

# Chartboost

## **SDK Extension** **for GameMaker Studio 1.4** **and GameMaker Studio 2.0** (Android & iOS)

~ API Documentation v1.2.11 ~

by  
**Josep Gonzalez**

## INDEX

Introduction	3
GameMaker: Studio version tested	3
Current SDK version	3
Minimum OS version	3
OS version tested	3
Games using Chartboost Extension	3
Methods	5
chartboost_init_sdk( appId String, appSignature String )	5
chartboost_cache_interstitial( location CLLocation )	5
chartboost_show_interstitial( location CLLocation )	5
chartboost_has_interstitial( location CLLocation )	6
chartboost_cache_rewarded_video( location CLLocation )	6
chartboost_show_rewarded_video( location CLLocation )	6
chartboost_has_rewarded_video( location CLLocation )	7
chartboost_cache_more_apps( location CLLocation )	7
chartboost_show_more_apps( location CLLocation )	7
chartboost_has_more_apps( location CLLocation )	8
chartboost_set_auto_cache_ads( enable Boolean)	8
chartboost_get_auto_cache_ads()	8
chartboost_get_sdk_version()	8
chartboost_has_internet_connection()	9
Delegates	10
CBDidInitialize	10
CBDidCacheInterstitial	10
CBDidFailToLoadInterstitial	10
CBDidDismissInterstitial	10
CBDidCloseInterstitial	11
CBDidClickInterstitial	11
CBDidDisplayInterstitial	11
CBDidCacheRewardedVideo	11
CBDidFailToLoadRewardedVideo	12
CBDidDismissRewardedVideo	12
CBDidCloseRewardedVideo	12
CBDidClickRewardedVideo	13
CBDidCompleteRewardedVideo	13
CBDidDisplayRewardedVideo	13
CBDidCacheMoreApps	13
CBDidFailToLoadMoreApps	14

CBDidDismissMoreApps	14
CBDidCloseMoreApps	14
CBDidClickMoreApps	14
CBDidDisplayMoreApps	15
Locations	16
Load Errors	17
CBLoadErrorFirstSessionInterstitialsDisabled	17
CBLoadErrorInternal	17
CBLoadErrorInternetUnavailable	17
CBLoadErrorNetworkFailure	17
CBLoadErrorNoAdFound	17
CBLoadErrorNoLocationFound	17
CBLoadErrorSessionNotStarted	17
CBLoadErrorTooManyConnections	18
CBLoadErrorWrongOrientation	18
Usage	18
Extra Usage (Only Android)	20
Extra Usage (Only Amazon)	21
IMPORTANT	21
Contact	23
Thank you for your purchase!	24

## Introduction

*Chartboost SDK Extension* lets you display mobile ads from **Chartboost** for Android, iOS and Fire OS devices. You can use just this extension to display ads, or you can even use it with other ad extensions all together.

### GameMaker: Studio version tested

- v1.4.1763
- v2.0.6

### Current SDK version

- **iOS:** 6.6.3 (May 1, 2017)
- **Android:** 6.6.3 (Mar. 30, 2017)
- **Fire OS:** 6.6.3 (Mar. 30, 2017)

### Minimum OS version

- **iOS:** 7.0 or later
- **Android:** 2.3 (API level 9) or later

### OS version tested

- **iOS:** 7.1.2, 8.4.1, 9.3.5, 10.2.1
- **Android:** 4.1 (API 16), 4.4 (API 19), 5.1.1 (API 22), 6.0.1 (API 23), 7.0 (API 24)
- **Fire OS:** 5.3.3.0

### Games using Chartboost Extension:

- **iOS**
  - Devilicious: <https://itunes.apple.com/app/id1156278022?mt=8>
  - Iron Snout+: <https://itunes.apple.com/app/id1162897879?mt=8>
  - Pixel Car Racer: <https://itunes.apple.com/app/id1068808996?mt=8>
- **Android**
  - Devilicious: <https://play.google.com/store/apps/details?id=com.jgonfer.devilicious>
  - Iron Snout+: <https://play.google.com/store/apps/details?id=com.snoutup.ironsnoutsteamed>
  - Pixel Car Racer: <https://play.google.com/store/apps/details?id=com.StudioFurukawa.PixelCarRacer>

*(Is your game using the Chartboost Extension? Do you want to place your game here? Contact me and I'll place it in the list above)*

## Methods

### `chartboost_init_sdk( appID String, appSignature String )`

Initializes the Chartboost SDK using the specified appID and the appSignature.

