# OnStream MediaPlayer+ Player
# API Upgrade

**An Application Guide for**

**All Platforms**

**SDK Version 3.17.0**

**VisualOn, Inc.**

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1      Added two functions for iOS:

**setSphericalVideoView**

**enableSphericalVideo**

2      Modified one function for iOS:

**VOOSMPOpenParam**

3      Added one function for Android and iOS:

**enableDRMOfflineMode**

4      Added two callback events for Windows and Mac OS:

**VO_OSMP_CB_AUDIO_RENDER_FAIL**

**VO_OSMP_CB_VIDEO_RENDER_FAIL**

1        Added one function for Android:
         **setHWDecoderMaxResolution**

1        Added one function for Android and iOS:
          **enableSEIPostProcessVideo**

2        Added one callback for Android, iOS, and plug-ins:
          **VO_OSMP_SRC_ADAPTIVE_STREAMING_INFO_EVENT_PLAYLIST**
          **_DOWNLOADOK**

1       Added one function for all platforms:
        **enableSubtitleAutoAdjustment**

2       Added one function for Android:
        **enforceSoftwareVideoScaling**

1       Added seven functions for Android:
        **setSubtitleFontPosition**
        **setSmoothBAWhiteListFile**
        **setView**
        **setSubtitleFontPosition**
        **setSurface**
        **resume**
        **setSubtitleTrim**

2       Added three functions for Android and iOS:
        **enableAnalyticsFoundationLocation**
        **getDRMKeyExpiredStatus**
        **setPreference**

3       Added five function for all platforms:
        **setAnalyticsFoundationCUID**
        **setSubtitleGravity**
        **setSubtitleBoundingBox**
        **enableAnalyticsFoundation**
        **setAudioEffectEndpointType**

4       Changed two functions for Android:
        **resume**
        **setView**

5       Deleted one function for Android:
        **setSubtitleFontPosition**

6       Added two event IDs for plug-ins:
        **VO_OSMP_CB_SUSPEND**
        **VO_OSMP_CB_RESUME**

7       Added three event IDs for all platform:
        **VO_OSMP_SRC_RTSP_ERROR_HTTP_ERROR**
        **VO_OSMP_SRC_RTSP_ERROR_URL_EXPIRED**
        **VO_OSMP_CB_SUSPEND**

8       Added two event IDs for Android and iOS:
        **VOOSMP_PID_ANALYTICS_FOUNDATION_LOCATION**
        **VOOSMP_PID_ANALYTICS_FOUNDATION_CUID**

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1    Added five functions for all platform:
     **enableHTTPGzipRequest**
     **getProcessorType**
     **getErrorCode**
     **getValidBufferDuration**
     **getDownloadStatus**

2    Added two functions for Android:
     **enableSEIPostProcessVideo**
     **setVolume**

3    Deprecated function for iOS and Plugin, to sync up with Android:
     **enableDolbyLibrary**
     replaced with **enableAudioDecoderLibrary**

4    Deprecated Events for API2:
     **VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD**
     **VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL**
     **VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION**
     **VOOSMP_CB_Downgrade_Resolution**
     **VOOSMP_PID_SUBTITLE_DISPALY**
     **VOOSMP_PID_MEDIACODEC_AUDIO_DECODER**

5    Added Events for API2 as replacements:
     **VOOSMP_AUDIO_DECODER_TYPE_IOMX**
     **VOOSMP_PID_AUDIO_DECODER_TYPE**
     **VO_OSMP_DEC_AUDIO_IOMX**
     **VOOSMP_PID_SUBTITLE_DISPLAY**
     **VOOSMP_CB_Output_Control_Change_Resolution**
     **VO_OSMP_CB_OUTPUT_CONTROL_CHANGE_RESOLUTION**
     **VO_OSMP_SRC_CB_IO_HTTP_START_DOWNLOAD**
     **VO_OSMP_SRC_CB_IO_HTTP_DOWNLOAD_FAIL**

6    Added function for Android:
     **setDRMFilePath**

1    Added four functions for all platform:
**getUTCPosition**
**setRTSPMaxSocketErrorCount**
**setRTSPConnectionTimeout**


2    Added two functions for Android and iOS:
**enableAnalyticsDisplay**
**setAnalyticsDisplayType**

3    Added two functions for Android:
**getSeriesTitle**
**enableVOAdaptivePlayback**

4    Changed parameters for:
**init**
**open**

5    Deleted functions for iOS:
**getDRMUniqueIndentifier**
**setDRMUniqueIndentifier**

6    Deleted functions for Android:
**getDRMUniqueIndentifier**
**setDRMUniqueIndentifier**
**getFileSize**
**setFileSize**

