Epiphan AV.io 4K

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Product feedback

Your feedback is important! We regularly contact our customers to ensure our products meet your performance and reliability requirements. We strive to continually enhance our products to accommodate your needs. Please let us know how you think we can improve our products by emailing your suggestions to info@epiphan.com.

Specifications

Go to the USB Video Grabbers page of the Epiphan Video website to get the most recent product specifications and additional information about AV.io 4K.

Warranty

All Epiphan Video products are provided with a 100% return to depot warranty for one year from the date of purchase.

Technical support

Epiphan's products are backed by our professional support team. If you are having issues with your product, please gather details about your system and contact our team by:

- E-mailing support@epiphan.com
- Live chat via the link on our support site
- Phone toll free at 1-877-599-6581 or call +1 613-599-6581

Be sure to include as much information about your problem as possible, including:

- Problem description
- Details of the video or audio source (type, resolution, refresh rate, etc.)
- Product serial number
- Your operating system and version number

Firmware 3.0.0 release notes

Firmware 3.0.0 is the inaugural release for AV.io 4K, bringing the effortless, high-quality video capture experience from AV.io HD to 4K resolutions.

Overview

AV.io 4K is the easiest 4K capture card you'll ever use. It doesn't need any special drivers installed on your computer – plug it in to your USB port and start using it right away. It's as simple as using a webcam! Windows, Mac and Linux operating systems automatically detect AV.io 4K, ensuring compatibility with your favorite software, including Skype, Wirecast and QuickTime.

About AV.io 4K

AV.io 4K is the latest addition to Epiphan Video's industry-leading video grabbers product line, adding 4K resolution support while maintaining support for HD and SD resolutions. To use AV.io 4K, there's no software to install; simply connect the cables and go. It works on Windows, Mac and Linux and integrates seamlessly with your favorite third-party applications such as Skype, Adobe FMLE, Wirecast, VLC media player and Quicktime.

AV.io 4K captures resolutions up to and including 4096×2160, making it the simplest way available to capture DCI 4K and 4K UHD digital signals.

For those curious as to the difference between DCI 4K and 4K UHD, these are just different definitions of a 4K resolution. 4K UHD (3840×2160) is the standard 4K resolution available on televisions and other common display screens. The 4K resolution of 4096×2160 is referred to as Digital Cinema Initiatives (DCI) 4K, and is the resolution used almost exclusively for cinema-scale film production. It is rare to find this resolution outside of a cinematic context. AV.io 4K is capable of supporting input and output at either.
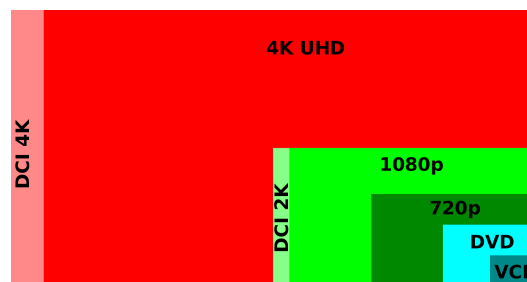
Registering your AV.io 4K

Why should I register my AV.io 4K?

It will allow you to activate your product warranty, give you notifications of firmware and software updates and get you our free personalized customer support.

How to register

1. Go to epiphan.com/register

2. Provide the required information. Your six digit serial number is found on your device. A valid e-mail address is required for product registration.

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Quickstart

Setting up your AV.io 4K device to capture live video and audio content couldn't be easier!

Before you begin the connection process, you will require:

- An HDMI^{TM} (or DVI-D) video source (with or without audio)

- Your AV.io 4K device

- A capture desktop computer, laptop or notebook

- A USB 3.0 cable (included with purchase) to connect to your AV.io 4K to your capture computer

- An HDMI cable (included with purchase) to connect your video source to your AV.io 4K

Once you have these things ready to go, you can now begin the simple process of hooking up your AV.io 4K so you can start capturing!

To connect your AV.io 4K for capture:

1. Connect your AV.io 4K device to your video source

2. Connect your AV.io 4K device to your computer

3. Open your favorite third-party application, select AV.io 4K from the list of available cameras and start capturing!

And that's it! No drivers to install and no extensive set-up! Just connect the cables and you're ready to go!

Getting started

Welcome and thank you for buying Epiphan Video's AV.io 4K!

