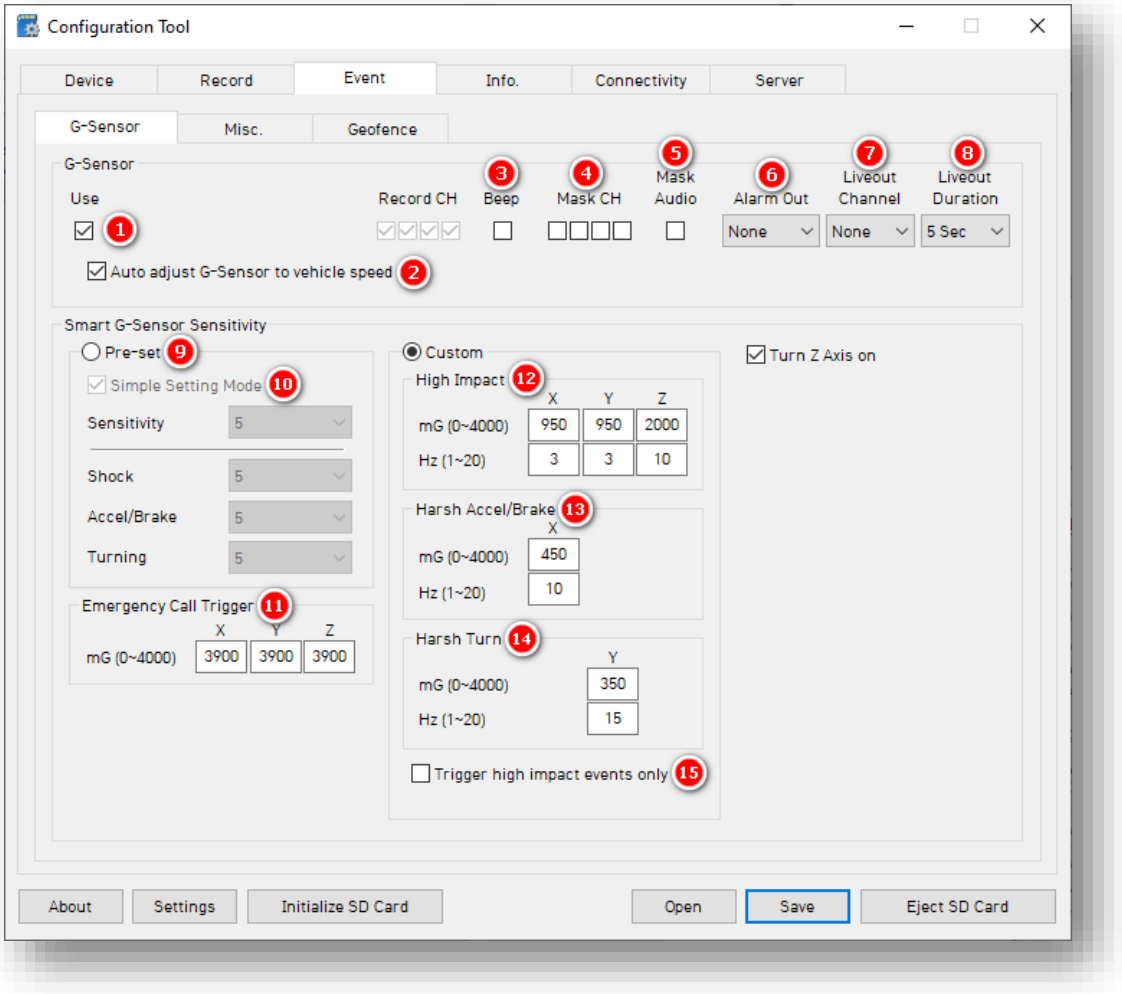
Note: Use the **Data Usage Calculation** to estimate your SD card's storage capacity based on your applied recording settings.



4.3 How to Configure Event Tab

4.3.1 G-Sensor Fields

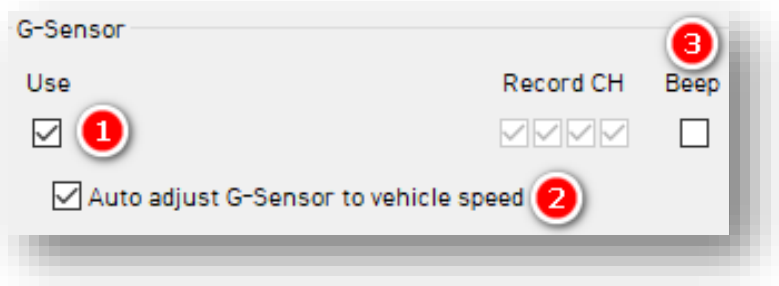
Event > G-Sensor Tab Layout: At A Glance



Event > G-Sensor

G-Sensor

1. To turn on the G-Sensor and configure its settings, check **Use.**
2. Automatically scale G-Sensor speed thresholds by clicking **Auto adjust G-Sensor to vehicle speed.** This increases your G-Sensor event threshold on each axis by 300mcg when your vehicle speed exceeds 20 km/h.
3. To turn on in-vehicle notifications for G-Sensor event triggers, check **Beep.**



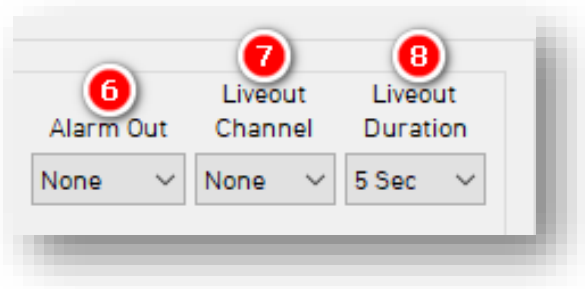
Note: Individual selection of camera channels disables when your device is in “Continuous” mode.

4. To prevent camera channel video recording, check **Mask CH.** Each checkbox corresponds to a channel (1-4, left to right).
5. Prevent device audio recordings by clicking **Mask Audio.**

Note: The masking of Video/Audio applies only during an event.

Event > G-Sensor

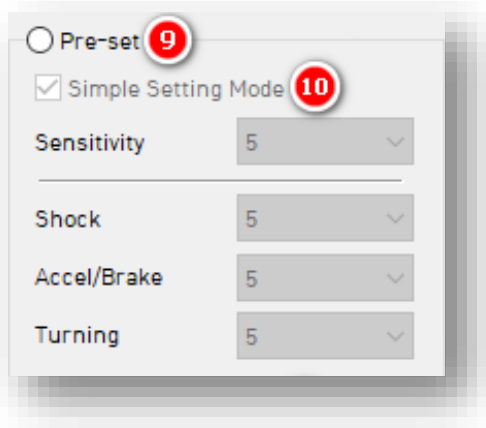
6. To set the alarm's notification duration, select from the **Alarm Out** options.
   - This sends a 5V output through **Alarm Out** (Brown Wire).
7. Decide which camera displays when your device's G-Sensor triggers by choosing from **Liveout Channel** options.
8. Determine how long the selected camera channel stays on after a completed event by selecting a **Liveout Duration.**



Smart G-Sensor Sensitivity

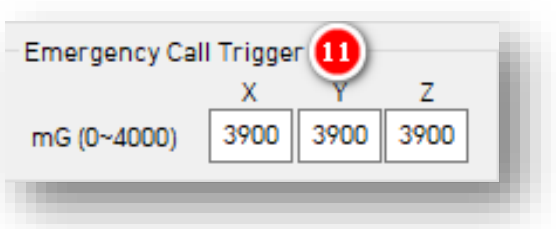
Determine your G-Sensor sensitivity with **Pre-Set** or **Custom** options.

