Overview

Express-Video SDK helps developers quickly build reliable and scalable video calling and interactive live video streaming into mobile, desktop, and web applications for a wide range of use cases such as one-on-one and group video calls, online education, entertainment live video streaming, and others.

With just four simple steps, your applications can access ZEGO's cloud streaming platform to deliver high-quality, ultra-low-latency, and interactive live video to your end-users across all platforms with the support for massive concurrency, providing the users a perfect live video experience.

1 Key Features

- Basic Functions

Main Function	Function Description	Business Scenarios
Live Push-Pull Streaming	Supports protocols such as RTMP, FLV, HLS, and RTP, global nodes achieve ultra-low 100ms latency, and provide multiple CDN streaming, adaptive flow control and other functions.	- Online Education - Live Show
Live broadcast with microphones	Supports multiple anchors linked with microphones, multi-person real-time communication and other functions, which can realize up to 32 channels of linked microphones with live streaming.	- PK Lianmai - Multi-person Conference
Beauty	Supports basic beauty functions, including settings for whitening, dermabrasion and other effects.	Show live

- Audio and Video Engine

Main Function	Function Description	Business Scenarios
Echo Cancellation	The engine has its own echo cancellation function. In the case of dual talk, the voice of all parties is clear, the duplex experience is good, and it supports three echo cancellation modes: comfortable, moderate and aggressive.	o Online Education o Live Show
Noise suppression	The engine has its own noise suppression function. Combined with the psychoacoustic model, it can increase the signal-to-noise ratio by more than 20 dB without damaging the voice quality.	o Online Education o Live Show
Automatic gain	The engine has its own automatic gain function, which can automatically adjust the microphone volume to adapt to near and far pickup, bringing a good experience in noisy environments.	o Online Education o Live Show
Multiple encodings	Support multiple hard coding and multiple soft coding to meet the coding requirements of multiple application scenarios and network environments.	o Online Education o Live Show
Multiple decoding	Support multiple hard solutions and multiple soft solutions to meet the decoding requirements of multiple application scenarios and network environments.	o Online Education o Live Show
GPU processing	All data goes to GPU memory, with good performance, good stability and	o Online

		Education
		○ Live Show

- Network Transmission

Main Function	Function Description	Business Scenarios
Network Transmission QoS	Realize the dynamic balance of redundant data (FEC) and retransmission strategy (ARQ). On the one hand, it can ensure the full utilization of bandwidth, and on the other hand, it will not grab bandwidth and cause congestion of the link itself.	Full scene
Network Adaptive	Provides end-to-end full-chain optimization algorithms, which can predict network speed according to the current network conditions and automatically perform flow control, and support weak network adaptive streaming and streaming.	Full scene
Intelligent adjustment	Intelligent adjustment of bit rate and frame rate ensures the balance effect of picture quality and fluency.	Full scene
Jitter buffer	In a weak network environment, use a good jitter buffer strategy to find the best fit between delay and smoothness.	Full scene

2 Key Properties

Property	Specification
SDK Size	The package size increments of the Express-Video SDK (Standard) is as follows:

	- iOS (arm64): 5.05 MB - Android (arm64) : 7.82 MB - Android (armv7): 7.56 MB - macOS (x86_64): 14.41 MB - Windows (x86): 14.20 MB - Windows (x86_64): 17.87 MB The package size increments of the Express-Video SDK (including whiteboard function) is as follows: - iOS (arm64): 5.33 MB - Android (arm64): 8.23 MB - Android (armv7): 7.88 MB - macOS (x86_64): 14.25 M - Windows (x86): 13.77 MB - Windows (x86_64): 17.86 MB
Multi-party Real-time Interaction	Supports up to 32 participants.
Video Quality	- Video Catpure Resolution: 1080p. - Video Capture Frame Rate: 1 fps ~ 30 fps. - Latency: normally 200 ms ~ 1000 ms.
Audio Quality	- Audio Sampling Rate: 16 kHz ~ 48 kHz. - Number Audio Channels: mono and stereo. - Echo Cancellation: supports 10 simultaneous speech channels.

Network Coverage	Global real-time network with more than 500 BGP nodes, covering more than 200 countries and territories.
Concurrency	Supports up to 1,000,000 concurrent viewers in a single live broadcast.

3 Compatibility

ZEGO Express-Video SDK supports iOS, Android, Windows, macOS, and Web, and allows for cross-platform interactions. The table below shows the supported platforms and their versions.

Platform	Supported Version	Supported Architecture
iOS	7.0 or above	- arm64 - armv7 - x86_64 (Simulator)
Android	4.1 or above	- arm64-v8a - armeabi-v7a - x86 - x86_64
Windows	Windows 7 or above	- x86 - x64
Linux	- Ubuntu 16.04 or above - CentOS	x86_64

macOS	10.10 or above	x64
Web	- Chrome 58 or above - Firefox 56 or above - Safari 11 or above - Opera 45 or above	–