

Licensing Overview

(Effective Date – November 1, 2022)

The open source community that created the x264 Advanced Video Coding (AVC) video encoder software (the "x264 Software") offers the x264 Software under two difference licenses:

- 1) The open source GNU General Public License, Version 2.0 (referred to as the "open source license" or "GPL"); or
- 2) A commercial license from x264, LLC ("x264") (a "Commercial License").

Each license has certain advantages and disadvantages. A key distinction is that the open source license is royalty free, but it automatically grants all third parties a license under the GPL to your product source code and may also require you to release your product source code. The GPL also grants third parties a perpetual and royalty free license to your patents to create new products based on your product source code. A Commercial License from x264 allows you to avoid these requirements.

The following information below is meant to help you determine which license type best meets your needs. We have included several **Use Cases** and **Other Issues** that you should carefully review as multiple factors may apply to each of your products. You need to be aware your business model or company structure could unintentionally require you to release the source code for your product under the open source license.

The information below is not a legal opinion and you should consult with an attorney to help you determine your options and which license is best for your application.



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Version 2, June 1991

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There is some confusion over whether the open source license requires you to release your product's source code even if you haven't modified the original x264 code. The definition of Program as used in Version 2.0 of the GPL is:

The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language.

Section 2 of the GPL does not apply to just the Program, but also to a "work based on the Program". In this case, the Program is the x264 Software and a "work based on the Program" is your product that incorporates or links to the x264 software or any portion of it, either verbatim or with modifications.

Does the GPL require the release and licensing of my product's source code?

Maybe. There are only two use cases:

- 1) If you publish, distribute or allow a third party to use your product then you are required to release your product source code to third parties under Version 2.0 of the GPL.
- 2) If you do not publish, distribute or allow a third party to use your application, then your use under the open source license does not require you to release your source code to third parties (see the "Internal Use" use case). You should be careful because it is very easy to inadvertently trigger the license grant and once granted it is difficult to fix.

Whether or not you have to release your source code, a quirk in the open source license indicates that everyone is automatically granted a license, including a patent license, to your source code.

Section 2 b) states that:

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to



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be licensed as a whole at no charge to all third parties under the terms of this License.

As a result, even if you are not required to release your source code, but it is somehow unintentionally released, the public would already have a license to use the source code and any underlying patents under the GPL.

What do I have to disclose under the GPL?

If you are required to disclose your source code under the open source license, the GPL requires that you disclose all the source code of any software that **includes or links** to the x264 Software or any portion of the x264 Software. The "linkage" provision creates an expansive definition of the source code that must be disclosed. Even if your product just links to the x264 Software library, all your source code is subject to the public disclosure and licensing requirements under the open source license. This is why most developers/companies creating commercial applications opt for a Commercial License.

Use Cases

Below are use cases of the most common business models to help you determine the consequences under Version 2.0 of the GNU General Public License. We have also included real-world examples to further help you understand the differences between the different use cases. It's not always easy to determine the best license option and we try to provide.

In some cases, we have provided legally binding opinion letters to assure a company that their use of the x264 Software falls under the Internal Use Safe Harbor use case described below. In these cases, x264 is not receiving a royalty, but we Please contact us if you have any questions.

Multiple use cases and other issues may apply to the same product and changes to your product or company structure may change your license obligations. If you use the x264 software in multiple products, each product should be reviewed individually for compliance on an ongoing basis.



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+Internal Product Development

- You should consider which license you want to use as it will impact your business plan. During development, as long as you do not distribute or allow a third party to use your product, the open source license does not require you to publicly release your product source code.

Several months before releasing your product, you should determine which license you need. If you decide you want the Commercial License, please contact us as soon as possible. Depending on the complexity, it can often take a month or more to complete the Commercial License.

+Hardware/Software Sales

– If you sell or perpetually license your product to a third party, this is clearly a distribution, and the open source license automatically grants a license to all third parties and requires the release of your product source code. It doesn't matter if you monetize your product or give it away for free, distributing your product to a third party triggers the license grant and obligation to disclose your product source code. Most companies choose the Commercial License to avoid the disclosure requirement under the open source license.

Media Excell sells transcoder appliances that can simultaneously transcode multiple video streams. The transcoders are sold for a one-time fee and the customer receives a perpetual hardware based license to use the x264 software as part of the purchase of the transcoder.

WeChat is a well-known social media app used extensively by over a billion people. The WeChat app uses x264 to encode high quality video on mobile devices.

+Term Licensing

- If you create a copy of your product and grant a customer the right to use the product, whether you make money or not, this constitutes a distribution, and the open source license automatically grants a license to all third parties and requires that you release your product source code. Again, it doesn't matter if the customer runs your product on



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your hardware, the cloud, or the customers own hardware. Most companies choose the Commercial License to avoid releasing their product source code.