Argument	Description
appID	The platform specific <b>appID</b> . This can be found listed under your project in the <a href="#">Chartboost dashboard</a> .
appSignature	The platform specific <b>appSignature</b> . This can be found listed under your project in the <a href="#">Chartboost dashboard</a> .

**Returns:** N/A

### `chartboost_cache_interstitial( location CBLocation )`

**Interstitial ads** can be cached for display at a later time using this method.

Caching (preloading) ads before you need to display them is a best practice that can help optimize your games' user experience. When an ad is already cached on the device it will display much faster when requested, and you can verify that there is an ad available before you even make the choice to display it.

Each ad type and named location has its own cache, so you can have several ads cached at the same time at different named locations (**CBLocation**).

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** N/A

### `chartboost_show_interstitial( location CBLocation )`

Shows an **Interstitial ad** using the location specified.

Argument	Description
----------	-------------

location	The platform specific game identifier. See <b>CBLocation</b> constants.
----------	---

**Returns:** N/A.

## chartboost\_has\_interstitial( location CBLocation )

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** Double. Returns **(1)** if the specified **Interstitial ad** is ready to show a static ad, and **(0)** if not.

## chartboost\_cache\_rewarded\_video( location CBLocation )

**Rewarded Video ads** can be cached for display at a later time using this method.

Caching (preloading) ads before you need to display them is a best practice that can help optimize your games' user experience. When an ad is already cached on the device it will display much faster when requested, and you can verify that there is an ad available before you even make the choice to display it.

Each ad type and named location has its own cache, so you can have several ads cached at the same time at different named locations (**CBLocation**).

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** N/A

## chartboost\_show\_rewarded\_video( location CBLocation )

Shows an **Rewarded Video ad** using the location specified.

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** N/A.

## chartboost\_has\_rewarded\_video( location CBLocation )

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** Double. Returns **(1)** if the specified **Rewarded Video ad** is ready to show a rewarded video ad, and **(0)** if not.

## chartboost\_cache\_more\_apps( location CBLocation )

**More Apps pages** can be cached for display at a later time using this method.

Caching (preloading) ads before you need to display them is a best practice that can help optimize your games' user experience. When an ad is already cached on the device it will display much faster when requested, and you can verify that there is an ad available before you even make the choice to display it.

Each ad type and named location has its own cache, so you can have several ads cached at the same time at different named locations (**CBLocation**).

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** N/A

## chartboost\_show\_more\_apps( location CBLocation )

Shows a **More Apps pages** using the location specified.

Argument	Description
location	The platform specific game identifier. See <b>CBLocation</b> constants.

**Returns:** N/A.

## chartboost\_has\_more\_apps( location CLLocation )

Argument	Description
location	The platform specific game identifier. See <b>CLLocation</b> constants.

**Returns:** Double. Returns **(1)** if the specified **More Apps** pages is ready to show a list of more apps, and **(0)** if not.

## chartboost\_set\_auto\_cache\_ads( enable Boolean)

This Chartboost SDK Extension includes behavior to automatically cache ads after they've been successfully displayed at the named location. However, it is still best practice to manually cache ads at bootup or other logical points in your app before you need to display them (in addition to letting autocache work its magic).

Autocaching will **not** cause unnecessary network requests, as any cache calls (auto or manual) will only send network requests if the cache is empty at a specific location.

Argument	Description
enable	Set <b>(1)</b> to enable the auto cache feature or <b>(0)</b> to disable it. It's enabled by default.

**Returns:** N/A.

## chartboost\_get\_auto\_cache\_ads()

**Arguments:** N/A

**Returns:** Double. Returns **(1)** if the auto cache feature is enabled and **(0)** if not. It's **(1)** enabled by default.

