Familiar Vehicle Notifications for Video Analytics

With Familiar Vehicle Notifications for Video Analytics, Video customers can know exactly whose cars are coming and going. Familiar Vehicle Notifications for Video Analytics lets customers identify familiar vehicles and receive customized alerts when either known or unknown cars are detected. Setup is quick and easy—customers create a vehicle detection recording rule and then identify their vehicles to train the system and begin receiving alerts. Property owners can also respond to unfamiliar cars and proactively deter unwanted visitors by manually triggering a warning sound from the app. For more on Manually Triggered Warning Sounds, see Manually Triggered Warning Sounds for proactive video deterrence.

Compatibility requirements

- A video service package that supports Video Analytics
- One of the following compatible video devices:
  - 1080p Indoor Wi-Fi Camera (ADC-V515)
  - Indoor Fixed w/IR (ADC-V522IR)
  - 1080p Indoor Wi-Fi Camera (ADC-V523/523X)
  - 4MP Indoor Wi-Fi camera with Integrated Spotlight (ADC-V530)
  - Outdoor Wireless (ADC-V722W)
  - 1080p Outdoor Wi-Fi Camera (ADC-V723/723X)
  - 1080p Outdoor Wi-Fi Camera with Two-Way Audio (ADC-V724/724X)
  - 4MP Outdoor Camera Floodlight (ADC-V729/V729AC/VC729P)
  - 4MP Outdoor Spotlight Camera (ADC-V730/VC730P)
  - 4MP Indoor/Outdoor Battery Camera with Two-Way Audio and Integrated Spotlight (ADC-V731B)
  - 1080p Mini-Bullet Camera (ADC-VC727P)
  - Pro Series 4MP Bullet PoE Camera with Varifocal Lens (ADC-VC728PF)
  - Prism Series 8MP Varifocal Bullet PoE Camera (ADC-VC7398PA)
  - Pro Series 1080p Dome PoE Camera (ADC-VC827P)
  - Prism Series 5MP Fixed Lens Dome PoE Camera (ADC-VC8295P)
  - Pro Series 4MP Varifocal Turret Camera (ADC-VC838PF)
  - Pro Series 1080p Dome PoE Camera with Varifocal Lens (ADC-VC847PF)
  - Prism Series 8MP Fixed Lens Dome PoE Camera (ADC-VC8498P)
  - Prism Series 8MP Varifocal Dome PoE Camera (ADC-VC8498PA)

Note: Familiar Vehicle Notifications for Video Analytics is not supported by Alarm.com doorbell cameras, and we do not

recommend using indoor cameras with this feature.

Feature details

Customers can train their system to identify up to 5 "familiar" vehicles and receive SMS, email, or push notifications when the system identifies known or unknown vehicles.

Limitations

1. The vehicle must be fully in view of the camera and not obstructed.
2. Cameras will not be able to distinguish between vehicles of similar model and color.
3. Changes in lighting, weather, and night vision can have an impact on accuracy. Ensure to enroll images of familiar vehicle during the day, twilight, and at night in IR mode.
4. Detections will only occur on analytics clips where a vehicle detection occurred. Event triggered clips or Other clips will not work.
5. Familiar Vehicle detection is intended to work with subjects 20 feet or closer to the camera. Vehicles farther away will have less detail that can be distinguished and may lead to inaccurate detections.
6. Familiar Vehicle detection works by analyzing the thumbnail snapshot, the entire clip is not analyzed.

   Note: The thumbnail snapshot is the same image that's included in notifications.

Intended use:

Familiar Vehicle Notifications for Video Analytics is meant for monitoring distinct vehicles entering driveways, parking spaces, or garages at low speed and within 20 feet of camera.

Important: Familiar Vehicle Notifications for Video Analytics is not intended for monitoring street traffic or parking lots.

Quick and easy setup

To begin configuring Familiar Vehicle Notifications for Video Analytics, a single image can be taken to start training the system. Customers can perform additional training from the notifications or by clicking the ellipses next to clips on the Saved Clips page.

Note: Identifying a vehicle from multiple angles and lighting levels enhances the accuracy of Familiar Vehicle Notifications for Video Analytics.

