Tencent Effect SDK

SDK Download

Product Documentation

Contents

SDK Download Features

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The Tencent Effect SDK for mobile/desktop applications comes in different package editions, each of which provides certain features. Divided into 4 series.: Basic A editions, Advanced S editions, Avatar V editions, and X series capabilities. In addition to the capabilities provided in different packages, we also offer independent X series capabilities for greater flexibility.

The table below lists the packages and capabilities we offer and what you can achieve with them. For more information on the SDK, see SDK Download.

Note:

Beauty AR Web capabilities are available in packages as detailed in the Pricing Overview page. You can connect to the SDK for web in two methods: NPM package or JS file. For more information, see Overview.

Features of Basic A editions

Basic A editions offer common beautification features for customers with basic requirements for facial beautification.

Feature		Edition						
		A1 - 00	A1 - 01	A1 - 02	A1 - 03	A1 - 04	A1 - 05	A1 - 06
Basic	**Beauty effects** Brightening, black, skin smoothing, and rosy skin filter	✓	✓	✓	✓	✓	✓	✓
	Image quality adjustment Contrast, saturation, and sharpness, Sharpening, Color Temperature, Hue, Brightness	-	✓	✓	✓	✓	✓	✓
	Basic face shaping Big eyes and slim face (natural, woman, and man)	-	✓	✓	✓	✓	✓	✓
	Filters	✓	✓	✓	✓	✓	✓	✓

	(20 general filters by default)	（Supports only 10 general filters.）						
Extended	**Stickers** (10 free 2D general stickers of your choosing)	-	-	✓	✓	-	✓	✓
	Genaral face shaping (Face width/Chin/Hairline/Nose size)	-	-	-	✓	✓	-	-
	Keying/Virtual background (Three specified keying stickers for free)	-	-	-	-	-	✓	-
	Makeup sets (Three specified makeup stickers for free)	-	-	-	-	-	-	✓
SDK Download		Download						

Features of Advanced S editions

Advanced S editions offer advanced beautification features (including stickers and makeup styles) for customers with high requirements for facial beautification.

Feature		Edition						
		S1 - 00	S1 - 01	S1 - 02	S1 - 03	S1 - 04	S1 - 05	S1- 07
Basic Features	**Beauty effects** Brightening, black, skin smoothing, and rosy skin filter	✓	✓	✓	✓	✓	✓	✓
	Image quality adjustment Contrast, saturation, and sharpness, Sharpening, Color Temperature, Hue,Brightness	✓	✓	✓	✓	✓	✓	✓

	Advanced face shaping Big eyes, face width, slim face (natural, woman, and man), V shape, chin, face length, face shape, hairline, bright eyes, eye distance, eye corners, eye width, eye height, eye position, eyebrow angle, eyebrow distance, eyebrow height, eyebrow length, eyebrow thickness, eyebrow ridge, slim nose, nose wings, cheekbones, nose position, Bridge of the nose, Root of the nose, white teeth, wrinkles, smile lines, eye bags, lip shape, lip height, lip width, lip position, smile face	✓	✓	✓	✓	✓	✓	✓
	Point makeup Lipstick, blush, three-dimensional, hair corlor, eyeshadow, eyeliner, eyelashes, eyebrows, eyeball, eyelids,wocan	✓ (No hair color)	✓	✓	✓	✓	✓	✓
	Filters (20 general filters by default)	✓	✓	✓	✓	✓	✓	✓
	Stickers (10 specified 2D general stickers for free)	-	✓	✓	✓	✓	✓	✓
	Advanced stickers (Three specified 3D general stickers for free)	-	✓	✓	✓	✓	✓	✓
	Makeup Sets (Three specified makeup stickers for free)	-	✓	✓	✓	✓	✓	✓
Extended	**Gesture stickers**	-	-	✓	-	✓	-	✓

	(One specified gesture sticker for free)							
	Keying/Virtual background (Three specified keying stickers for free)	-	-	-	✓	✓	✓	✓
	Face recognition Facial detection (identification of facial frames, multiple faces, and facial obstructions), recognition and output of 256 facial key points	-	-	-	-	-	✓	-
	Body shaping One-click slimming, long legs, slim legs, slim shoulders, small head, breast enlargement	-	-	-	-	-	-	✓
SDK Download		Download						

Avatar V editions

Avatar V series editions offer virtual avatars, avatar customization, and facial expression mirroring. They are designed for applications such as avatar-based socializing and live streaming.

