

# User Generated Short Video SDK Product Introduction



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# Product Introduction

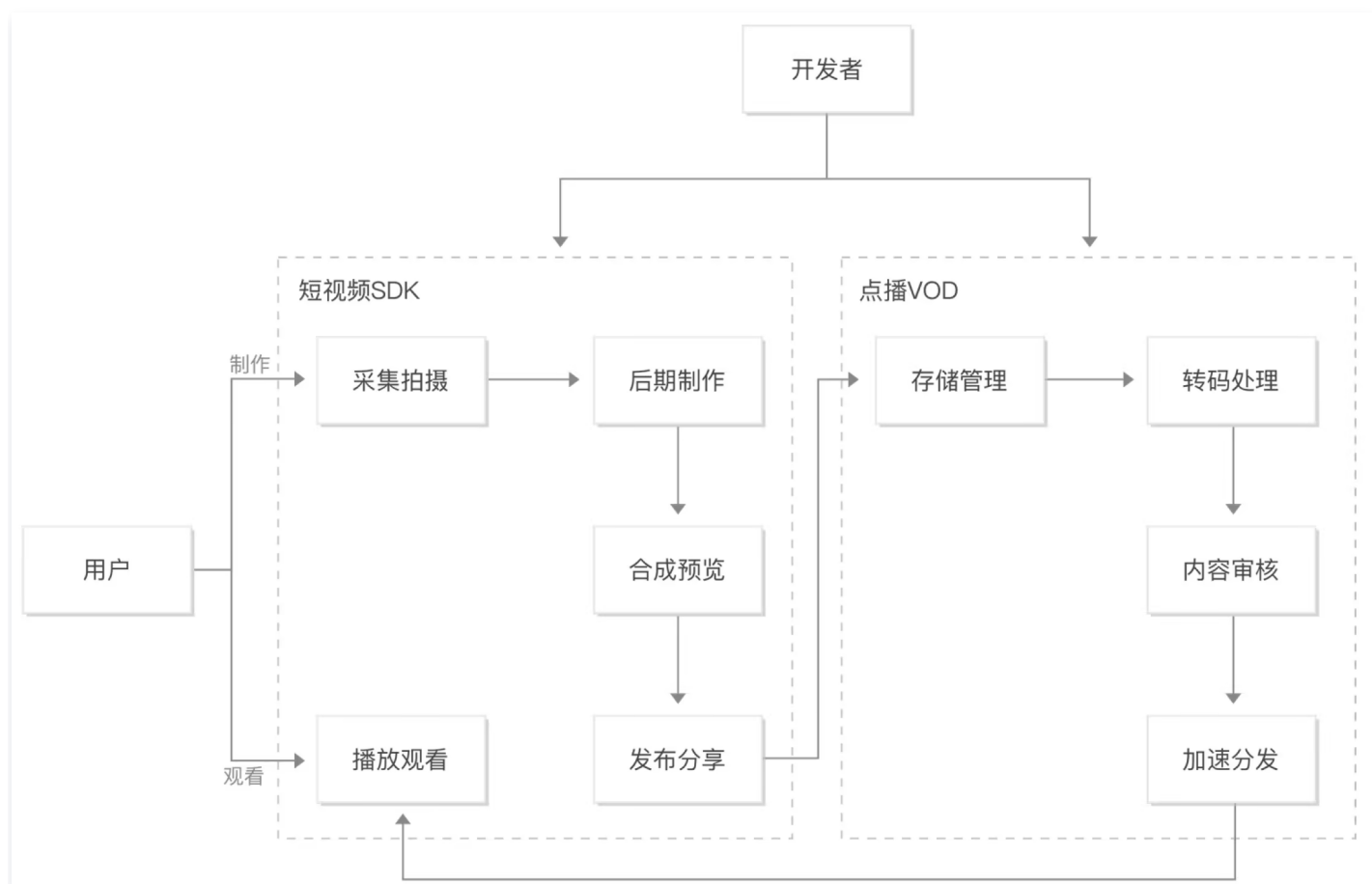
## Overview

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UGSV SDK is one of the sub-products of audio and video terminal SDK (Tencent Cloud RT-Cube), providing features such as short video production (collection, editing, splicing, special effects, etc.), playback and sharing on the App.