1    Added two functions for output control **isOutputControlActive** and **isOutputControlEnforce**

1    Added functions for iOS:
     **enableAudioDecoderLibrary**
     **setPreferredAudioLanguage**
     **setPreferredSubtitleLanguage**
     **setInitialBufferingTime**
     **setInitialBufferTime**
     **setMaxBufferingTime**
     **setMaxBufferTime**
2    Added functions for Android:
     **enableAudioDecoderLibrary**
     **setPreferredAudioLanguage**
     **setPreferredSubtitleLanguage**
     **setInitialBufferingTime**
     **setInitialBufferTime**
     **setMaxBufferingTime**
     **setMaxBufferTime**
     **resume**
3    Added functions for Plugin:
     **enableAudioDecoderLibrary**
     **setRenderType**
4    Deprecated followings for Android and iOS, they will be removed in the future:
     **setDefaultAudioLanguage**
     **setDefaultSubtitleLanguage**
     **VO_OSMP_SRC_CB_ADAPTIVE_STREAM_WARNING**
     **VO_OSMP_CB_SRC_BUFFER_TIME**
5    Added event IDs :
     **VO_OSMP_CB_SRC_BUFFERING_TIME**
     **VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING**
     **VO_OSMP_SRC_FFSTREAMING_PUSHPD**
     **VO_OSMP_CB_OUTPUT_CONTROL_CAPTURE_SOFTWARE_RUNNING**

6    Changed return value for Plugin API. **getPlayingAsset.Returned** JSON content changed.

1    Added functions for iOS:
      **notifyViewSizeChanged**
      **setDefaultAudioLanguage**
      **setDefaultSubtitleLanguage**
2    Added event IDs :
      **VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK**
      **VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT**
      **VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION**
      **VO_OSMP_OUTPUT_CONTROL_TYPE**
      **VO_OSMP_CB_CODEC_NOT_SUPPORT**

3    Updated comments for **setZoomMode** and **setDisplayArea.**
4    Added **setDRMVerificationInfo, setDRMUniqueIdentifier, setDRMLibrary, getDuration,** and **deleteContent**.

1    Added two keys for **getAudioProperty** API, **"bitrate"** and **"channelcount"**

2    Added error codes :
     **VO_OSMP_HTTP_CONNECT_FAILED**
     **VO_OSMP_HTTP_INVALID_RESPONSE**
     **VO_OSMP_HTTP_CLIENT_ERROR**
     **VO_OSMP_HTTP_SERVER_ERROR**

3    Added APIs **playbackDuration, registerEventHandler, setOnEventHandler, getTotalCodecDropNum, getTotalDocodedNum, getTotalRenderDropNum, getTotalRenderedNum,** and **getTotalSourceDropNum**

4    Added APIs **getRootURL** and **getURL.**

5    Added API of **setHTTPRetryTimeout**

6    Added types **rootURL/URL/startTime/duration/timeScale** into **VOOSMPChunkInfo**

7    Added events of **VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED, VO_OSMP_CB_AUDIO_RENDER_FAIL,** and **VO_OSMP_MODULE_TYPE_DRM_VENDOR_A**

8    Added **setSubtitleTypeface** (Typeface type)

1     Added new method **enableCPUAdaptation.**

2

Cleaned up API categorizations for iOS:

- Moved followings to VOCommonPlayerStatus:

 **getPlayerType, getPlayerStatus, canBePaused, isLiveStreaming, getPosition, getMinPosition, getMaxPosition, getDuration, getScreenBrightness, getDRMUniqueIndentifier, getDRMUniqueIdentifier, getVersion,** and **getSEIInfo**

- Moved followings to VOCommonPlayerAnalytics:

**enableAnalytics, startAnalyticsNotification, stopAnalyticsNotification, getAnalytics, getVideoDecodingBitrate,** and **getAudioDecodingBitrate**

1    For Android/API3, the arguments of setDRMAdapter() were changed. If you are using this API, you have to modify your code.
     Except for this particular case, others API changes were additions only and do not require changes to code.

2    From V3.7.2, there is a clear distinction between what is selected and  what is playing. Please check getCurrentSelection() and getPlayingAsset().

