

User Generated Short Video SDK

Product Introduction

Product Documentation



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Product Introduction

Overview

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The user-generated short video (UGSV) sector has boomed in recent years. Thanks to innovation on both content and app features, UGSV has become the next hotspot after live streaming. To help you quickly build and launch your own UGSV app, Tencent Cloud VOD launched a one-stop UGSV solution that includes everything from video generation and uploading to processing, distribution and playback.

The UGSV SDK leverages the powerful video uploading, storage, transcoding and distribution capabilities of Tencent Cloud VOD, as well as the video content recognition technology of Tencent Cloud IM to offer you features such as video capturing, clipping, splicing, special effects, sharing and playback. With UGSV SDK, you can easily create UGSV apps for your businesses.

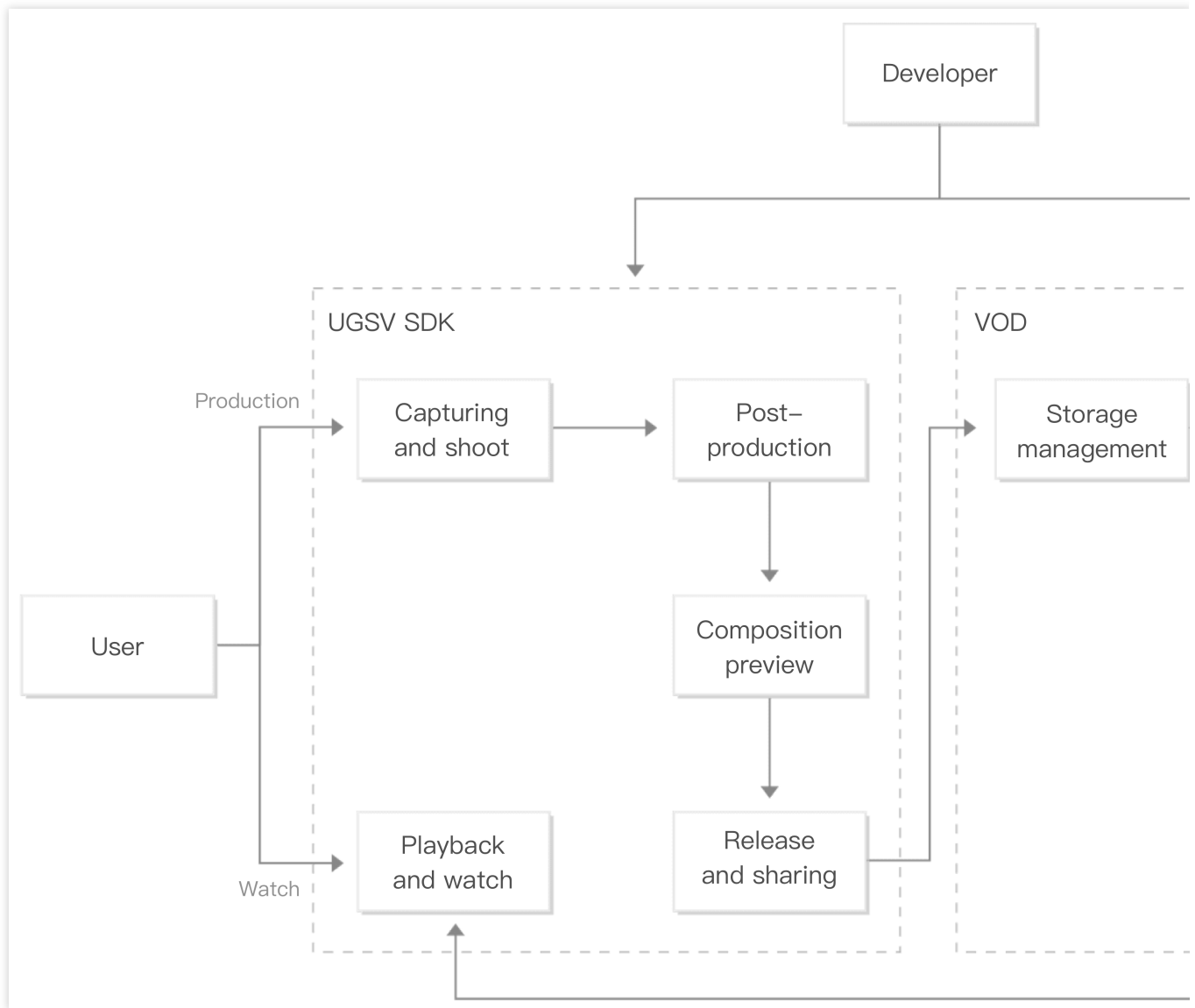
This document offers you a fast and simple way to explore Tencent Cloud UGSV services and guides you through activation, purchase and integration.