## chartboost\_get\_sdk\_version()

**Arguments:** N/A

**Returns:** String. Returns the Chartboost SDK version as string.



## `chartboost_has_internet_connection()`

**Arguments:** N/A

**Returns:** Double. Returns **(1)** if the device has internet connection or **(0)** if not.

## Delegates

### CBDidInitialize

Called after the SDK has been successfully initialized and video prefetching has been completed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
status	The result status after initialize the SDK. It returns <b>(1)</b> if the SDK has been initialized or <b>(0)</b> if not.

### CBDidCacheInterstitial

Called after a static ad has been loaded from the Chartboost API servers and cached locally.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

### CBDidFailToLoadInterstitial

Called after a static ad has attempted to load from the Chartboost API servers but failed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
error	The Chartboost error that occurred. See <b>CBLoadError</b> constants.

### CBDidDismissInterstitial

Called after a static ad has been dismissed.

Argument	Description
----------	-------------

type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
------	--

## CBDidCloseInterstitial

Called after a static ad has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidClickInterstitial

Called after a static ad has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidDisplayInterstitial

Implement to be notified of when a static ad did display on the screen for a given **CLLocation**. You can then resume things like play effects and sounds.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidCacheRewardedVideo

Called after a rewarded video has been loaded from the Chartboost API servers and cached locally.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidFailToLoadRewardedVideo

Called after a rewarded video has attempted to load from the Chartboost API servers but failed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
error	The Chartboost error that occurred. See <b>CBLoadError</b> constants.

## CBDidDismissRewardedVideo

Called after a rewarded video has been dismissed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidCloseRewardedVideo

Called after a rewarded video has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidClickRewardedVideo

Called after a rewarded video has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidCompleteRewardedVideo

Called after a rewarded video has been viewed completely and user is eligible for reward.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
reward	The reward amount ( <b>Int</b> ) that the user has to received as a result.

## CBDidDisplayRewardedVideo

Implement to be notified of when a video did display on the screen for a given **CLLocation**. You can then resume things like play effects and sounds.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidCacheMoreApps

Called after a list of more apps has been loaded from the Chartboost API servers and cached locally.

Argument	Description
----------	-------------

type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
------	--

## CBDidFailToLoadMoreApps

Called after a list of more apps has attempted to load from the Chartboost API servers but failed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.
error	The Chartboost error that occurred. See <b>CBLoadError</b> constants.

## CBDidDismissMoreApps

Called after a list of more apps has been dismissed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidCloseMoreApps

Called after a list of more apps has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidClickMoreApps

Called after a list of more apps has been closed.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## CBDidDisplayMoreApps

Implement to be notified of when a list of more apps did display on the screen for a given **CLLocation**. You can then resume things like play effects and sounds.

Argument	Description
type	The constant type of the Delegate method that the <b>Social Asynchronous Event</b> has received.

## Locations

Show different ad campaigns at different points in your game and fine-tune your campaigns' behavior from your dashboard. Customize your game logic to match the right ad request with the right player at the right time.

Learn more about **Locations** and advanced settings here:

<https://answers.chartboost.com/hc/en-us/articles/204888915-Named-Locations>

I recommend you to use **CBLocationDefault** location if you want a quick implementation and your game has a simple ad logic.

- CBLocationStartup
- CBLocationHomeScreen
- CBLocationMainMenu
- CBLocationGameScreen
- CBLocationAchievements
- CBLocationQuests
- CBLocationPause
- CBLocationLevelStart
- CBLocationLevelComplete
- CBLocationTurnComplete
- CBLocationIAPStore
- CBLocationItemStore
- CBLocationGameOver
- CBLocationLeaderBoard
- CBLocationSettings
- CBLocationQuit
- CBLocationDefault



## Load Errors

The enumerator **CBLoadError** is used to describe errors that may occur with Chartboost. Errors are reported by implementations of the **Delegate methods** received in the **Asynchronous Social Events**.

### CBLoadErrorFirstSessionInterstitialsDisabled

Fires when the **Chartboost SDK** is set to not show ads during the user's first-ever session.