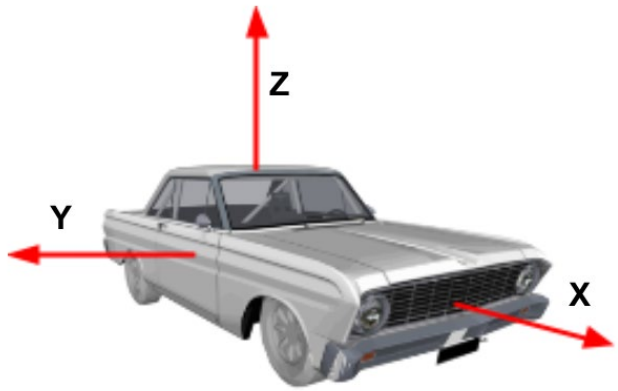
9. To set general sensitivity settings, check **Pre-Set**. Lower sensitivities result in fewer G-Sensor-related events. Higher sensitivities result in more events.
   - Disable **Simple Setting Mode** to set **Shock**, **Accel/Brake** and **Turning** settings.
10. To set an overall G-Sensor sensitivity, click **Simple Setting Mode,** then **Sensitivity**.



Event > G-Sensor

11. Events generate when the X, Y or Z axis acceleration exceeds the set G-Sensor threshold for **Emergency Call Trigger** (Severe Shock).

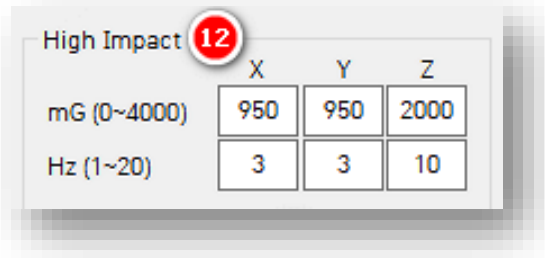




Custom

To set customized G-Sensor sensitivity settings, click **Custom.**

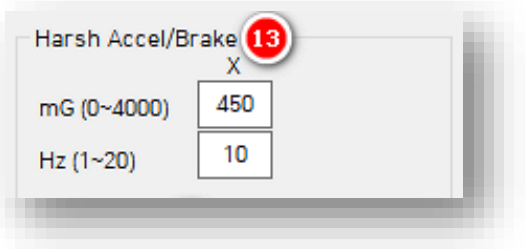
12. **High Impact** events occur if acceleration exceeds the X, Y or Z axis threshold (Activate the Z axis via **Turn Z Axis on**).



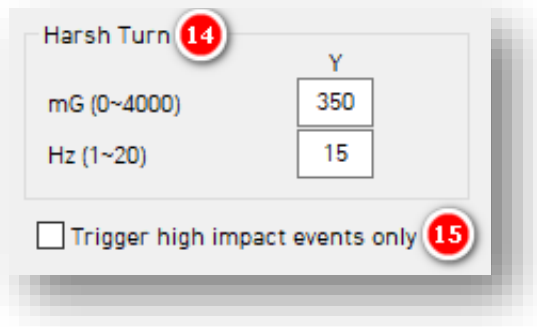
Note: Hz values set the number of times in a row the device's G-Sensor must exceed the X, Y or Z thresholds to trigger a harsh event. "Simple Setting Mode" is fixed at 1Hz. "Custom" is adjustable.

Event > G-Sensor

13. **Harsh Accel/Brake** events generate if acceleration exceeds the X axis threshold.



14. **Harsh Turn** events occur if acceleration exceeds the Y axis threshold.
15. Check **High Impact Trigger** to limit alerts to high-impact events. This disables Accel/Brake and Turn events.

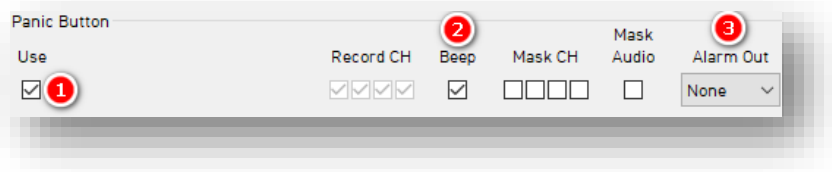


Event > Misc.

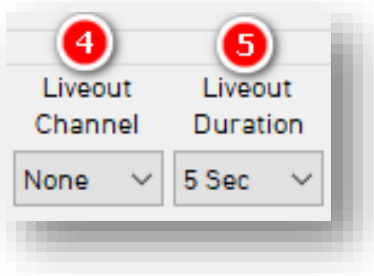
4.3.2 Misc. Fields

Panic Button

1. To activate the Panic Button, check **Use**.
2. Turn on audible notifications when a driver presses the Panic Button by clicking **Beep.**
3. Set the duration of the alarm via the **Alarm Out** options.
   - This sends a 5V output through Alarm Out (Brown Wire).



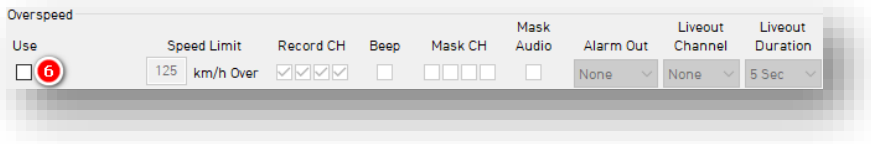
4. Decide which camera displays on the LCD when your device's Panic Button triggers via **Liveout Channel** options.
5. Determine how long your selected camera channel stays on after an event trigger by selecting a **Liveout Duration.**



Event > Misc.

Overspeed

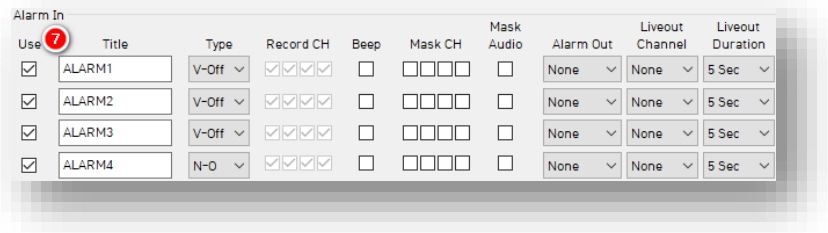
6. To configure Overspeed settings, click **Use.**
   - Enter your **Speed Limit** threshold for recording (gauges vehicle speed, not regional speed limits).
   - You should be familiar with the other settings featured in this image. Click **here** for a reference of each field's function. Apply the same logic to Overspeed settings.