## Basic Features

- **Feature Support:** Short video production (collection, editing, concatenation, special effects, etc.), sharing, playback features. For details, see [Product Features](#).
- **Platform Support:** iOS, Android
- **Cloud-based Support:** Using the UGSV SDK requires integration with [Tencent Cloud Video on Demand](#) to provide complete cloud-based capabilities such as upload, storage, transcoding, distribution, and content review.



## Advantages

## Complete Features

Provide all the features required by mainstream short video apps in the market, including capabilities such as video capture, edit, concatenate, special effect, beauty effect, filter, green screen keying, dynamic widgets, publish, and playback. For complete features, see [Product Features](#).

## Easy-To-Use Integration

Provide demo source code with full capabilities, including one-stop access service from VOD configuration to SDK feature usage. Simply change the parameters to quickly create your own "Douyin" or "Kuaishou". For details, see [Demo Experience](#).

## Compliance Review

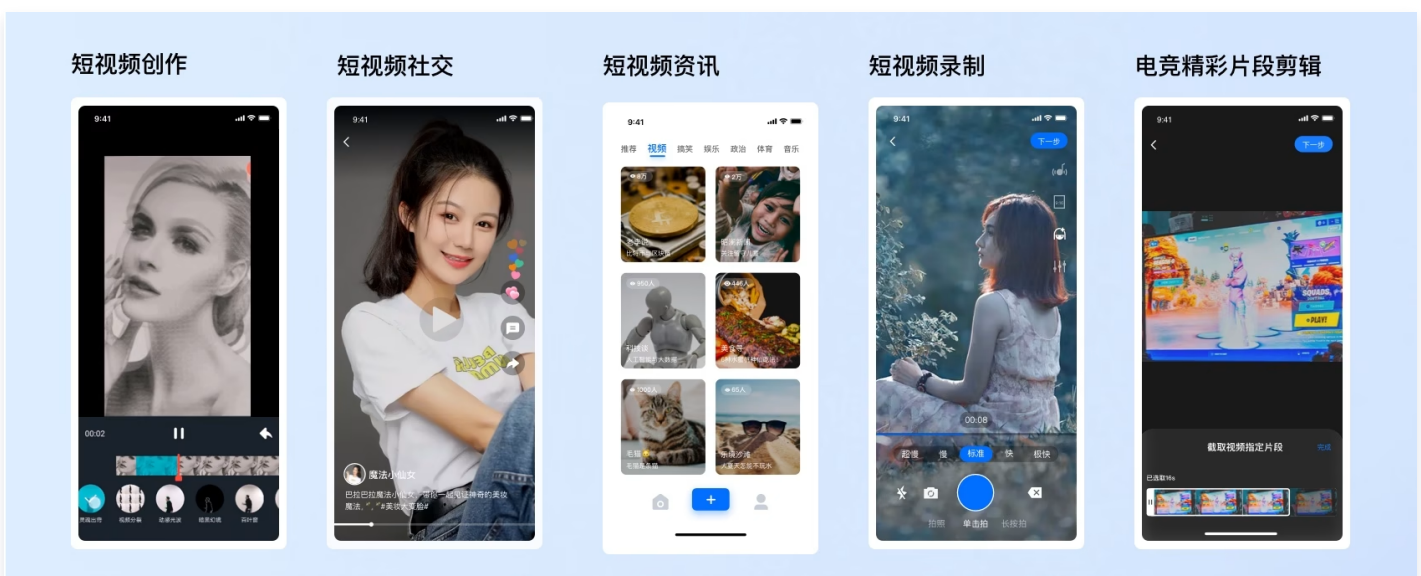
Based on Tencent Cloud VOD, it provides video compliance content review capabilities and feeds back video review results to facilitate video compliance management. For details, see [Media Auditing Service](#).

