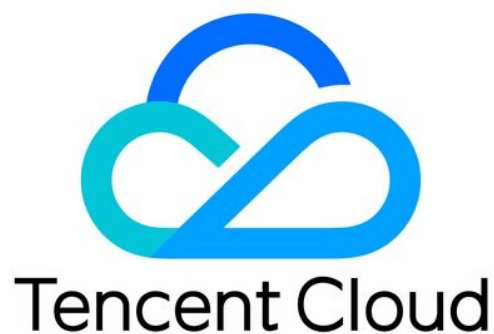


# **Mobile Live Video Broadcasting Release Notes and Announcements Product Documentation**



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Release Notes and Announcements

Release Notes

# Release Notes and Announcements

## Release Notes

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### March 2024

Dynamic name	Dynamic description	Release time	Related documents
Version 11.7	<p>Android: Optimize the parameters and calling order of the system capture audio API to reduce the probability of capturing only noise and improve the sound capture effect.</p> <p>iOS: Optimize the capture restart logic after system interruption to reduce the probability of capturing silence.</p> <p>iOS: Improve the focusing effect of rear triple and dual camera capture, increasing the focusing speed.</p> <p>Android: Fix some echo leakage cases.</p> <p>Android: Fix some Bluetooth interruptions causing external playback issues.</p>	2024-03-04	<a href="#">SDK Download</a>

### January 2024

Dynamic name	Dynamic description	Release time	Related documents
Version 11.6	<p>iOS : Added Picture-in-Picture support for `TXLivePlayer`.</p> <p>Android&amp;iOS : Optimized the success rate of playing BGM with URL.</p> <p>All platforms : Optimized SDK overall stability.</p>	2024-01-10	<a href="#">SDK Download</a>

### August 2023

Dynamic name	Dynamic description	Release time	Related documents
Version 11.4	<p>Android&amp;iOS: V2TXLivePusher pushes local preview and adds rendering mode setting interface `setRenderFillMode`.</p>	2023-08-30	<a href="#">SDK Download</a>

	<p>Full platform: Optimize and improve the overall performance in IPv6 network environment.</p> <p>All platforms: Optimize the AI noise reduction algorithm to further improve the noise reduction effect.</p> <p>Optimize and improve the live playback second opening rate.</p> <p>Android&amp;iOS: Optimize the audio collection and processing strategy to reduce the probability of silent problems caused by abnormal collection devices.</p> <p>Android: Optimize the callback notification after the microphone is silenced by the system.</p> <p>Android: Optimize the gravity sensing adaptation logic of specific Android customized devices to avoid incorrect screen rotation angles when the gravity sensing direction returned by the device is wrong.</p> <p>Android: Optimize the rendering processing method, support real-time tracking of the screen during View pinch zoom, and improve the user experience during floating window playback.</p> <p>iOS: Optimize the audio collection strategy in the background to reduce the probability of silent problems caused by system interruption.</p> <p>iOS: Optimize and improve audio device restart speed.</p>		
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## July 2023

Dynamic name	Dynamic description	Release time	Related documents
Version 11.3	<p>All platforms: Added reverberation effect "Studio 2", see `TXVoiceReverbType` for details</p> <p>iOS&amp;Android: Added startPlayMusic support for .ogg format music files.</p> <p>All platforms: Optimize the adaptive digital gain algorithm to improve the sound listening experience, enhance volume stability, and avoid the volume being too loud or too low.</p> <p>Android: Optimize audio collection and playback logic to avoid abnormal sound problems on some Android devices.</p> <p>Android: Optimize the performance of hard-coded video auxiliary streams and improve the picture quality of shared screens.</p> <p>iOS: Optimize audio device restart logic to reduce the number of sound interruptions.</p>	2023-07-07	<a href="#">SDK Download</a>

iOS&Android: TXLivePlayer deletes on-demand related interfaces. Please use TXVodPlayer to play on-demand videos.		
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## June 2023

Dynamic name	Dynamic description	Release time	Related documents
Version 11.2	<p>All platforms: Supports seamless switching between BGM accompaniment and original singer in chorus scenes, see [setMusicTrack] for details</p> <p>iOS: Support running the SDK through the Xcode simulator on Apple chip devices.</p> <p>All platforms: Optimize the overall sound quality of the chorus scene, improve the chorus effect, and reduce chorus delay.</p> <p>All platforms: Optimize the audio effect when putting on and off the mic, making the experience of putting on and off the mic smoother.</p> <p>All platforms: Optimize the audio experience under extremely weak networks.</p> <p>All platforms: Optimize the weak network experience when a single live broadcast anchor pushes streams.</p> <p>All platforms: Optimize the smoothness of the switching process between high-definition large screen and low-definition small screen of remote video.</p> <p>Android&amp;iOS: Optimize the sound quality performance in music scenes and improve the chorus experience.</p> <p>Android&amp;iOS: Optimize the experience of using Bluetooth headsets under different volume types.</p> <p>Android: Optimize hardware decoding delay and improve the loading experience of the first frame of the video.</p> <p>Android: Optimize the earphone function and improve the experience when switching the earphone on and off.</p> <p>Android: Optimize the collection compatibility of Android audio devices and reduce audio anomalies.</p> <p>iOS: Optimize image quality performance and improve video image clarity.</p>	2023-06-05	<a href="#">SDK Download</a>