Alarm-In

7. To set your optional alarm input triggers, check **Use**. Under **Title**, label them according to the input type (e.g., doors).
   - **Alarm 1** - White Wire
   - **Alarm 2** - Purple Wire
   - **Alarm 3** - Green Wire
   - **Alarm 4** - Orange Wire
   - **Input Types:**
     - **V-On/Off** (12V)
     - **N-C** (Normally Closed Circuit)
     - **N-O** (Normally Open Circuit)

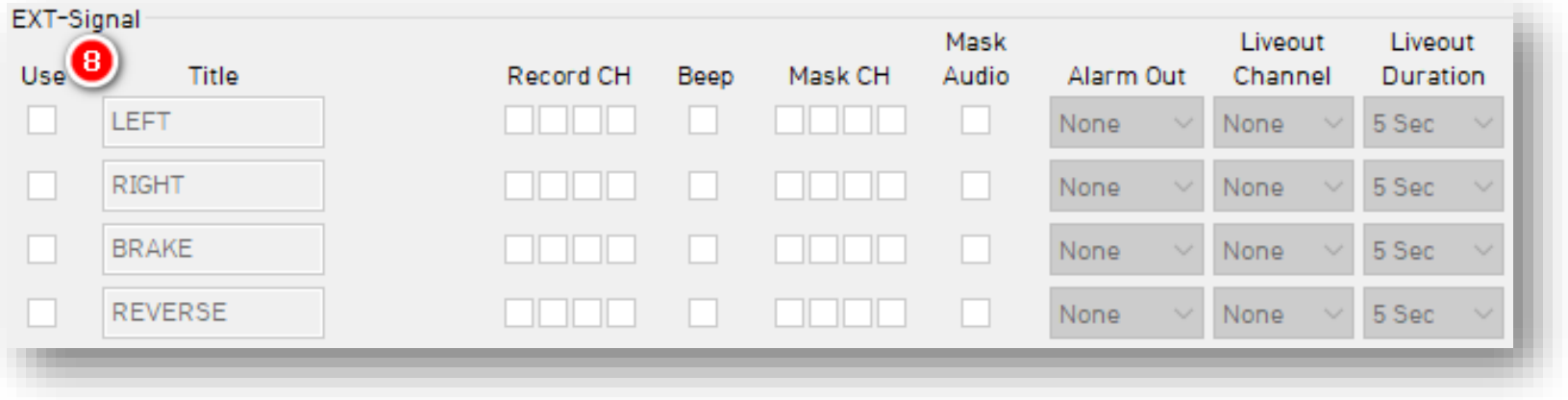
Note: Older CP4 hardware doesn't support Alarm 4. CP4/CP4S devices post-August 2018 support a 4th alarm input.



Event > Misc.

EXT-Signal

8. Signal events are reserved for RS232 accessory devices with their own event triggers (like an ADAS or DMS camera). This allows CP4S to configure recording, masking and display rules for accessory devices. EXT-Signal serves no purpose beyond RS232 accessory devices.

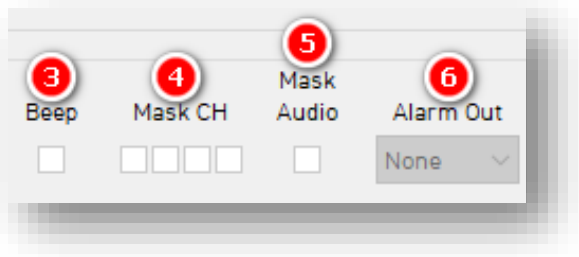


4.3.3 Geofence Fields

Set virtual boundaries for your device to record events. Optionally, obscure your camera's field of vision and audio recording.

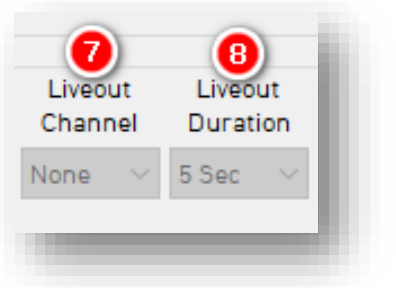
1. To activate the Geofence, click **Use.**
2. Select the **Type** of Geofence.
   - **In** activates a Geofence when the vehicle *enters* the geographic boundary.
   - **Out** triggers when the vehicle *exits* the geographic boundary.

3. Audibly notify the driver when they have crossed the Geofence's boundary via **Beep.**
4. To obscure camera channels, check the relevant **Mask CH.**
5. Prevent device audio recording by clicking **Mask Audio.**
6. Set the duration of the alarm via **Alarm Out** (Brown Wire) dropdown.



Event > Geofence

7. Choose which camera displays on the LCD when your device's Geofence triggers via **Liveout Channels** (if using an LCD monitor).
8. Determine how long your selected camera channel stays on after a completed event by selecting a **Liveout Duration.**

