avigilon™

Avigilon Player User Guide

Version 7.14

Avigilon Corporation
avigilon.com

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What Is the Avigilon Player?

The Avigilon Player is the video player for Avigilon Native Video Export (AVE) files and Avigilon Backup (AVK) files.

The Avigilon Player displays video in image panels, and allows you to control their playback through the Timeline. The Avigilon Player is able to authenticate video files against tampering, and can be used to re-export video into other formats. Both AVE and AVK video include event data embedded in the file, so you are also able to search for events that are linked to the video.

A copy of the Avigilon Player can be downloaded from the Avigilon website, or exported with the AVE file from the Avigilon Control Center™ Client software (see *The Avigilon Control Center Client User Guide* for more information).

Getting Help

If you want to learn more about a feature or how to accomplish a task, visit **help.avigilon.com/acc** or see our in-product help.

- In the top-right corner of the window, select ⚙ > **Help**.

For More Information

For additional product documentation and software and firmware upgrades, visit **support.avigilon.com**.

Technical Support

Contact Avigilon Technical Support at **support.avigilon.com/s/contactsupport**.

Starting Up and Shutting Down the Avigilon Player

The Avigilon Player can be started up or shut down at any time.

Starting Up

The Avigilon Player can be opened in any of the following ways:

- Double-click the desktop shortcut icon .
- In Windows, select **All Programs** or **All Apps > Avigilon > Avigilon Player**.

When the application first opens, you will be prompted to open an AVE or AVK file:

- If the file is password-protected, enter the password when prompted.

    The Avigilon Player will open and display the video file.

Shutting Down

- In the top-right corner of the Avigilon Player software, click .
- Select **> Exit**.

Reviewing Video

The Avigilon Player allows you to watch exported AVE video and AVK video in View tabs, similar to the Avigilon Control Center Client software.

If the video file contains video from multiple cameras, the video can be displayed in multiple image panels. You can zoom and pan the exported video images, and use the Timeline to control the playback of the recorded video.

Authenticating Video

All AVE and AVK files contain an encrypted digital signature that is used to confirm that exported images have not been tampered with.

- To authenticate a video, select ⚙ > **Authenticate Images...**.

  The Authenticate Images dialog box appears and displays the progress as the application checks all the video images for tampering.

When the process is complete, the Authenticate Images dialog box displays the number of images that are authentic and the number of images that have been corrupted.

Adding and Removing Cameras

You can add and remove cameras from the View tab to focus on specific parts of the video file.

- Click and drag a camera from the System Explorer to an empty image panel in the **View** tab.

  > **Tip:** You can view the same camera in multiple image panels to maintain different zoom levels.

- To remove the camera, in the top-right corner of the image panel click ✕ .

Maximizing Views

In the toolbar, click ⬕ to maximize the View. Click ⧉ to return to the previous size.

View Layouts

Customize the number and shape of image panels in your View by editing the View Layout.

1. In the toolbar, click ▦ .
2. Select a configured layout or click **Edit Layouts** to create a custom configuration.
3. If you are creating a custom configuration, select a layout and enter the number of columns and rows.

> **Tip:** Click on the dotted or red borders to increase or decrease the size of an image panel. Up to 64 cameras can fit in a View.

4. Click **OK** to save.

Playing Recorded Video with the Timeline

The Timeline displays when video was recorded and lets you control video playback. Recorded video may be stored on the ACC Server or the archive storage location.
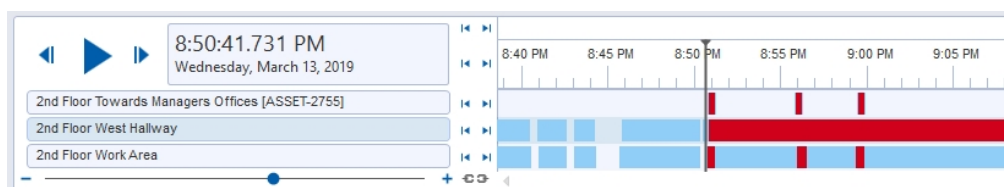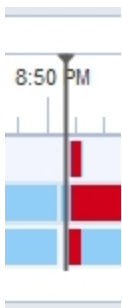
The colored bars on the Timeline show the camera's recording history:

- ▮ — motion event video.
- ▯ — recorded video.
- ▭ — bookmarked video.
- ▣ — protected bookmarked video.
- ▮ — selected motion or event search result video.