This guide contains all the information necessary to successfully use AV.io 4K to quickly and easily capture live video content without any configuration – simply connect the cables and you're ready to go!

This guide starts off by jumping right into it by showing you how to start capturing video, then we'll take you through how AV.io 4K works, followed with some technical reference material, and we'll conclude with a walkthrough of some optional video capture configuration.

Let's get started!

What's in the box?

Your AV.io 4K product contains everything you need to easily capture live video content with minimal setup. Your purchase includes the following:

Table 1 *Description of included purchase contents (for identification only, color and appearance of individual cables/adapters may vary).*

AV.io 4K video grabber		Your video capture device!
HDMI connector cable (1 m / 3 ft)		Connects a HDMI source to your AV.io 4K's native HDMI port.
USB 3.0 cable (1 m / 3 ft)		The USB 3.0 cable connects your AV.io 4K video grabber with your computer's USB 3.0 or 2.0 port.

System requirements

System requirements are the barebones technical essentials your computer needs to work with AV.io 4K. System requirements to use AV.io 4K include:

Video source	Any VESA-compatible HDMI (or DVI-D) source.
Video capture workstation	Any computer (laptop/desktop/other format) with: • a compatible USB 3.0 host controller for SuperSpeed operation and 4K functionality (for maximum performance, an Intel USB 3.0 host controller is needed); or, • a USB 2.0 host controller (will limit maximum frame rate and resolution support)
Video capture workstation operating system	Windows 8.1, Windows 10 Mac OS X 10.10 and up Linux distribution with kernel 3.5.0 or higher
Processor frequency	Minimum recommended value: 2.4 GHz
RAM	Minimum recommended value: 4 GB

Technical specifications

Technical specifications for AV.io 4K are included in the table below.

Operating System support	Windows 8.1, Windows 10, Mac OS X 10.10 and up, Linux distribution with kernel 3.5.0 or higher
Drivers	Native UVC and UAC device auto-detected by OS
Input connector	HDMI
Input resolution	Standard and non-standard resolution from 640×360 up to 4096×2160 (4K DCI)
Output connector	USB 3.0 B-Type connector with USB 2.0 backward compatibility
Output scaling	Choose from: no scaling (1:1), preserve aspect ratio scaling or aspect ratio conversion scaling

		Color space YUY2 (4:2:2)	Color space NV12 (4:2:0)
Supported output resolutions	640×360	15, 23.97, 24, 25, 29.97, 30, 50, 59.94 or 60 fps	15, 23.97, 24, 25, 29.97, 30, 50, 59.94 or 60 fps
	640×480		
	960×540		
	1024×768		
	1280×720		
	1280×1024		
	1600×1200		
	1920×1080		
	3840×2160 (4K UHD)	5, 10, 15, 20 fps	15, 23.97, 24, 25, 29.97, 30 fps
	4096×2160 (DCI 4K)*		
USB host controllers	When capturing 4K resolutions we recommend using a computer with an Intel USB host controller (this is the most common type) to achieve the best results. With other USB host controllers such as ASM, AMD, VIA, Renesas, Eltron, Fresco and TI, capture will be at 79% to 96% of the expected frame rate.		
HDMI audio input	Up to 96 kHz sampling rates		
Audio output	16-bit 48 kHz stereo sampling rates		
Capture latency	Near-zero. However, third-party applications may contribute capture delay		
HDCP	High-bandwidth digital content protection (HDCP) protected content cannot be captured		
LED	LED indicates the status of AV.io 4K		
Dimensions	3.54" × 2.36" × 0.91" (90 mm × 60 mm × 23 mm)		

* Note: For DCI 4K, the actual frame rate is limited to 24 fps for NV12 and 15 fps for YUY2.