Feature		Edition			
		V1 - 00	V1 - 01	V1 - 03	V1 - 02
Basic Features	**Virtual avatars** Proprietary lightweight 3D rendering engine	✓	✓	✓	✓
	Face customization Support for more than 50 details of the eyes, nose, mouth, face shape, hair, etc.	✓	-	✓	✓
Drive Capability	**Facial keypoint recognition and expression mirroring** Recognition and tracking of 256 facial keypoints, as well as binding and mirroring of 52 facial expressions	-	✓	-	✓

	Speech mirroring Performs phoneme recognition on real-time speech/offline audio to drive changes in mouth shape	-	-	✓	✓
	Body mirroring Identifies and track key points of the body's limbs and skeleton to drive the body's movements	-	-	-	✓
SDK Download	iOS and Android	Download			

X series capabilities

The X series offers specific capabilities, giving you greater flexibility and scalability.

No.	Capability	Description	SDK Download
X1 - 01	Portrait keying	Accurately removes the background and applies a customizable virtual background in real time.	
X1 - 02	Face recognition	Detects when a face is partially captured or covered or when there are multiple faces; recognizes 256 facial keypoints.	Download
X1 - 03	Gesture recognition	Recognition and data output of 31 key points in the hand, automatic recognition of 14 common gestures.	

Tencent Effect Studio

Product	Description
Tencent Effect Studio	Empowers users to create customized special effect tools, varied templates, trendy makeup looks, interactive games, and more, based on the purchased AI capabilities. For detailed usage instructions, refer to the usage guidance of Tencent Effect Studio.

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Mobile Editions

The SDK for mobile applications is available in 16 editions, including six Basic editions, five Advanced editions, three Avatar editions, and two X series capabilities. For details about the features of different editions, see Pricing Overview.

Note：

The ZIP package of the Tencent Effect SDK for iOS includes the SDK and demo project. If you want to use the Tencent Effect demo for iOS, you can download the ZIP package on this page.

Basic editions

Basic A editions offer common beautification features for customers with basic requirements for facial beautification.

Edition	ZIP Package for iOS	ZIP Package for Android	SDK Integration Guide	Package Size
Basic A1 - 00	DOWNLOAD	DOWNLOAD	iOS Android	**iOS package size:** arm64: 9.4MB bundle:12.1MB **Android package size:** arm64-v8a: 11.3 MB armeabi-v7a: 8.45 MB assets: 7.15 MB aar: 0.83MB
Basic A1 - 01	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64: 9.4 MB bundle: 12.1 MB **Android package size:** arm64-v8a: 11.3 MB armeabi-v7a: 8.45 MB assets: 7.15 MB aar: 0.83MB
Basic A1 - 02	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64: 14.2 MB bundle: 12.1 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB
Basic A1 - 03	DOWNLOAD	DOWNLOAD		

				assets: 7.15 MB aar: 0.83MB
Basic A1 - 04	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64: 14.2 MB bundle: 19.2 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 13.91 MB aar: 0.83MB
Basic A1 - 05	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64: 14.2 MB bundle: 17.6 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 7.15 MB aar: 0.83MB
Basic A1 - 06	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64: 14.2 MB bundle: 17.6 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 7.15 MB aar: 0.83 MB

Advanced editions

Advanced S editions offer advanced beautification features and are for customers with high requirements on face editing.

Edition	ZIP Package for iOS	ZIP Package for Android	SDK Integration Guide	Package Size
Advanced S1 - 00	DOWNLOAD	DOWNLOAD	iOS Android	**iOS package size:** arm64: 9.4 MB bundle: 12.1 MB **Android package size:** arm64-v8a: 11.3 MB armeabi-v7a: 8.45 MB aar: 0.83 MB

			assets: 7.15 MB
Advanced S1 - 01	DOWNLOAD	DOWNLOAD	**iOS package size:** arm64: 14.2 MB bundle: 16.9 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 15.08 MB aar: 0.83 MB
Advanced S1 - 02	DOWNLOAD	DOWNLOAD	**iOS package size:** arm64: 14.2 MB bundle: 24 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 21.84 MB aar: 0.83MB
Advanced S1 - 03	DOWNLOAD	DOWNLOAD	**iOS package size:** arm64: 14.2 MB bundle: 22.4 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 19.65 MB aar: 0.83 MB
Advanced S1 - 04	DOWNLOAD	DOWNLOAD	**iOS package size:** arm64: 14.2 MB bundle: 29.5 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 26.42 MB aar: 0.83 MB
Advanced S1 - 05	DOWNLOAD	DOWNLOAD	**iOS package size:** arm64：14.2MB bundle：22.4MB **Android package size:** arm64-v8a：21.11 MB armeabi-v7a：16.62 MB assets：19.65 MB aar：0.83 MB

Advanced S1 - 06	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64：14.2MB bundle：29.5MB **Android package size:** arm64-v8a：21.11MB armeabi-v7a：16.62MB assets：26.42MB aar：0.83MB
Advanced S1 - 07	DOWNLOAD	DOWNLOAD		**iOS package size:** arm64：14.2MB bundle：29.5MB **Android package size:** arm64-v8a：21.11MB armeabi-v7a：16.62MB assets：27.75MB aar：0.83MB

Avatar editions

Avatar V series editions offer virtual avatars, avatar customization, and facial expression mirroring. They are designed for applications such as avatar-based socializing and live streaming.