## April 2023

Dynamic name	Dynamic description	Release time	Related documents
Version 11.1	<p>All platforms: Optimize the automatic cleaning logic of log files to prevent the log folder size from exceeding the standard.</p> <p>iOS &amp; Android: Optimize color matrix compatibility during decoding and rendering to avoid introducing color deviations.</p> <p>Android: Optimize the issue where hard programming occasionally fails to start on low-end machines in high-resolution scenarios, resulting in increased performance overhead.</p> <p>Android: Optimize the problem of uncontrolled hardcoding rate occasionally occurring in Android 12 and above systems.</p>	2023-04-17	<a href="#">SDK Download</a>

## March 2023

Dynamic name	Dynamic description	Release time	Related documents
Version 11.0	<p>Android: Interface change, the return type of <code>TXLiveBase.setLibraryPath</code> is adjusted to <code>bool</code>, indicating whether loading the SDK dynamic library is successful.</p> <p>Android: Optimize audio compatibility and reduce current noise and silent problems.</p> <p>All platforms: Improve the success rate of online BGM playback under weak network conditions.</p>	2023-03-09	<a href="#">SDK Download</a>

## January 2023

Dynamic name	Dynamic description	Release time	Related documents

Version 10.9	<p>All platforms: Optimize audio and video synchronization issues and improve video playback smoothness.</p> <p>Android: Optimize the problem of popping sound after setting the music sound quality in certain scenarios.</p> <p>Android: Live broadcast adds audio capture support for external microphone devices (such as lavalier microphones).</p> <p>Android: Optimize the sound outgoing problem that still exists on a small number of models after plugging in headphones at media volume.</p> <p>iOS: Optimize the external recording screen to automatically rotate to the right direction when the system switches between horizontal and vertical screens, improving the viewing experience.</p> <p>Mac: Optimize the screen recording performance of MacOS 12.3 and later versions to reduce CPU overhead and memory usage.</p>	2023-01-09	<a href="#">SDK Download</a>
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## November 2022

Dynamic name	Dynamic description	Release time	Related documents



Version 10.8	<p>Android: V2TXLivePusher supports sharing system sounds when pushing streams.</p> <p>All platforms: Optimize the success rate of fast streaming.</p> <p>Android: Optimize the time it takes to start streaming within seconds.</p>	2022-11-01	<a href="#">SDK Download</a>
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## October 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.7	<p>iOS&amp;Android: The startPlay method name of TXLivePlayer\V2TXLivePlayer is changed to startLivePlay to force the license verification to be turned on. For License application, please see: <a href="#">Video Playback License</a>.</p> <p>Optimize AudioJitterBuffer caching strategy.</p>	2022-10-08	<a href="#">SDK Download</a>

## September 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.7 startPlay interface name change	<p>Starting from version 10.7 of the mobile terminal (iOS &amp; Android &amp; Flutter), the name of the mobile terminal's start playback interface `startPlay` has been changed, as follows:V2TXLivePlayer's</p>	2022-09-19	<a href="#">SDK Download</a>

startPlay has been changed to startLivePlay. The startPlay of TXLivePlayer is changed to startLivePlay.
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## August 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.6	<p>iOS&amp;Android&amp;Mac: Professional version TXLivePlayer\ V2TXLivePlayer supports HLS playback, adaptive playback and multi-bitrate seamless streaming. All platforms: Optimize the problem of low volume in Music sound quality. Android&amp;iOS: Missing characters when optimizing call volume. Android: Optimize the issue of occasional missing echoes.</p>	2022-08-31	<a href="#">SDK Download</a>
Version 10.5	<p>All platforms: Optimize qos strategy and improve weak network experience. iOS&amp;Android: Reduce latency across all links; optimize the in-ear experience. Android: Optimize the memory management of video decoding to prevent memory accumulation. Windows: Optimize the noise reduction effect of the built-in microphone, especially in music mode, the performance is better. Mac: Optimize the noise problem that is likely to occur</p>	2022-08-16	<a href="#">SDK Download</a>

	when microphone collection is turned on.		
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## July 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.4	<p>All platforms: Optimize the memory usage problem of TXLivePlayer\ V2TXLivePlayer when pulling FLV streams.</p> <p>iOS&amp;Android: V2TXLivePlayer allows to retain the last frame when ending playback.</p> <p>iOS: Optimize the problem of low volume captured on iPad.</p> <p>Android: Fixed the issue of occasional freezes when streaming in TXLivePlayer\ V2TXLivePlayer.</p> <p>Android: Optimize the compatibility of low-latency earphones and two-channel capture.</p> <p>Android: Optimize the strategy of switching from hard decoding to soft decoding to improve decoding performance.</p> <p>Android: Fixed the issue where TXLivePlayer\ V2TXLivePlayer occasionally switches to soft solution when streaming.</p>	2022-07-21	<a href="#">SDK Download</a>

## June 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.2	<p>All platforms: TXLivePlayer\ V2TXLivePlayer adds License verification when pulling streams.</p>	2022-06-22	<a href="#">SDK Download</a>

All platforms: V2TXLivePlayer supports setting HTTP Headers when pulling FLV streams.

All platforms: TXLivePusher\\V2TXLivePusher allows audio encoding parameters to be changed midway during RTMP streaming.

All platforms: Optimize the interface of V2TXLivePlayer to adapt to the bit rate when pulling fast live streams.

All platforms: Optimize the problem that V2TXLivePlayer takes too long to reconnect when pulling streams.

All platforms: Optimize the problem of low local cache when TXLivePlayer\\V2TXLivePlayer pulls FLV and RTMP streams.

All platforms: Fixed the problem that the lag threshold set by TXLivePlayer does not take effect.

All platforms: Fixed the problem of abnormal callback timing of the first frame of audio and video when V2TXLivePusher is pushing in RTC.

Android: Fixed the issue where the screen of TXLivePlayer\\V2TXLivePlayer would occasionally go black when quickly stopping and starting when streaming.