3    From 3.7.10, plugin, the function open added two more parameters.  VO_OSMP_SRC_FORMAT sourceType, VOOSMPOpenParam* openParam.
     New added functions: getVideoDecodingBitrate, getAudioDecodingBitrate, getDRMUniqueIdentifier, setDRMUniqueIdentifier.

4    From V3.7.11, there are several functions changed return value. It can provide better debugging information.

API2: license check changed as below.
setParam(VOOSMP_PID_LICENSE_TEXT) is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:
a. init()
b. setParam(VOOSMP_PID_LICENSE_FILE_PATH, "Path here") or setParam(VOOSMP_PID_LICENSE_CONTENT, content)
c. setParam(VOOSMP_PID_LICENSE_TEXT, "License key here")
d. open()

API3: see guidelines below.

1   Type of parameter 1 of VOSyncEvent() was changed from VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID. You must change the type in your code, otherwise you will get a compilation error.

2   VOCommonPlayerControl.open() and VOCommonPlayerControl.init() were overloaded. Use the new one, i.e.
    VO_OSMP_RETURN_CODE open(String url, VO_OSMP_SRC_FLAG flag, VO_OSMP_SRC_FORMAT type, VOOSMPOpenParam openParam);
    VO_OSMP_RETURN_CODE init(VO_OSMP_PLAYER_ENGINE playEngineType, VOOSMPInitParam initParam);

3   If you are using event ID VO_OSMP_SRC_CB_DRM_VERIFICATION, rename it to VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO (It was actually moved from enum VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID).

4   setPreAgreedLicense() is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:
    a. init()
    b. setLicenseFilePath() or setLicenseContent()
    c. setPreAgreedLicense("License key here")
    d. open()

5   Known issues:
    Event VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL is not correct (with wrong Object type);
    Implementation of enablePCMOutput() is not complete

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.17.0 | add | Event ID | Windows, Mac OS | VO_OSMP_CB_VIDEO_RENDER_FAIL | Event is triggered when video rendering is failed. |
| API3 | V3.17.0 | add | Event ID | Windows, Mac OS | VO_OSMP_CB_AUDIO_RENDER_FAIL | Event is triggered when audio rendering is failed. |
| API3 | V3.17.0 | add | function | iOS | setSphericalVideoView | Configure the settings for decoding 360 degree video |
| API3 | V3.17.0 | add | function | iOS | enableSphericalVideo | Enable or disable the decoding of 360 degree video |
| API3 | V3.17.0 | change | function | iOS | VOOSMPOpenParam | Add settings of video decoder type |
| API3 | V3.17.0 | add | function | Android, iOS | enableDRMOfflineMode | Enable or disable DRM offline mode |
| API3 | V3.16.10 | add | fcuntion | Android | setHWDecoderMaxResolution | Configure the maximum resolution when initializing hardware decoder |
| API3 | V3.16.0 | change | Event ID | all | VO_OSMP_SRC_ADAPTIVE_STREAMING_INFO_EVENT_PLAYLIST_DOWNLOADOK | callback for accessing the downloaded MasterPlaylist |
| API3 | V3.16.0 | add | function | Android, iOS | enableSEIPostProcessVideo | Enable or disable video post-processing with SEI |
| API3 | V3.15.0 | add | function | Android | enforceSoftwareVideoScaling | Enable or disable the video scaling using software. |
| API3 | V3.15.0 | add | function | all | enablesubtitleAutoAdjustment | Enable or disable the automatic adjustment of font size and position for subtitle. |
| API3 | V3.14.0 | add | function | Android, iOS | setPreference | Set preference for playback |
| API3 | V3.14.0 | add | function | Android | setSubtitleTrim | Trim String to make subtitle position correct |
| API2 | V3.14.0 | add | Event ID | Android, iOS | VOOSMP_PID_ANALYTICS_FOUNDATION_LOCATION | |
| API3 | V3.14.0 | add | function | all | setAnalyticsFoundationCUID | |
| API3 | V3.14.0 | change | function | Android | resume | Change parameter to Object, in case Surface is used only for video playback |
| API3 | V3.14.0 | add | function | Android | setSurface | Add new interface to use Surface for video playback |
| API3 | V3.14.0 | add | Event ID | all | VO_OSMP_SRC_RTSP_ERROR_HTTP_ERROR VO_OSMP_SRC_RTSP_ERROR_URL_EXPIRED | |
| API3 | V3.14.0 | add | function | all | setSubtitleGravity | Set gravity for subtitle |
| API3 | V3.14.0 | add | function | all | setSubtitleBoundingBox | Set bounding box for subtitle |
| API3 | V3.14.0 | add | function | Android | setDRMFilePath | Support multiple users with Verimatrix DRM |
| API3 | V3.14.0 | add | function | Android, iOS | getDRMKeyExpiredStatus | Add new interface to check license expiration of downloaded content |
| API3 | V3.14.0 | deprecated | function | Android | setSubtitleFontPosition | Rename to setSubtitleBoundingBox |
| API3 | V3.14.0 | change | function | Android | setView | Use voSurfaceView |
| API3 | V3.14.0 | add | function | all | setAudioEffectEndpointType | Speaker endpoint settings |
| API3 | V3.14.0 | add | Event ID | Plug-ins | VO_OSMP_CB_SUSPEND | Support session control events |
| API3 | V3.14.0 | add | Event ID | Plug-ins | VO_OSMP_CB_RESUME | Support session control events |
| API3 | V3.14.0 | add | function | Android | setSmoothBAWhiteListFile | Add device.xml related interface implementation |
| API3 | V3.14.0 | add | function | Android | setSubtitleFontPosition | Set position for subtitle |
| API3 | V3.13.0 | add | function | all | getValidBufferDuration | |