Edition	ZIP Package for iOS	ZIP Package for Android	SDK Integration Guide	Package Size
V1 - 00				**iOS package size:** arm64: 16 MB bundle: 78.2 MB **Android package size:** arm64-v8a: 38.61 MB armeabi-v7a: 26.72 MB assets: 70.99 MB aar: 0.83 MB
V1 - 01	DOWNLOAD	DOWNLOAD	Integrating Avatars Integrating Avatars	
V1 - 02				

X series capabilities

The X series offers specific capabilities, giving you greater flexibility and scalability.

Edition	ZIP Package for iOS	ZIP Package for Android	SDK Integration Guide	Package Size
X1 - 01	DOWNLOAD	DOWNLOAD	Keying	**iOS package size:** arm64: 14.2 MB bundle: 17.6 MB

				Android package size: arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 11.7 MB aar: 0.83 MB
X1 - 02	DOWNLOAD	DOWNLOAD	Facial Keypoint Detection	iOS package size: arm64: 14.2 MB bundle: 12.1 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 6.98 MB aar: 0.83 MB
X1 - 03	DOWNLOAD	DOWNLOAD	Gesture Detection	iOS package size: arm64: 16 MB bundle: 78.2 MB **Android package size:** arm64-v8a: 21.11 MB armeabi-v7a: 16.62 MB assets: 6.98 MB aar: 0.83 MB

Note：

For more information on package downsizing, see Android and iOS.

Desktop Editions

Platform	SDK Download	Integration Guide
Windows	ZIP	Windows
macOS	ZIP	Mac

Cross-Platform Editions

Platform	SDK Download	Integration Guide
Flutter	ZIP	Flutter

Web Editions

Platform	SDK Download	Integration Guide
Web	-	Overview
Mini program	-	Mini program

Version History
Android

Last updated：2024-08-08 18:08:43

Version 3.8.0.5 @2024.08.07

Added beauty/beauty makeup/body attributes: brightness adjustment, eye position, double eyelid, under-eye bags, slim arms.

Optimized the issue of makeup display on occluded objects.

Optimized makeup smudging issue on low-end devices.

Added new makeup and sticker materials.

Performance optimization.

Version 3.7.0.5 @2024.05.29

Added skin tanning capabilities.

Added hair dyeing feature for single-point makeup.

Added natural face slimming feature in the high-performance mode.

Added new 2D animation materials.

Added the `getDeviceLevel` API to obtain device level.

Optimized the forehead (hairline) effect.

Optimized the beauty effect panel.

Version 3.6.0.4 @2024.03.21

Add "Denoise" feature.

Add "camera move" capability and user experience.

Fix known bugs.

Version 3.5.0.5 @2024.01.29

Added color temperature and hue-conditioning capabilities.

Added intelligent beauty features and gender detection capabilities, providing softened beauty makeup effects for males and babies.

The SDK supports pag file settings when self-definition segmentation and green screen are used.

Optimized background segmentation capabilities.

Optimized skin smoothing and brightening effects, minimizing impacts on non-skin areas.

Optimized face detection sensitivity.

Optimized the interface for setting beauty effects and added a new setEffect interface.

Bug fix: the clarity range from -100 to 100 before has been changed to 0 to 100. Breast enhancement has been optimized as chest adjustment, with range changed from 0 to 100 to -100 to 100.

Added 2D/3D sticker materials and full-face makeup style materials.

Upgraded the libpag library to 4.3.33. Clients can replace it with their own pag version as needed.

Revamped the demo style, and added the quickly accessible TEBeautyKit library.

Version 3.3.0.2 @2023.10.30

Added new features such as colored contact lenses, nose bridge width, and nose root.

The demo has introduced a new texture cropping feature.

The demo facial keypoints uses different colors to draw keypoints based on their visibility.

Version 3.2.0.5 @2023.09.20

Added sharpness effect feature.

A new level of skin whitening, whitening 3, has been added.

Added exclusive ability for skin brightening.

Optimized the background blurring effect.

Optimized the makeup logic of a single area.