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Hardware

This section describes the physical features of your AV.io 4K, including diagrams and hardware feature descriptions.
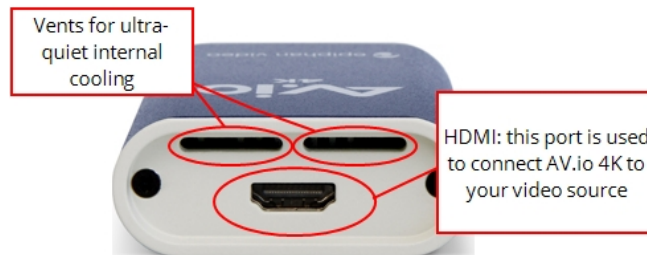
Topics covered include:

- Hardware diagrams; and,
- Indicator LED details
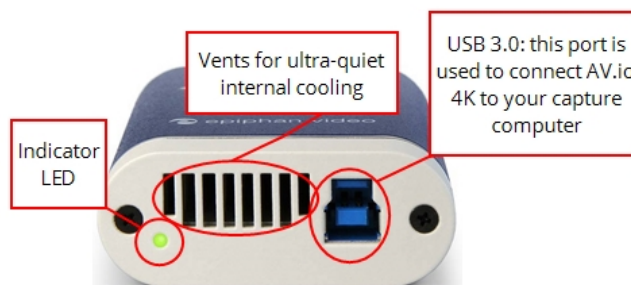
Hardware diagrams

Your AV.io 4K device includes an input, an output and an indicator light.

Input/output ports and indicator lights are identified and explained in the top and bottom cap view AV.io 4K images below. Indicator light details are explained in the proceeding section.

Top cap view:

Bottom cap view:

Indicator LED details

The color and action of the indicator LED depends on whether you are connected by USB 3.0 or USB 2.0. For maximum performance, always use a USB 3.0 port and the included USB 3.0 cable. Note that frame capture rate will be reduced when connected via USB 2.0, and it is likely that any attempt to use 4K resolutions with USB 2.0 will be unstable.

From the operating system's UVC drivers, the application will receive the AV.io 4K supported color space, resolution and frame rates. If you're not sure if your controller is USB 3.0 or USB 2.0, plug AV.io 4K into the capture computer and look at the indicator LED. After initial boot up (red LED), blue is used for USB 3.0 and green is used for USB 2.0:

Blue LED means USB 3.0	Green LED means USB 2.0

Connection type/LED color	USB 3.0 connection	USB 2.0 connection
Solid red	• Firmware update in progress • AV.io 4K initializing	• Firmware update in progress • AV.io 4K initializing
Solid green	–	USB 2.0 connection active
Blinking green	-	Video and/or audio transferring successfully
Solid blue	USB 3.0 connection active	–
Blinking blue	Video and/or audio transferring successfully	-

Capture

Setting up your AV.io 4K device to capture live video content couldn't be easier!

Before you begin the connection process, you will require:

- An HDMI (or DVI-D) video source

- Your AV.io 4K device

- A capture computer, laptop or notebook

- A USB 3.0 cable (included with purchase) to connect to your AV.io 4K to your capture computer

- An HDMI cable (included with purchase) to connect your video source to your AV.io 4K

Once you have these things ready to go, you can now begin the simple process of hooking up your AV.io 4K so you can start capturing!

How AV.io 4K works

Once you're ready to start capturing, you'll need either a built-in or third-party application to capture video and audio content with AV.io 4K.

The application communicates with AV.io 4K and negotiates a **color format** (the range of available colors), **frame rate** (frequency at which frames in a video sequence are displayed) and **frame resolution** (size of a single video frame in pixels). Higher frame rate means smoother video capture while resolution determines the aspect ratio of the video output as well as its resolution and degree of definition.

With the help of AV.io 4K, the content from your video source is automatically configured and captured on your computer through your selected application. If the application requests a frame size that is smaller or larger than your video source, AV.io 4K automatically scales the video for you. For consistent and widely compatible output, audio is automatically resampled to 16-bit 48 kHz stereo audio.

No configuration required!

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Set up your AV.io 4K for capture

Connecting your AV.io 4K to your capture computer is simple and is accomplished in three easy steps.

To connect your AV.io 4K for capture:

1. Connect your AV.io 4K device to your video source

2. Connect your AV.io 4K device to your desktop computer, laptop or notebook

3. Open your favorite third-party application, select AV.io 4K from the list of available input sources and start capturing!

And that's it! No drivers to install and no extensive set-up! Just connect the cables and you're ready to go!

Resolutions, capture rates and aspect ratios

The **resolution** (also known as frame size or display mode) of a video signal, digital image, TV screen, computer monitor or other display device is a count of the number of pixels displayed horizontally and vertically. For example the resolution 1920×1080 (which is 1080p) creates an image that is 1920 pixels wide and 1080 pixels tall.