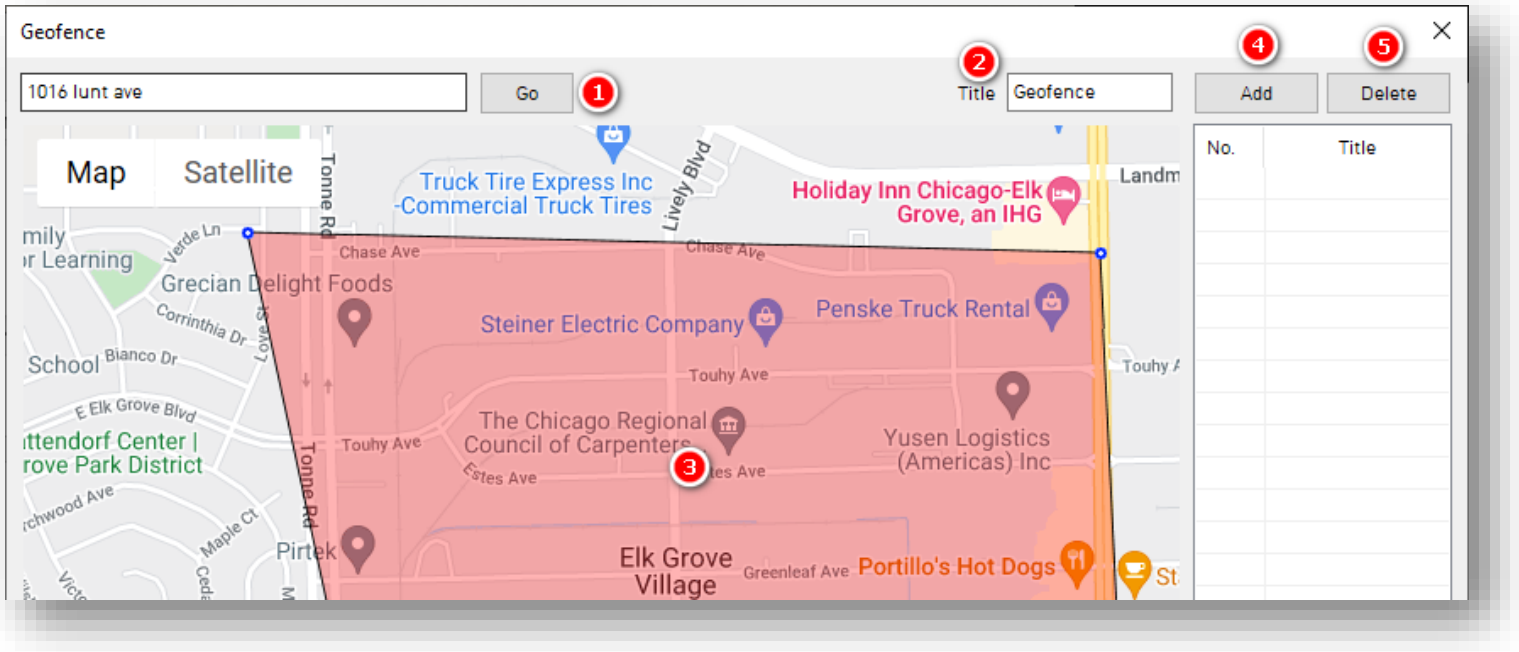


Event > Geofence

Zone Selection

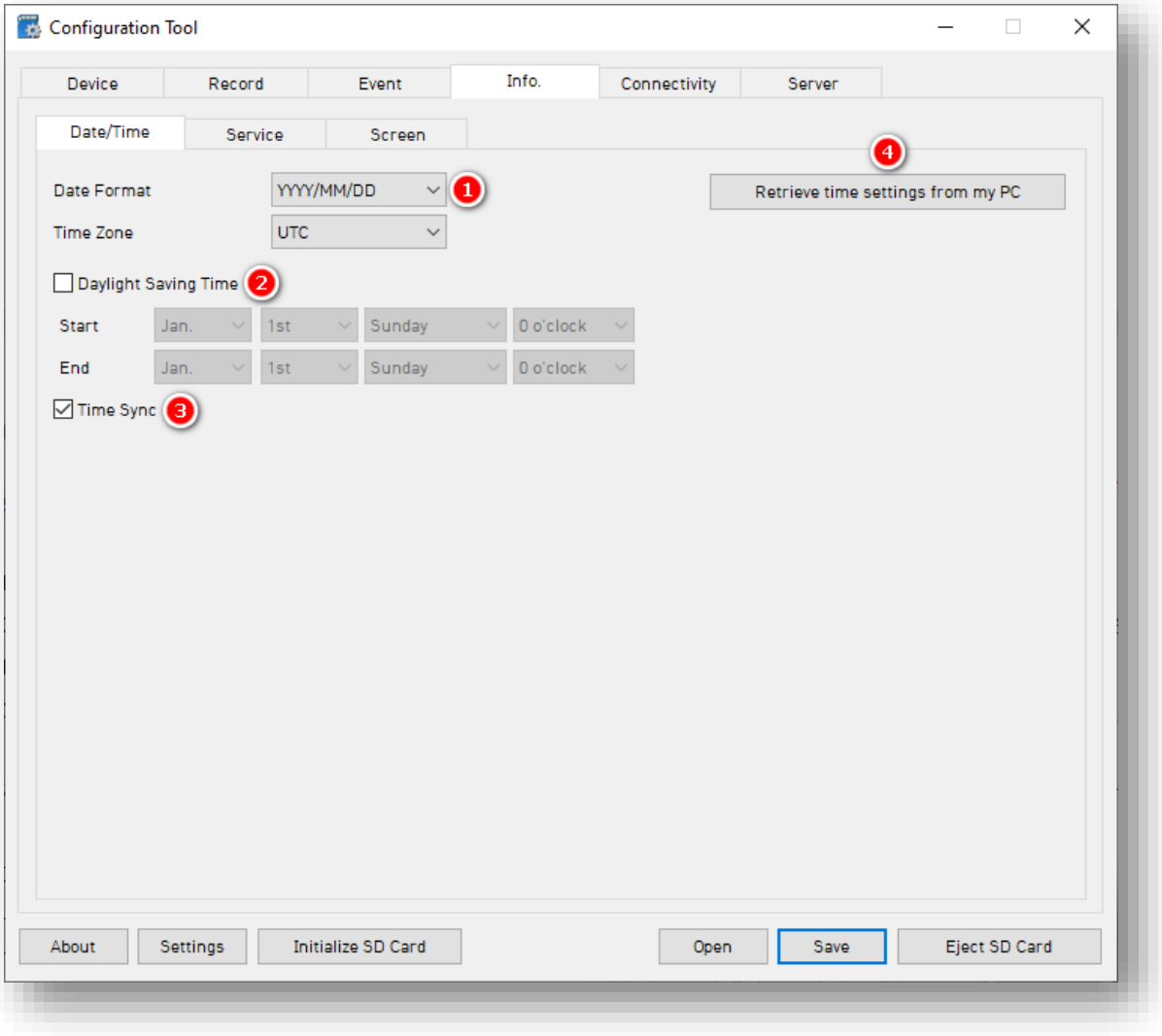
To set Geofence boundaries on Google Maps, click **Zone Selection**. Create up to 20 geofence zones.

1. To search for a location, enter an address into the text field and click **Go.**
2. Change the **Title** of your Geofence**.**
3. To set a perimeter, click on the map. The area in **Red** is your Geofence.
4. Activate your outlined Geofence by clicking **Add.**
5. To remove a Geofence, check the Geofence **No.** and click **Delete.**



