

Avigilon Software Development Kit

Avigilon Control Center (ACC) provides an open platform that enables easy integration with other systems. Our simple, yet powerful, Software Development Kit (SDK) provides a programming interface for almost all of the features available through the ACC Client software.

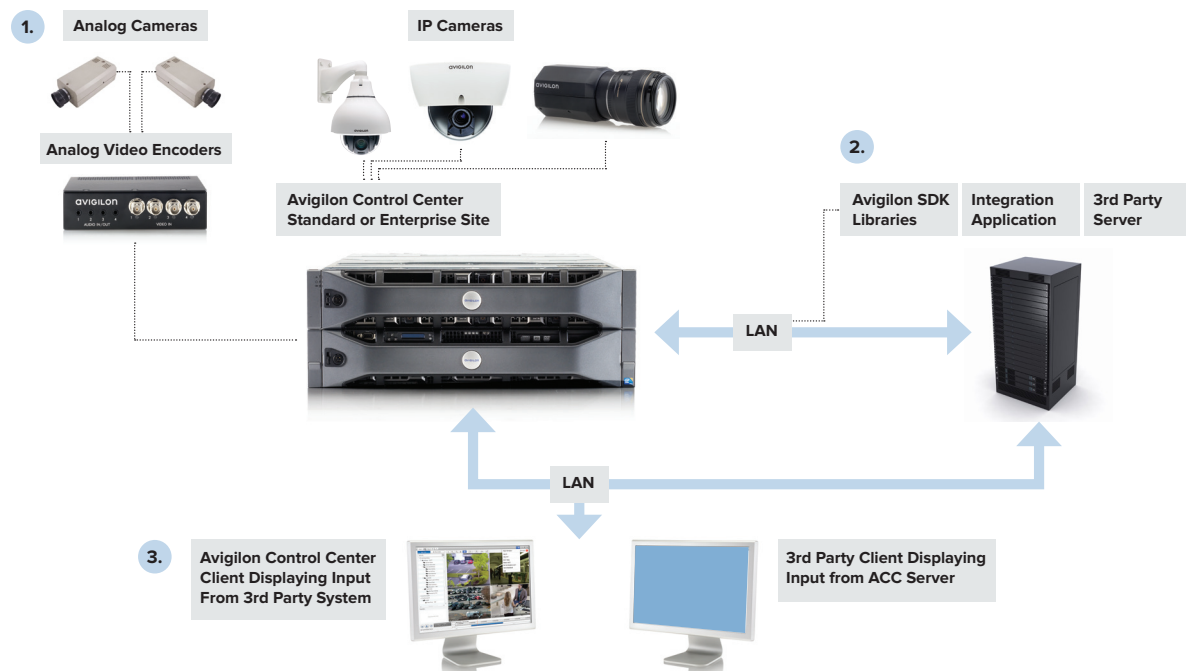
SDK Benefits

Integration through the Avigilon SDK provides many advantages:

- **Streaming live or recorded video from any camera into your own application** – stream video from any camera, including 3rd party cameras, connected to an Avigilon site.
- **Leveraging the full power of Avigilon's High-Definition Stream Management (HDSM)** – harness the power of Avigilon's proprietary HDSM technology to provide maximum viewing quality while using minimum bandwidth.
- **Ensuring consistent behavior and a simple setup** – design the most effective behavior for a fully integrated system, while simplifying configuration and ensuring consistency at all customer sites

Integration Setup

Below is an example of a full integration setup using the Avigilon SDK. (1) An integration application can use the Avigilon SDK libraries to connect to any number of Avigilon sites, access all cameras connected to each site, retrieve data, and trigger or acknowledge alarms within the site. (2) The integration application can be either embedded within a 3rd party application or a standalone application that uses the 3rd party SDK and the Avigilon SDK. (3) Once the information has been communicated at the site level, both the Avigilon client and the 3rd party client can display the information.



SDK Integration Process

The integration process begins with the acquisition of the ACC-SDK-DEV license that provides access to Avigilon's developer partner support program. This program has been designed to provide everything you need for a successful integration – including access to Avigilon Technical Support, the full SDK (complete with documentation and sample applications) and temporary server licenses for your test environment.

SDK Features

The Avigilon SDK is written in the Microsoft Windows .NET Framework and offers the following features and benefits:

- **Avigilon's High-Definition Stream Management (HDSM)** – When requesting a video stream, based on your set viewing area and zoom level, the Avigilon site will reduce the data streamed to the SDK to optimize bandwidth and processing power.
- **Simple Set-up and Configuration** - The Avigilon SDK can automatically discover Avigilon sites that are available on your network and manually add remote sites. Once connected to an Avigilon site, it is easy to access and display the devices connected to each site.
- **Full streaming control** – The Avigilon SDK provides full control of what is received and how it is received. For simple implementations, you can create an “image panel” and stream directly to that panel with a simple function call. The image panel comes equipped with both digital and mechanical PTZ controls that automatically work through the SDK. For more advanced integrations, the Avigilon SDK provides the ability to set up synchronous and asynchronous stream callback functions, and to specify the data format as either RAW or JPEG.
- **Full control of alarms and events** – The Avigilon SDK provides access to alarms or events for every device, user, and network video recorder (NVR) in your network. Through the SDK you can monitor or change the status of numerous functions, such as:
 - Device events (motion detection and connection errors)
 - User events (login and logout)
 - Storage events (low disk space warning and drive failures)
 - Application events (license expiry warnings)
 - Alarm status changes (triggering and acknowledgements)When connected to an Avigilon site with License Plate Recognition (LPR) or Point of Sale (POS) functionality, the integration can also access license plate detection events or transactions exception events.
- **Full control of recorded footage** – The Avigilon SDK provides multiple ways to control and use recorded footage, including:
 - Scheduling, starting, or aborting backups of selected data to a specified location
 - Perform detailed searches (including access to recorded alarm and bookmarked footage)
 - Export video in multiple formats (Native AVE, AVI, JPEG, PDF, PGM, PNG, TIFF and WAV audio)
- **Pull and push changes** – The Avigilon SDK provides not only the ability to pull data, such as video and alarms, but also push data to the Avigilon sites. For example, you can trigger an ACC alarm based on changes from a 3rd party system or trigger digital relay outputs through the SDK.
- **Define system behavior** – By combining data input, alarms and rules, the Avigilon SDK provides you with the ability to setup your system exactly the way you want.

Let's take the example of an access control system integrated with ACC – when an intruder attempts to force a door open, the integration triggers an alarm on the ACC site to activate a PTZ camera to move to a preset location that looks at the door. The video evidence associated with the alarm is automatically recorded, bookmarked and protected. At the same time, the video is automatically displayed to a member of the security staff who can then respond appropriately.

The Avigilon SDK is simple to use, easy to set-up, fully featured and extremely powerful. It is a strong example of Avigilon's commitment to being an open platform and gives partners and customers an effective product to meet their needs.

