

# Setting Up a Digital Signage System With Android



The Android operating system is not only used on smartphones and tablets but is also integrated into many TV sets and screens as Android TV. There are also compact and inexpensive media players (set-top boxes) based on Android that can be easily connected to any screen via HDMI. In this tutorial, we will show you how you can implement a powerful digital signage system based on an inexpensive Android system and the FrontFace software from mirabyte without any cloud dependencies.

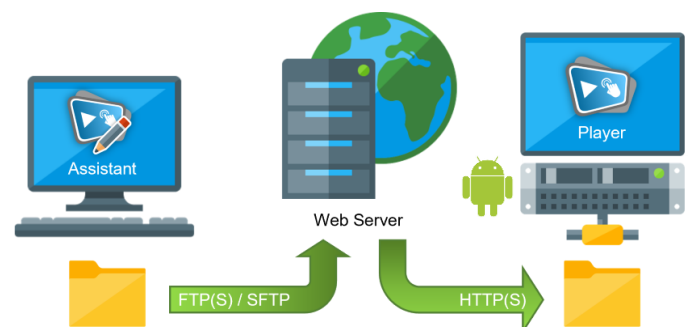
## 1 Hardware Selection and Installation

First you need an Android-based device for running the digital signage software that shows your content. This device is referred to as a “player”. Screens and TVs with an integrated Android TV operating system, external media players or set-top boxes with Android or even Android tablets are all suitable here. If your screen doesn't already have Android TV built in, the Amazon Fire TV Stick can be an interesting choice, as this device is also Android-based, and it is particularly inexpensive.



Figure 1: The Amazon Fire TV Stick is based on Android.

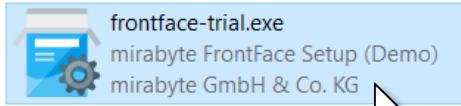
After you have selected and connected the hardware, you also need a Windows PC on which you can install the *FrontFace Assistant* (the content management software) and a web server that is used for distributing the content from the Windows PC to the Android player over the Internet. Here you can either host a web server yourself (IIS, Apache, etc.) or use a hosting package from a provider such as GoDaddy. If you have a home page, you probably already have a proper web server. The only requirement is that you can access the web space by FTP, FTPS or SFTP and that the content can then be accessed via HTTP. No other components or applications need to be installed on the server!



If you do not want to expose your system to the Internet, the content can alternatively be transferred to the player over the local network or even offline using a USB thumb drive. If you are interested in this type of setup, you can find a detailed description in the [FrontFace user manual](#). However, in the following we use a web server for updating the screen over the Internet.

## 2 Downloading and Installing FrontFace

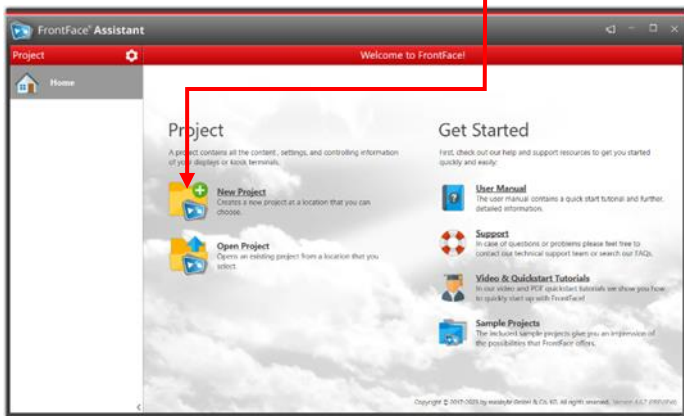
First, visit the *FrontFace* product website <https://www.mirabyte.com/en/frontface/> and click on the **Download** button to download the trial version (or the full version if you have a license). After the download, run the installation package `frontface-trial.exe` on your workstation PC and select the installation option "*Full Installation (incl. FrontFace Assistant)*".