Solved the head-lowering issue during avatar body drive.

Optimized the logic of voice drive.

Upgraded the lilbpag version.

Optimized aliasing rules to avoid the occurrence of class `a.a.a.a.a` .

Addressed issues of jagged edges and unclear peripheries in skin smoothing.

Version 3.1.0.2 @2023.08.02

Newly added single-point makeup: eye shadow, eyeliner, eyelashes, and eyebrows, available in the S series package.

Added gesture recognition capability, which can recognize 14 gestures and hand positions. Please refer to the gesture document for details.

The beauty feature has added a high-performance mode, which is suitable for long-term use on low-end devices.

Please refer to the Android API documentation.

Avatar has added new animation materials.

Avatar supports custom backgrounds.

The beauty feature's custom background segmentation and green screen segmentation have added image orientation detection.

Fixed known bugs.

Version 3.0.1.2 @2023.07.18

Added material overlay capability, please refer to the Android API documentation for details.

Fixed several known bugs.

Version 3.0.0.13 @2023.05.12

New beauty features added, including eye width, eye height, eyebrow angle, eyebrow distance, eyebrow height, eyebrow length, eyebrow thickness, eyebrow peak, lip width, lip position, and smile lips.

New breast enlargement feature added to the body-shaping tool.

so Library changes include renaming libteffmpeg.so to libtecodec.so.

Fixed user experience issues and bugs related to background segmentation.

Upgraded the 3D engine in the SDK. Please verify that any existing animated stickers are functioning correctly after upgrading. If you experience any issues, please contact us.

API changes:

Removed the setYTDataListener interface and moved the data previously called back in onYTDataUpdate to AIDataListener as onAIDataUpdated. The content of the callback remains unchanged.

Material changes:

(1) Deleted the following materials: Duck cap, Flower fairy, Glasses 2, Magic bow. These materials are not compatible with the current version of the SDK.

(2) Upgraded the following materials: Helmet, Paws, Lamb, Glasses. If you have used any of these materials before, please contact us to obtain the upgraded files.

Version 2.6.0.112 @2023.03.01

Added the green screen keying feature.

Redesigned the beauty filter demo.

Added the chin tucking feature.

Optimized the rosy skin filter to add a filter to only the skin color area.

Added support for dynamically downloading the `benchmark` folder in `assets` .

Upgraded the PAG version to v4.0.

Optimized the avatar APIs and demo.

Updated the avatar materials.

Fixed several bugs.

Version 2.5.1.135 @2022.12.08

Optimized 52 facial expressions.

Added the 3D body keypoint detection capability.

Added the enhanced beautification mode.

Optimized the avatar image loading mode.

Optimized the speech mirroring performance.

Optimized custom keying.

Version 2.5.0.207 @2022.10.25

Introduced avatar features.

Added support for muting and unmuting audio effects.

Added a callback API for `updateProperties` .

Added the `setBundleToLightEngine` API, which is used to dynamically add AI model-based resources.

Added support for code obfuscation.

Deleted the `LogUtils` class in the SDK.

Version 2.4.2.324 @2022.09.13

Fixed the issue where the blush, contour, and lipstick effects fail to work in some cases.

Version 2.4.2.322 @2022.07.19

Fixed some effect errors.

Version 2.4.2.317 @2022.07.13

Deleted `beacon.aar` . If you update from a version earlier than v2.4.2.317, the new version will not include `beacon.aar` .

Version 2.4.2 @ 2022.07.07

Optimized the face detection algorithm to fix unstable recognition and tracking performance in some scenarios.

Added support for verification of the parameters of the `updateProperty` API. For details about the parameter requirements, see updateProperty.

Fixed the issue where the value returned by `isDeviceSupport` is sometimes inaccurate.

Added `beacon.aar` to the `libs` directory of the SDK. You need to copy it to your project. If your project already has a beacon, it may cause a conflict. To avoid this, do not import the AAR file.

Added support for Unity. For details, see the `Unity` folder in the SDK package.

iOS

Last updated：2024-07-05 14:51:09

Version 3.7.0.1 @2024.05.30

Added skin tanning capabilities.

Added hair dyeing feature for single-point makeup.

Added natural face slimming feature in the high-performance mode.

Added new 2D animation materials.

Added the `getDeviceLevel` API to obtain device level.

Optimized the forehead (hairline) effect.

Optimized the beauty effect panel.

Version 3.6.0.3 @2024.04.11

Update PrivacyInfo.

Version 3.6.0.1 @2024.03.21

Add "Denoise" feature.

Add "camera move" capability and user experience.

Add PrivacyInfo.

Fix known bugs.