- Empty areas show that there is no recorded video.

> **Note:** When the ACC Client starts up and displays the timeline, each device initially displays gray bars while the timeline loads the recording. A gray bar implies that the footage is still loading. Data is retrieved on a per device basis and displayed in the timeline when it becomes available eventually.

Using the Timeline

To...	Do this...	
Select a playback time		• Click the date and select a specific date and time. • Click a point on the Timeline. The marker appears on your selection. Drag the Timeline marker to preview video at different times.
Start playback	Click ▶ .	
	• Click ▶▶ to fast forward. Click again to increase the playback speed. Maximum speed is 8x. • Click ◀◀ to rewind. Click again to increase the playback speed. As video plays, the Avigilon Player automatically skips through white areas on the Timeline with no recorded content. If you are using the Auto View layout mode, the View automatically displays video from all the cameras with recorded content at the same point on the Timeline. As each recorded video segment ends, the View hides the video that is not playing.	
Stop playback	Click ❚❚ .	
	• Click ▐▶ to go forward one frame. • Click ◀▌ to go backward one frame.	
Jump forward or backward	Click ◄ or ► to jump forward or backward by a day, minute, or by camera event.	
Zoom in or out of the Timeline	• Move the slider on the bottom left. • Place your mouse over the Timeline and scroll. You can zoom in to a quarter of a second, and zoom out to see years if recorded video exists.	
Pan the Timeline	• Move the horizontal scroll bar under the Timeline. • Right-click and drag the Timeline.	

To...	Do this...
Center the Timeline	Right-click the Timeline, and select **Center on Marker.**

You can continue to use the timeline when the ACC Server is in recovery mode. The ACC Server that is in recovery mode will have the **Recovering** suffix shown after its name in the tree under the Setup tab. The server will continue to record new video and you can click on the timeline to view and scrub video.

Viewing Unusual Events

When viewing recorded video from a video analytics device, the Timeline displays motion, Unusual Activity, and Unusual Motion events.

You can filter the Timeline to display Unusual events only.

1. In the top-left corner of the Timeline, select the **Unusual Activity** or **Unusual Motion** checkbox.
2. Select the **Skip Play** checkbox to skip to the next event when playing video.
3. Select which **Anomaly Type** to display:
   - **All** — All unusual events.
   - **Speed** — Events with unusual speed.
   - **Direction** — Events with unusual direction.
   - **Location** — Events in areas where activity does not typically occur.
4. Move the **Rarity** slider to set how rare an event must be. Keep the slider towards the right to reduce noise.
5. Enter a **Minimum Duration** between 0-59 seconds to set how long an event must last. The default value is 2 seconds.
6. Use the Timeline controls to view the event video.

   Unusual Activity is highlighted in yellow bounding boxes. Unusual Motion is highlighted in teal bounding boxes. Image panels without unusual events are dimmed.

Zooming and Panning

To get a better look at events in video, you can zoom or pan to focus on a section of the camera's field of view.

> **Tip:** Fisheye and panomorph video automatically dewarps when you zoom and pan.

Zooming

- Scroll the mouse wheel inside an image panel.

Panning

- Right-click and drag inside an image panel.

You can also use the Zoom ⊕ ⊖ and Pan 🖐 icons on the right side of the toolbar.

Listening to Audio

If audio was included in the video file, you can listen to it through the video image panel. The audio is muted by default.

- In the lower-right corner of the image panel, click 🔊 to mute or activate the audio.
- Move the slider to change the volume.

Reviewing Recorded POS Transactions

While you watch recorded video, you can review POS transactions that occurred at the same time.

1. Select a camera that is linked to the POS transaction source and display the camera's recorded video

2. In the image panel, click .

   If there is more than one POS transaction source linked to the camera, you will be prompted to select one. The POS transactions are displayed in the next image panel.

   - Each transaction is separated by date and time.
   - When you select a transaction, the video jumps to that event on the Timeline.
   - Scroll up or down to see other recorded POS transactions.