Softvelum licenses its Nimble Streamer transcoder software to customers and charges per-minute of encoded video. Customers are in control of the application, but they do not have a perpetual license to the application. Customers cannot continue using the Nimble Streamer when they stop paying for use of the transcoding service.

+Open Source Use

– You always have the option of using the x264 software and publishing your product source code for others to use under the open source license. Everyone using your product source code is granted a license to use it in accordance with the open source license, including the obligation to contribute back to you any changes to your product source code. We encourage this use case option as it allows the development community to learn and improve upon your work.

Kaltura is a good example of a company that uses the x264 software and releases its product source code. Anyone can download and use the published source code for free under the open source license.

+Internal Use Safe Harbor

– If you use your product internally and do not distribute or allow third parties to use it, you can use the x264 software under the open source license without triggering the automatic license grant or the requirement to release your product source code. This is the only use case that allows you to use the x264 Software under the open source license without the automatic license grant or obligation to disclose your product source code.

Netflix is a good example. Studios license their content to Netflix, which uses the x264 Software internally for high quality encoding of the content for distribution. Neither the studios nor consumers have control of the encoding software.

It is important to understand that you can unintentionally lose your Internal Use Safe Harbor exception to automatically granting a license and releasing your product source code. For example:



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- A company that develops its own video encoding and distribution system that it uses internally could inadvertently lose its safe harbor by granting a license to its video encoding software to a third party. For example, when a company expands internationally, it often creates one or more wholly owned subsidiaries in various countries and licenses (technology transfer) its video encoding system to the foreign subsidiary. Because they are separate legal entities, this is a distribution, and the GPL requires that the company release the source code for its video encoding system. It doesn't matter that the companies are related or that they both use the software internally, it was a distribution to a separate legal entity.
- Similarly, many companies create development hubs in various countries. If the
 development hub develops a video encoding system as a work-for-hire, and
 transfers all ownership to the parent company, then it should fall under the
 Internal Use Safe Harbor. However, if the development up licenses it to the
 parent company and also maintains rights to use it or license it independently,
 then it is a distribution triggering the automatic release and licensing of the
 source code.
- You, as an individual, create a great product using the x264 Software and then you form a company to monetize your product. When you assign or license your product to the company, this could be a distribution between two legal entities and trigger the requirement to release your source code.

These are just a few examples of the ways you could inadvertently trigger the source code release requirements allowing third parties to use your product under the GPL without meaning to do so.

+Software as a Service (SaaS)

– If you use your product to offer video encoding services to third parties, the service will fall under either the Internal Use Safe Harbor or Term License use cases. As discussed previously, the Term License use case automatically grants a license to all third parties and requires the release of your source code, whereas Internal Use Safe Harbor does not trigger these provisions. The determining factor between the two use cases is control.



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If a new instance (copy) of your product is generated (by you or the customer) and the customer controls its use, then you are effectively distributing your product. The open source license triggers the requirement for you to release your product source code.

Another indicator that the service is a distribution under the open source license is if you require the customer to execute a license agreement before they can use the service, even a click license. If you require a service agreement, it will depend on the terms of the service agreement. Please contact us and we will try to help.

In contrast, if the customer submits their videos to you and you use your product to encode them for the customer, then it is effectively under the Internal Use Safe Harbor and the disclosure requirement is not triggered.

JW Player is an example of an Internal Use SaaS use case. JW Player has APIs that allow customers to submit their video to the JW Player distribution platform. The customer doesn't have access to the JW Player platform software and JW Player does not create a new software instance for a customer.

Elemental, Media Excel, Softvelum and many others provide an example of a Term License SaaS use case. These companies offer their transcoding service in the cloud, such as AWS. Customers can select the service and create new server instances as required. The customer controls how many videos, when to encode, and all the encoding settings, which can then be output to various video distribution platforms.

+Apps

– The x264 software in often used in apps, particularly in mobile video apps, because of the performance (minimal processor requirements) and high quality video produced by the x264 Software. Since the app is being distributed to third parties, the open source license requires that you release the source code for your app. This is why most companies opt for the Commercial License.

Tencent Music uses the x264 Software in its mobile app to allow users to upload and share videos.



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Verizon uses the x264 Software in its Acquire software app to enable customers to encode video and automatically upload it to the Verizon cloud-based distribution system.

+ Unforeseen distribution requiring source code disclosure

In addition to the standard use cases, the open source license can create other problems in a commercial setting.

+Internal Licensing/Distribution

– Companies legitimately using the x264 software without disclosure under the Internal Use Safe Harbor exception may trigger the open source disclosure requirement when they license (distribute) their technology to a different legal entity within the company.

