

User Guide

Avigilon™ USB Wi-Fi Adapter System

H4-AC-WIFI

© 2019, Avigilon Corporation. All rights reserved. All rights reserved. AVIGILON, the AVIGILON logo, AVIGILON CONTROL CENTER and ACC are trademarks of Avigilon Corporation. Google Chrome and Android are trademarks of Google Inc. Other names or logos mentioned herein may be the trademarks of their respective owners. The absence of the symbols ™ and ® in proximity to each trademark in this document or at all is not a disclaimer of ownership of the related trademark. Avigilon Corporation protects its innovations with patents issued in the United States of America and other jurisdictions worldwide (see avigilon.com/patents). Unless stated explicitly and in writing, no license is granted with respect to any copyright, industrial design, trademark, patent or other intellectual property rights of Avigilon Corporation or its licensors.

This document has been compiled and published using product descriptions and specifications available at the time of publication. The contents of this document and the specifications of the products discussed herein are subject to change without notice. Avigilon Corporation reserves the right to make any such changes without notice. Neither Avigilon Corporation nor any of its affiliated companies: (1) guarantees the completeness or accuracy of the information contained in this document; or (2) is responsible for your use of, or reliance on, the information. Avigilon Corporation shall not be responsible for any losses or damages (including consequential damages) caused by reliance on the information presented herein.

Avigilon Corporation
avigilon.com

PDF-WIFIWEB-A

Revision: 2 - EN

20191231

Table of Contents

Introduction	1
System Requirements	1
Package Contents	1
Using the USB Wi-Fi Adapter System	2
Creating the Initial User and Logging In	3
Adding an Android Shortcut	3
Adding an iOS Shortcut	3
Configuring the Camera	5
Live View	5
Zooming and Focusing the Camera	5
Adjusting the Image Quality	6
Setting the Camera's IP Address	7
Configuring 802.1x Port Based Authentication	7
Setting Time on the Camera	8
Setting the Camera Name and Location	8
Changing the Camera Password	9
Disabling Wifi Access	9
For More Information	11
Troubleshooting	12
Android Repeatedly Prompts to Login to Wifi	12
iOS Mobile Web Interface Missing Video/Tabs/Buttons	12

Introduction

The Avigilon™ USB Wi-Fi Adapter System provides you with direct access to the camera mobile web interface. During the camera installation process, you can connect the USB Wi-Fi Adapter to the camera's micro USB port. Once connected, you can access the camera through the wifi network created by the adapter.

The camera mobile web interface is a simplified version of the camera's full web browser interface. It gives you access to the camera's live video stream and allows you to change the camera's network settings. You will also be able to adjust some of the camera's image settings.

System Requirements

To use all the features provided by the Avigilon USB Wi-Fi Adapter, you must have access to a mobile device with wifi receiving capability and a web browser installed.

The following mobile operating systems and browsers are supported by the wifi adapter:

- Android™ version 4.3 or later
 - Google Chrome™ browser versions 39 or later
- iOS 8.3 or later
 - The default system browser

Package Contents

- USB Wi-Fi Adapter
- Micro USB to USB adapter cable
- T20 Pin-In Torx bit

Using the USB Wi-Fi Adapter System

The USB Wi-Fi Adapter creates a wifi network when it is connected to the camera. Once the wifi network is active, you can connect and access the camera's mobile web interface.

1. Connect one end of the micro USB to USB cable to the camera. For more information, see the illustrated instruction manual provided with the USB Wi-Fi Adapter System.
2. Connect the USB Wi-Fi Adapter to the other end of the cable.
3. On your mobile device, access the wifi settings page and connect to the following wifi network:

AvigCam-<last 6 digits of the USB Wi-Fi Adapter MAC address>

For example: AvigCam-12a4b6

4. When you are prompted to enter a password, enter:

avigilon

5. Access the camera's mobile web interface at `camera.lan`.

If you are not automatically prompted to enter the username and password for the mobile web interface, open your web browser and enter `http://camera.lan`.

The USB Wi-Fi Adapter automatically redirects you to the correct IP address even if the camera has been assigned a specific IP address.

6. Cameras manufactured after January 1, 2020, do not have a default username or password and will be in a factory default state.

Important: You must create a user with *administrator* privileges before the camera is operational.

When you are prompted, enter the camera's administrator username and password. Depending on the manufacture date of your camera, you will have one of the two options below to log in for the first time:

- Cameras manufactured after January 1, 2020: these cameras do not have a default username or password and will be in a factory default state. Login with the username and password that you create when first connecting. For more information, see *Creating the Initial User and Logging In* on the next page.
- Cameras manufactured before January 1, 2020: login to the camera using the default username of *administrator* with no password. It is recommended that you change the password after you first login.