3. To display cameras that are linked to the POS transaction source, click in the POS transaction image panel.

   If multiple cameras are connected to the POS transaction source, you will be prompted to select one.

4. Use the Timeline to review the video in more detail.

For more information about Timelines, see *Playing Recorded Video with the Timeline* on page 8.

If you want to find a specific POS transaction, see *Searching Text Source Transactions* on page 17.

Camera Properties

To see detailed information about any camera in the AVE file, you need to access the camera properties.

- In the System Explorer, right-click a camera and select **Properties...**.

The Camera Properties dialog box displays the following information about the camera:

- Camera Name

- Model number

- Firmware Version:

- Location:

- MAC Address:

- Serial Number:

- Default Resolution:

Searching

AVE and AVK files have embedded event data, so you can quickly search for events or motion that occurred.

> **Note:** Some search options are only available if the video file contains the required data.

Avigilon Appearance Search™ Feature

FOR ENTERPRISE EDITION

If you have video analytics cameras with the Avigilon Appearance Search feature enabled, you can search your site for persons or vehicles of interest.

Searching by Description

If you have a physical description of a person or vehicle of interest, start an Avigilon Appearance Search query. Searching for vehicles by description requires the ACC Server software version 7.2 or later.

You can select as many or few search criteria as you want. The system ranks results that match all descriptions higher.

> **Note:** When searching for video in both day and night scenes, avoid using color as a search criteria. For example, the color red may appear gray at night.

1. In the New Task menu ☰, click **Appearances** 👤 .
2. Select the person or vehicle icon.
3. Select the icons that best represent the person or vehicle description.
4. Click **Date Range** to set the date and time of your search.
5. Click **Cameras** to select the cameras you want to include in the search. By default, all cameras enabled with the Avigilon Appearance Search feature are selected.
6. Click **Search**.

    Only the first 15 minutes of search results are displayed, regardless of the Date Range selected. Move the Search Results Graph window to view more results.

    For more information, see *Avigilon Appearance Search Results* on the next page.

Searching Recorded Video

You can start a search for both people and vehicles of interest based on one instance in recorded video.

1. Complete a Motion, Thumbnails, Alarm or Identity search, or use the Timeline to find the person or vehicle of interest.

2. Click the bounding box around the person or vehicle and select one option:

   - ⬕➡ **Find Appearances After This** — Search for instances of the person or vehicle after this event.

   - ⬅⬔ **Find Appearances Before This** — Search for instances of the person or vehicle before this event.

   - 🔍 **Additional Search Options** — Select cameras and a time range before performing the search.

   Only the first or last 15 minutes of search results are displayed, regardless of the Date Range selected. Move the Search Results Graph window to view more results.

   For more information, see *Avigilon Appearance Search Results* below.

Avigilon Appearance Search Results

In Appearance Search results, when viewing zoomed in results, the person or vehicle of interest is surrounded by a white bounding box that may or may not correspond with the blue object detection box. For multiple objects in video, the white bounding box is useful to identify the vehicle or person of interest. The white bounding box appears on one frame and disappears off the clip when playing the clip.

The search results may not always match the person or vehicle of interest. Refine your results before they are saved.

> **Note:** Only the first 15 minutes of search results are displayed, regardless of the Date Range selected. Move the Search Results Graph window to view more results.

Refining Results

1. Use the **Search Results Graph** or **Timeline** to view additional results. Click 📅 to edit the date range.

2. In the top-left area, click **Change Cameras** to add or remove cameras from the search.

3. For description searches, update the search criteria in the **Appearance Description** area.

4. If a search result matches the person or vehicle of interest, hover over a thumbnail and click ☆ . This improves the system's accuracy.

> **Tip:** If there are multiple objects in the scene, a white bounding box outlines the match detected by the system. Hover over a thumbnail and click 🔍 to zoom in on the image from the search result.

Saving Results

When you have verified search results, you can either bookmark or export them.

- Click to bookmark all starred results.

- Click to export all starred results.

  For Native video exports, select the **Password Protection:** and **Include Identity Data:** checkboxes to enable LPR, Appearance, or Face Recognition data in the Avigilon Player.

  For AVI video exports, select the **Blur background** checkbox to obscure everything except the detected person or vehicle.