4.4 How to Configure Info Tab

Info Tab Layout: At a Glance

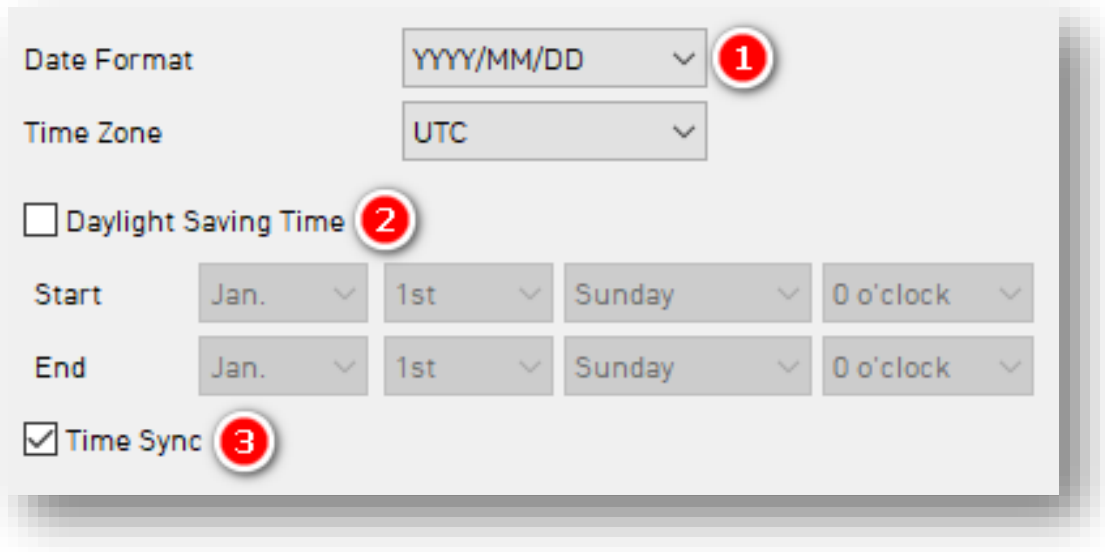


Info > Date/Time

4.4.1 Date/Time Fields

Setting time preferences on your CP4/CP4S is **not recommended**. PC Viewer software and Smart API automatically adjust UTC to your local time zone. **If you've connected your CP4/CP4S to Smart API, do not set time preferences.**

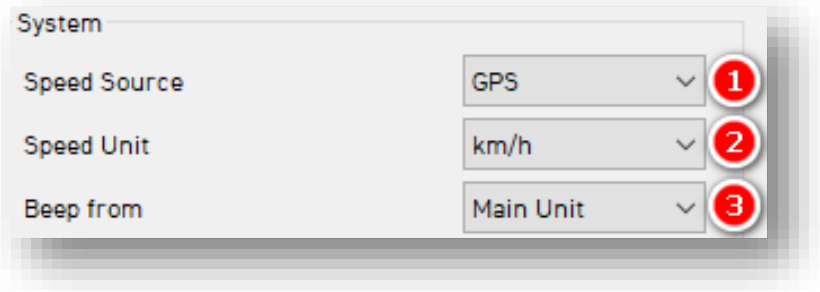
1. Set your preferred **Date Format.**
2. Set a customized date and time range for **Daylight Savings Time.**
3. Ensure GPS time syncs with device OS time by clicking **Time Sync.**



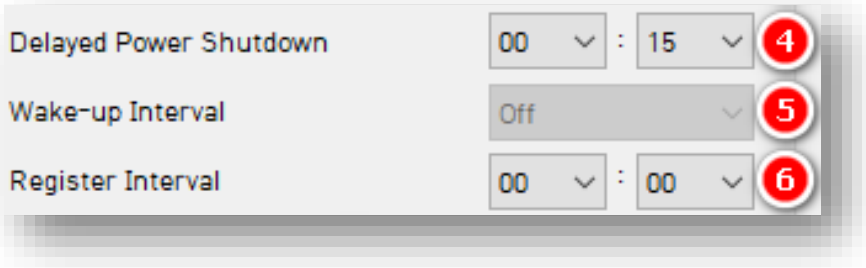
4.4.2 Service Fields

System

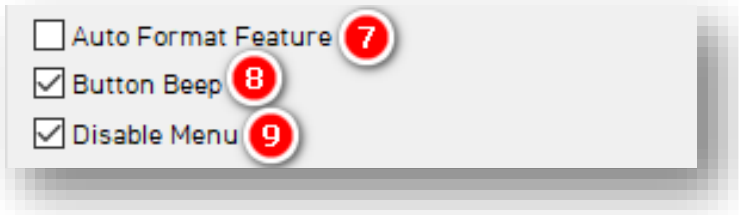
1. Determine how your device gauges vehicle speed by choosing a **Speed Source.**
2. Set a preferred **Speed Unit**.
3. Choose the source of your device's audible notifications with **Beep.**



4. Pick the time your CP4/CP4S stays on after ignition off from **Delayed Power Shutdown** options.
5. Select the time, or **Wake-up Interval,** when your device powers on after shutdown.
6. Select an amount of time, or **Register Interval,** your device stays on during its Wake-up.



7. CP4 automates necessary SD card maintenance when the **Auto Format Feature** is on.
   - This feature formats blank SD cards automatically.
   - It will not format corrupted SDs. Instead, the device sends a “Media Error” event to the server. The red LED and an optional audible alarm (See **System Warning**) will turn on.
8. Allow audio responses from your device’s button by clicking **Button Beep.**
9. Remove the user-facing menu from your LCD monitor with **Disable Menu.**



Ignition Off Filter

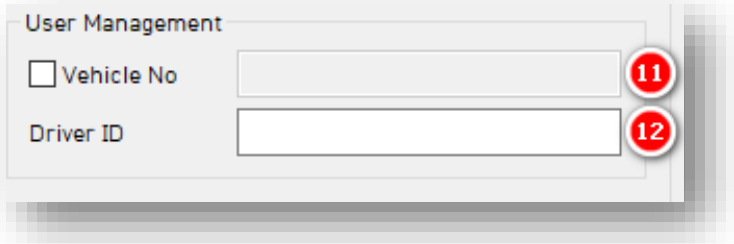
10. Check **Use** to turn on Ignition Off Filter.
    - Set the time your device maintains ignition on operation with **Filter Duration.**
    - Set a value the **G-Sensor Threshold** must exceed to retain ignition on functions.
    - To prevent faulty ignition off events, set a **Threshold** value.

Info > Service

User Management

11. Check **Vehicle No** and assign a number to your vehicle.
12. Enter a unique **Driver ID** for different vehicles.

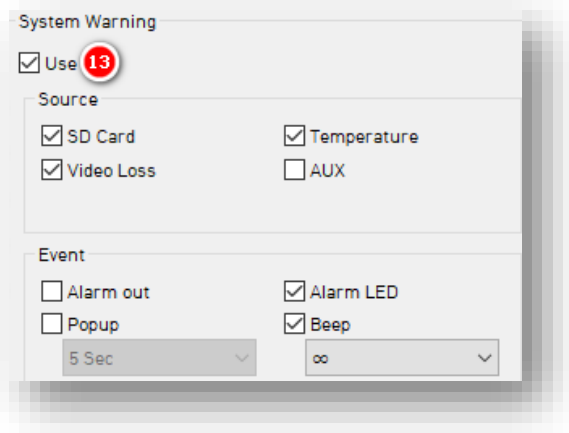
    Note: You can watermark **Vehicle No** & **Driver ID** on your MP4 converted video feed with desktop analysis software.