### CBLoadErrorInternal

Multiple possible causes. Send your logs (with breakpoint where error occurs) to the Chartboost support team for assistance.

### CBLoadErrorInternetUnavailable

Fires when there is no internet connection on the test device. Troubleshoot possible device network connection issues.

### CBLoadErrorNetworkFailure

Fires when the network is unavailable on the device, or the device cannot connect to internet for any reason. Check your network settings and make sure your device is connected to the internet. If you still experience this error, please send Charles Web Proxy logs of the event to the Chartboost support team.

### CBLoadErrorNoAdFound

Fires when our ad server hasn't found an appropriate interstitial to deliver to the device. This could be due to location, campaign filters, fill rate, or other factors.

### CBLoadErrorNoLocationFound

Fires when you enter NULL for your named location string.

### CBLoadErrorSessionNotStarted

A valid Chartboost session has not been detected. Check that your app ID and app signature are correct and that you are properly initializing the **Chartboost SDK**.

## CBLoadErrorTooManyConnections

Fires when there are too many simultaneous requests made from/to the same named location. Use a new named location or otherwise reduce your requests to the location.

## CBLoadErrorWrongOrientation

Fires when Chartboost sends an interstitial of the wrong orientation to the device. Please verify in your [Chartboost dashboard](#) that the correct orientation settings have been selected for this **appID**. If possible, send Charles Web Proxy logs of the event to our support team.

## Usage



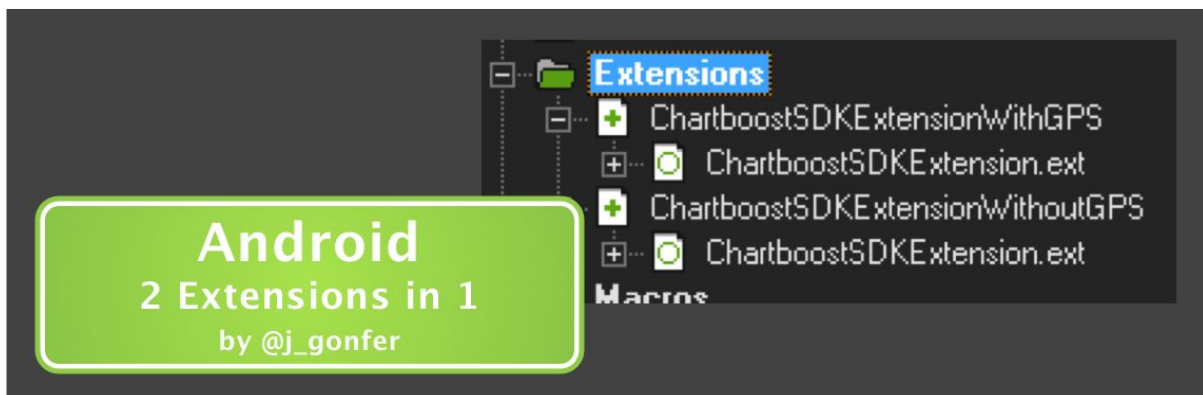
*Charboost SDK Extension* comes with a great example project to show how you should use all the functions included in the extension.

- Use the function **chartboost\_init\_sdk** to initialize the *Chartboost SDK*.
- (Optional) Use the function **chartboost\_set\_auto\_cache\_ads** if you want to set on/off to get automatically the ads cached.
- (Optional) Or even you can cache in memory Interstitials, MoreApps and RewardedVideo individually with the functions **chartboost\_cache\_interstitial**, **chartboost\_cache\_more\_apps** and **chartboost\_cache\_reWARDED\_video**.
- By default all kind of ads are cached automatically because **chartboost\_set\_auto\_cache\_ads** is set on.
- Use the functions **chartboost\_show\_interstitial**, **chartboost\_show\_more\_apps** and **chartboost\_show\_reWARDED\_video** to show ads.
- (Optional) Use the functions **chartboost\_has\_interstitial**, **chartboost\_has\_more\_apps** and **chartboost\_has\_reWARDED\_video** to know if that kind of ad is cached in memory or not.
- (Optional) Use the **chartboost\_has\_internet\_connection** function to know if there is *Internet Connection* or not and the game will be able to get Ads or initialize the SDK.

