

DATA SHEET

Solbox Ad Zipper

Challenges of Client-side Ad Insertion Technology

The goal of ad serving in the media industry is to maximize ad revenue. As more and more advertisers are allocating budgets towards video advertising across all four screens - PCs, mobiles, tablets and TVs - publishers are starting to realize the rewarding monetization opportunity. However, Internet video publishers are experiencing technical challenges across all new devices and cost burdens to meet the complexity of the client-side ad insertion.

The traditional approach for delivering in-stream video ads requires dealing with client-side SDKs, plug-ins, and JavaScript by each device respectively. This results in hiring too many personnel and investing too many resources to overcome the technical difficulties for ad delivery and to handle ad blockers with temporary fixes and high costs. But publishers are faced with the loss of ad revenue due to the buffering issue, ad system's fragmentation, and use of ad blockers.

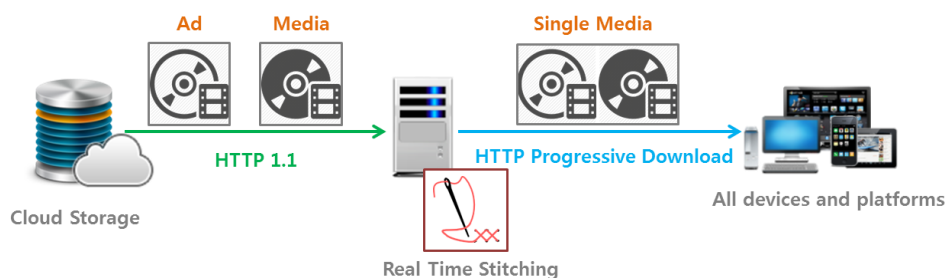
Server-side Ad Insertion Technology

To solve all the above mentioned issues, Solbox invites OVP providers, CDN players and video publishers to insert engaging video ads into the video contents dynamically via a server-side ad insertion technology. Your advanced ad service with **Solbox Ad Zipper** can help the Internet video publishers maximize their video ad monetization and enhance ad delivery performance.

Solbox Ad Zipper inserts server-side video ads directly into the media content source in real-time and delivers a single media file or stream on any device without any client-side changes. This offers dynamic and targeted ad insertion and drastically shortens time-to-market ad servicing with lower cost. It can also provide TV-like ad delivery performance without buffering and is not affected by most ad blockers. Therefore, it enables OVP providers, CDN players, and video publishers to provide a dynamic and targeted video ad service for their video publishers bringing a high-quality user experience across all devices.

For multi-platform secure streaming, **Solbox Ad Zipper** supports standard MP4 file format widely accepted in PC and mobile devices and the HTTP progressive download with the most compatibility currently. Your ads will automatically work on any platform, and the stream can be accessed with the same URL on any device. Accordingly, **Solbox Ad Zipper** provides high-quality user experience, maximizes your advertising effectiveness, and contributes to revenue growth.

Solbox Ad Zipper Diagram



Benefits

- Minimize technical issues from the client-side ad insertion technology to support SDKs and plug-ins across all devices.
- Eliminate ad loss due to most ad blockers by stitching video ads and media contents into a single file or stream.
- Enable a smooth and secure streaming service with support for various codecs and streaming protocols
- Insert the targeted ads into the media content anywhere you want.
- Through integration with NAS and cloud storage, it provides efficient local caching of video ads and media contents for quick response and high performance.

Features

- **Real-time Stitching**
Promptly stitch video ads and media content into a file from the requested time for real-time delivery.
- **Multi-protocol Support**
Support the HTTP progressive download with the most compatibility across all devices currently; also supports HTTP live streaming for mobile devices and smart TVs as well as the next-generation streaming protocol, MPEG-DASH.
- **In-stream Pre, Mid and Post-roll Ads**
Support the server-side insertion of pre, mid and post-roll ads on any app or website.
- **External Storage Integration**
Access to content source through HTTP 1.1. It also integrates with all types of NAS and cloud storage that support HTTP 1.1. It provides parallel block access and read-ahead function.
- **Local Media Caching**
Cache the content source before stitching into the local disk. Users can efficiently utilize cache space for access minimization to original storages. It enables higher system performance.
- **Audio Selection**
Select a certain server-side audio in MP4 file that contains multiple audio.
- **Content Segmentation**

Segment certain parts of the video in real time, such as “Preview 3 minutes” or “Show 1 hot minute”.

- **EXT-X-DISCONTINUITY in HLS not in Use**

Not-in-use server-side ad insertion EXT-X-DISCONTINUITY tags in HTTP live streaming.

- **Fast Start Support**

Support for fast start by changing dynamically the length of the TS file while some mobile devices start playing right after downloading 3 to 5 TS files.

- **Integration with the Wowza Streaming Engine**

Support for legacy streaming protocols such as RTMP, RTSP, and MPEG2-TS by integrating with the Wowza Streaming Engine. Especially if you use the Wowza HTTP Reader plug-in from Solbox, the de-duplicated caching function is activated.

Specification

Item	Specification
Service Type	VOD
File Format	MP4
Video Codec	AVC (H.264), HEVC (H.265)
Audio Codec	AAC (AAC-LC, HE_AAC)
Access to Source	HTTP 1.1
Streaming Protocol	HTTP Progressive Download HTTP Live Streaming MPEG-DASH