If there are no vehicle-classified saved clips on the account, a customer will need to create a Video Analytics rule. Once the rule is created and vehicle-classified clips are uploaded, there will be images available to select and associate to a Familiar Vehicle. For more information about creating a Video Analytics rule, see Configure a Video Analytics rule.

Steps to set up Familiar Vehicle Notifications for Video Analytics:

1. Enable the Familiar Vehicle feature on all desired cameras.

2. If there are no existing Video Analytics rules on the account, create and configure a Video Analytics rule to detect a vehicle. Alternatively, you can edit existing rules to add vehicle detection. For more information about creating and editing Video Analytics rules, see Configure a Video Analytics rule.
3. Trigger the rule with the vehicles you want Familiar Vehicle Notifications for Video Analytics to recognize.
4. Add Familiar Vehicles to the account.
5. To help improve the accuracy of the feature, train Familiar Vehicle Notifications for Video Analytics by selecting images to assign to familiar vehicles.

Enable the Familiar Vehicle feature

The Familiar Vehicle feature can be enabled using the Alarm.com customer website and Alarm.com app.
Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Settings**.
4. Click **Familiar Vehicles** or **Familiar Faces and Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, click **Vehicle**.
   - If you are setting up a Familiar Vehicle for the first time, you will need to opt-in. In *What is Familiar Vehicles?*, click **Agree** to enable the feature.
5. In *Cameras*, click to select which cameras you want to enable.
6. Click **Save**.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap .
3. Tap .
4. Tap **Familiar Vehicles** or **Familiar Faces & Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, tap **Vehicle**.
   - If you are setting up a Familiar Vehicle for the first time, you will need to opt-in. In *What is Familiar Vehicles?*, tap **Agree** to enable the feature.
5. In **Camera Access**, tap to select the desired cameras.
6. Tap **Save**.

To disable the Familiar Vehicle feature

The Familiar Vehicle feature can be disabled using the Alarm.com customer website and Alarm.com app.

Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Settings**.
4. Click **Familiar Vehicles** or **Familiar Faces and Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, click **Vehicle**.
5. Click **Disable Feature**.
6. Click the *Photo Collection* toggle switch to enable or disable the setting as desired.
   - If enabled, Video Analytics rules will continue to capture new vehicles' photos for two months, which can be used if the feature is enabled in the future.
   - If disabled, Video Analytics rules will not continue to capture new vehicles' photos once the feature is disabled.
7. Click **Disable feature and Delete all data**.
8. Click **Turn Off**.
9. Click **Save**.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap .
3. Tap .
4. Tap **Familiar Vehicles** or **Familiar Faces & Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, tap **Vehicle**.
5. Tap **Disable Feature**.
6. Tap the *Photo Collection* toggle switch to enable or disable the setting as desired.
   - If enabled, Video Analytics rules will continue to capture new vehicles' photos for two months, which can be used if the feature is enabled in the future.
   - If disabled, Video Analytics rules will not continue to capture new vehicles' photos once the feature is disabled.
7. Tap **Disable feature and Delete all data**.
8. Tap **Turn Off**.
9. Tap **Save**.

Add a Familiar Vehicle

A Familiar Vehicle can be added using the Alarm.com customer website and Alarm.com app.

Note: Only images from clips captured after enabling the Familiar Vehicle feature can be associated with Familiar

Vehicles.
Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Settings**.
4. Click **Familiar Vehicles** or **Familiar Faces and Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, click **Vehicle**.
5. Click + to add a Familiar Vehicle.
   - To edit or add new photos to an existing Familiar Vehicle, click the desired vehicle.
6. Click to select a photo. For best performance, we recommend starting with at least 5 photos.
7. Click < to return to the previous page.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap .
3. Tap .
4. Tap **Familiar Vehicles** or **Familiar Faces & Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, tap **Vehicle**.
5. Tap + to add a Familiar Vehicle.
   - To edit or add new photos to an existing Familiar Vehicle, tap the desired vehicle.
6. Tap to select a photo. For best performance, we recommend starting with at least 5 photos.
7. Tap ← to return to the previous screen.

Note: Limit the distance of vehicles to 20 feet from the camera, especially at night, when there will not be enough detail to classify vehicles accurately.