The first page you see displays the camera's live video stream. You can adjust the camera's zoom and focus from this page. For more information, see *Configuring the Camera* on page 5.

After you finish configuring the camera from the mobile web interface, disconnect the USB Wi-Fi Adapter.

Creating the Initial User and Logging In

Cameras manufactured after January 1, 2020, do not have a default username and password and will be in a factory default state.

Important: You must create a user with *administrator* privileges before the camera is operational.

Tip: Cameras manufactured before January 1, 2020, have a default username and password you can use to log in. For more information, see *Using the USB Wi-Fi Adapter System* on the previous page.

If the camera is in the factory default state, you will be redirected to the **CREATE USER** page to create an administrator user:

1. Enter a new **Username** or keep the default `administrator` name.
2. Enter a new **Password** for the user. It is recommended to use a secure and complex password. The relative strength of your password is shown below the password field.

To ensure that you've entered the correct password, select the **Show password** check box.

3. Tap **CREATE USER**. After creating the user, you will be asked to login with the credentials you have just created.

Adding an Android Shortcut

To make accessing the mobile web interface more convenient, you can add a shortcut to camera.lan on your Android Home screen.

The added benefit of accessing the mobile web interface from a shortcut is that the browser automatically hides the address bar, so there is more screen space dedicated to the mobile web interface.

1. Connect and login to the camera mobile web interface. For more information, see *Using the USB Wi-Fi Adapter System* on the previous page.
2. In the Google Chrome web browser, display the browser menu and select **Add to Home screen**.


A shortcut is added to your Home screen.

Next time you use the USB Wi-Fi Adapter, you can access the camera's mobile web interface from the shortcut.

Adding an iOS Shortcut

To maximize the screen area used by the mobile web interface, add a shortcut to your Home screen.

The benefit of accessing the mobile web interface from a shortcut is that the browser automatically hides the address bar and the toolbar bar, so there is more screen space dedicated to the mobile web interface.

1. On the wifi settings page, tap  for the USB Wi-Fi Adapter network.
2. On the following page, tap **Join Network**.
3. When you are prompted to enter a password, enter:

`avigilon`

4. Tap **Join**.


The captive portal browser immediately opens the mobile web interface and asks you for the camera credentials.

5. Tap **Cancel**.
6. In the top corner of the browser, tap **Cancel** then select **Use Without Internet**.

The wifi settings page is displayed, and you are still connected to the wifi network.

7. From the home screen, open the Safari browser and enter `http://camera.lan`.
8. When you are prompted, enter the camera's administrator username and password.

The default username is `administrator` with no password.

9. In the browser, tap .
10. In the following dialog, tap **Add to Home Screen**.
11. When the confirmation message is displayed, tap **Add**.

A shortcut is added to your Home screen.

Next time you use the USB Wi-Fi Adapter, you can access the camera's mobile web interface from the shortcut.

Configuring the Camera

After you connect to the mobile web interface, you can see the camera's live video stream to confirm that the camera is aimed in the right direction. You can also adjust the camera's zoom and focus, and its network settings. If you need to configure more detailed image and display settings, use the camera's full web interface or the Avigilon Control Center™ Client software.

Live View

The first page you see after you login to the mobile web interface is the camera's live video stream. You can digitally zoom and pan the video image to confirm that the camera is able to capture the expected level of detail in the scene.

To access this page from other parts of the mobile web interface, tap the top-left menu icon then select **Camera**.

Note: Digitally zooming and panning the video image does not set the camera's zoom level. To set the video's zoom level, you must move the **Zoom** slider. For more information, see *Zooming and Focusing the Camera* below.

- To zoom in, place two fingers on the video image panel and pull apart to zoom in.
- While zoomed in, drag the screen to pan across the video image.
- To zoom out, place two fingers on the image panel and push together to zoom out.

To adjust the video image quality, tap **IMAGE** and make the required changes. For more information, see *Adjusting the Image Quality* on the next page.

Zooming and Focusing the Camera

To set the mechanical zoom and focus of the camera, use the settings available on the **ZOOM/FOCUS** tab of the Camera page. The settings are provided below the camera's live video stream. Refer to the live video stream after you make each change to confirm that the video is correct.

- To change the camera's zoom level, move the **Zoom** slider. The farther right you move the slider, the closer the camera zooms in.
- To focus the camera, complete the following steps:
 - a. In the **Iris** drop down list, select **Open**. When the iris is fully open, the camera's depth of field is the shortest.
 - b. Tap **AUTO** to allow the camera to auto focus once.
 - c. If the preferred focus was not achieved, use the focus near and far buttons to adjust the focus.