  > **Tip:** Hover over a thumbnail and select the checkbox of all results you want to star, bookmark, export, or remove.

Searching Events

Search for configured events in recorded video.

1. In the New Task menu ☰, click **Events** ⓘ .
2. Select the cameras to include in your search.
3. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.
4. Select the type of events to include in your search:
   - **Motion** — Motion was detected in the target area.
   - **Digital Input** — A signal was sent from a device.
   - **Classified Object** — A person or vehicle was detected in the configured region of interest.
   - **Tampering** — An unexpected change in the scene was detected.
   - **ONVIF** — A third-party ONVIF device event was detected.
   - **Presence** or **Presence Dwell** — The Avigilon Presence Detector sensor detected an individual.
   - **Unusual Motion** — Unusual pixel motion was detected.
   - **Unusual Activity** — A classified object behaving unusually was detected.
   - **Face Watch List Match** — A watch list match was detected.
   - **Person without Mask** — A person without a face mask was detected.
5. Click **Search**.

   Your search results are displayed. For more information, see *Reviewing Search Results* on page 18.

Searching Motion

Search for motion events from cameras configured for Classified Object Motion or Pixel Motion detection events.

Classified Object Motion

1. In the New Task menu ☰, click **Motion** .
2. Select the cameras to include in your search.
3. Select **Classified Object Motion** and update the following:
   - **Object Types:** — select the objects to search for.
   - **Confidence:** — set how certain the system must be that it identified the correct object type.
   - **Minimum Threshold Time:** — set how long the object must be in the scene before it is considered a search result.
   - **Show Results As:** — select whether to display each classified object as an individual search result or as a single search result if multiple objects are detected within the time entered.
4. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.
5. In the camera preview, adjust the green region of interest to specify the search area. You can add or remove areas to exclude from the search as needed.
6. Click **Search**.

   Your search results are displayed. For more information, see *Reviewing Search Results* on page 18.

Pixel Motion

1. In the New Task menu ☰, click **Motion** .
2. Select the cameras to include in your search.
3. Select **Pixel Motion** and update the following:
   - **Motion Activity Image Overlay:** — highlights detected motion with a red overlay if enabled.
   - **Threshold:** — specify how many pixels must move to be defined as motion. A higher threshold provides fewer false results.
   - **Join results less than** — set the minimum time between search results. Enter up to 100 seconds.
4. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.
5. In the camera preview, adjust the green region of interest to specify the search area.
6. Click **Search**.

   Your search results are displayed. For more information, see *Reviewing Search Results* on page 18.

Searching License Plates

FOR ENTERPRISE EDITION

The License Plate Search allows you to search for license plates that were detected in the exported video.

1. In the New Task menu ▬, click **LPR** 🚗.
2. Select the cameras to include in your search.
3. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.
4. Enter the license plate number you are searching for and select the minimum Match percent.

   The Match percent is how similar the detected plates must be to the search query to be displayed as a result. A higher percent will result in fewer false positives while a lower percent will result in more events.

   If no license plate number is entered, the system will search for all detected license plates over the selected search period.
5. Click **Search**.

   Your search results are displayed. For more information, see *Reviewing Search Results* on the next page.

   The **Confidence** column displays how confident the algorithm is that the detected plate number is the actual plate number.

Searching Text Source Transactions

FOR STANDARD AND ENTERPRISE EDITION

Search for specific transactions recorded by a point of sale (POS) transaction source.

1. In the New Task menu ▬, click **Text Source Transactions** 📋.
2. Select the POS transaction sources you want to include in your search.
3. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.
4. In the **Search Text:** field, add any product name or transaction value you want included in your search.

   Tip: Leaving the text field blank will search for all transactions.

5. Click **Search**.

   Your search results are displayed. For more information, see *Reviewing Search Results* on the next page.

Searching Thumbnails

When examining video for changes, use the Thumbnail search to display a series of comparison images over time.

1. In the New Task menu ☰, click **Thumbnails** ⊞.

2. Select the cameras to include in your search.

3. Enter a **Date Range** or use the Timeline range markers to set the date and time of your search.

4. Click **Search**.

5. Double-click a thumbnail to narrow your search or click **Open In View** to display the result in a new View tab.

> **Tip:** Click Step Out to return to the previous series of thumbnails.