Training Familiar Vehicle Notifications for Video Analytics

Training Familiar Vehicle Notifications for Video Analytics can help improve the feature's accuracy by identifying instances where vehicles are correctly, or incorrectly, identified.
Alarm.com app steps Push notification steps

To train Familiar Vehicle Notifications using the {{customerapp}:

1. Log in to the Alarm.com app.

2. Tap .
3. Tap .
4. Tap **Familiar Vehicles** or **Familiar Faces & Vehicles**.
    - If you have Familiar Vehicles and Familiar Faces enabled on the account, tap **Vehicle**.
5. Tap + to view recent photos.
6. Tap

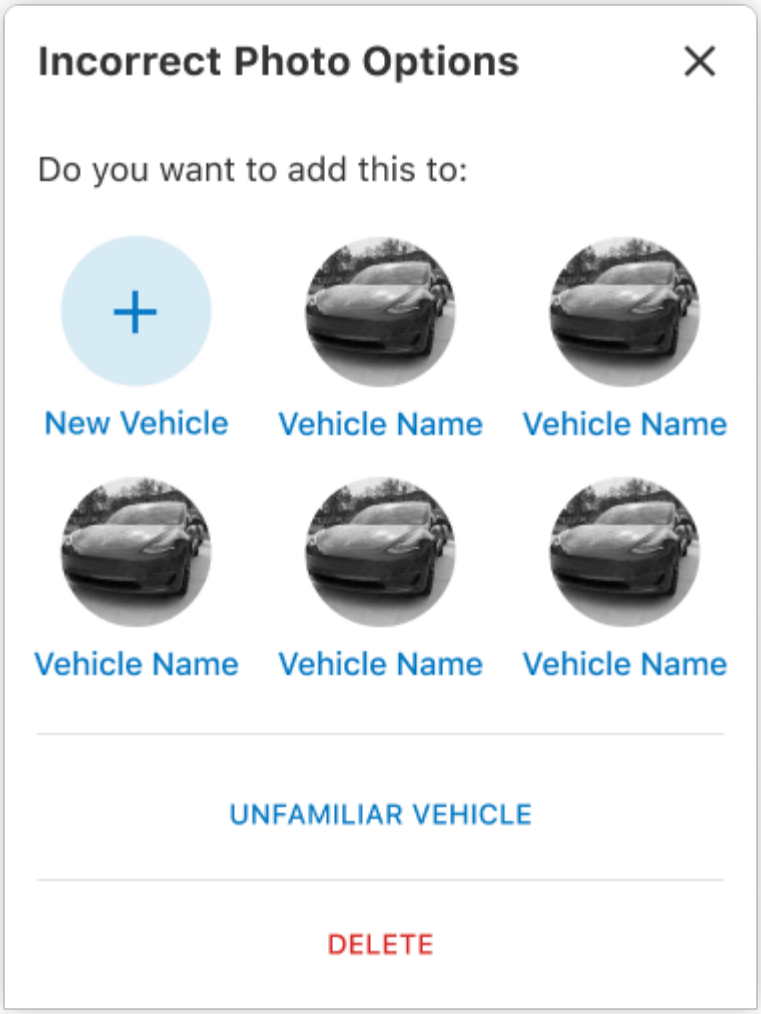
   

   to select photos that match the correct Familiar Vehicle.
7. Tap to select the correct Familiar Vehicle.

To train Familiar Vehicle Notifications for using push notifications:

Tap to open the Familiar Vehicle Notification:

- If the correct vehicle is identified tap .
- If the incorrect vehicle is identified, tap . An action sheet will open and allow the user to select an existing vehicle, create a new one, mark the vehicle as unfamiliar, or delete it.



Note: Deleting the image will not delete the video clip, it will only delete the image used for Familiar Vehicle Notifications for Video Analytics.

Create/edit Familiar Vehicle Notifications

Familiar vehicle notifications can be created and edited using the Alarm.com customer website and Alarm.com app.
Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

To create Familiar Vehicle Notifications for a single recording rule:

1. Log in to the Alarm.com customer website.
2. Click **Video**.

3. Click **Recording Rules**.
4. Click ✎ to edit an existing rule, or click + to create a new one.
5. Configure the recording rule as desired.
6. In *Send notification for clips containing...*, verify the *Vehicle* toggle switch is enabled.
7. Click

   to select *All Vehicles*, *All Unknown Vehicles*, or the desired familiar vehicle to send notifications.
8. Click **Save**.