For example, media and distribution companies often create foreign subsidiaries in different countries to expand their market. When they created the foreign subsidiary, they typically license the parent company's technology to the subsidiary. This allows the subsidiary to transcode local content without needing to send it to the parent company. The problem is that the technology transfer is a distribution between legal entities. It does not matter that they are related companies; it is a distribution from one legal entity to another that triggers the requirements for releasing all the source code under the open source license.

Another common situation is when a company reorganizes (often for tax purposes) and transfers ownership of the intellectual property associated with the product to a separate subsidiary. The transfer of the ownership or a license to another legal entity could be a distribution triggering source code disclosure requirement under the open source license.

+Sale/Purchase of the Company

– When one company buys another company that is using the x264 Software under the Internal Use Safe Harbor exception, the sale/purchase of the company may constitute a distribution and trigger the requirement to disclose the product source code.



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The evaluation is a two part test. First, is the purchase an equity purchase (the acquiring company buys the shares of the purchased company and acquires all its assets and liabilities). If it is an equity purchase, then the second question is whether the company is operated as a subsidiary or is the technology transferred within the acquiring company. If it is an equity sale and the company is operated as a subsidiary without any technology transfer to the rest of the company, the Internal Use Safe Harbor disclosure exception is preserved.

If the purchase is an asset purchase (the acquiring company buys only the assets and the equity remains with the original owners), then this is likely a distribution (the product/technology is being sold) that triggers the source code disclosure requirement under the open source license.

Likewise, if the purchased company's technology is distributed (technology transfer) within the acquiring company, this would constitute a distribution, triggering the requirement to disclose the product source code of any products using the x264 Software.

+Proprietary Software Integration

– Video encoding and distribution platforms typically have many interrelated components (other codecs, video analytics, optimization, server management, distribution, ad insertion, etc.) and very few companies develop all these components themselves. When you incorporate proprietary components from vendors with the x264 Software under the open source license, these vendor's proprietary software becomes subject to the open source license.

Most vendors contractually prohibit their proprietary software from being used in a product that uses open source software. They don't want their proprietary software being subject to the automatic licensing or disclosure requirements of the open source license. The company would likely be liable to the vendors for the damage caused by the release and licensing of their product source code under the open source license. The Commercial License allows a company to avoid breaching their contracts and maintaining compliance.

+Third Party Development



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– Video encoding platforms are complex and typically require unique development knowledge. Most companies' license existing components of a video encoding and distribution platform or they engage a developer to develop components of the system in accordance with their specifications. This can create several open source license issues.

As long as the developer assigns all their ownership rights to the company, then this is effectively a work-for-hire contractor and is the same as doing the work internally. However, if the developer is allowed to retain some rights or is granted back some rights to the developed software, then this becomes a distribution under the open source license.

It should be noted that x264, LLC does not typically enter into a Commercial Licenses with third party developers or allow the x264 software to be used in a Software Development Kit (SDK). This would essentially allow the developer to offer a x264 as a sublicense. In the rare circumstance it has been allowed, the applications are specific to a single class of products and the SDK developer manages the usage and pays the royalties for each app. In every other case, the Commercial License would need a Commercial Licensed by the company having the product developed by the third party developer. Please contact us if you have any question.

+ Other Issues

+ FFmpeg

– The FFmpeg software is the leading multimedia framework and provides a complete platform for recording, converting or streaming audio and video. It is an incredible platform and most of the x264 licensees utilize the FFmpeg software (https://ffmpeg.org/).

The FFmpeg software is also an open source project (several developers worked on both the x264 and FFmpeg projects). The FFmpeg software is licensed under the GNU Lesser General Public License (LGPL), Version 2.1, which is much less restrictive than the open source license for the x264 Software. Specifically, the FFmpeg website cautions developers about incorporating optional GPL software (the x264 Software) that will cause all of the program to fall under the GPL:



Licensing (Page 19)

FFmpeg is licensed under the <u>GNU Lesser General Public License (LGPL) version</u>
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2 or later. If those parts get used the GPL applies to all of FFmpeg.

Read the license texts to learn how this affects programs built on top of FFmpeg or reusing FFmpeg. You may also wish to have a look at the GPL FAQ.

Note that FFmpeg is not available under any other licensing terms, especially not proprietary/commercial ones, not even in exchange for payment.

https://ffmpeg.org/legal.html

+MPEG-LA Patent License

– The x264 Software complies with the H.264 video encoding standard. When the standard was created, a patent pool was created that included all of the patents needed to implement the H.264 video standard. This patent pool is managed by MPEG-LA (https://www.mpegla.com/).

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