Android: Optimize the speed of the first frame of TXLivePlayer\\V2TXLivePlayer when pulling streams.

iOS: Optimize the size of iOS SDK.

iOS: LiteaVSDK Live version packages TXLiveBase.h.

## May 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 10.1	<p>All platforms: Support V2TXLivePlayer seamless streaming capability. Supported stream types: FLV, LEB.</p> <p>All platforms: Optimize the timeout logic of TXLivePlayer\V2TXLivePlayer when playing RTMP streams.</p> <p>iOS: Optimize V2TXLivePusher horizontal and vertical screen push logic.</p> <p>iOS: Fixed V2TXLivePremier log enumeration exception issue.</p> <p>Android: Fixed the problem that the callback data is empty when switching the TXLivePlayer custom rendering format.</p> <p>Android: Fixed the occasional problem of Bluetooth headsets constantly reconnecting.</p> <p>Android: Fixed the occasional silent problem on some mobile phones.</p> <p>Android: Fixed the crash problem caused by repeated plugging and unplugging of headphones on some models such as Redmi.</p>	2022-05-29	<a href="#">SDK Download</a>
Version 10.0	<p>iOS&amp;Mac: Fix the problem of onComplete callback error when starting to play BGM;</p> <p>All platforms: Fix V2TXLivePlayer when playing RTC stream, the View will not be set Crash problem.</p> <p>All platforms: Fixed the issue where V2TXLivePlayer occasionally has no sound when playing fast live streams.</p>	2022-05-17	<a href="#">SDK Download</a>

	All platforms: Fixed the issue where the number of reconnections set is invalid when V2TXLivePlayer plays a fast live stream.		
Version 9.9	<p>All platforms: TXLivePlayer\\V2TXLivePlayer supports playing live streams with opposite audio phases.</p> <p>Android: TXLivePusher\\V2TXLivePusher adds a new release method to support the ability to quickly release resources.</p> <p>Android: Optimize the acquisition delay and improve the ear-returning experience.</p> <p>iOS: Fixed the problem of black screen when using external recording screen when pushing RTC stream with V2TXLivePusher.</p>	2022-05-06	<a href="#">SDK Download</a>

## April 2022

Dynamic name	Dynamic description	Release time	Related documents
Product name change	The original live broadcast SDK was renamed as Tencent Cloud Video Cube·Live Broadcast SDK.	2022-04-01	<a href="#">Product Overview</a>

## March 2022

Dynamic name	Dynamic description	Release time	Related documents
Live streaming upgrade	The live streaming solution has been upgraded. Tencent	2022-03-01	-

	Cloud Video Cube provides users with a new version of the streaming solution based on real-time audio and video TRTC capabilities.		
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## January 2022

Dynamic name	Dynamic description	Release time	Related documents
Version 9.5	<p>iOS: Fixed the issue where V2TXLivePusher used an illegal push address to cause an exception.</p> <p>iOS: Fixed the problem of black screen in the first frame of calling setupVideoWidget in TXLivePlayer in some scenarios.</p> <p>Android: Fixed the memory leak problem of fast live broadcast playback.</p> <p>Android: Fixed the issue where the V2TXLivePusher push stream frequently switches between horizontal and vertical screens and sometimes the screen appears horizontally.</p>	2022-01-24	<a href="#">SDK Download</a>
	<p>iOS: New screen recording start and screen recording end callbacks for live screen recording.</p>	2022-01-11	

	<p>iOS: Fixed the problem that V2TXLivePusher did not take effect when opening the rear camera.</p> <p>iOS: Fixed the problem that when V2TXLivePusher is pushing the stream, the delay will be higher and higher when the camera is turned off and then the streaming end is turned on.</p> <p>Android: Fixed the issue where the push end screen cannot be seen when the microphone is turned off during RTC push streaming.</p> <p>Android&amp;iOS: Kuaibo domain name supports external settings.</p>		
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## December 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 9.4	<p>iOS: Fixed the problem that when V2TXLivePusher sets a horizontal screen preview before pushing, the preview screen direction is wrong.</p> <p>Android: Fixed the issue of V2TXLivePlayer occasionally crashing.</p> <p>Android&amp;iOS: Optimize the playback delay of fast live broadcast.</p> <p>Android&amp;iOS: V2TXLivePlayer adds a</p>	2021-12-09	<a href="#">SDK Download</a>



	new resolution change notification interface. Android&iOS: V2 lag callback adds lag duration information.		
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## November 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 9.3	Android&iOS: Kuai Live supports receiving SEI messages. Android: Fixed the issue of occasional crash of TXLivePlayer. Android: Fixed the problem of the screen not rendering after playing multiple video addresses in V2.	2021-11-04	<a href="#">SDK Download</a>

## September 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 9.2	iOS: Fixed the problem of V2 Player onWarning method not returning. iOS: Fixed the problem of the audio and video being out of sync when the streaming end of Quick Live broadcast stops streaming and then re-streaming to watch the audio and video. Android: Fixed a crash issue under certain circumstances.	2021-09-26	<a href="#">SDK Download</a>

	Android: Fixed the memory leak problem in V2 RTMP push streaming.		
Version 9.1	<p>iOS&amp;Android: V2 adds support for setting frame rate and bit rate.</p> <p>iOS&amp;Android: V2 adds a new failure status callback when pulling invalid streams.</p> <p>Mac&amp;Windows: V2 adds hot-swappable callbacks for audio and video peripherals.</p> <p>Android: Optimize the overexposure problem of video images under certain conditions.</p> <p>iOS: Fixed the issue of audio settings affecting each other when playing multiple instances of Quick Live.</p> <p>All platforms: Fixed the memory leak problem of Kuai Live.</p>	2021-09-02	<a href="#">SDK Download</a>