The **aspect ratio** of an image describes the proportional relationship between its pixel width and height. The resolution 1920×1080 (1080p) is quite a bit wider than it is tall. The ratio of its width to height is 16 to 9, represented as an aspect ratio 16:9.

AV.io 4K outputs resolutions in commonly supported aspects ratios. The table below is a color-coded legend for interpreting the two tables of product resolutions below it:

Aspect Ratio	Common Use
4:3	Standard TV (NTSC/PAL) display and non-widescreen computer displays
16:9	Widescreen (HD) TV displays (1080p, 1080i, 720p etc), and 4K-capable displays
16:10 (8:5)	Widescreen computer displays, and 4K-capable displays
5:4	Sometimes used in larger format computer monitors
1.90:1	Digital Cinema Initiatives standard resolution for 4K or 2K video projection

AV.io 4K accepts the following inputs by default:

640×480	1024×768	1280×720	1280×800
1280×1024	1440×900	1600×1200	1920×1080
1920×1200	2048×1080	3840×2160	4096×2160

If you're using an input resolution that is not on this list, it might still be possible to capture. However, the video might be stretched, or scaled to a different size and surrounded by black letter-boxing, based on the software and your configuration settings. Read Configure settings using AV.io Config tool for more detail.

AV.io 4K generates a list of the following possible resolutions for your capture application to select for output display:

640×360	640×480	960×540	1024×768

1280×720	1280×1024	1600×1200	1920×1080
3840×2160	4096×2160		

Captured video content is output to your application, depending on your resolution and color space, at **5, 10, 15, 20, 23.97, 24, 25, 29.97, 30, 50, 59.94 or 60 frames per second** (your application chooses one of these frame rates) when captured over USB 3.0.

When capturing 4K resolutions we recommend using a computer with an Intel USB host controller (this is the most common type) to achieve the best results. With other USB host controllers such as ASM, AMD, VIA, Renesas, Eltron, Fresco and TI, capture will be at 79% to 96% of the expected frame rate.

Automatic image scaling & audio resampling

If your source content is larger or smaller than the frame size chosen by the application, AV.io 4K automatically **scales your source** to match the desired frame size! No user configuration required!

AV.io 4K also automatically performs **audio resampling**, meaning that no matter the bit depth or frequency of audio through an HDMI audio source, AV.io 4K automatically resamples your audio so that your application gets a consistent audio sample rate and bit depth, even if you change the video source!

Third-party applications

AV.io 4K uses pre-installed drivers on your OS (called **UVC drivers** and **UAC drivers**) to communicate with third-party applications and capture content. Due to AV.io 4K's use of UVC/UAC technology, there is no need for driver installation. Just like a webcam, your AV.io 4K device is immediately recognized as a camera device (like a web cam) and can be used to capture content via any UVC-compatible third-party application.

Third-party applications that work with AV.io 4K include, but are not limited to the following list. Try your favorite capture application!

Zero-install applications (included with your OS)		
Skype (with Windows 8.1 and Windows 10)	**Windows Camera app** (with Windows 8.1 and Windows 10)	**QuickTime** (with Mac OS X)

Popular applications available for download		
Skype	**Wirecast**	**QuickTime**
Adobe FMLE	**VLC media player**	

Configuration options

Your AV.io 4K device is ready to use right out of the box; however, there is support for additional configuration should you need it.

Firmware updates and changes to default capture settings can be applied to your AV.io 4K using Epiphan's AV.io Config tool.

Detailed instructions on how to use AV.io Config can be found using the links below:

- Install the AV.io Config tool
- Configure settings using AV.io Config tool
- Update firmware using the AV.io Config tool
- Identify input details using the AV.io Config tool

The AV.io Config tool allows you to change several settings to make changes to your video capture experience if necessary. Most users won't need to use this utility for anything other than firmware updates, but advanced users may find these tweaks help them get the most out of their AV.io 4K.

These settings include:

- **input signal resolution**
- **aspect ratio preservation**
- **performance mode**

Input signal resolution (disabled by default)

When enabled, your AV.io 4K adds the exact resolution of your input signal to the list of supported output resolutions. This provides the ability to capture non-standard frame sizes 1:1 if required. However it is important to note that the capture resolution is still dictated by the third-party application and this application can override any AV.io 4K custom capture settings. Also note that in selecting this mode, any change in input signal (programmatic or by connecting a different input) causes AV.io 4K to renegotiate its resolution with the application. This can cause an interruption in the captured stream.