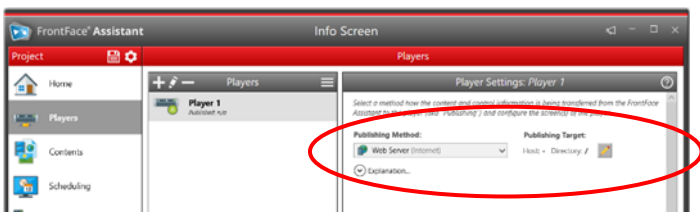
The *FrontFace* software consists of two main components, the *FrontFace Assistant* for creating and configuring your projects and the *FrontFace Player App* for playing the content on the screen. In this step you have installed the *FrontFace Assistant* on your workstation PC. The installation of the *FrontFace Player App* on the Android device is described in [step 6](#).

## 3 Creating a Project

Now, start the *FrontFace Assistant* on your workstation PC from the Windows Start Menu and click on "*New Project*" on the start page:



Enter a name for the project (e.g., "*Info Screen*") and then select a suitable location on your hard drive for the project, e.g., in the "*Documents*" folder. You should select "*Digital Signage*" as project type and "*Android*" as the default player type.

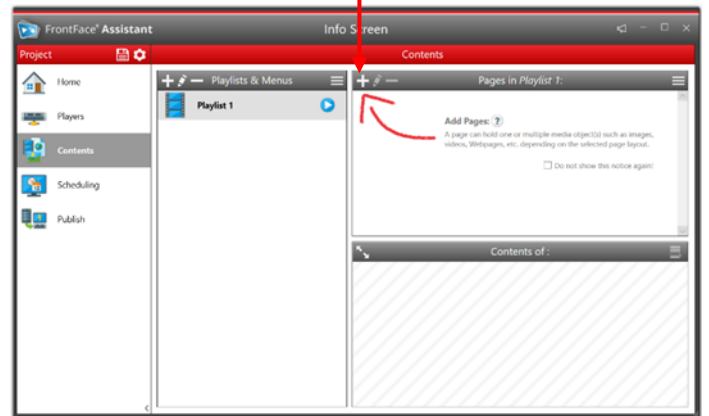


In the "*Players*" menu, select "*Web Server (Internet)*" as the publishing method for your player and enter the credentials (host name, login, password, protocol, and directory) of your web server. Make sure that you select a (new) empty directory as the directory on the web server in order to avoid conflicts with other content that already exists on the server such as your homepage.

## 4 Creating a Playlist

Now head over to the "*Contents*" menu. Here, a playlist is already created. A playlist comprises a sequence of pages with their content to be displayed, the so-called media objects. These can be, for example, images, videos, PDF files, websites, news tickers, weather and much more. Playlist pages can also be split or partitioned using layouts so that more than just one media object can be placed on it.

Add some pages to the playlist by clicking the "+" button above the list of pages:



To get started, select the "*Full screen*" page layout for each page, and then insert a media object of your choice.

To preview your playlist or a specific page of it once (i.e., display the content in the same way as it will later appear on the player), simply click on the playlist's or page's preview button:

To learn more about creating content with *FrontFace*, watch the [introduction video "Digital Signage with FrontFace"](#).

After creating a playlist, go to the "*Scheduling*" menu. Here you can see your player and the connected screen. Select your playlist as the content to be displayed on that screen. If needed, you can also enable the "*Advanced Scheduling*" and then take advantage of complex scheduling options.

## 5 Publishing the Content

After you have configured a player for the "*Web Server (Internet)*" publishing method, created a playlist with content and assigned it to the screen, the last step is to publish your project by clicking the "*Publish!*" button from the "*Publish*" menu:



During this process, all content and control information are transferred from your PC to your web server by the *FrontFace Assistant*. The Android player then accesses it later by HTTP via the Internet and can also be updated in this way at any time.

## 6 Install FrontFace on the Android Player

If you have not already done so, please set up the network connection (WLAN or LAN) first under Android so that your player can access the Internet.

Since the *FrontFace Player App* for Android is not obtained from an app store but must be installed as a so-called "sideload", some settings and additional steps are required for the installation:

First you must enable the so-called "Developer options". To do this, open up the information about the Android version number from the Android system settings menu and click on the entry showing the "Build number" 7x in a row. A message "You are now a developer!" will appear then. For Amazon Fire TV, click 7x on the entry with the name of the device in the settings menu "About" > "My Fire TV".