## Cloud-Based Collaboration

Combined with Tencent [VOD](#), provide one-stop cloud access service from work upload, storage, fast transcoding, to video porn detection and distribution, ensuring that users' works are watched and shared as soon as possible.

## Application Scenarios

Support various scenarios such as short video production (collection, editing, concatenation, special effects, etc.), playback, and sharing for all kinds of mobile terminal Apps.



## Product Family

**Audio and Video Terminal SDK (Tencent Cloud RT-Cube)** is a family of audio and video communication terminal products, including multiple sub-SDKs, aiming to provide you with professional, stable and high-quality terminal services.

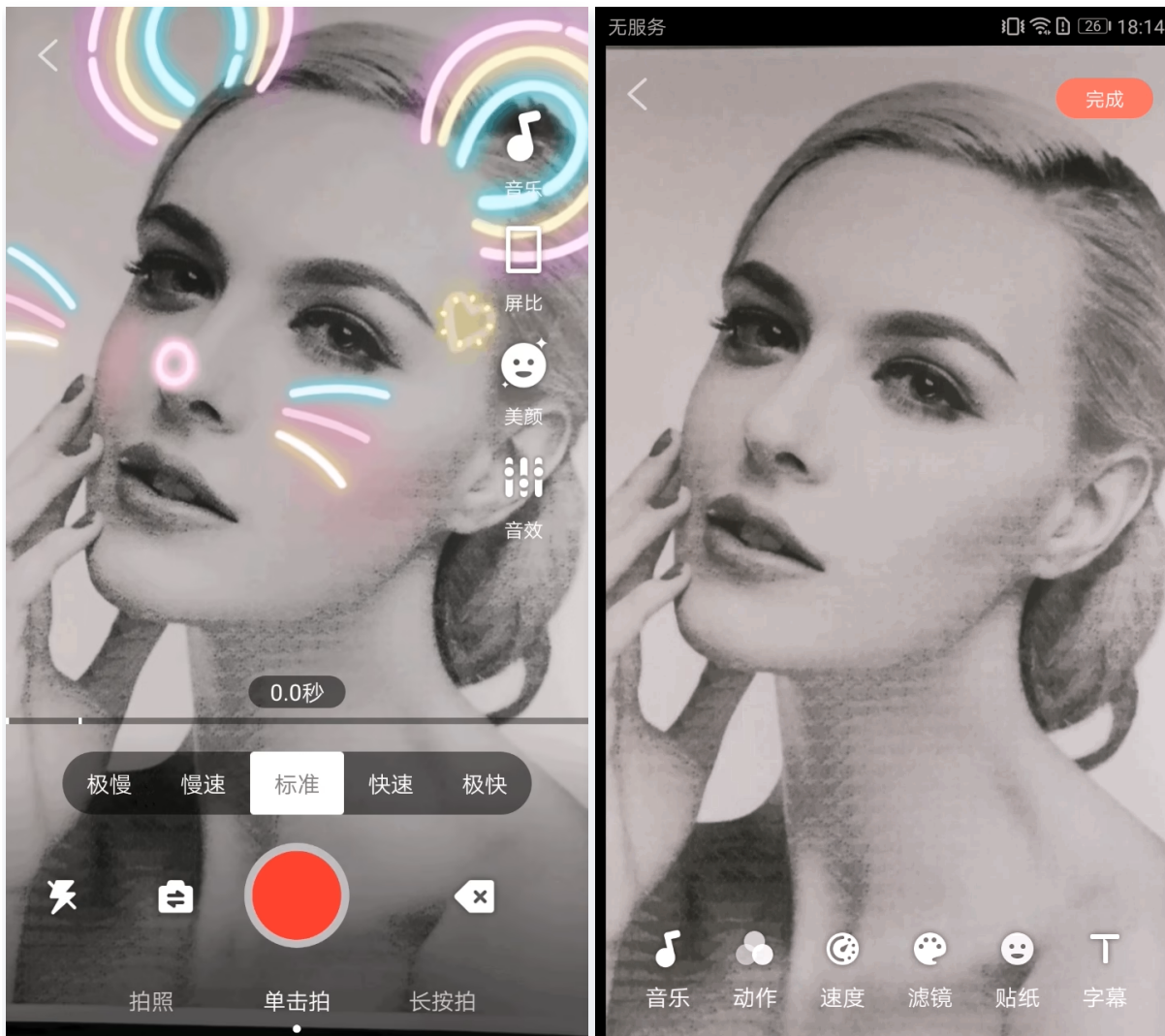
If you have other terminal requirements such as [Live Streaming Pushing](#), [Audio/Video Call](#), [Video Beauty Effects](#) besides short video, you can refer to other sub-products of the product family.