Preserve aspect ratio (enabled by default)

When enabled, your AV.io 4K preserves the aspect ratio of your input signal by adding black bars to the sides or top and bottom of the frame (only for cases when the application using the signal requests a frame size

with a different aspect ratio). For example, with this option enabled, a 4:3 input signal gets black bars added to the sides of the image when viewed in an application that requests a 16:9 aspect ratio. With this option disabled, the 4:3 image is instead stretched to fit the full 16:9 size.

Performance mode (enabled by default)

When enabled, your AV.io 4K enters and exits system suspend mode (i.e. sleep) faster by disabling support for the Suspend/U3 USB power state. This means AV.io 4K starts working again faster after your computer wakes from a system suspend state, at the cost of increased power consumption. Disabling this setting is ideal in situations where power consumption needs to be monitored, such as battery preservation in laptops.

Audio selector for multichannel inputs

Not applicable to AV.io 4K.

Now that you've learned what these configuration settings do, you may want to Configure settings using AV.io Config tool or Update firmware using the AV.io Config tool.

Install the AV.io Config tool

Epiphan's AV.io Config tool is used for loading firmware updates on your AV.io 4K and for advanced settings changes.

> You may install AV.io Config on the same computer(s) where you use AV.io 4K, or only on one computer for configuration. All firmware updates and settings changes are saved to the device and work without any software installed on the computer.

To install the AV.io Config tool, follow the directions below for your computer's operating system.

Windows

1. Download the AV.io Config package under the **Windows** heading on the AV.io 4K Downloads page on Epiphan's web site.

   http://www.epiphan.com/support/avio-4k-drivers-documentation/

2. Extract all the files from the zip file (remember the location you're unzipping to).

3. Browse to the unzip folder and open the AV.io Config tool by double-clicking on **AVioConfig.exe**. (Depending on your local security settings, you may need to right-click and choose to run the file as an administrator).

4. AV.io Config starts! If you video grabber is connected to the computer by USB, it is detected.

Mac

1. Download the AV.io Config package under the **Mac OS X** heading on the AV.io 4K Downloads page on Epiphan's web site.

   http://www.epiphan.com/support/avio-4k-drivers-documentation/

2. Double-click the downloaded file to open the disk image package.

3. If desired, drag the AVioConfig application to your desktop or another location where you will find it for future use.

4. Double-click the AVioConfig application icon to launch AV.io Config; a warning box appears.

5. Click **Open**.

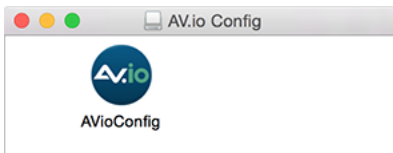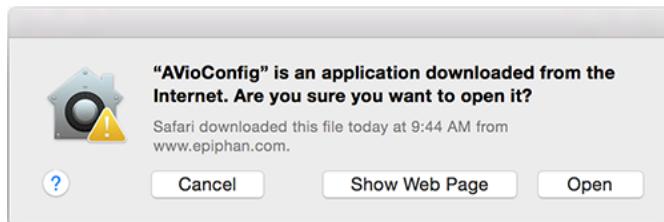6. AV.io Config starts! If you video grabber is connected to the computer by USB, it is detected.

Linux

1. Download the AV.io Config package under the **Linux** heading on the AV.io 4K Downloads page on Epiphan's web site.

    http://www.epiphan.com/support/avio-4k-drivers-documentation/

2. Untar and unzip the contents of the .tar.bz2 file (tar -xjvf can be used to untar and unzip in one command).

3. Browse (or change directories) to the unzip folder.

4. Either: Double-click the AV.io Config application icon or execute the AV.io Config application from the command line to launch AV.io Config (./AVioConfig).

5. AV.io Config starts! If you video grabber is connected to the computer by USB, it is detected.

Configure settings using AV.io Config tool

Epiphan's AV.io Config tool gives advanced users the ability to change several settings to their video capture experience. The settings that can be changed include: Re-numerate input signal resolution, aspect ratio preservation and performance mode. See Configuration options for more details.