Basic Features

Basic Features: The UGSV SDK offers features including video production (shooting, editing, splicing, and special effects), playback, and sharing.

Platform: We provide an iOS SDK and an Android SDK.

VOD Integration: UGSV integrates [Tencent Cloud VOD service](#) to provide a one-stop cloud-based solution for video uploading, storage, quick transcoding, porn detection and video distribution. It helps ensure that user videos are viewed and shared in a timely fashion.



Strengths

Diverse Features

UGSV is a full-featured service that provides app developers with a variety of industry-leading mobile video capabilities, including video capturing, clipping, splicing, special effects, beauty filters, green screen keying, animated widgets, publishing and playback.

Content Detection

UGSV comes built in with VOD's porn detection. Once a video is uploaded, porn detection starts automatically and a score indicating the amount of pornographic content is quickly computed.

AI Support

Powered by cloud-based AI engines, UGSV enables content classification and personalized recommendation and supports intelligent tagging, intelligent video cover generation, green screen keying, face widgets and more.

Powerful Cloud Capabilities

UGSV leverages Tencent Cloud VOD's cloud capabilities and quick transcoding, porn detection and video distribution services to help ensure that user videos are uploaded and stored to the cloud quickly and viewed and shared in a timely fashion.

Seamless Integration

Once integrated, the SDK can capture videos not only via the camera, but also from live streams. It also supports editing and splicing video, adding filters and face widgets, as well as green scree keying directly on the phone, offering your app users a diverse array of options to create and edit their content.

More Media SDKs

In addition to Player SDK, we also provide [MLVB](#), [Player](#) and [Effect](#) SDKs to quickly meet different applications requirement. You can choose the appropriate SDK you need. If you need both MLVB, UGSV, Player functions, you can also choose to download the [All-In-One SDK](#).

UGSV SDK

MLVB SDK

Player SDK

TRTC SDK

All-In-One SDK

Features

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The UGSV SDK offers features including video production (shooting, editing, splicing, and special effects), playback, and sharing. We provide an iOS SDK and an Android SDK.



To use the UGSV SDK, you need to purchase a UGSV license. The UGSV license comes in four types: **Lite**, **Standard**, **Premium** and **Template-based Editing**. If you need Premium or Template-based Editing, please [submit a ticket](#) to contact us for integration. The features supported by different types are listed in the table below:

Module	Feature	Description	Lite License	Standard License	Premium License	Template-based Editing License
License	Price(USD/year)	Pricing of Licenses	1,899	9,999	49,999	79,999
Beauty Effects	Advanced beautification	Apply effects including big eyes, slim face, V shape, slim chin, short	Beauty effects-related features are value-added capabilities, and the UGSV SDK does not support them. If you need to use them in combination,			

		face, and slim nose, and adjust the strength	<p>please purchase the Tencent Effect SDK to unlock the Beauty Effects feature module.</p> <p>Learn more about Tencent Effect SDK>></p> <p>Tencent Effect SDK's Pricing Overview>></p> <p>Purchase Tencent Effect SDK>></p> <p>Integrating Tencent Effect into UGSV SDK>></p>			
	Animated stickers	Apply face reshaping effects and stickers based on facial recognition technology				
	AI-based keying	Change the background to an animated image, PowerPoint, or other background image				
	Green screen keying	Replace the green background of a video with an animated image, PowerPoint, or other image				
UI	Custom UI	We provide a complete set of UI interaction source code in the UGSV demo app. You can reuse the code directly or customize your own UI based on it	✓	✓	✓	✓
shooting	Aspect ratio	Shoot videos in the aspect ratio of 16:9, 4:3, or 1:1	✓	✓	✓	-
	Video quality selection	Shoot videos in SD, HD, or FHD and at a specified bitrate, frame rate, and GOP	✓	✓	✓	-
	Shooting control	Switch the camera and adjust brightness during shooting	✓	✓	✓	-
	Duration limits	Set the maximum and minimum video	✓	✓	✓	-