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.13.0 | add | function | all | getDownloadStatus | |
| API3 | V3.13.0 | add | function | Android | enableSEIPostProcessVideo | |
| API3 | V3.13.0 | add | function | all | enableHTTPGzipRequest | |
| API3 | V3.13.0 | add | function | Android | setVolume | |
| API3 | V3.13.0 | add | function | all | getProcessorType | |
| API3 | V3.13.0 | add | function | all | getErrorCode | |
| API3 | V3.13.0 | deprecated | function | iOS, Plugin | enableDolbyLibrary | sync up with Android: Replaced by enableAudioDecoderLibrary |
| API3 | V3.13.0 | add | Event ID | all | VO_OSMP_SRC_CB_IO_HTTP_START_DOWNLOAD VO_OSMP_SRC_CB_IO_HTTP_DOWNLOAD_FAIL | |
| API3 | V3.13.0 | deprecated | Event ID | all | VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL | replaced with above new added events |
| API2 | V3.13.0 | add | Event ID | all | VO_OSMP_CB_OUTPUT_CONTROL_CHANGE_RESOLUTION | |
| API2 | V3.13.0 | deprecated | Event ID | all | VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION | replaced with above new added event |
| API2 | V3.13.0 | add | Event ID | Android,iOS | VOOSMP_CB_Output_Control_Change_Resolution | |
| API2 | V3.13.0 | deprecated | Event ID | Android,iOS | VOOSMP_CB_Downgrade_Resolution | replaced with above new added event |
| API2 | V3.13.0 | add | Event ID | Android | VO_OSMP_DEC_AUDIO_IOMX | |
| API2 | V3.13.0 | add | Event ID | iOS | VOOSMP_PID_SUBTITLE_DISPLAY | |
| API2 | V3.13.0 | deprecated | Event ID | iOS | VOOSMP_PID_SUBTITLE_DISPALY | replaced with VOOSMP_PID_SUBTITLE_DISPLAY |
| API2 | V3.13.0 | add | Event ID | Android | VOOSMP_AUDIO_DECODER_TYPE_IOMX | |
| API2 | V3.13.0 | add | Event ID | Android | VOOSMP_PID_AUDIO_DECODER_TYPE | |
| API2 | V3.13.0 | deprecated | Event ID | Android | VOOSMP_PID_MEDIACODEC_AUDIO_DECODER | replaced by VOOSMP_PID_AUDIO_DECODER_TYPE |
| API3 | V3.12.0 | add | function | all | getUTCPosition | |
| API3 | V3.12.0 | add | function | Android | enableVOAdaptivePlayback | |
| API3 | V3.12.0 | add | function | all | setRTSPMaxSocketErrorCount | |
| API3 | V3.12.0 | add | function | all | setRTSPConnectionTimeout | |
| API3 | V3.12.0 | add | function | Android | getSeriesTitle | |
| API3 | V3.12.0 | add | function | Android,iOS | enableAnalyticsDisplay | |
| API3 | V3.12.0 | add | function | Android,iOS | setAnalyticsDisplayType | |
| API3 | V3.12.0 | change | function | all | init | |
| API3 | V3.12.0 | change | function | all | open | |
| API3 | V3.12.0 | delete | function | Android,iOS | getDRMUniqueIndentifier | |
| API3 | V3.12.0 | delete | function | Android,iOS | setDRMUniqueIndentifier | |
| API3 | V3.12.0 | delete | function | Android | getFileSize | |
| API3 | V3.12.0 | delete | function | Android | setFileSize | |