To change the configurable settings with the AV.io Config tool:

1. If needed, install the AV.io Config tool. For details specific to your OS, see Install the AV.io Config tool.

2. Connect your AV.io 4K device to your computer, laptop or notebook.

3. Open the AV.io Config tool.

4. Select your AV.io 4K device from the list under the Devices heading.

> If your video grabber is not displayed, press the Refresh icon to refresh the list of connected devices.
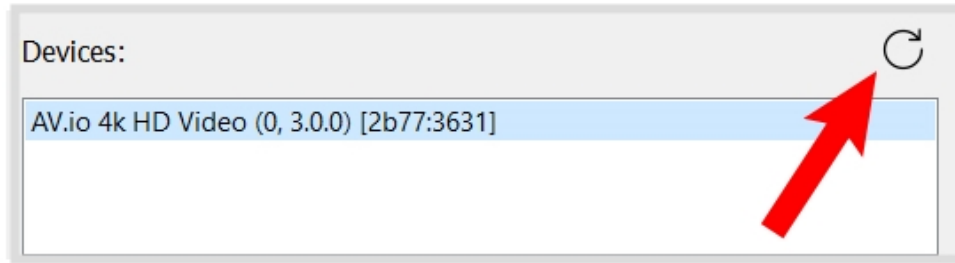
5. Click the **Settings** tab; the settings page appears.

6. Enable or disable the individual settings by clicking each checkbox according to your needs. See
    Configuration options for a description of each setting.

Identifying the input resolution on your AV.io 4K

The AV.io Config tool can help you figure out exactly what information your video source is sending. Plug in the source and select your device. The UI detects information about the source and presents it at the bottom of the window.
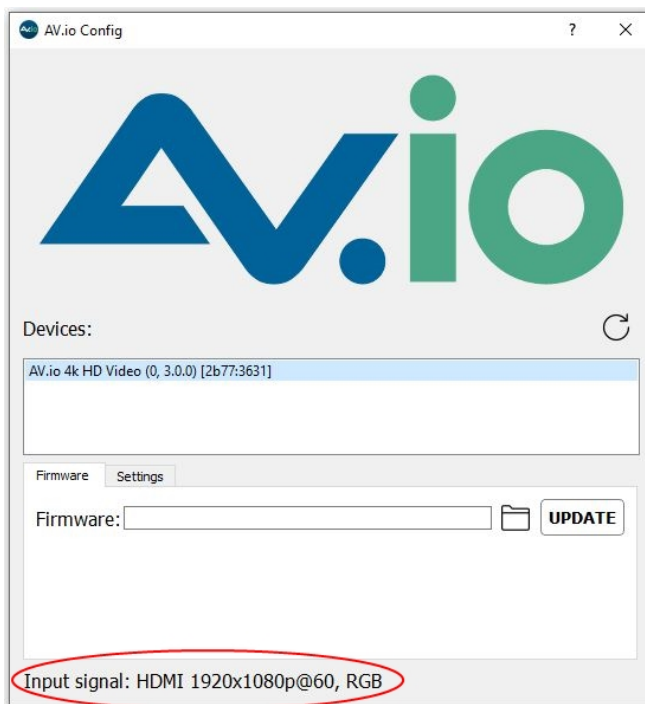
The line tells you what connector the video source is using (in this case, HDMI), the exact resolution of the source (1920×1080p), the frame rate the source is outputting (60 fps) and the color model (RGB).

Update firmware using the AV.io Config tool

From time-to-time Epiphan Video releases firmware updates for our video grabbers. If you register your product and agree to be notified of product updates, you'll receive an email when there is an AV.io 4K update available for download.

When new firmware is available, you can load this firmware onto your AV.io 4K using the AV.io Config tool and the steps below.

> **STOP** Attempting to update firmware while running virtual machines will result in firmware upgrade failure.

To update firmware using the AV.io Config tool:

1. If you haven't already done so, download and install the AV.io Config tool. See Install the AV.io Config tool.

2. Download the firmware update file from the Epiphan website, as described in your firmware update notification email or discussion with your vendor.