## August 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 9.0	<p>Android: Fixed the abnormal problem caused by switching image quality in quick live broadcast.</p> <p>Android: Added exception events thrown when mobile live broadcast screen recording, microphone,</p>	2021-08-06	<a href="#">SDK Download</a>

	<p>and earpiece are occupied.</p> <p>iOS: Added Kuai Live onStatisticsUpdate callback.</p> <p>Android&amp;iOS: V2 adds SEI message sending and receiving functions.</p> <p>Windows: Added V2 related functions and interfaces.</p>		
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## July 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.9	<p>iOS: Fixed the issue where the remote end cannot see the background image after turning off the video upstream in Mobile Live V2 and then turning on the gasket push stream.</p> <p>Android: Fixed the problem of audio and video being out of sync with mobile live broadcast custom audio and video.</p>	2021-07-15	<a href="#">SDK Download</a>

## June 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.8	<p>Android: Fixed the issue of occasional crashes when playing fast live streams under certain circumstances.</p>	2021-06-18	<a href="#">SDK Download</a>

	<p>Android: Fixed an error when playing HLS files on Android 11.</p> <p>iOS&amp;Android: Fixed the issue of VodPlayer seeking slow playback of specific videos.</p>		
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## May 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.7	<p>Android: Fixed an issue where FPS settings did not take effect during mobile live streaming.</p> <p>Android: Optimize the playback experience of mobile live broadcast, with hard decoding by default.</p> <p>iOS&amp;Android: Added Kuai Live playback capability. For details, please refer to <a href="#">Quai Live Pull</a>.</p>	2021-05-24	<a href="#">SDK Download</a>
Version 8.6	<p>iOS&amp;Android: Mobile Live V2 adds a new RTC protocol mixed stream interface.</p> <p>iOS&amp;Android: Mobile Live Broadcast V2 adds a new pre-processing interface.</p> <p>iOS&amp;Android: Mobile Live Broadcast V2 fixes the problem of occasional streaming failure on the viewer side.</p> <p>iOS&amp;Android: Mobile Live V2 fixes the</p>	2021-05-06	<a href="#">SDK Download</a>

	<p>problem of streaming failure caused by turning on custom collection and then turning it off.</p> <p>iOS&amp;Android: Mobile Live Broadcast V2 optimizes several experience issues.</p> <p>iOS&amp;Android: Fixed several stability issues in mobile live broadcast.</p> <p>iOS: Optimizing Swift compilation warning issues.</p>		
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## March 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.5	<p>iOS&amp;Android: Mobile Live Broadcast V2 continues to be optimized, including new features, ease of use, stability, etc.</p> <p>iOS&amp;Android: Advanced beauty effect optimization, optimizing face slimming, big eyes, V-face and other related effects.</p> <p>iOS&amp;Android: New narrow face interface for advanced beauty.</p> <p>iOS&amp;Android: Advanced beauty facial feature extraction optimization.</p> <p>iOS&amp;Android: New narrow face interface for advanced beauty.</p> <p>iOS&amp;Android: Live broadcast supports 0x5 SEI message type.</p>	2021-03-18	<a href="#">SDK Download</a>

	<p>iOS&amp;Android: Optimize Super Player to play some network streams seek slow problem.</p> <p>iOS&amp;Android: Fixed the abnormal problem of mobile live broadcast encoding dts.</p> <p>Android: Fixed the problem of error reporting in Super Player when playing in fileid mode.</p>		
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## February 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.4	<p>iOS&amp;Android: A new V2 interface is added to the live push and pull stream, providing a new Lianmai interactive solution and ultra-low latency live broadcast capabilities.</p> <p>iOS&amp;Android: Live playback buffering strategy optimization, configurable mandatory and non-mandatory buffering.</p> <p>iOS: Optimize preprocessing performance and improve stability.</p> <p>iOS: Fix facial coordinate issue in beauty callback.</p>	2021-02-07	<a href="#">SDK Download</a>

## January 2021

Dynamic name	Dynamic description	Release time	Related documents
Version 8.3	iOS: Fixed the issue of camera switching being invalid during live streaming. iOS: Fixed the issue of abnormal sound playback of low-quality files in low-latency streaming scenarios.	2021-01-15	<a href="#">SDK Download</a>

## December 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 8.2	Android: Optimize the quality of mobile live streaming. iOS: Fixed the issue where the player rotates upside down and the playback screen ratio is abnormal.	2020-12-24	<a href="#">SDK Download</a>
Version 8.1	Android: Modify the parameter type of the beauty-related interface from int to float. iOS: Improve the sound quality of the in-ear reverberation effect in mobile live broadcasts. iOS: Fixed the abnormal screen display issue in iOS 14.2 version of mobile live broadcast after disconnection and reconnection.	2020-12-03	<a href="#">SDK Download</a>

## November 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 8.0	<p>Android: Optimize MLVB anchor PK and audience onboarding process.</p> <p>Android: Optimize MLVB interface prompts.</p> <p>Android: The live push-pull stream Demo project is optimized and the logic is simpler.</p>	2020-11-13	<a href="#">SDK Download</a>

## October 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.9	iOS&Android: The live broadcast player optimizes the delay control algorithm to avoid frequent acceleration and deceleration.	2020-10-23	<a href="#">SDK Download</a>

## September 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.8	<p>iOS: Basic beauty optimization of push streaming, adding white and natural filters.</p> <p>iOS: Super Player fixes iOS 14 compatibility issues.</p> <p>Android: Fix the crash issue of Advanced Beauty Android 4.4 system.</p>	2020-09-27	<a href="#">SDK Download</a>
Version 7.7	Android: Basic beauty	2020-09-08	<a href="#">SDK Download</a>