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.11.10 | add | function | all | isOutputControlActive | |
| API3 | V3.11.10 | add | function | all | isOutputControlEnforce | |
| API3 | V3.11.0 | deprecated | Event ID | Android,iOS | VO_OSMP_CB_SRC_BUFFER_TIME | **replaced with VO_OSMP_CB_SRC_BUFFERING_TIME** |
| API3 | V3.11.0 | add | Event ID | Android,iOS | VO_OSMP_CB_SRC_BUFFERING_TIME | |
| API3 | V3.11.0 | deprecated | Event ID | Android,iOS | VO_OSMP_SRC_CB_ADAPTIVE_STREAM_WARNING | **replaced with VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING** |
| API3 | V3.11.0 | add | Event ID | Android,iOS | VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING | |
| API3 | V3.11.0 | add | Event ID | all | VO_OSMP_CB_OUTPUT_CONTROL_CAPTURE_SOFTWARE_RUNNING | |
| API3 | V3.11.0 | add | function | all | enableAudioDecoderLibrary | |
| API3 | V3.11.0 | add | function | Android | resume | |
| API3 | V3.11.0 | deprecated | function | Android,iOS | setDefaultAudioLanguage | **replaced with setPreferredAudioLanguage** |
| API3 | V3.11.0 | deprecated | function | Android,iOS | setDefaultSubtitleLanguage | **replaced with setPreferredSubtitleLanguage** |
| API3 | V3.11.0 | add | function | Android,iOS | setPreferredAudioLanguage | |
| API3 | V3.11.0 | add | function | Android,iOS | setPreferredSubtitleLanguage | |
| API3 | V3.11.0 | add | Event ID | Android,iOS | VO_OSMP_SRC_FFSTREAMING_PUSHPD | |
| API3 | V3.11.0 | add | function | Android,iOS | setInitialBufferingTime | |
| API3 | V3.11.0 | deprecated | function | Android,iOS | setInitialBufferTime | |
| API3 | V3.11.0 | add | function | Android,iOS | setMaxBufferingTime | |
| API3 | V3.11.0 | deprecated | function | Android,iOS | setMaxBufferTime | |
| API3 | V3.11.0 | change | function | Plugin | getPlayingAsset | return value JSON object content changed |
| API3 | V3.11.0 | add | function | Plugin | setRenderType | |
| API3 | V3.10.0 | add | Event ID | all | VO_OSMP_CB_CODEC_NOT_SUPPORT | |
| API3 | V3.10.0 | add | Event ID | Android,iOS | VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT | |
| API3 | V3.10.0 | add | Event ID | Android,iOS | VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK | |
| API3 | V3.10.0 | add | Event ID | Android,iOS | VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION | |
| API3 | V3.10.0 | add | Event ID | Android,iOS | VO_OSMP_OUTPUT_CONTROL_TYPE | |
| API3 | V3.10.0 | add | function | all | setDefaultAudioLanguage | |
| API3 | V3.10.0 | add | function | all | setDefaultSubtitleLanguage | |
| API3 | V3.10.0 | add | function | Android,iOS | deleteContent | |
| API3 | V3.10.0 | add | function | Android,iOS | getDuration | |
| API3 | V3.10.0 | add | function | Android,iOS | setDRMLibrary | |
| API3 | V3.10.0 | add | function | Android,iOS | setDRMUniqueIdentifier | |
| API3 | V3.10.0 | add | function | Android,iOS | setDRMVerificationInfo | |
| API3 | V3.10.0 | add | function | iOS | notifyViewSizeChanged | |
| API3 | V3.10.0 | change | function | iOS | setDisplayArea | only change on comment. |
| API3 | V3.10.0 | change | function | iOS | setZoomMode | only change on comment. |