3. Connect your AV.io 4K device to your computer, laptop or notebook.
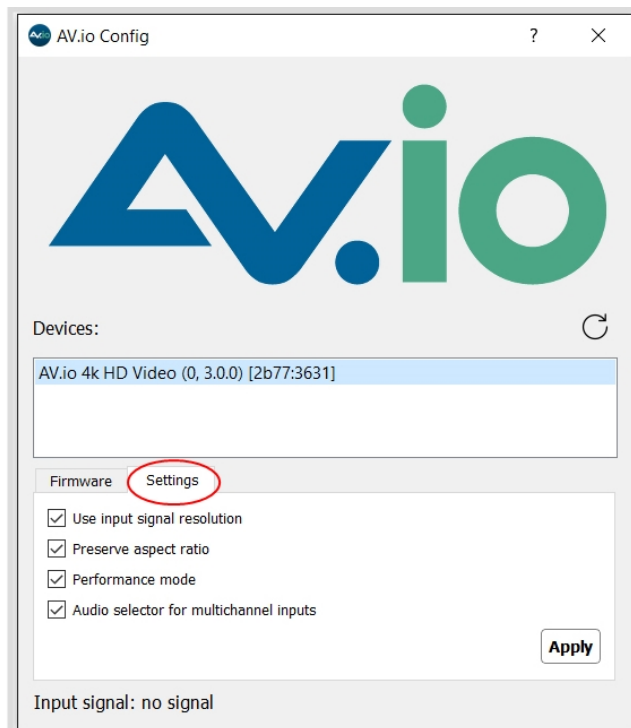
4. Open the AV.io Config tool.

5. Select your AV.io 4K device from the list under the Devices heading.

If your AV.io 4K device is not displayed, press the Refresh icon to refresh the list of connected devices.
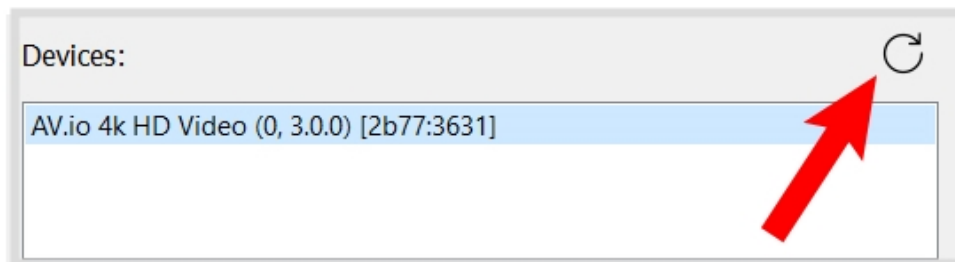
6. Using the diagram below, check the current firmware version of your AV.io 4K. If it is the same version as the new firmware you downloaded, there is no need to do the firmware update.

7. Click the **Firmware** tab

8. Click the **folder icon** to navigate to the saved location of the firmware, and click **Update** to update your video grabber to the selected firmware; an update bar appears and displays the progress of the update.

🛑 Do not disconnect your AV.io 4K at any point during the update process! Doing so may cause irrevocable errors and/or permanently damage the device.

9. When the update is finished the progress bar turns green and displays "Update Completed" (Note the firmware update will not be automatically reflected in the Devices list unless the **Refresh** icon is clicked). You may now safely disconnect your AV.io 4K if needed.

When updating firmware on a Mac, the "Update Completed" text will not be displayed. The firmware upgrade is complete when the progress bar fills the width of the AV.io Config window and the window contents are no longer greyed out.

Limitations and known issues

This section includes known issues or limitations that affect functionality or usability and ways that you can work around these limitations.

Affecting all operating systems

- When capturing from a source with a 23.98p, 29.97p or 59.94i signal, frame rate occasionally dips before returning to its original capture rate.

    - **Workaround**: Set your source frame rate to a different value, such as 30 or 60 fps.

Affecting Windows

- Windows 7/8.1: The AV.io Config tool may display the AV.io 4K device more than once in the device list possibly causing user confusion.

    - **Workaround**: Simply press the refresh icon to refresh the device list; only one AV.io 4K device is displayed.

- Windows 8.1: On rare occasions (< 5% of the time), captured video has a small vertical fluctuation (of a few pixels) or small artifacts in the lower right quadrant of the screen. This is noticeable right from the beginning of capture.