The left arrow buttons focus the camera towards Zero (0), and the right arrow buttons focus the camera towards Infinity.
 - d. In the **Iris** drop down list, select **Automatic**.

Allow the camera a few moments to save and apply your changes to the video stream.

Adjusting the Image Quality

As you observe the live video stream, you can adjust the camera's image quality. This includes the camera's compression and image rate for streaming video through the network, and some basic lighting settings.

Note: Some options may not be displayed if they are not supported by the camera.

1. On the Camera page, tap **IMAGE**.
2. In the settings area below the image panel, tap any of the following settings to expand the settings menu. You can scroll through the available options then select the appropriate setting.
 - **Quality** — Select an image quality setting. An image quality setting of **1** will produce the highest quality video and require the most bandwidth. The default setting is **6**.
 - **Max Bitrate** — select the maximum bandwidth the camera can use in kilobits per second (kbps).
 - **Keyframe Interval** — select the preferred number of frames between each keyframe.

It is recommended that you have at least one keyframe per second. So, if the image rate is set to 30 images per second, you should select 30 for this setting.

- **Image Rate** — select the number of images per second you want the camera to stream over the network.
- **Resolution** — select the preferred image resolution.
- **Flicker Control** — If your video image flickers because of the fluorescent lights around the camera, you can reduce the effects of the flicker by changing this setting to match the frequency of your lights. Generally, Europe is **50 Hz** and North America is **60 Hz**.

3. If the camera supports wide dynamic range (WDR), select the **Enable Wide Dynamic Range** check box to use this feature.

This allows the camera to adjust the video image to accommodate scenes where bright light and dark shadow are clearly visible.

4. If the camera includes an IR illuminator, select the **Enable IR** check box to use this feature.

Allow the camera a few moments to save and apply your changes to the video stream.

Setting the Camera's IP Address

By default, the camera is set to automatically obtain an IP address.


If the camera needs to use a static IP address in your network, you can disable the Automatic Network Configuration option.

1. In the mobile web interface, tap the top-left menu icon then select **Network**.
2. On the Network page, tap the **GENERAL** tab.
3. Tap the **Automatic Network Configuration** switch to disable automatic IP addressing.
Once disabled, the screen displays the static IP settings.
4. Enter the IP Address, Subnet Mask, and Default Gateway that you want to use.
5. Tap **SAVE**.

Configuring 802.1x Port Based Authentication



If your network switch requires 802.1x port based authentication, you can set up the appropriate camera credentials so that the video stream is not blocked by the switch.

Note: The mobile web interface only supports configuring PEAP username and password authentication. To set up EAP-TLS certificate authentication, you must use the full web browser interface.

1. In the mobile web interface, tap the top-left menu icon then select **Network**.
2. On the Network page, tap the **802.1X** tab.
3. From the bottom right corner, tap .
4. In the following Edit Configuration screen, enter the authentication details:
 - **Configuration Name** — give the profile a name.
 - **EAP Identity** — enter the username that will be used to authenticate the camera.
 - **Password** — enter the password that will be used to authenticate the camera.To ensure that you've entered the correct password, select the **Show password** check box.

5. Tap **SAVE**. If this is the first profile added to the camera, it is automatically enabled.

The profile is added to the 802.1X tab. The check mark beside the profile name shows that it is enabled.

6. To add a another profile, tap  again and repeat the previous steps.
7. To enable a different profile, tap the profile in the list then tap **ENABLE** on the following screen.
8. To delete a profile, tap .

The following message is displayed:

Delete configuration?

This 802.1x configuration will be permanently removed.

- Tap **DELETE**.

Setting Time on the Camera

When Avigilon cameras are connected to the Avigilon Control Center, the cameras always keep time through the software. If a camera is connected to a different network video management software or is recording to itself, the camera keeps time through a Network Time Protocol (NTP) server.

By default, the camera automatically uses DHCP to find an NTP server that is available on the network. If there are no NTP servers in your network, you can manually set the camera to use a specific NTP server.

1. In the mobile web interface, tap the top-left menu icon then select **Network**.
2. On the Network page, tap the **GENERAL** tab.
3. Tap the **Configure NTP from DHCP** switch to disable the camera from automatically looking for an NTP server through DHCP.

Once disabled, the **NTP Server** setting is displayed.

4. Enter the address of your preferred NTP server.
5. Tap **SAVE**.

Setting the Camera Name and Location

To help you identify the camera and where it is installed, you can assign a specific name and location to the camera. By default, the camera name is its model number and the location is not defined.