Searching Bookmarks

You can search for specific bookmarks.

1. In the New Task menu ☰, click **Bookmarks** 🔖.

2. In the **Search** field, enter the bookmark name to find it in the list.

3. Select a bookmark and use the Timeline to review the video.

4. Select one or more bookmarks, and click one of the following:

   - 🔒 — Prevents the video from being deleted. These videos take up space and can become the oldest video on the server.

   - 🔓 — Removes protection.

   - ⤇ — Exports the video.

   - 🗑 — Removes the bookmark tag from the recorded video.

   - **Perform a motion search on this event** — Begins a Motion Search.

   - **Edit this bookmark** — Updates the bookmark name, description, time range, or cameras.

   - **Export results to a file** — Exports a CSV or text file of all the bookmark details.

> **Note:** The Windows operating system does not allow special characters to be used in file names. When exporting bookmarks, special characters in a bookmark name are replaced by underscores (_) for the file name to be valid in Windows.

Reviewing Search Results

After completing a search, you can review and save your results.

Reviewing Results

- Use the Timeline to watch and review the event video.
- Click **Add to new View** to display the results in a View tab.
- Click **Perform a motion search on this event** to further refine your search.

Saving Results

- Click **Export this event** to download a copy of the event as a video, image, or audio. For more information, see *Exporting* on the next page.
- Click **Export results to a file** to download a CSV or text file of search results.
- Click **Bookmark this event** to save the event for quick access.

Exporting

You can export content in multiple video and image formats. You can export bookmarks, search results, and video from the Timeline. You can also export snapshots of an image panel as you monitor video.

> **Note:** The Windows operating system does not allow special characters to be used in file names. When exporting bookmarks, special characters in a bookmark name are replaced by underscores (_) for the file name to be valid in Windows.

> **Note:** If the video is password-protected, you cannot export it from the Avigilon Player.

Adding Content to Export

As you investigate video, you can queue content that you want to export.

- **Search Results and Bookmarks** — Click **Export this event**.
- **Timeline** — Right-click the Timeline and select **Add Export**.
- **Snapshot** — In an image panel, click 📷.

  A notification confirms that the file was added to the list.

  Continue working or click the link in the notification to open the Export tab. Each export file is displayed in the order it was added.

  > **Note:** Only snapshots of recorded video are added to the Export tab. Snapshots of live video are exported individually in Live Snapshot tabs.

You can also add content directly in the Export tab:

1. In the New Task menu ☰, click **Export**.
2. Click **Add** and select the type of file you want to export:
   - **Video** — Export as Avigilon Player (AVE video), AVI video, or MP4 video. The Avigilon Player format requires the Avigilon Player software, which lets users view recorded video with Timeline controls and search capabilities.

     For Native video exports, select the **Password Protection:** and **Include Identity Data:** checkboxes to enable LPR, Appearance, or Face Recognition data in the Avigilon Player.

- **Image** — Export as a JPEG, TIFF, or PNG file.
- **Audio** — Export as a WAV file.
- **Document** — Export as a PDF file with notes or send a file directly to your printer.

3. Update the export options. For more information, see *Export Options* on the next page.

Combining Export Files

Export files can contain several clips and images from your investigation.

- To combine files, drag and drop. Expand and collapse the file to show and hide its clips.
- To add a clip to a file, click ✚ .
- To remove a clip from file, click ✕ .
- To rename a file, double-click its name and enter a new name. Click outside the field to save.

Exporting Video Quickly

To quickly export a snapshot or a clip while viewing video:

1. Right-click the View or the Timeline and select **Quick Export**. The Quick Export dialog opens. quick
2. In the Time Range for Export section, configure the **From:**, **To:**, and **Duration:** fields as required.
3. Select the required **File Type**.
4. Optionally, select the **Password Protection:** checkbox and set a password for native video exports.
5. Click **Export** and save the video file.

You can continue to work while the video is being exported.

Exporting Files

1. In the Export tab, select the files you want to export.
2. Click **Export**.

   A warning is displayed if your files may contain identity data but the Password Protection: and Include Identity Data: checkboxes were not selected.