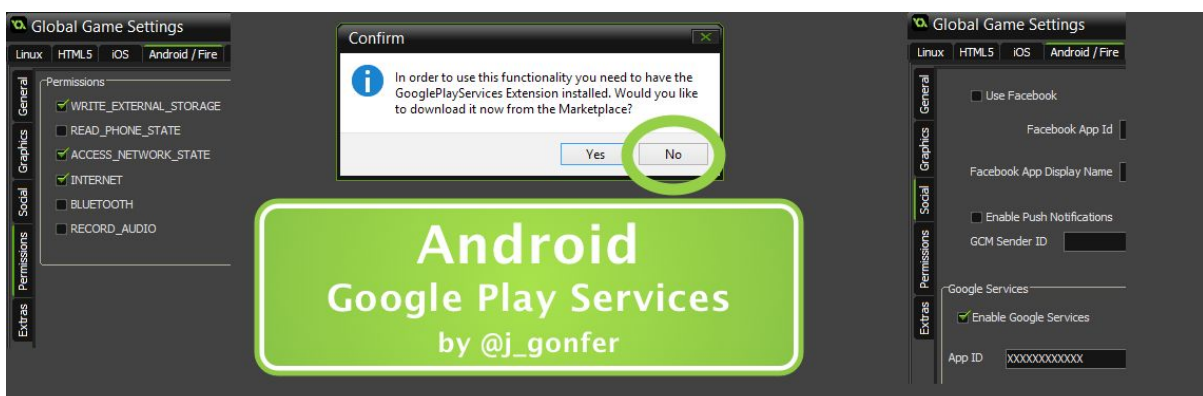



- The delegate methods will trigger a **Social asynchronous event**. Check the **Example Project** to know how you can handle the **Social asynchronous event** properly.

## Extra Usage (Only Android)

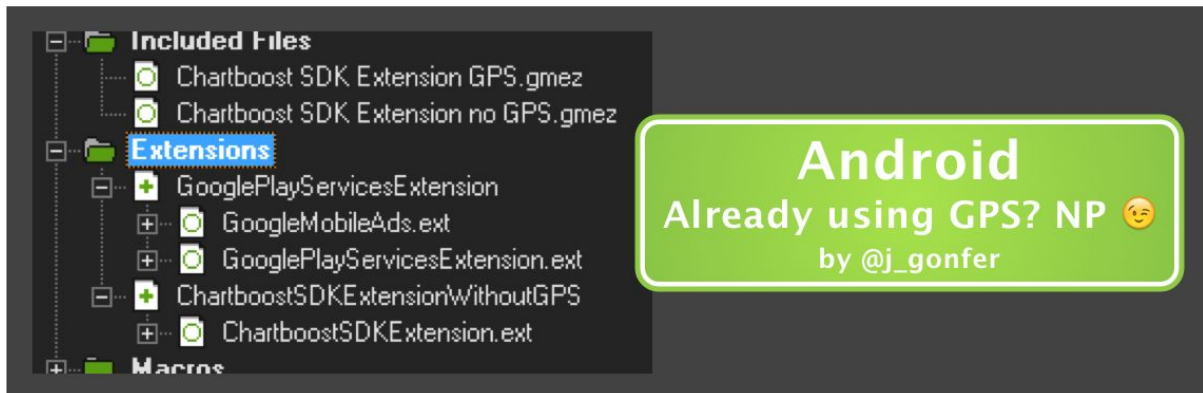


*Chartboost SDK Extension* includes two extensions in the **Included Files** folder. Let's see which fits better your necessities:



- **Chartboost SDK Extension GPS.gmez:** This file extension uses Gradle injection to import *Google Play Services* library. When you tap the  **Create Executable for Target** button, an alert box will be displayed for download and install the **GooglePlayServices Extension**. This step isn't necessary because the extension has already imported the library via Gradle injection. You need to the the **No**

button and save the APK file wherever you want. Choose this extension if you are using just this extension in your project or the other extensions you have don't use *Google Play Services*.