# Product Features

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The User Generated Short Video SDK provides features for short video production (collection, editing, concatenation, special effects, etc.), playback, sharing, and supports iOS and Android platforms.



The feature details are as follows:

Feature Module	Feature Item	Feature Introduction	Basic Edition License	Basic Edition License	Advanced Edition License	Template - Based Editing

							License
SDK Download	Android	Short Video SDK (LiteAVSDK) + Demo Source Code	<a href="#">Android SDK DOWNLOAD</a>		If you need to use the advanced version of short video and JianTongKuan, please <a href="#">submit a ticket</a> to contact us for testing and integration.		
	iOS	Short Video SDK (LiteAVSDK) + Demo Source Code	<a href="#">iOS SDK DOWNLOAD</a>				
License	Applying for a License	The short video SDK can be used only after purchasing a License. Different licenses unlock different features.	<a href="#">Simplified edition License</a>	<a href="#">Basic version License</a>			
	License price (CNY/year)	Purchase method 1: <a href="#">Get a License for free when purchasing Video on Demand (VOD) traffic resource packages</a> .	1,699	8,399	-	-	
		Purchase method 2: <a href="#">Directly purchase a License</a>	3,299	16,699	250,000	450,000	
Tencent Effect SDK Value-added capability	Advanced beauty filter	Set big eyes, slim face, V-shaped face, chin adjustment, short face, small nose effects in shooting, and support intensity adjustment	Beauty effect-related features are value-added capabilities. The UGSV SDK does not support this feature. If you need to use it together, please purchase the Tencent Effect SDK package to unlock the Tencent Effect (beauty effect) feature module. <ul style="list-style-type: none"> <li>• <a href="#">Understand Tencent Effect SDK</a></li> <li>• <a href="#">Overview of Tencent Effect SDK Pricing</a></li> <li>• <a href="#">Purchase Tencent Effect SDK</a></li> <li>• <a href="#">Integration Guide of Tencent Effect SDK into Short Video</a></li> </ul>				
	Motion Effect Stickers	Locate facial features, and then add effects such as deformation, overlay stickers and pendant widgets.					

			SDK			
	Portrait segmentation	Identify the background outline, remove the background, and replace it with elements of material videos.				
Interface	Custom UI	Developers customize the UI. The mini video App provides a complete set of UI interaction source code, which can be reused or customized.	✓	✓	✓	✓
Collection and shooting	Screen ratio	Support shooting with multiple screen ratios such as 16:9, 4:3, and 1:1.	✓	✓	✓	–
	Clarity	Support SD, HD and UHD shooting, support custom bitrate, frame rate and GOP.	✓	✓	✓	–
	Shooting control	Control of front and rear camera switching before and after shooting, and light.	✓	✓	✓	–
	Duration setting	Custom shooting's minimum and maximum duration	✓	✓	✓	–
	Watermark	Shooting supports adding watermark.	×	✓	✓	–
	Focal length	Shooting supports adjusting the focal length.	✓	✓	✓	–
	Focus mode	Supports manual focus and autofocus.	✓	✓	✓	–
	Segmented recording	Shooting can be paused for segmentation and back-delete is possible.	✓	✓	✓	–
	Take a photo	Supports taking photos.	×	✓	✓	–