3. Select a folder and then click **Select Folder** to start the export.

   While the export is in progress, you can Pause ▋▋ , Resume ▶ , or Cancel ■ the export.

   When the export is complete, click 📁 to open the file location.

   - To edit and re-export the file, click ≣± .
   - To clear the file from the list, click ✕ .
   - To clear all finished files, click **Clear finished**.

> **Tip:** To export a video to a disc, place a writable disc in the drive and click **Burn to Disc**.

Export Options

The following table displays the options available for different export formats.

Format	Export Options
Avigilon Player (AVE video)	• **Image Rate:** Select a high image rate to maintain quality or a low one to reduce the file size. • **Maximum file size:** The export file will not exceed this size. • **Include Identity Data:** The export file will contain LPR, Appearance, or Face Recognition data. The export must be password-protected to enable this. • **Password Protection:** Select to add a password. • **Export Avigilon Player:** Select to include a copy of the Avigilon Player with the export file.
AVI video	• **Resolution:** Select the export video resolution. • **Overlays:** Select the video overlays to include. • **Change Image Region...** Select the field of view to export. > **Note:** The Change Image Region... option is not available for Fisheye cameras when exporting AVI video.
MP4 video	• **Quality:** Select the export video quality.
Images and print	• **Quality:** Select the image quality. • **Resolution:** Select the export image resolution. • **Images to Export:** Select the number of images to export from the selected time range. • **Overlays:** Select the image overlays to include. • **Change Image Region...** Select the field of view to export. • **Display Adjustments...** Adjust the Black, White, and Gamma levels. • **Add Export Notes...** Enter text to include with the PDF or print image. • **Printer Settings...** Select your printer and adjust print settings.

Display Settings

You can update the Site View to change the order of the System Explorer and configure how the ACC Client software displays video.

Changing the Theme

You can adjust whether the application display uses a light or dark theme. By default, the light theme is used.

Use a dark theme to reduce eye strain when using the software in a dark room.

1. In the top-right corner of the Avigilon Player, select ⚙ > **Player Settings...**.
2. In the Display tab, select a theme.
3. Click **OK** to save your changes.

Changing the Video Display Settings

There are multiple settings that impact color and quality of the image displayed from a camera.

1. Click ⚙ > **Player Settings...** > **Display**.
2. Update any of the following settings.
   - **Display Deinterlaced Images** — Smooths the blur occasionally seen in analog video.
   - **Loop Playback** — Repeats video automatically.
   - **Display Logical IDs** — Displays the Logical ID next to the device name in the System Explorer.
   - **Display Quality:** — Adjusts image quality based on bandwidth or processing power. Increasing the quality allows you to make out objects and faces while lowering quality is better for viewing moving events.
   - **Display Adjustment Settings:** — Changes the levels of contrast and brightness or restores the factory default. Make small changes at a time. If video is displayed in a View tab, the new settings will not take effect until the **Restore Defaults** option is selected in the image panel.

   > **Tip:** You can adjust these settings per image panel by right-clicking and selecting **Display Adjustments...**.

3. Click **OK** to save.

Hardware Rendering

Hardware rendering is enabled by default in ACC. You can choose to enable or disable hardware rendering explicitly to troubleshoot any GPU driver issues affecting ACC applications.

1. Click ⚙ > **Player Settings...** > **Graphics**.
2. Select the **Enable Hardware Rendering** check box to enable hardware rendering and click **OK** in the confirmation dialog.
3. Click **OK** to save.

> **Note:** The hardware rendering option only affects how video is rendered in ACC. It has no effect on recorded footage or on video output by cameras.

Video Overlays

Overlays display additional contextual information over video.

1. In the top-right corner, click ⚙ > **Player Settings...** > **Overlays**.
2. Enable any of the following overlays.
   - **Device Name** — Displays the device's assigned name.
   - **Device Location** — Displays the custom location of the device.
   - **Playback Timestamp** — Displays either the device's local timestamp or your local timezone during recorded playback.
   - **Motion Activity** — Highlights motion.
   - **Video Analytics Activity** — *For video analytics devices*. Highlights people and vehicles in live and recorded video.
3. Click **OK** to save.