System Warning

13. To provide notifications for system component corruption and/or failure, check **Use.**
    - Check any/all boxes to allow notifications.
    - Set your **Event** notification and sound duration settings for system warnings.

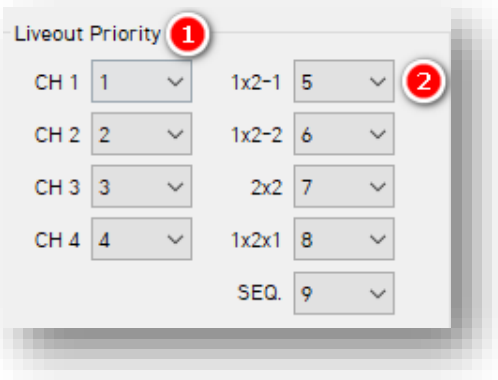
    Note: If you have activated **System Warning** in **Source**, your device sends corresponding notifications to SmartAPI.



4.4.3 Screen Fields

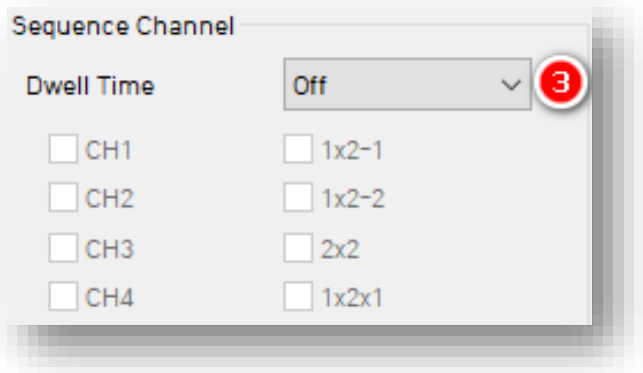
Liveout Priority

1. Select display preferences when your device's trigger activates from **Liveout Priority** options.
   - Camera prioritization ranges from 1 (highest priority) to 9 (lowest priority).
   - If **CH1** and **CH2** trigger simultaneously, the camera with higher priority is displayed.
2. Select individual camera channel aspect ratios.



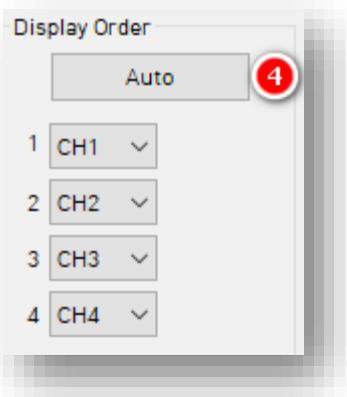
Sequence Channel

3. Select the display time per selected camera channels (**Off** – **5 sec**) from the **Dwell Time** options.



Display Order

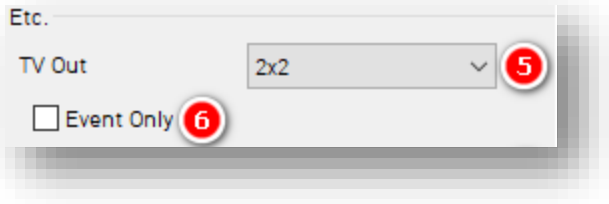
4. Automate the organization of your camera channel display by clicking **Auto.** If you prefer manual camera channel organization, select a display order.



Etc.

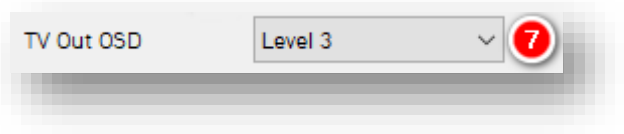
5. Choose a signal to provide to your monitor from the **TV Out** options.
   - **2x2**, or “quad view,” is the default display view.

6. Click **Event Only** to turn off the V/O (video output) signal unless there is an event and “Event Only” is configured in the **Event** tab.