	Variable speed recording	Supports slow and fast recording during shooting	×	✓	✓	–
	Background music	You can select a local MP3 as background audio before shooting.	×	✓	✓	–
	Voice – changing and reverb ratio	Change the voice (such as Lolita, uncle) and add reverb effects (such as KTV, auditorium) to the recorded audio before shooting.	×	✓	✓	–
	Filter	Support real-time preview and swipe switching of filter effects, support custom filters and set the strength of filters.	✓	✓	✓	–
	Basic beauty filter	Set facial smooth skin, brighten, ruddy in shooting settings and adjust intensity.	✓	✓	✓	–
Special Effect Edit	Quick Import	Support quick import of videos	✓	✓	✓	–
	Composite Import	Support composite import of multiple images and videos.	×	×	✓	–
	Image cropping	Support cropping of video footage, including proportion cropping and angle adjustment.	×	×	✓	–
	Video cropping	Accurately crop videos within the given time range.	✓	✓	✓	–
	Video segmentation	Support quick video segmentation and editing of segmented video clips.	×	×	✓	–

Picture – in – picture	Overlay a video on the primary video track to generate a video file with a Picture – in – Picture effect.	×	×	✓	–
Bitrate Settings	Specify the bitrate to generate a video.	✓	✓	✓	–
Get cover	Get video frame by time	✓	✓	✓	–
Preview per frame	When moving the timeline, display the frame image where the Benchmark Cursor stays in the preview window.	✓	✓	✓	–
Filter	Add a filter to the video and support setting the intensity of the filter.	×	✓	✓	–
Time special effects	Add time special effects such as reverse playback, repetition, and slow motion to the video.	×	✓	✓	–
Filter Special Effects	Add special effects such as soul leaving the body, dynamic light waves, splitting, and phantoms to the video.	×	✓	✓	–
Background music	Select a built-in audio file or a local MP3 on the user's mobile phone as background audio. Support cropping of background music and setting of volume.	×	✓	✓	–
Import multiple BGMs	Support setting multiple BGMs	×	×	✓	–
Dynamic or	Add dynamic or static stickers, support setting the display	×	✓	✓	–

	static stickers	location and start time in video footage.				
	Basic subtitles	Add subtitles, select the style of the subtitle border background, such as bubble, support setting the display location and start time in video footage.	×	✓	✓	–
	Advanced subtitles	Support subtitle editing capabilities in multiple styles, including font, color, size, ornate lettering, decoration.	×	×	✓	–
	Image transitions	Import multiple images, select transition effects such as rotation and fade in/out, and generate a video.	×	✓	✓	–
Video concatenation	Concatenate multiple videos	Support front – back concatenation of multiple videos.	×	✓	✓	–
	Follow – up shooting	Support follow – up shooting according to the played video and generate a split – screen video.	×	✓	✓	–
Video export	One – click export	Support export videos according to the specified quality level	✓	✓	✓	–
	Custom export	Support export videos according to the specified resolution/bitrate/frame rate/encoding format	✓	✓	✓	–
Video upload	Upload to Tencent Cloud VOD	Tencent Cloud VOD supports Media Asset Management, Content Review and other features.	✓	✓	✓	–

On-dem and play back	Super Player	A solution implemented based on the on-demand player, integrating data pulling, landscape/portrait mode switch, clarity selection, bullet screen, live streaming time shift and other features, and completely open-source.	✓	✓	✓	-
Material production tool	Provide an integrated material production tool that supports the production and import of special effects such as filters, stickers, subtitles, animations, transitions, and making identical templates.	×	×	✓	✓	
Make the same style	Provide the ability to quickly edit the same video effects according to templates, including 20 free templates and supporting the import and use of custom templates.	×	×	×	✓	

# Basic Concepts

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## License

By purchasing a specific type of on-demand package, you can obtain the corresponding SDK License and enable the corresponding User Generated Short Video SDK feature service. For specific correspondence, see [Purchase Official Version License](#).