Then, look for the "Install unknown apps" option in the Android settings menu. Grant permission for a web browser app of your choice (e.g., *Google Chrome*) that you will use next to download the *FrontFace Player App*.

If you are using an Amazon Fire TV Stick, you can find the setting under "Settings" > "My Fire TV" > "Developer Options" > "Install Unknown Apps". Also, *Google Chrome* cannot be installed on this device and the Amazon browser does not allow downloading and installing external apps. Therefore, instead install the "Downloader" app from the store and then use this app instead of the web browser app.

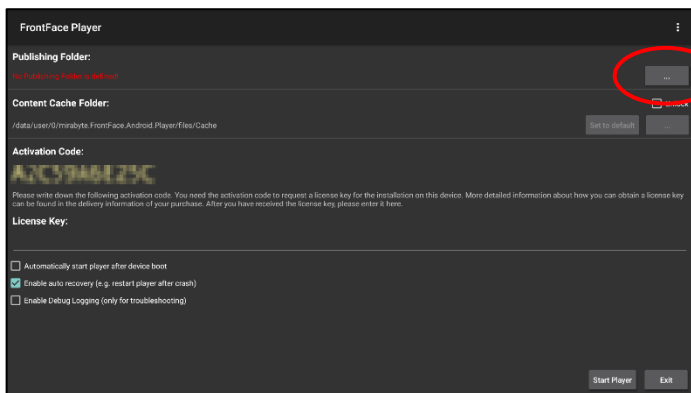
After giving your web browser app (or Downloader app) the permission to install apps from unknown sources, open it and go to the following URL:

<https://www.mirabyte.com/go/ff-apk-download-trial>

Then install the downloaded APK file. After the installation is complete, you will find "FrontFace Player" in the list of apps.

## 7 Setting up the FrontFace Player App

After starting the *FrontFace Player App*, the last step is to select the "Publishing Folder" (that is the location where the player app expects the published content from the *FrontFace Assistant*):



The "Web Server" option must be selected here as well and the HTTP URL to the directory on your web server must be specified where you published the content in [step 5](#). This URL could look like this, for example: <https://www.my-webspace.com/frontface/>

<http://www.mirabyte.com/>

You can also specify here whether the *FrontFace Player App* should be started automatically each time the Android player device is started.

Finally, click the "Start Player" button. If everything has been set up correctly so far and the *FrontFace Player App* can reach your web server, you should see your playlist on the screen after a few seconds.

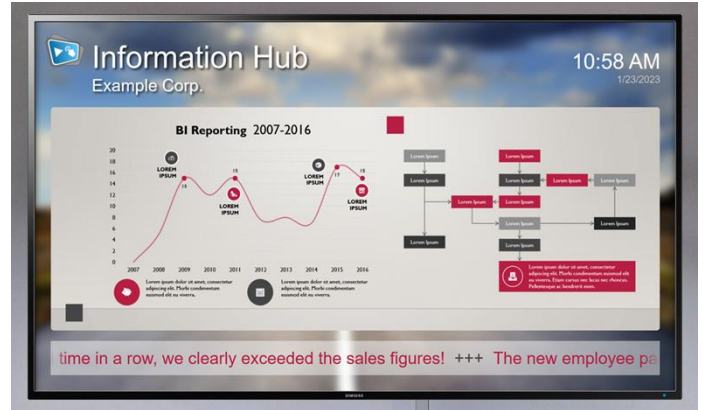


Figure 2: The final playlist on a screen with Android TV

## 8 What's Next?

As you can see, you can easily and flexibly build a professional digital signage system with *FrontFace* without requiring any cloud dependencies. Now that you have set up the basic system, you can start refining your playlists and further enhance them visually and in terms of content.

For more information about the basic operation and installation of *FrontFace* and the capabilities that this software provides, please refer to the *FrontFace* user manual and the video tutorials available online at: <https://www.mirabyte.com/go/frontface/>

If you have any technical questions about *FrontFace* or this tutorial, please feel free to contact our free support. Just visit our homepage to find out how to get in touch with us: <http://www.mirabyte.com/en/support/>