		duration allowed				
	Watermarking	Add a watermark to the video shot	×	✓	✓	-
	Focal length	Adjust the focal length during shooting	✓	✓	✓	-
	Focus mode	Auto or manual focus	✓	✓	✓	-
	Segment-based shooting	Pause shooting to generate a video segment, which can be deleted	✓	✓	✓	-
	Photo	Take photos	×	✓	✓	-
	Speed change	Shoot a video in slow or fast motion	×	✓	✓	-
	Background music	Select a local MP3 file as the background music before shooting	×	✓	✓	-
	Voice change/reverb	Select a voice changing effect (such as girl or man) or reverb effect (such as karaoke room or hall) before shooting	×	✓	✓	-
	Filters	Swipe to preview the video with different filters applied; customize filters; set the filter strength	✓	✓	✓	-
	Basic beautification	Apply effects including smooth skin, brightening, and rosy skin and adjust the strength	✓	✓	✓	-
Editing	Quick import	Quickly import videos	✓	✓	✓	-
	Hybrid import	Facilitates the hybrid importation of multiple images and videos.	×	×	✓	-

Image cropping	Enables the cropping of video frames, including aspect ratio cropping and angle adjustment.	×	×	✓	-
Video clipping	Create a video clip from an original video by specifying a start and end time	✓	✓	✓	-
Video segmentation	Facilitates swift segmentation of videos and allows for the editing of the resultant video clips.	×	×	✓	-
Picture-in-picture	Enables the overlay of videos on a primary track, producing video files with an embedded picture-in-picture effect.	×	×	✓	-
Bitrate setting	Generate a video at the specified bitrate	✓	✓	✓	-
Thumbnail generation	Capture a video frame at the specified time to use as the thumbnail	✓	✓	✓	-
Preview by frame	Move the cursor across the timeline to preview a video at a specific time point	✓	✓	✓	-
Filters	Apply filters and set the filter strength	×	✓	✓	-
Time effects	Apply time effects to a video such as reverse, loop, and slow motion	×	✓	✓	-
Special effects	Add special effects such as soul out, rock	×	✓	✓	-

		light, split screen, and phantom				
	Background music	Select a preset track or local MP3 file to use as the background music (you can clip the track and adjust the music volume)	×	✓	✓	-
	Multiple BGM import	Supports configuring multiple background music tracks.	×	×	✓	-
	Static/Animated stickers	Add an animated or static sticker to the specified segment of a video at the specified location	×	✓	✓	-
	Basic subtitles	Add text of a specific style (such as speech bubbles) to the specified segment of a video at the specified location	×	✓	✓	-
	Advanced subtitles	Offers the capability to edit subtitles in various styles, including font, color, size, ornate lettering, and decorations.	×	×	✓	-
	Image transitions	Add transition effects such as rotate and fade between multiple images and convert the images into a video	×	✓	✓	-
Video splicing	Splicing	Splice videos in the specified sequence	×	✓	✓	-
	Co-shooting	Shoot a video while playing an existing	×	✓	✓	-

		video and splice the two videos into one split-screen video				
Video export	One-click export	Enables video exportation at a specified quality level.	✓	✓	✓	-
	Custom export	Supports video exportation with designated resolution, bitrate, frame rate, and encoding format.	✓	✓	✓	-
Video upload	Upload to VOD	VOD offers services such as media management and content moderation	✓	✓	✓	-
Playback	VOD player	A VOD player-based, open-source solution that integrates features including data pulling, orientation change, definition selection, on-screen comments, and time shifting	✓	✓	✓	-
Material creation tools		We offer an integrated suite of material creation tools, supporting a wide array of special effects production including filters, stickers, subtitles, animations, transitions, and the creation of identical templates for import and use.	×	×	✓	✓
Template cloning		We provide the capability to swiftly edit videos to achieve desired effects based	×	×	×	✓

	on templates, including 20 free templates, with support for the import and use of custom templates.				
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Use Cases

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Creative short videos for social media

UGSV enables you to create, upload and share short and creative mobile videos in real time. You can use a variety of features, including beauty filters, animated widgets, special effects, green screen keying, intelligent clipping and splicing.