	<p>optimization for push streaming, adding white and natural filters.</p> <p>Android: On-demand support for playing audio-only streams when View is not set.</p> <p>Android: On-demand video playback supports retaining the last frame.</p>		
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## August 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.6	<p>iOS &amp; Android: AI beauty optimization, repairs lip gloss occlusion problem, improves recognition accuracy, and optimizes side face makeup effects.</p> <p>iOS&amp;Android: SDK event and error callback information internationalization.</p>	2020-08-24	<a href="#">SDK Download</a>

## July 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.5	<p>Android: The on-demand player adds a new automatic audio focus control interface.</p> <p>Android: Fixed the problem of no sound in local recording files of live streaming.</p> <p>Android: Demo UI optimization for live streaming and live playback.</p> <p>Solve the problem of flickering watermark at the end of short video viewing.</p>	2020-07-31	<a href="#">SDK Download</a>
Version 7.4	<p>iOS&amp;Android: Optimize preprocessing clarity and improve image quality.</p> <p>iOS&amp;Android: Supports full-link 128kbps high-quality stereo sound.</p>	2020-07-03	<a href="#">SDK Download</a>

	<p>iOS&amp;Android: Supports multi-channel background music playback, used to support karaoke scenes where the original sound and accompaniment are separated, and supports two-channel background music and loop playback.</p> <p>iOS&amp;Android: While compatible with the old background sound playback interface, a new sound effect management interface TXAudioEffectManager has been added to support more flexible and diverse sound effect capabilities.</p> <p>iOS: In-ear monitors support superimposed reverberation and other sound effects.</p> <p>iOS: Fixed the audio lagging issue in live broadcast screen recording.</p> <p>iOS: Fixed the issue where the front and rear cameras occasionally failed to switch.</p> <p>Android: Sound effect files support asset-packaged sound effect files.</p>		
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## April 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.2	<p>iOS&amp;Android: Added TXLivePlayer support for callback HTTP Response header fields, which can be used to parse CDN-customized HTTP response header fields.</p> <p>iOS&amp;Android: Added TXLivePusher support for local volume callback.</p> <p>iOS&amp;Android: Optimize filters, green screen and other visual effects interfaces and merge them into the TXBeautyManager class to achieve a unified calling method.</p>	2020-04-17	<a href="#">SDK Download</a>

## March 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 7.1	<p>iOS&amp;Android: Super Player is better integrated with the on-demand backend, adding v4 protocol support, which can be played directly using fileid, and adding SimpleAES support, which can directly play standard HLS AES encrypted videos.</p>	2020-03-30	<a href="#">SDK Download</a>

	<p>Android: Short video editing adds support for HE-AAC audio format, making it better compatible with third-party video editors.</p> <p>Android: Short video UGCKit fixes related issues such as abnormal cropping page display and occasional recording errors.</p> <p>Android: C++ STL libraries are unified and statically linked, completely solving the problem of STL library conflicts.</p>		
Version 7.0	<p>iOS&amp;Android: Live broadcast mode bit rate optimization.</p> <p>iOS&amp;Android: Added VOIP mode support in live broadcast mode.</p> <p>Android: Solve the problem of occasional CRASH in facial animation effects.</p> <p>Android: Solve the occasional CRASH problem caused by frequently switching cameras and stopping recording in short videos.</p>	2020-03-09	<a href="#">SDK Download</a>

## Jan 2020

Dynamic name	Dynamic description	Release time	Related documents
Version 6.9	<p>iOS&amp;Android: UGC TUIKit implementation, UI componentization, supports custom themes, and facilitates integration and modification.</p> <p>iOS&amp;Android: UGC supports three-screen co-production and volume adjustment capabilities.</p> <p>iOS&amp;Android: Live streaming supports 1080p Blu-ray streaming.</p> <p>Android: Android 10 compatible support.</p> <p>Android: Live streaming supports ear-return capability.</p> <p>Android: UGC preprocessing is hard-coded to improve preprocessing speed.</p> <p>iOS: The UGC chorus module is optimized to solve related problems such as out-of-synchronization of audio and video.</p>	2020-01-15	<a href="#">SDK Download</a>

## November 2019

Dynamic name	Dynamic description	Release time	Related documents
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Version 6.8	<p>iOS&amp;Android: Optimize QoS flow control and improve code rate adaptive recovery efficiency.</p> <p>iOS &amp; Android: The enterprise version adds new P-picture features, including skin beautification, eye brightening, teeth whitening, wrinkle removal, eye bag removal and other new features.</p>	2019-11-15	<a href="#">SDK</a> <a href="#">Download</a>
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## September 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 6.7	<p>iOS: iOS13 screen recording compatibility issue solved.</p> <p>iOS&amp;Android: Added 16:9 resolution support for recording.</p>	2019-09-29	<a href="#">SDK</a> <a href="#">Download</a>
Version 6.6 Patch	iOS: iOS13 compatibility support.	2019-09-10	<a href="#">SDK</a> <a href="#">Download</a>

## August 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 6.6	<p>iOS: Fixed the issue of inaccurate NET_SPEED in onNetStatus callback.</p> <p>iOS: Fixed the issue where TXVideoEditor sometimes returns incorrect data when obtaining thumbnails by time points.</p> <p>iOS: Fixed the issue where setting dynamic effects would be invalid after switching to the background.</p> <p>Android: Enterprise version adds 64-bit support, and P gallery supports dynamic downloading.</p>	2019-08-06	<a href="#">SDK</a> <a href="#">Download</a>