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.9.3 | add | add | all | VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED | new return code |
| API3 | V3.9.3 | add | data | Plugin | VOOSMPChunkInfo | add type/rootURL/URL/startTime/duration/timeScale |
| API3 | V3.9.3 | add | Event ID | all | VO_OSMP_MODULE_TYPE_DRM_VENDOR_A | |
| API3 | V3.9.3 | add | Event ID | Android,iOS | VO_OSMP_CB_AUDIO_RENDER_FAIL | |
| API3 | V3.9.3 | add | function | all | getPlaybackDuration | |
| API3 | V3.9.3 | change | function | all | getRootURL | |
| API3 | V3.9.3 | add | function | all | getTotalCodecDropNum | |
| API3 | V3.9.3 | add | function | all | getTotalDocodedNum | |
| API3 | V3.9.3 | add | function | all | getTotalRenderDropNum | |
| API3 | V3.9.3 | add | function | all | getTotalRenderedNum | |
| API3 | V3.9.3 | add | function | all | getTotalSourceDropNum | |
| API3 | V3.9.3 | change | function | all | getURL | |
| API3 | V3.9.3 | add | function | all | setHTTPRetryTimeout | |
| API3 | V3.9.3 | add | function | Android | setSubtitleTypeface | |
| API3 | V3.9.3 | add | function | Android, iOS | previewSubtitle | |
| API3 | V3.9.3 | change | function | Android, iOS | startAnalyticsNotification | Removed to PlayerControl |
| API3 | V3.9.3 | change | function | Android, iOS | stopAnalyticsNotification | Removed to PlayerControl |
| API3 | V3.9.3 | change | function | Plugin | playbackDuration | |
| API3 | V3.9.3 | change | function | Plugin | registerEventHandler | |
| API3 | V3.9.3 | change | function | Plugin | setOnEventHandler | |
| API3 | V3.9.0 | add | function | all | enableRTSPOverHTTP | |
| API3 | V3.9.0 | add | function | all | getRTSPStatistics | |
| API3 | V3.9.0 | add | function | all | setRTSPOverHTTPConnectionPort | |
| API3 | V3.9.0 | add | function | all | setSegmentDownloadRetryCount | |
| API3 | V3.9.0 | add | function | Android | setSurfaceHolder | |
| API3 | V3.8.3 | add | function | all | enableCPUAdaptation | default is Enabled. |
| API3 | V3.7.11 | change | function | Android | getmProxyHost | returns String |
| API3 | V3.7.11 | change | function | Android | getmProxyPort | returns int |
| API3 | V3.7.11 | change | function | Android | setDataFlag | returns VO_OSMP_RETURN_CODE |
| API3 | V3.7.11 | change | function | Android | setmProxyHost | returns VO_OSMP_RETURN_CODE |
| API3 | V3.7.11 | change | function | Android | setmProxyPort | returns VO_OSMP_RETURN_CODE |
| API3 | V3.7.11 | change | function | Android | setResponseString | returns VO_OSMP_RETURN_CODE |
| API3 | V3.7.11 | change | function | Android | setVerificationString | returns VO_OSMP_RETURN_CODE |
| API3 | V3.7.10 | add | function | all | getAudioDecodingBitrate | |
| API3 | V3.7.10 | add | function | all | getDRMUniqueIdentifier | |
| API3 | V3.7.10 | add | function | all | getVideoDecodingBitrate | |
| API3 | V3.7.10 | add | function | all | setDRMUniqueIdentifier | |
| API3 | V3.7.10 | change | function | Plugin | open | new added with parameters VO_OSMP_SRC_FORMAT sourceType, VOOSMPOpenParam* openParam. They are null by default. |
| API3 | V3.7.7 | add | Event ID | Android | VO_OSMP_AD_CB_PLAYBACKINFO | |