Version 3.5.0.2 @2024.01.29

Added color temperature and hue-conditioning capabilities.

Added intelligent beauty features and gender detection capabilities, providing softened beauty makeup effects for males and babies.

The SDK supports pag file settings when self-definition segmentation and green screen are used.

Optimized background segmentation capabilities.

Optimized skin smoothing and brightening effects, minimizing impacts on non-skin areas.

Optimized face detection sensitivity.

Optimized the interface for setting beauty effects and added a new setEffect interface.

Bug fix: the clarity range from -100 to 100 before has been changed to 0 to 100. Breast enhancement has been optimized as chest adjustment, with range changed from 0 to 100 to -100 to 100.

Added 2D/3D sticker materials and full-face makeup style materials.

Upgraded the libpag library to 4.3.33.

Revamped the demo style, and added the quickly accessible TEBeautyKit library.

Version 3.3.0.1 @2023.10.30

Added new features such as colored contact lenses, nose bridge width, and nose root.

The compilation of libpag.framework and TECodec.framework has introduced the simulator x86_64 architecture.

The demo has introduced a new texture cropping feature.

Version 3.2.0.2 @2023.10.11

Fixed known bugs.

Version 3.2.0.1 @2023.09.20

Optimized background blur.

Added sharpness effect feature.

A new level of skin whitening, whitening 2 and whitening 3 have been added.

Optimized performance.

Solved the head-lowering issue during avatar body drive.

Added a feature only for skin whitening.

Upgraded the libpag version.

Optimized the logic of voice drive.

Addressed issues of jagged edges and unclear peripheries in skin smoothing.

Version 3.1.0.1 @2023.08.02

Newly added single-point makeup: eye shadow, eyeliner, eyelashes, and eyebrows, available in the S series package.

Added gesture recognition capability, which can recognize 14 gestures and hand positions. Please refer to the gesture document for details.

The beauty feature has added a high-performance mode, which is suitable for long-term use on low-end devices.
Please refer to the IOS API documentation.

Avatar has added new animation materials.

Avatar supports custom backgrounds.

Fixed known bugs.

Version 3.0.1.5 @2023.07.18

Added material overlay capability, please refer to the IOS API documentation for details.

Fixed several known bugs.

Version 3.0.0.4 @2023.06.06

Modify the naming of beauty parameters in XmagicConstant.h.

Version 3.0.0.3 @2023.05.31

new interface:

(1) Added an interface for setting the path of the beauty model.

(2) Added interface for obtaining avatar animation configuration.

(3) Added setting avatar animation interface.

Version 3.0.0.1 @2023.5.12

New beauty features added: eye width, eye height, eyebrow angle, eyebrow distance, eyebrow height, eyebrow length, eyebrow thickness, eyebrow peak, lip width, lip position, and smile lips.

A breast enhancement feature has been added to the body beauty options.

Experience issues and bugs related to background separation have been fixed.

The 3D engine of the SDK has been upgraded, please verify if previous dynamic sticker effects are working properly after the SDK upgrade. If not, please contact us.

API changes

Delete the onYTDataEvent callback and move the data previously called back in onYTDataEvent to onAIEvent, which will now be accessed

using event[@"ai_info"]. The content of the callback remains unchanged.

Framework changes include renaming TEFFmpeg.framework to TECodec.framework.

Material changes:

(1) Deleted the following materials: Duck cap, Flower fairy, Glasses 2, Magic bow. These materials are not compatible with the current version of the SDK.

(2) Upgraded the following materials: Helmet, Paws, Lamb, Glasses. If you have used any of these materials before, please contact us to obtain the upgraded files.

Version 2.6.0.1 @2023.03.01

Added green screen functionality to background segmentation.

Revamped the beauty demo.

Added chin slimming feature to beauty effect.

Improved the blush effect by applying it only to the skin area.

Optimized Avatar interface and demo.

Updated Avatar assets.

Fixed several bugs.

Version 2.5.1.249 @2022.12.12

Updated the `ffmpeg` and `Auth` dynamic libraries.

Added the enhanced beautification mode.

Added full-body avatars, body mirroring, cool boy, and speech mirroring.

Version 2.5.0.250 @2022.10.31

Added support for muting audio effects.

Introduced avatar features.

Added support for compilation on an emulator.

Fixed known memory leak issues.

Version 2.4.2.114 @2022.07.19

Fixed some effect errors.

Reduced the package size.

Version 2.4.2 @ 2022.07.07

Optimized the face detection algorithm to fix unstable recognition and tracking performance in some scenarios.

Added support for dynamically downloading effect resources for the demo.

Fixed the failure to use custom filter images.

Updated the API documentation.