Chat

UGSV allows you to shoot and share short videos in real time while chatting on your mobile, rendering the experience more entertaining than the traditional text and images messaging. You can add design elements to your video captions for efficient and lively interaction.

Video news

You can use UGSV to shoot and share newsreels in real time, which are easier to digest and more engaging than the traditional text- and image-based news. The fast upload, intelligent editing and cloud storage features of UGSV help you efficiently extend the outreach of your newsreels.

Consultation

With UGSV, professional consultants can record short videos and use engaging captions to answer inquiries, improving business efficiency and accuracy.

eSports highlights

During eSports live streaming, you can use UGSV to shoot and edit video footages on the spot, and quickly share the content with viewers across the Internet. The special effects and intelligent clipping features can make your videos even more eye-catching.

Concepts

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License

Certain VOD packages come with licenses for Tencent Cloud media SDKs, which you can use to activate UGSV features in the SDKs.

Note :

After you purchase a VOD package, you need to bind the license to your application in the console. Make sure you double-check the [bundle ID and package name](#) when binding a license. **The information cannot be modified after submission.**

Player signature

A player signature is used to authorize a playback device to play videos. If your application playback service issues a valid signature to a device, the device will be able to play the video within the signature's validity period. A player signature is required for playback in one of the following cases:

- You have enabled [key hotlink protection](#) for your playback domain.
- A non-default [player configuration](#) is used.
- The video to be played is [encrypted](#).

Note :

For more information on player signatures and how to use them, see [Player Signature](#).

Frame rate

Frame rate refers to the number of frames in a video per unit time. It is measured in fps (frames per second).

Bitrate

Bitrate refers to the number of bits required per unit time to play continuous media (such as compressed audio or video). It is measured in bit/s (or bps).

Transcoding

Transcoding converts a video bitstream into another one. It changes the codec, resolution, bitrate, and other parameters of the bitstream for playback on different devices in various network environments. This feature can

achieve the following:

- Increase compatibility: Transcode a source video to formats (MP4 for example) that are compatible with more types of devices for smooth playback.
- Increase bandwidth adaptability: Transcode a source video into different video qualities such as smooth, SD, HD, and FHD. End users can select the bitrate that best suits their network conditions.
- Improve playback efficiency: Move the moov atom from the end of an MP4 file to the beginning, so that a video can be played before it is downloaded completely.
- Watermark: Add a watermark to a video for copyright protection.
- Reduce bandwidth consumption: The use of more advanced codec technology (such as H.265) makes it possible to significantly reduce the bitrate of a video while maintaining its quality, which helps reduce bandwidth consumption.

Keyframe

Frame is the basic unit of videos. A video consists of multiple continuous frames.

Timestamp

Timestamp is the current time of data.

GOP

A GOP (group of pictures) refers to a collection of successive pictures within an MPEG encoded video stream. It starts with an I-frame and ends with the next I-frame. A GOP can contain the following types of pictures:

- I-frame: Intra encoded picture. It is a fixed image independent of other image types. Each GOP begins with this type of image.
- P-frame: Predictive coded picture. It contains difference information relative to the previous I or P frame.
- B-Frame: Bidirectionally predictive coded picture. It contains difference information relative to the previous or ensuing I or P frame.

The number of frames within a GOP is called GOP length.

Codec

A video codec refers to a program or a device that can compress or decompress (video decoding) digital videos.

Common codecs include:

- H.26x series: Standards developed by the International Telecommunication Union (ITU), among which the most popular is H.264. H.265 is the successor of H.264 and offers a doubled compression rate compared to H.264, yet H.265 is not widely used due to patent and other reasons.

- MPEG series: Codec standards developed by Moving Picture Experts Group (MPEG) under International Organization for Standardization (ISO).
- Other series such as VP8 and VP9 developed by Google and RealVideo developed by RealNetworks

Event notification

Operations in VOD, such as video uploading, deleting, and processing, are referred to as events. It may take some time for an operation to be completed, and once it is completed, VOD will notify your application service of the result. This is an event notification.