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.7.7 | add | function | all | enableLiveStreamingDVRPosition | The function will extend usage of getPosition, getMinPosition, getMaxPosition |
| API3 | V3.7.6 | add | Event ID | iOS | VO_OSMP_SRC_CB_PD_BUFFERING_PERCENT | |
| API3 | V3.7.6 | add | Event ID | iOS | VO_OSMP_SRC_CB_PD_DOWNLOAD_POSITION | |
| API3 | V3.7.6 | add | function | Android | addTrackingServer | |
| API3 | V3.7.6 | add | function | Android | enableFullScreen | |
| API3 | V3.7.6 | add | function | Android, iOS | enableSEI | |
| API3 | V3.7.6 | add | function | Android, iOS | getSEIInfo | |
| API3 | V3.7.6 | add | function | Android, iOS | startSEINotification | |
| API3 | V3.7.6 | add | function | Android, iOS | stopSEINotification | |
| API3 | V3.7.6 | add | function | iOS | captureVideoImage | |
| API3 | V3.7.5 | add | function | Android | setAdTrackingAPI | |
| API3 | V3.7.5 | add | function | Plugin | getDRMUniqueIndentifier | |
| API3 | V3.7.5 | add | function | Plugin | showCursor | |
| API3 | V3.7.4 | add | constant | Android, iOS | VO_OSMP_SEI_INFO_FLAG | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_AD_END | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_AD_LOAD_ERROR | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_AD_START | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_CONTENT_END | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_CONTENT_START | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_DATA_LOAD_ERROR | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_NO_AD_CONTENT | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_PLAYLIST_END | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_PLAYLIST_START | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_STATE_CHANGE | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_VIDEO_DONE | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_VIDEO_GEO_BLOCKED | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_VIDEO_NOT_AVAILABLE | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_CB_VIDEO_PROGRESS | |
| API3 | V3.7.4 | add | Event ID | Android | VO_OSMP_AD_STATUS | |
| API3 | V3.7.4 | add | Event ID | Android, iOS | VO_OSMP_CB_SEI_INFO | |
| API3 | V3.7.4 | add | Event ID | Plugin | VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO | |
| API3 | V3.7.4 | add | Event ID | Plugin | VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL | |
| API3 | V3.7.4 | add | Event ID | Plugin | VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD | |
| API3 | V3.7.4 | add | function | Android | getVideoAdClickThru | |
| API3 | V3.7.4 | add | function | Android | loadAdCall | |
| API3 | V3.7.4 | add | function | Android | loadVideoByUrl | |
| API3 | V3.7.4 | add | function | Android, iOS | enableSEI | |

| Category | Ver | Action | Type | Platform | Name | Description |
|----------|-----|--------|------|----------|------|-------------|
| API3 | V3.7.4 | add | function | Android, iOS | getSEIInfo | |
| API3 | V3.7.4 | add | function | Android, iOS | startSEINotification | |
| API3 | V3.7.4 | add | function | Android, iOS | stopSEINotification | |
| API3 | V3.7.3 | add | function | Android | loadVideoById | |
| API3 | V3.7.2 | add | constant | all | VO_OSMP_RATIO_AUTO | |
| API3 | V3.7.2 | add | constant | all | VO_OSMP_RATIO_ORIGINAL | |
| API3 | V3.7.2 | rename | constant | Android, Plugin | INDEX_VIDEO_AUTO | Rename to VO_OSMP_ASSET_AUTO_SELECTED |
| API3 | V3.7.2 | add | constant | Android, Plugin | VO_OSMP_ASSET_NOT_SELECTED | |
| API3 | V3.7.2 | add | Event ID | all | VO_OSMP_SRC_CB_NOT_APPLICABLE_MEDIA | |
| API3 | V3.7.2 | change | function | all | getPlayingAsset | Return the actual indices of video/audio/subtitle tracks which are being played.<br>1. If a track is being played, its index is returned through VOOSMPAssetIndex.<br>2. If no track of a specific type (mostly likely subtitle) is being played, then the corresponding index in VOOSMPAssetIndex is set to VO_OSMP_ASSET_NOT_SELECTED. |
| API3 | V3.7.2 | add | function | all | setAnewBufferingTime | |
| API3 | V3.7.2 | add | function | Android, Plugin | getCurrentSelection | |
| API3 | V3.7 | add | Event ID | Plugin | VO_OSMP_CB_FULLSCREEN_INDICATOR | |
| API3 | V3.7 | add | function | all | Configuration::setPresentationDelay | |
| API3 | V3.7 | change | function | Android | setDRMAdapter | Argument changed: from setDRMAdapter(int adapter) to setDRMAdapter(Object adapter, boolean isLibraryName) |
| API3 | V3.7 | add | function | Android, iOS | Configuration::getVersion | For plugin, use .version property of plug in object instead |
| API3 | V3.7 | add | function | iOS | getCurrentSelection | |
| API3 | V3.7 | add | function | Plugin | isFullScreen | |
| API3 | V3.7 | add | function | Plugin | toggleOverlayUI | |
| API3 | V3.6 | add | Error Code | all | VO_OSMP_ERR_LICENSE_FAIL | |
| API3 | V3.6 | add | Event ID | all | VO_OSMP_CB_LICENSE_FAIL | |
| API3 | V3.6 | add | Event ID | all | VO_OSMP_CB_PCM_OUTPUT | |
| API3 | V3.6 | rename | Event ID | all | VO_OSMP_SRC_CB_DRM_VERIFICATION | to VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO |
| API3 | V3.6 | add | function | all | Configuration: setAudioPlaybackSpeed | |
| API3 | V3.6 | change | function | all | onVOSyncEvent | type of argument 1: from VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID |
| API3 | V3.6 | add | function | Android | OpenParam: getDecoderType | |
| API3 | V3.6 | add | function | Android | OpenParam: setDecoderType | |
| API3 | V3.6 | add | function | Android, iOS | Buffer: getBuffer | |
| API3 | V3.6 | add | function | Android, iOS | Buffer: getBufferSize | |
| API3 | V3.6 | add | function | Android, iOS | Buffer: getTimestamp | |
| API3 | V3.6 | add | function | Android, iOS | Configuration: enablePCMOutput | |
| API3 | V3.6 | add | function | Android, iOS | Configuration: setDRMAdapter | |