- **Chartboost SDK Extension no GPS.gmez:** When you are already using an extension like the *Google Play Services* from *YoYo Games* or another one that includes the *Google Play Services* library from *Google*, you have to choose this extension in order to avoid conflicts when you run your project.

## Extra Usage (Only Amazon)

To display Ads in Amazon devices with Fire OS you can import **Chartboost SDK Extension GPS.gmez** or **Chartboost SDK Extension no GPS.gmez**. But in order to avoid extra calls, you should import **Chartboost SDK Extension no GPS.gmez** because there is something important you need to have in mind, Fire OS games don't use Google Play Services.

## IMPORTANT

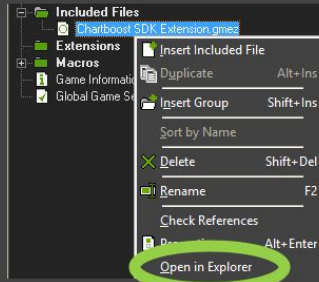
- The **Example Project** is using **appId** and **appSignature** owned by Chartboost. Please, consider to replace them by your own **appId** and **appSignature**. Create an account if you don't have done it yet, tap the **Sign up** button at the top-right corner: [Chartboost homepage](#).
- Setup a **Campaign** to display ads: [Chartboost help](#).
- Setup the **MoreApps** section in your **Chartboost Dashboard**: [Chartboost help](#)
- **Extension file** is in the **Included Files** folder, IMPORT it to the extensions first:

## Import Extension

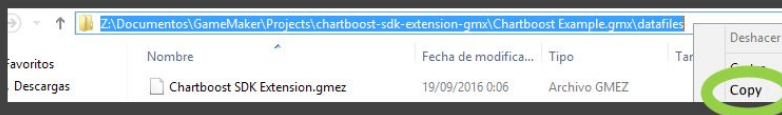
Chartboost SDK Extension.gmez

by @j\_gonfer

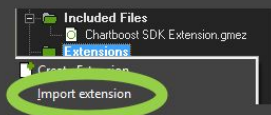
### ① Right click, select “Open in Explorer”



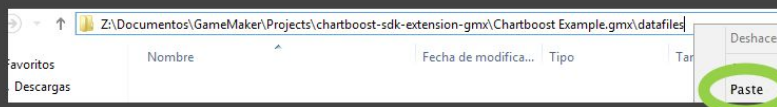
### ② Copy the directory path



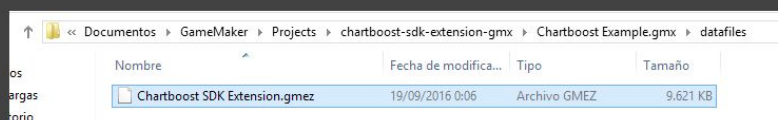
### ③ Right click, select “Import extension”



### ④ Paste the directory path into the path field



### ⑤ Select the “Chartboost SDK Extension.gmez”



1. Right click on **Chartboost SDK Extension GPS.gmez** or **Chartboost SDK Extension no GPS.gmez** in **Included files** and select **Open in Explorer** option.
2. Copy the directory path from the Path field in the Explorer.

3. Right click on **Extensions** and select **Import extension** option.
4. Paste the directory path that you have in the Clipboard into the Path field in the Explorer.
5. Select the **Chartboost SDK Extension.gmez** file.

## Contact

Feel free to write me if you have any question or problem, or just to say 'hello!'.

- **Trello:** Check the current state of this project in the public [Trello board](#). I'm using this great tool to manage new tasks, versions and changelogs in real time.
- **Twitter:** Follow me on Twitter ([@j\\_gonfer](#)) to get the latest updates of the *Chartboost SDK Extension* or even to know things related to GameMaker: Studio and other stuff.



## Thank you for your purchase!

Last but not least, if you enjoy this extension it'd be great getting a comment from you in the YoYo Marketplace and help other users like you to find this Extension.