## June 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 6.5	iOS&Android: Added image upload support.	2019-06-	<a href="#">SDK</a>

	iOS&Android: BGM supports playback progress adjustment.	12	<a href="#">Download</a>
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## May 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 6.4	The live streaming push component TXLivePusher adds a license verification function. The live streaming component TXLivePlayer will no longer automatically switch to CDN streaming after throwing error code -2302 if it cannot obtain the acceleration address in real-time streaming mode.	2019-05-15	<a href="#">SDK Download</a>

## March 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 6.3	Android: Android adds ARM64 support to better support 64-bit mobile phone systems. iOS&Android : The Professional Edition offers real-time audio and video capabilities.	2019-03-29	<a href="#">SDK Download</a>

## January 2019

Dynamic name	Dynamic description	Release time	Related documents
Version 5.4	iOS&Android: Optimize	2019-01-04	<a href="#">SDK Download</a>

	<p>the network protocol algorithm, and the live streaming can resist 30% packet loss without any pressure.</p> <p>iOS&amp;Android: Optimize the network QoS flow control algorithm, resulting in lower video call lag rate and higher smoothness.</p>		
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## October 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 5.3	<p>iOS &amp; Android: Streaming &amp; Playback solves problems related to sound collection and playback of wired headsets and Bluetooth headsets.</p> <p>Android: Push &amp; playback supports surface rendering (used to support <b>&lt;live-pusher&gt;</b> and <b>&lt;live-player&gt;</b> in WeChat mini-programs that can be mixed and superimposed with other elements).</p>	2018-10-25	<a href="#">SDK Download</a>

## September 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 5.2	<p>iOS&amp;Android: Enterprise version supports License setting interface and online download and update License.</p>	2018-09-14	<a href="#">Guide to Using Licenses</a>

	iOS&Android: Live push effect supports mute setting interface.		
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## August 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 5.1	iOS&Android: Demo main interface has been redesigned to make it clearer and easier to use. iOS: Solve the problem of blurry screen during push playback and short video recording on iOS12 system.	2018-08-18	<a href="#">Demo Experience</a>

## July 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 5.0	iOS: The iOS Demo interface is adapted to iPhoneX. iOS: iOS fixes memory leaks, improves stability, and adds module definitions to better support swift integration. Android: The software editor improves the accuracy of RGBA-generated YUV conversion and improves the streaming image quality.	2018-07-18	<a href="#">Demo Experience</a>

## June 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.9	iOS&Android: Added BGM pitch change support for live broadcast.	2018-06-14	<a href="#">SDK Download</a>

## May 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.7	iOS&Android: Live broadcast supports stereo playback. iOS&Android: The lag threshold is configurable by customers to solve the problem of customer-defined lag duration. Added texture support for custom data.	2018-05-25	<a href="#">SDK Download</a>
Version 4.6	iOS&Android: Added original audio data callback on the streaming side. iOS&Android: Demo adds anchor PK function. Android: Optimize small file upload and improve success rate.	2018-05-04	SDK Download

## April 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.5	Demo code with new upload function is integrated with the on-	2018-04-13	<a href="#">Demo Experience</a>



	<p>demand service to provide an integrated solution from shooting to special effects production, uploading, transcoding, pornography identification, distribution and playback.</p> <p>GIF format is supported for uploading covers, and a new clip synthesis function is added.</p> <p>iOS: iOS screen recording optimization.</p> <p>Android: Supports editing of video files without audio tracks.</p>		
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## March 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.4	<p>iOS: Added audio data callback interface on the streaming side.</p> <p>iOS&amp;Android: Demo adds the Lianmai solution, which encapsulates the liveroom interface based on the RoomService service. For details, please refer to the live broadcast experience source code.</p> <p>iOS&amp;Android: Demo adds a new multi-person video session solution, which encapsulates the rtcroom interface based on the RoomService service. For details, please refer to the multi-person audio and</p>	2018-03-23	<a href="#">Demo Experience</a>

	video source code.		
Version 4.3	<p>iOS&amp;Android: The live broadcast player supports custom HTTP Header and can specify Refer to prevent hotlinking.</p> <p>iOS&amp;Android: The live broadcast player exposes the audio data acquisition interface.</p>	2018-03-09	SDK Download

## February 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.2	<p>iOS&amp;Android: Improve the performance of the enterprise version SDK, enable P-picture animation, significantly increase the frame rate of iOS, and reduce the consumption of Android GPU.</p> <p>iOS&amp;Android: Optimize the audio and video synchronization effect of the live broadcast player, and the new audio and video synchronization solution is better adapted to OBS push streaming.</p> <p>iOS&amp;Android: The on-demand player supports FieldID, improving the ease of use in multi-resolution switching scenarios.</p>	2018-02-02	SDK Download

## January 2018

Dynamic name	Dynamic description	Release time	Related documents
Version 4.1	<p>iOS&amp;Android: Live streaming and playback support carrying messages in audio and video streams.</p> <p>iOS&amp;Android: Added screenshot and recording capabilities for live streaming.</p>	2018-01-26	SDK Download

## December 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 3.9	<p>iOS&amp;Android: The Demo function has been completely revised, adding dual and multi-player real-time audio and video capabilities.</p> <p>iOS&amp;Android: The animated stickers have been greatly upgraded, with new HDR and high-resolution sticker effects, making the stickers more beautiful.</p> <p>iOS&amp;Android: Added AI intelligent background cutout capability, so anchors no longer need a green screen.</p> <p>iOS&amp;Android: Supports seamless switching of video resolution during on-demand playback.</p> <p>iOS&amp;Android: Fixed several bugs.</p>	2017-12-07	SDK Download