| Category | Ver | Action | Type | Platform | Name | Description |
|---|---|---|---|---|---|---|
| API3 | V3.6 | add | function | Android, iOS | HTTPDownloadFailure: getReason | |
| API3 | V3.6 | add | function | Android, iOS | HTTPDownloadFailure: getResponse | |
| API3 | V3.6 | add | function | Android, iOS | HTTPDownloadFailure: getURL | |
| API3 | V3.6 | add | function | Plugin | Control: setOnEventHandler | |
| API3 | V3.6 | add | function | Plugin | RTSPConfiguration: getRTSPStatistics | |
| API3 | V3.6 | add | function | Plugin | RTSPConfiguration: setRTSPConnectionPort | |
| API3 | V3.6 | add | function | Plugin | RTSPConfiguration: setRTSPConnectionType | |
| API3 | V3.5 | overload | function | all | Control:init | |
| API3 | V3.5 | overload | function | all | Control:open | |
| API3 | V3.5 | add | function | all | onVOSyncEvent | |
| API2 | V3.10.0 | add | Param ID | Android, iOS | VOOSMP_PID_OUTPUT_CONTROL_ACTIVE | |
| API2 | V3.10.0 | add | Param ID | Android, iOS | VOOSMP_PID_OUTPUT_CONTROL_ENFORCE | |
| API2 | V3.7.4 | add | Event ID | Android | VOOSMP_PID_SUBTITLE_TIME_OFFSET | |
| API2 | V3.7.2 | add | constant | Android, iOS | VOOSMP_RATIO_2331 | API3 already has it |
| API2 | V3.7.2 | add | constant | Android, iOS | VOOSMP_RATIO_AUTO | |
| API2 | V3.7.2 | add | constant | Android, iOS | VOOSMP_RATIO_ORIGINAL | |
| API2 | V3.7.2 | add | Event ID | Android, iOS | VOOSMP_SRC_CB_Not_Applicable_Media | |
| API2 | V3.7 | add | Event ID | Android, iOS | VOOSMP_SRC_CB_DRM_Init_Data | |
| API2 | V3.7 | add | Event ID | Plugin | VOOSMP_CB_FullScreen | |
| API2 | V3.7 | add | Param ID | Android, iOS | VOOSMP_PID_DRM_UNIQUE_IDENTIFIER | |
| API2 | V3.7 | add | Param ID | Android, iOS | VOOSMP_PID_MODULE_VERSION | |
| API2 | V3.7 | add | Param ID | Android, iOS | VOOSMP_SRC_PID_PRESENTATION_DELAY | |
| API2 | V3.6 | add | Error Code | all | VOOSMP_ERR_LicenseFailed | |
| API2 | V3.6 | add | Event ID | all | ID_STREAMING_VOLIBLICENSEERROR | |
| API2 | V3.6 | add | Event ID | all | VOOSMP_CB_LicenseFailed | |
| API2 | V3.6 | add | Param ID | all | VOOSMP_PID_AUDIO_PLAYBACK_SPEED | |
| API2 | V3.6 | define | Param ID | all | VOOSMP_PID_MODULE_VERSION | |
| API2 | V3.6 | add | Param ID | all | VOOSMP_SRC_PID_DRM_ADAPTER_OBJECT | |

**Action**      **Description**

add             type/constant/function added

remove          type/constant/function removed

change          argument changed in a function

rename          function renamed; constant renamed or moved from one enum to another

define          defined, but not really used or not implemented

overload        added function with same name but different arguments

deprecated      not recommended, will be remvoed in the future.