### Note:

After purchasing the on-demand package and binding the License, please confirm that [Bundle ID and Package Name](#) are correct before clicking **Confirm** to submit. Once submitted, **License information cannot be modified**.

## Player Signature

The player signature is used for the authorization playback of the application playback service to the terminal. If the application playback service allows the terminal to play, a legal signature will be issued, and the terminal can play video content within the validity period of the signature. When one of the following situations occurs, the App terminal needs a super player signature to play:

- The domain name has [KEY Hotlink protection](#) enabled.
- Used a [player configuration](#) other than default.
- Need to play [encrypted](#) video content.

### Note:

For specific features and usage methods of Player Signature, see [Player Signature Documentation](#).

## Frame Rate

Frame Rate is a unit of measurement for the number of video frames displayed Per unit of time, measured in "Frames Per Second" (FPS).

## Bit Rate

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

## Transcoding

Transcoding is the process of converting one video bitstream into another and can change parameters of the original bitstream such as encoding format, resolution, and bitrate, so as to adapt to playback on different terminals and in different network environments. The Transcode feature can achieve:

- **Adapt to more terminals:** Transcode the original video into a format (such as MP4) with stronger terminal adaptation capabilities, so that video resources can be played on more devices.
- **Adapt to different bandwidths:** Convert videos into outputs such as smooth, standard definition, high definition and ultra-high definition, and users can select videos with appropriate bitrates for playback according to the current network environment.
- **Improve playback efficiency:** Transcoding can move the meta-information MOOV at the end of MP4 to the head, allowing players to start playback immediately without downloading the entire video.
- **Add a watermark to a video:** Add a watermark to a video to indicate the ownership or copyright of the video.
- **Save bandwidth:** Transcode using more advanced encoding methods (such as H.265) to significantly reduce the bitrate without sacrificing the original video quality, thus saving playback bandwidth.

## Key Frame

A frame is the basic unit that makes up a video image. A video file consists of multiple consecutive frames.

## Timestamp

Timestamp records the time when data occurs.

## GOP

GOP (Group of Pictures) is a set of consecutive images within a video or video stream encoded with MPEG, starting with an I-frame and ending with the next I-frame. A GOP contains the following types of images:

- **I frame (Intra Coded Picture):** A node encoded image. A fixed image that is independent of other image types, and each GOP starts with this type of image.
- **P-frame (Predictive Coded Picture):** Predictive coded picture. Contains differential information from previous I-frames or P-frames.
- **B-frame (Bidirectionally Predictive Coded Pictures):** Bidirectionally predictive coded picture. Contains differential information from previous or subsequent I-frames or P-frames.

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

## Encoding Method

Encoding method (Codec) is a program or device that can compress or decompress (video decoding) digital video. Common encoding methods include:

- H.26X series, led by ITU (International Telecommunication Union). Among the standards in this series, H.264 is currently the most widely used, and its successor is H.265. With the same image quality, the compression rate of H.265 can be twice that of H.264, but due to factors such as patents, the application of H.265 has not yet become widespread.
- MPEG series, led by MPEG (Moving Picture Experts Group) under ISO (International Organization for Standardization).
- Other series, such as VP8, VP9 led by Google, RealVideo led by Real Company, etc.

## Event Notification

Initiating operations such as uploading, deleting, and video processing on videos in Cloud Video on Demand can all be referred to as an event. The execution of an event takes some time to complete. When the event ends, Cloud Video on Demand will immediately notify the App service of the execution result of the operation, that is, event notification.