	<p>iOS&amp;Android: Launched three time special effects: slow motion, repeat playback, and time rewind.</p> <p>iOS&amp;Android: A variety of new filters have been added, with more effects for you to choose from.</p> <p>iOS&amp;Android: Added a variety of dynamic and static stickers, supporting customization of more stickers.</p> <p>iOS&amp;Android: You can add bubble subtitles to videos.</p> <p>iOS&amp;Android: Supports silent shooting to facilitate post-production.</p> <p>iOS&amp;Android: Supports switching between horizontal and vertical screens while shooting.</p> <p>Android: UGCPublish integrates the new cos architecture and optimizes the short video upload processing process.</p>		
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## November2017

Dynamic name	Dynamic description	Release time	Related documents
Version 3.7	<p>iOS&amp;Android: Demo optimization, new low-latency playback, push live broadcast playback can be experienced directly.</p> <p>iOS&amp;Android : Demo adds multi-</p>	2017-11-17	SDK Download

	<p>terminal audio and video interoperability capabilities, allowing multi-person conversations with mini programs, Windows and other terminals.</p> <p>Android: Fixed multiple TXCloudView rendering display issues.</p>		
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## October 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 3.5	<p>iOS&amp;Android: The continuous mic sending strategy is optimized, and the sound under weak network is smoother.</p> <p>iOS&amp;Android: The sound resampling algorithm has been updated to provide better compatibility with background sounds of different sampling rates.</p> <p>Android: Lianmai supports system AEC for some mobile phones, with better performance.</p> <p>Android: The custom sending interface (sendCustomVideoData) supports sending custom data such as I420 and NV21.</p> <p>Android: The player supports YUV video data callback interface.</p>	2017-10-27	SDK Download

## September 2017

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Dynamic name	Dynamic description	Release time	Related documents
Version 3.4	<p>iOS&amp;Android: New functions such as deletion, multi-ratio switching, and focus adjustment are added to short video recording.</p> <p>iOS&amp;Android: Added end watermark function to short video editing.</p> <p>iOS&amp;Android: Fixed the compatibility issue of third-party push FLV live streaming.</p> <p>iOS: Fix iOS11 compatibility issues.</p> <p>Android: Solve the problem of inaccurate on-demand callback.</p>	2017-09-28	SDK Download
Version 3.3	<p>iOS&amp;Android: On-demand HLS supports EXT-X-DISCONTINUITY tag.</p> <p>Android: Supports background collection and push streaming.</p>	2017-09-08	SDK Download
Version 3.2	<p>iOS&amp;Android on-demand supports local cache playback of MP4 videos.</p> <p>Solve the problem of BGM low sampling rate not being supported.</p>	2017-09-01	SDK Download

## August 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 3.1	<p>iOS&amp;Android: The beauty algorithm is optimized, adding a rosy effect and multiple sets of beauty styles.</p>	2017-08-28	SDK Download

	<p>iOS: Two new beauty styles, smooth and natural, are added.</p> <p>Android: Added three new beauty styles: smooth, natural, and hazy.</p> <p>The enterprise version adds features such as V-face, thin nose, and thin chin.</p>		
Version 3.0	<p>iOS&amp;Android: Reconstruct the beauty module to improve the beauty effect while reducing GPU usage.</p> <p>iOS&amp;Android: Optimized the anti-jitter capability of Lianmai's underlying network components, and made better model adaptation of the AEC echo cancellation components.</p> <p>iOS&amp;Android: TXUGCRecord adds pauseRecord and resumeRecord interfaces to support multi-segment recording.</p>	2017-08-08	SDK Download

## June 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 2.0.5	<p>Android: Add watermark function to short video editing.</p> <p>Android: Added multi-segment recording function to short video recording.</p>	2017-06-30	SDK Download

Version 2.0.4	<p>iOS: Short video editing adds filters, watermarks, background sounds, subtitles, speed changes and other functions.</p> <p>Android: Optimize short video cropping and splicing functions, and add editing filter functions.</p> <p>iOS&amp;Android: Add beauty callback preprocessing interface for UGC recording.</p>	2017-06-02	SDK Download
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## May 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 2.0.3	<p>Android: Added UGC cropping and splicing functions.</p> <p>Android: A new Auto option is added for soft and hard programming. The SDK automatically enables hard programming or soft programming according to the performance of the phone.</p> <p>iOS: Optimize the overexposure problem on iOS and make the exposure more natural.</p> <p>iOS&amp;Android: Optimize the Demo directory and code structure, reduce access costs, and add short video recording, cropping, splicing, and mic connection demos,</p>	2017-05-16	<a href="#">Demo Experience</a>



	which are simple and easy to use.		
Version 2.0.2	<p>iOS: Added UGC cropping and splicing functions.</p> <p>iOS: Lite version supports Bitcode.</p> <p>Android: The privileged version adds a new feature of big eyes and face slimming.</p> <p>iOS&amp;Android: Optimize the mirroring performance of the front camera when turning on P pictures and green screens.</p> <p>iOS&amp;Android: Optimize UGC upload protocol.</p>	2017-05-02	SDK Download

## April 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 2.0.1	<p>iOS&amp;Android: Optimize the continuous wheat connection and increase the ability of multiple people to connect the wheat.</p> <p>iOS&amp;Android: Add the function of adding background music to UGC short videos.</p> <p>iOS&amp;Android: Added audio-only streaming function.</p> <p>iOS&amp;Android: Added player screenshot function.</p> <p>Android: Added reverb function and preset multiple reverb effects.</p>	2017-04-15	SDK Download