To create Familiar Vehicle Notifications across all recording rules:

1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Settings**.
4. Click **Familiar Vehicles** or **Familiar Faces and Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, click **Vehicle**.
5. In *Vehicles*, click to select the desired Familiar Vehicle.
   - If no Vehicle has been added, click + to add a Familiar Vehicle.
6. Click **Notifications**.
7. Click **Apply to all rules**.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap 📹.
3. Tap ⚙.
4. Tap **Recording Rules**.
5. Tap ✎ to edit an existing rule, or tap + to create a new one.
6. Configure the recording rule as desired.
7. In *Notify Recipients & Active Alerts*, verify the *Vehicle* toggle switch is enabled.
8. Tap

   to select *All Vehicles, All Unknown Vehicles*, or the desired familiar vehicle to send notifications.
9. Tap **Save**.

View Familiar Vehicle Notifications for Video Analytics clips

Familiar Vehicle Notifications for Video Analytics clips can be viewed through the Alarm.com customer website and Alarm.com app.
Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

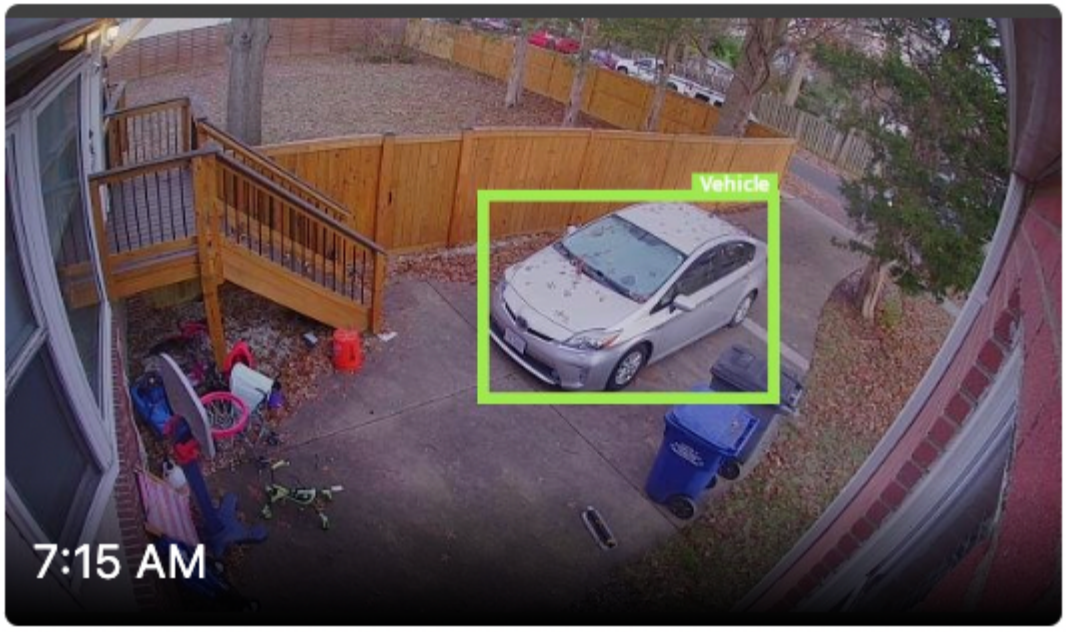
1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Saved Video Clips**.
4. Click ⧩.
5. In *Object Detection*, click to select **Vehicle**.
6. Using the *Cameras* dropdown menu, click to select the desired cameras.
7. Using the *Familiar Vehicles* dropdown menu, click to select the desired vehicles.
8. When all desired filters are selected, click **Apply**.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap 🎥.
3. Tap **Saved**.
4. Tap ⧩.
5. In *Cameras*, tap to select the desired camera.
6. In *Object Detection*, tap to select *Any Familiar Vehicle* to filter clips related to all Familiar Vehicles associated with the account.
    - To find clips associated with a specific Familiar Vehicle, in *Familiar Vehicles*, tap to select the desired vehicles.
7. When all desired filters are selected, tap **Apply**.