1. In the mobile web interface, tap the top-left menu icon then select **Network**.
2. On the Network page, tap the **GENERAL** tab.
3. In the Name and Location area, tap the following fields then enter the appropriate details:
 - Camera Name — enter a specific name for the camera.
 - Location — enter where the camera is installed.
4. At the bottom of the screen, tap **SAVE**.

Your changes are saved and the camera can now be identified by its new name and location.

Changing the Camera Password

By default, Avigilon cameras manufactured before January 1, 2020, do not have a password. This provides you with easy access to the camera during installation, but can prove to be a security risk if you do not apply a password after it is connected to your network video management system. While you are installing the camera, you can apply a new password to the camera.

Note: If your camera was manufactured after January 1, 2020, you will be required to create a user with *administrator* privileges before the camera is operational. For more information, see *Creating the Initial User and Logging In* on page 3.

This password is required to access the camera's mobile web interface, full web browser interface and for connecting the camera to a network video management system.

1. In the mobile web interface, tap the top-left menu icon then select **Users** and tap the **UPDATE USER** tab. If your camera is using older firmware and there is no Users menu, select **Network** and tap the **SECURITY** tab.

2. In the Change Administrator Password area, tap the text field and enter a new password.

To ensure that you've entered the correct password, select the **Show password** check box.

3. Tap **CHANGE PASSWORD**.

The following message is displayed:

Confirm Password Change

Are you sure you want to change the administrator password?

4. Tap **CONFIRM**.
5. When you are prompted to log in again, enter the administrator username and the new password.

Disabling Wifi Access

After you've configured the camera and will no longer need to access the mobile web interface, you can disable wifi access so that other users with a USB Wi-Fi Adapter cannot modify the camera settings.

Note: Once you disable wifi access, you cannot access the mobile web interface again unless you reset the camera to the factory default settings.

1. In the mobile web interface, tap the top-left menu icon then select **Network**.

The first screen you see is the SECURITY tab.

2. At the bottom of the screen, tap the **Wifi Configuration Support** switch to disable wifi access.

The following message is displayed:

Disable Wifi

Are you sure you want to disable Wifi? This action cannot be reversed.

3. Tap **CONFIRM**.

You will no longer be able to access the mobile web interface.

For More Information

The USB Wi-Fi Adapter System provides you with access to the most basic settings required for installing a camera into your surveillance network. For more advanced configuration options, you will need to access the camera's full web browser interface or connect the camera to the Avigilon Control Center.

For more information, see the following manuals:

- *Avigilon™ High Definition H4 and H5 IP Camera Web Interface User Guide*
- *Avigilon Control Center™ Client User Guide*

Troubleshooting

If the following troubleshooting solutions do not resolve your issue, contact Avigilon Technical Support – <http://avigilon.com/support-and-downloads/>

Android Repeatedly Prompts to Login to Wifi

After you login to the wifi network and are able to access the mobile web interface without issue, Android continues prompt you to login to the wifi network from the notification menu. When you tap the notification to log in again, a *401 Unauthorized* error message is displayed.

This occurs because you are connected to a closed wifi network without internet access. Android devices display these notifications whenever they lose internet connection to the Google servers.

Perform any of the following:

- Ignore the error message and login prompts. You are still able to access the mobile web interface regardless of the notifications.
- In the top-right corner of the error message, tap the menu button and select **Use this network as is** then access the mobile web interface as usual. The login prompts stop displaying while you are using the mobile device, but may return once the device is idle.


iOS Mobile Web Interface Missing Video/Tabs/Buttons

After you login to the wifi network and login to the mobile web interface, you notice that some of the interface buttons or tabs are missing. In some cases, the live video stream may be missing or changes are not saved.

This may occur if the captive portal browser recently updated and no longer supports the mobile web interface.

The captive portal browser is different from Safari, so you should still be able to access the mobile web interface using the other browser.

To use Safari instead of the captive portal browser, complete the following steps:

1. On the wifi settings page, tap  for the USB Wi-Fi Adapter network.
2. On the following page, tap **Join Network**.
3. When you are prompted to enter a password, enter:

avigilon

4. Tap **Join**.

The captive portal browser immediately opens the mobile web interface and asks you for the camera credentials.

5. Tap **Cancel**.

6. In the top corner of the browser, tap **Cancel** then select **Use Without Internet**.

The wifi settings page is displayed, and you are still connected to the wifi network.

7. From the home screen, open the Safari browser and enter `http://camera.lan`.
8. When you are prompted, enter the camera's administrator username and password.

The default username is `administrator` with no password.

The camera's mobile web interface is displayed and should provide all the expected tabs, buttons and video stream.