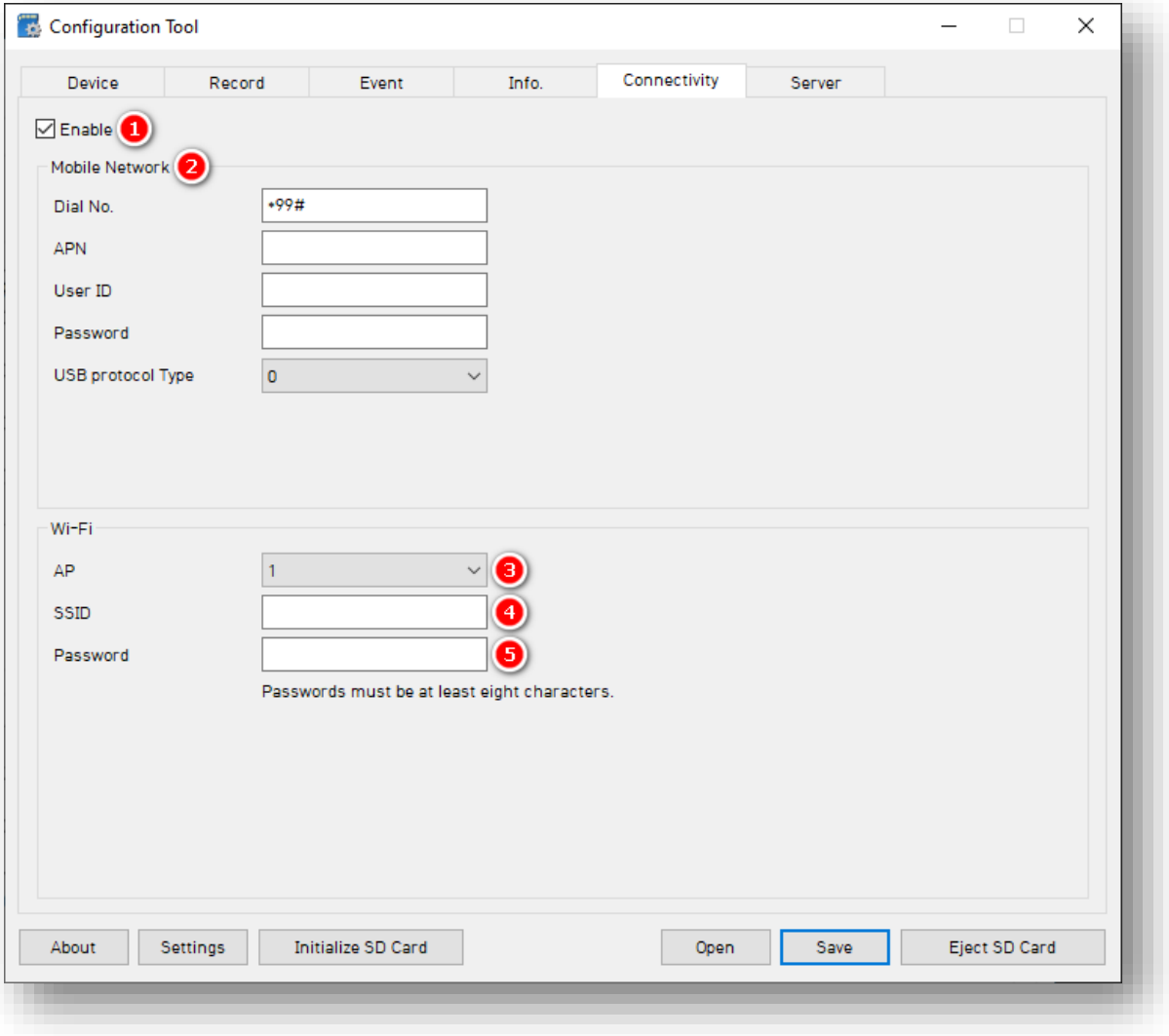
Info > Screen

7. Select which information appears on your LCD.
   - **Level 1** (Full): Time, Disk Space, Camera Title, Camera/Event Status.
   - **Level 2**: Time, Disk Space, Camera Title.
   - **Level 3**: Time, Disk Space.
   - **Level 4** (Off): No data overlay.



4.5 How to Configure Connectivity Tab

Connectivity Tab Layout: At a Glance

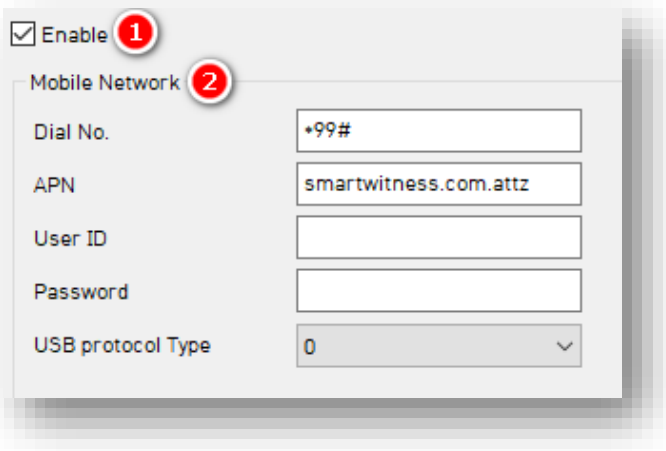


Connectivity

Mobile Network

1. To specify mobile and WIFI network settings, check **Enable.**
2. Add **Mobile Network** details to relevant fields. If you use an INSIGHTS AT&T SIM card, ensure the APN matches the image shown.

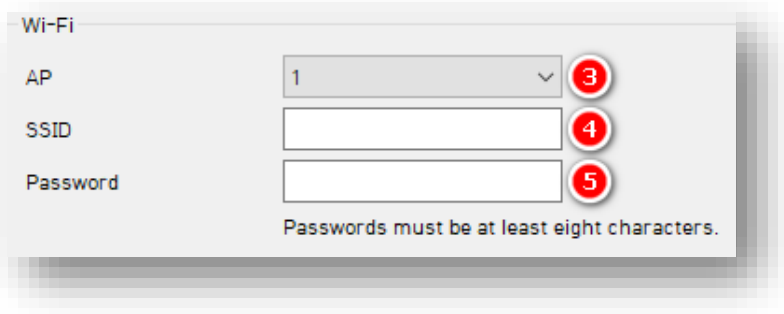
   Note: CP4 and CP4S do not have Wi-Fi built-in as standard. Only the “CP4S-W” model supports Wi-Fi.



Wi-Fi

Use a Wi-Fi connection instead of cellular, with an approved Wi-Fi USB dongle.

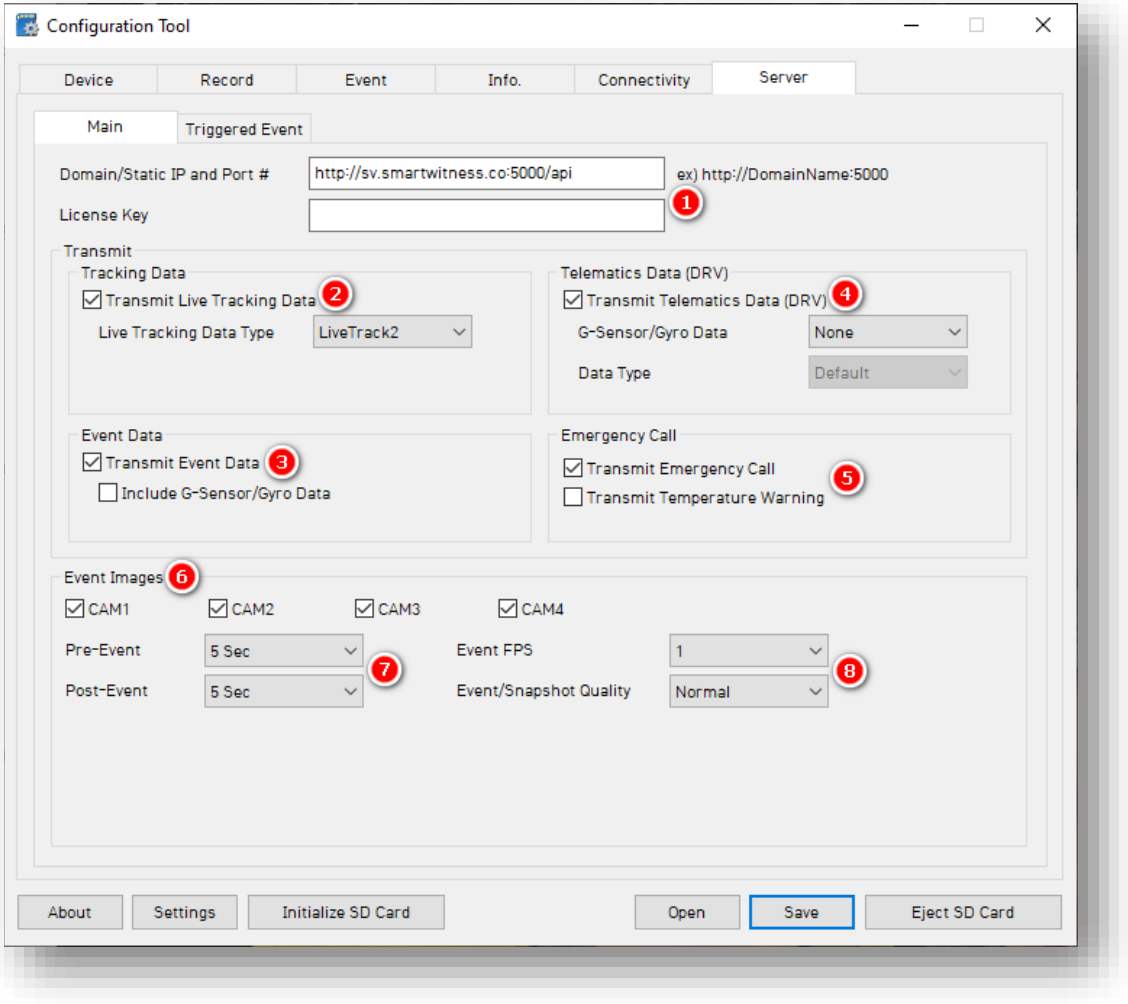
3. Your CP4/CP4S has built-in Wi-Fi. Select your **AP**. Your **AP** must be secure and use WPA/WPA2 encryption.
4. Set up to 10 Wi-Fi **SSIDs**. Your CP4/CP4S will scan for as many networks as added to your settings.
5. Enter a **password**.