Troubleshooting

- Verify that all Video Analytics best practices are followed. Incorrect camera placement, ground zone/tripwire placement, or lighting may prevent vehicles from being correctly identified. For more information, see Video Analytics best practices.
- Verify the user has at least 5 enrollment images per vehicle and per camera.
- Verify the enrollment images of Familiar Vehicles are within 20 feet of the camera.
- Check the bounding box of the missed detections.



Important: The bounding box is used for both enrolling and classifying the Familiar Vehicle. When troubleshooting, always compare the bounding box of the missed detections to the enrollment images (under the *Photo List* of the *Familiar Vehicle Profile*).

- Verify that all of the vehicle is within the camera view. If not, adjust the tripwire/groundzone and loiter time to avoid capturing the vehicle near the edge of the camera view.

  Important: The snapshot/thumbnail taken when the vehicle crosses the ground zone or tripwire is used to train the vehicle identification algorithm. If vehicles are not identifiable within the snapshot (i.e., the snapshots are being taken too early or the vehicle is obstructed), moving the tripwire/groundzone closer to the camera or adjusting the loiter time within a groundzone rule will help the snapshot contain the detail needed to correctly identify the vehicle.

- Verify distinct features of the vehicle, like the windows and door handles, are visible through the snapshot.
- Check if clips are identified as *Unidentified Vehicle* or *Familiar Vehicle.*

  Note: Cameras will not be able to distinguish between vehicles of similar size, shape, or color.

- If the associated Familiar Vehicles have distinct features, check to ensure there are no enrolled images of the target vehicle in the photo list for the incorrect vehicle.
- If the vehicle is unidentified, check to ensure there are no images of the target familiar vehicle in the incorrect photo list.
- For all Familiar Vehicles, ensure there are no incorrect photos in the target familiar vehicle photo list.
- Compare enrollment images. Is the vehicle's angle, lighting, or size significantly different from the missed detections? If yes, ask the customer to add these images to the model and verify performance

  Example: If familiar detection is missed at night, night images need to be added to that Familiar Vehicle.

- If the bounding box type is consistently missed, add more images to model familiar vehicle.

Submit feedback on Familiar Vehicle results

Users can mark vehicle photos as incorrect, correct, or move to another familiar vehicle. The Familiar Vehicle classification model is unique for each account. In other words, unlike traditional People/Vehicle/Animal analytics, when the user provides feedback via Familiar Vehicles settings, the model will improve.

Note: When a customer marks a vehicle as correct or moves it to a Familiar Vehicle, that image will appear in the Familiar Vehicles Profiles image list. Users can always review these images to ensure they only contain images of the vehicle they wish to identify. If the image is moved from saved clips page of an unidentified familiar vehicle, it may take several hours for image to appear as it goes through processing.

To submit feedback through saved clips using the Alarm.com app:

Note: If a camera is deleted from the account, feedback cannot be left on saved clips recorded by the deleted camera.

1. Log in to the Alarm.com app.
2. Tap .
3. Tap **Saved**.
4. Tap to select the desired Familiar Vehicle clip.
5. Tap .

To submit feedback through a Familiar Vehicle profile

Alarm.com customer website steps Alarm.com app steps

Using the Alarm.com customer website:

1. Log in to the Alarm.com customer website.
2. Click **Video**.
3. Click **Settings**.
4. Click **Familiar Vehicles** or **Familiar Faces and Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, click **Vehicle**.
5. Click to select the desired Familiar Vehicle.
6. Click **Photos**.
   - Click if the vehicle in the photo was correctly identified.
   - Click if the vehicle in the photo was incorrectly identified.

Using the Alarm.com app:

1. Log in to the Alarm.com app.
2. Tap .
3. Tap .
4. Tap **Familiar Vehicles** or **Familiar Faces & Vehicles**.
   - If you have Familiar Vehicles and Familiar Faces enabled on the account, tap **Vehicle**.
5. Tap to select the desired Familiar Vehicle.
6. Tap **Photos**.
   - Tap if the vehicle in the photo was correctly identified.
   - Tap if the vehicle in the photo was incorrectly identified.