	<p>Android: The privileged version adds a green screen function.</p> <p>iOS: Optimize software decoding performance, open the playback end data callback interface, and customers can customize playback rendering.</p>		
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## March 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 2.0.0	<p>Add the collection and publishing function of UGC short videos.</p> <p>iOS&amp;Android: Added stream interception and recording function, viewers can intercept a short UGC video while watching the live broadcast, and then share it.</p> <p>iOS: Added a new "whitening" filter, suitable for customers who prefer Inke's beauty effects.</p>	2017-03-31	SDK Download
Version 1.9.2	<p>iOS&amp;Android: Added support for local file playback.</p> <p>iOS&amp;Android: Redesigned the buffer scheme in the player, optimizing the sound fluency of low-latency links.</p> <p>iOS: Added setReverbType interface, which can set</p>	2017-03-22	SDK Download

	<p>various sound reverberation effects.</p> <p>iOS: Optimized the performance of adding watermarks during live broadcast.</p>		
Version 1.9.1	<p>iOS&amp;Android: Optimized the beauty effect and clarity experience in camera live broadcast.</p> <p>iOS&amp;Android: Beauty has added a filter function, and a variety of mainstream filter effects are available for your anchor to choose from.</p> <p>iOS&amp;Android: Added setVideoQuality interface to make image quality selection easier and sound better</p>	2017-03-02	SDK Download

## January 2017

Dynamic name	Dynamic description	Release time	Related documents
Version 1.9.0	<p>iOS: Supports turning on Bitcode to reduce the size of the App Store installation package.</p> <p>iOS: Software and hardware beautification are unified, and the GPU acceleration solution is used uniformly.</p> <p>iOS&amp;Android: The audio module is optimized, and Lianmai supports background sound playback.</p> <p>iOS: A new ear-back function is added, that</p>	2017-01-20	SDK Download

	is, when the anchor plugs in the headphones and sings, he can hear the effect of his own pronunciation in real time.		
Version 1.8.2	Based on the Tencent Cloud accelerated link, the continuous mic function is realized, and 1v1 server-side mixing is supported. Live broadcast supports multi-instance playback capability, while on-demand video streaming does not currently support multi-instance playback.	2017-01-05	SDK Download

## December 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.8.1	iOS&Android live broadcast supports multi-instance playback capability, while on-demand video streaming does not currently support multi-instance playback. Optimize the playback experience in weak network environments. Optimized mixing function.	2016-12-29	SDK Download
Version 1.8.0	A new streamlined version is added to iOS, including live streaming and playback functions.	2016-12-09	SDK Download

	<p>Dynamic bitrate adjustment optimization to improve bitrate adjustment accuracy.</p> <p>Added new mirror interface for push streaming.</p> <p>iOS upper layer collection optimization.</p> <p>Android's new beauty optimization, FPS control is more accurate.</p> <p>A new progress callback interface has been added to the mixing function.</p> <p>SDK adds support for HTTPS.</p>		
Version 1.7.2	<p>Android: acquisition coding reconstruction.</p> <p>Android: software editor supports new beauty effects.</p> <p>Android: hard-coded new cloud blacklist control.</p> <p>Android: screen recording privacy mode adds the ability to push the anchor's audio.</p>	2016-12-01	SDK Download

## November 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.7.1	Optimize the Android mixing interface to make it easier to use.	2016-11-17	-
Version 1.7.0	iOS&Android : Introduced new interfaces ZoomIn and ZoomOut.	2016-11-11	SDK Download

	<p>Added on-demand MPEG4 v3 decoding support.</p> <p>A new intelligent speed control mode is added to adaptively adjust the bit rate and resolution according to the network speed</p>		
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## October 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.6.2	<p>iOS: has updated a new beautification algorithm.</p> <p>iOS: SDK adds support for replaykit screen recording capability.</p> <p>A new Pause/Resume interface is added to live broadcast to support pause and resume.</p>	2016-10-25	SDK Download

## September 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.6.1	<p>Android: SDK adds a mobile phone screen recording function.</p> <p>Added background mixing capability, anchors can choose their favorite songs for accompaniment.</p>	2016-09-29	SDK Download
Version 1.6.0	<p>Increase audio data acceleration processing capabilities.</p> <p>Added PUSH_WARNING_SERVER_DISCONNECT notification in case of active rejection by the streaming background.</p>	2016-09-02	<a href="#">Error Codes</a>

iOS: adds horizontal screen push streaming and local playback support. For details, please see the interface changes.		
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## August 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.5.2	<p>Added audio decoding support for HE-AAC V2. Pushing and playing VideoView supports resizing and retaining the last frame rendering. Optimize nearby access and intelligently select the optimal line.</p> <p>Android: hardware supported models to top100.</p>	2016-08-26	SDK Download

## July 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.5.1	<p>Android: streaming supports hardware acceleration MP4 and HLS on-demand support hardware decoding.</p>	2016-07-29	SDK Download
Version 1.5.0	<p>Reconstruct the push and player SDK to improve the stability of the SDK.</p> <p>Added GOP setting parameters, 3 seconds is recommended in show scenes (default value).</p>	2016-07-19	SDK Download

Version 1.4.2	Support MP4 and HLS online on-demand. No longer use aar as the packaging method of Android SDK, and change to the traditional jar + lib mode. Android SDK adds arm64 mode.	2016-07-08	SDK Download
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## June 2016

Dynamic name	Dynamic description	Release time	Related documents
Version 1.4.1	Improve streaming performance and sound encoding and decoding performance. Added FLV on-demand support.	2016-06-20	SDK Download
Version 1.3.1	Improve playback performance. Optimize caching strategy and provide multiple parameter configurations. Added watermark support on the streaming side.	2016-06-08	SDK Download