4.6 How to Configure Server Tab

4.6.1 Main Fields

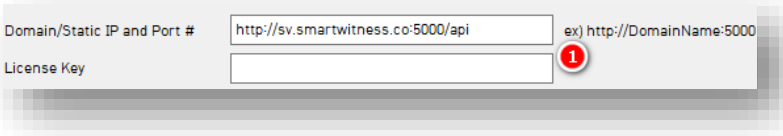
Server > Main Tab Layout: At A Glance



Server > Main

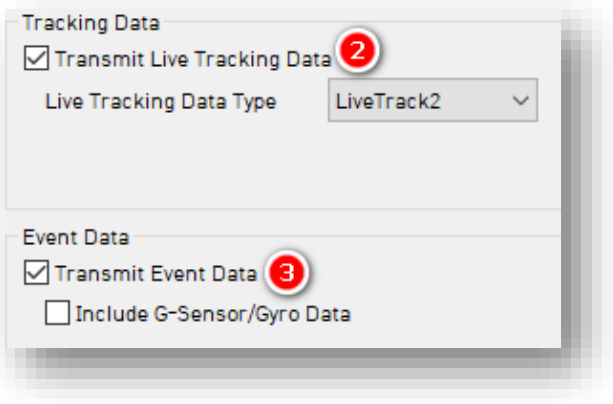
Server

1. INSIGHTS, or your service provider, will give you the **Domain/Static IP and Port #** URL and **License Key** (If necessary) to enter here.



Transmit

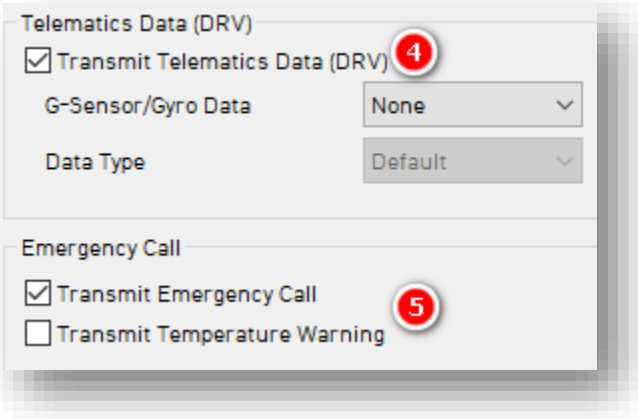
2. Use HTTP posts from your CP4/CP4S to the server by checking **Transmit Live Tracking Data**. Livetrack2 contains GPS coordinates. LiveTrack3 does not.
3. To send event notifications and images to the server, check **Transmit Event Data.**



Server > Main

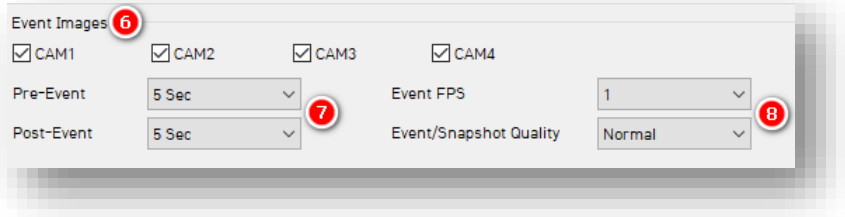
4. Send DRV data to the server by clicking **Transmit Telematics Data (DRV).**
5. Send emergency notifications like Ecall and over-temperature warnings to the server.

   Note: The frequency interval of LiveTrack and DRV uploads is server-controlled.



Event Images

6. Choose which camera channels will send event images to the server.
   - **CAM1, CAM2, CAM3,** and **CAM4**
7. Select from **Pre-Event** and **Post-Event** options to determine snapshot timing before and after an event.
8. Select image capture settings for **Event FPS** and **Snapshot Quality.**

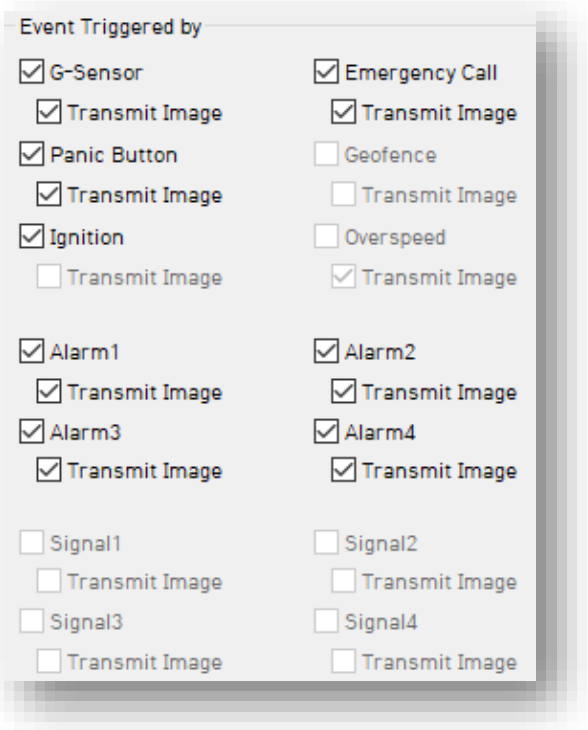


4.6.2 Triggered Event Fields

Event Triggered By

Select the events your device sends to the server. Events transmit instantly, even in “Continuous” record mode.

Note: SmartAPI Workstation event admin controls dictate what events and event notifications are sent from SmartAPI to our partner’s servers.



5 Finishing Up/Support

Goal: Completing your configuration

1. Click **Save** to set your finalized settings configuration.
2. Select **FHDRM** SD drive when prompted. Your configuration saves to your card.
3. Wait for confirmation that the software applied your settings configuration.
4. Click **Eject SD Card**, insert it into your CP4/CP4S and power on the device.
5. You have completed your configuration.

Note: Apply device configurations over-the-air from the Smart API Workstation. See the instructions **here**.

5.1 Support Information

If you need additional support or want an expert to walk you through this process, please **register** and submit a ticket, or email us at **support@smartwitness.com**. If you are enrolled in SWAT, reach out to the integration team via Teams with any device configuration questions.

Feel free to call our support team:

North America, South America, APAC

- +1 (312) 981 8774

EMEA

- +44 (0) 1483 397005