    - **Workaround**: Start capturing a few moments before your recording or streaming event and check vertical position and the lower right quadrant of the captured image. If any issues are noticed, disconnect and re-connect AV.io 4K's USB 3.0 cable to the capture computer.

Affecting Ubuntu

- Ubuntu 14.04 LTS: With the exception of the first capture after system reboot, the very first captured frame is always green.

    - **Workaround**: Remove the green frame in post-production editing. If streaming the captured video, begin streaming after the initial green frame has already been captured.

Troubleshooting

Use the follow table for help if you are experiencing problems or unexpected behavior from your AV.io 4K.

Affecting all operating systems

Symptom(s)	Action(s) to resolve
Frame rates lower than 30 fps at 4K resolutions	1) Optimize performance by using an Intel USB host controller. 2) Use your application to change the color space you are using. At 4K resolutions, NV12 (4:2:0) is available at 15, 23.97, 24, 25, 29.97, or 30 fps, and YUY2 (4:2:2) is available at 5, 10, 15, or 20 fps.

Affecting Windows

Symptom(s)	Action(s) to resolve
Incorrect input resolutions detected	If using **Windows 8.1 or 10** with **VLC Media Player 2.2.1**, downgrade to an earlier version of VLC or use a different capture application, such as Adobe FMLE.
Audio artifacts are present (popping, missing audio, poorly encoded audio, etc).	If using **Windows 8.1 or 10** with **VLC Media Player 2.2.1**, downgrade to an earlier version of VLC or use a different capture application, such as Adobe FMLE. OR If using **Windows 8.1 or 10** with **Skype for Business**, use a different capture application, such as Adobe FMLE.
Captured video file displays black screen when opened.	If capturing on **Windows 8.1** using **Windows Movie Maker** with your AV.io 4K connected to an **Etron EJ188H USB 3.0/2/0 host controller**, switch to a different capture application, connect to a different USB port, or upgrade to Windows 10.

Recorded file does not have audio.	If capturing on **Windows 8.1** using **Windows Camera** with your AV.io 4K connected to a **Texas Instruments TSub USB 3.0 controller**, switch to a different capture application (such as VLC Media Player) or upgrade to Windows 10.
Firmware update fails	If updating on a computer running Windows **8.1 or 10** with your AV.io 4K connected to an **Etron 3.0 host controller**, perform the firmware update on another computer (without an Etron USB host controller) or using another USB port on the same computer. Note that USB 2.0 can be used for firmware updates.

Affecting Mac

Symptom(s)	Action(s) to resolve
AV.io 4K is specified as the capture device in the application, but capture occurs using a different device connected to the computer (such as a web cam).	If using **VLC Media Player 2.2.1**, disconnect all capture devices except AV.io 4K, downgrade to an older version of VLC media player or use a different capture application.
Recorded file does not have audio.	If using **VLC Media Player 2.2.1**, downgrade to an earlier version or use a different capture application, such as Quicktime.
Video doesn't update (appears frozen) when using AV.io 4K as the video source for Skype video calls.	Disconnect and reconnect AV.io 4K. If the problem persists, use a different capture computer. This problem appears to happen with regular web cams as well.

Affecting Ubuntu

Symptom(s)	Action(s) to resolve
Video cannot be resumed if stopped during a Skype call.	If capturing on **Ubuntu 14.04 LTS** with your AV.io 4K connected to an **Etron EJ168A USB 3.0 controller**, switch to a different USB port or simply avoid stopping the Skype call. If it is not possible to stop the Skype call or if it stops accidently, disconnect and reconnect the

	device. You may need to restart the video call.
Video capture fails when the capture computer recovers from sleep mode, even if capture was stopped prior to sleep mode	If capturing on **Ubuntu 15.04** with your AV.io 4K connected to a **Texas Instruments TUSB7320 USB 3.0 host controller**, switch to a different USB port or simply disconnect and re-connect AV.io 4K's USB 3.0 cable to the capture computer.

Affecting Chromebook

Symptom(s)	Action(s) to resolve
AV.io 4K is not detected as a valid audio device.	If capturing using **Chromebook Apps Clipchamp** and **WebRTC** on Google **Chrome OS v43.0.2357.125 (64 bit)**, use a different Chromebook app to capture both video and audio, such as Screencastify or MediaCore Capture.

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March 28, 2014

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2. This device must accept any interference received, including interference that may cause undesired operation.

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