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### Summary

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Date	Version	Description
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## ComQi Embedded Player Guide

The EnGage Embedded Player (EEP) is an EnGage CMS compatible media player designed to run on a range of low-cost devices including Android media players and tablets and Samsung Smart Signage. Designed for menu boarding and merchandising applications, the Embedded Player features full 1080p video playback, data channel access and support for ComQi's Message and OSM Widgets.

The Embedded Player implements a subset of the EnGage x86 Media Player functionality. The specific subset is device dependent, but in general there are differences in the number of display and audio channels supported, device integration, and content support. Advanced EnGage features, such as content sharing, inter-player synchronization, and player failover are not supported on the Embedded Player.



<u>NOTE:</u> Throughout this document the term "device" will be used to describe the hardware on which the EEP software will run. This device could be a certified screen, tablet, smartphone, or standalone media player.

# General Steps to setting up an EEP Device

- 1. Connect and configure the device (this step will be device specific)
- 2. Commission the device
- 3. Set up the content and programming within EnGage

## **Step 1: Connect and Configure the Device**

The first step is to connect the required cables and peripherals to the device. Once they're connected the device can be configured to receive the EEP software. Each device will have different instructions for this configuration. Skip to the section specific to your device.

- Android Devices (EEP/Android)
- Samsung SSP Screens (EEP/SSP gen1) DM32C
- Samsung SSP Screens (EEP/SSP gen2) DM32D

# **Android Devices (EEP/Android)**

The term "Android Device" is used as a general term for any tablet, phone or stand-alone device running the Google Android software. The Embedded Player is available on devices running Android 4.2 or greater. Specific functionality and playback performance is device and version dependent. Currently, ComQi only provides support for Android based hardware that has been certified for running the EEP software.

The EEP for Android is packaged as an Android Application (APK). This application can be configured to be the only user visible application running on the device and can also prevent changes to the configuration of the device so as to ensure interrupted playback.

#### **Fresh Installation**

To ensure trouble-free operation, the EEP software should be installed on a fresh installation of Android, not a device that has been used for other purposes in the past. To ensure the device has a fresh install, use the "Factory Data Reset" within the Android settings before attempting to install the EEP.



**WARNING:** Factory resetting a device will permanently delete all the previously stored data on the device.

#### **Set up Instructions**

Since Android device vary by hardware and operating system version, the instructions vary for each device. The instructions provided herein are general steps required to get the device set up and configured as a media player. The buttons and settings on a device may not be exactly as shown in these instructions.

#### **Set up Requirements**

- Android device meeting the minimum hardware and software requirements and power supply.
- A USB mouse and/or touchscreen
- A network connection that can freely access the Internet
- A screen and video cable, usually HDMI
- Access to an EnGage network configured with an EEP license

#### **Step 1a: Connecting the Player**

Be sure the following is connected to the device:

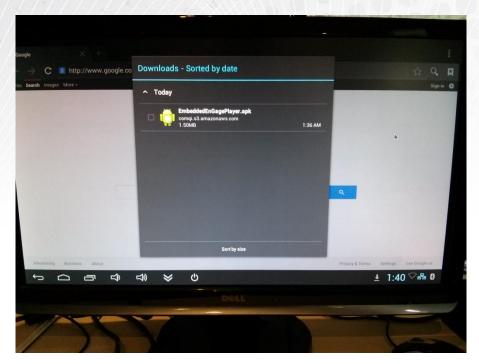
- Connect the video cable, usually HDMI, from the device to the screen
- Connect the USB mouse to the Android device
- Connect the network connection to the Android device



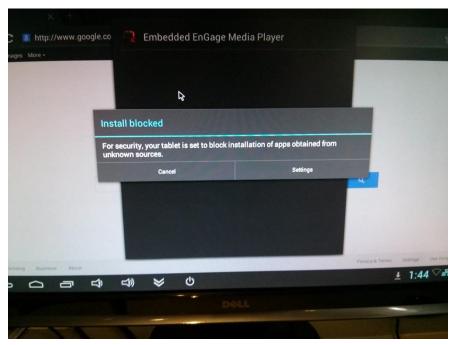
Once the device is connected, power on the player via the power button if the device does not power on automatically.

#### **Step 1b: Download the EEP APK**

Using the mouse or touchscreen, launch the Android browser and type in the following URL: <a href="https://comgi.s3.amazonaws.com/EEP/EmbeddedEnGagePlayer.apk">https://comgi.s3.amazonaws.com/EEP/EmbeddedEnGagePlayer.apk</a>



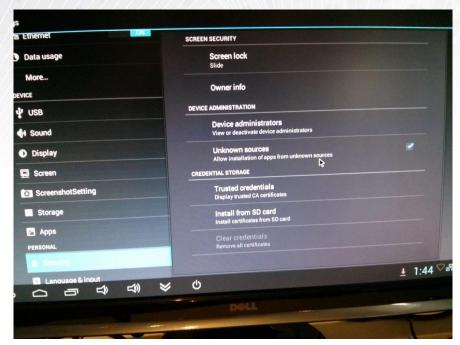
The EEP software will then download to the player. Once downloaded, click on the file. By default, many devices will not allow the installation of software from unknown sources (sources that are not in the Google Play store). Click the "Settings" button to enable this option.



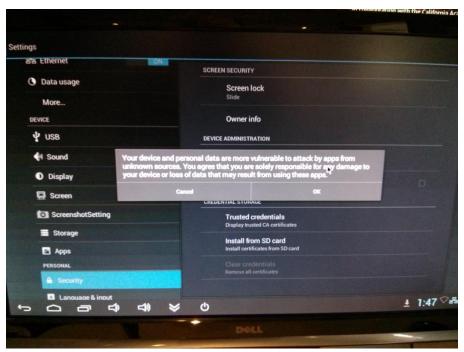
•

**NOTE:** If the option to navigate to Settings isn't available, click the "Home" button from the menu and manually navigate to the Settings. The option should be in the: Personal -> Security -> Device Administration.

Enable the "Unknown Sources" option. A warning will appear.

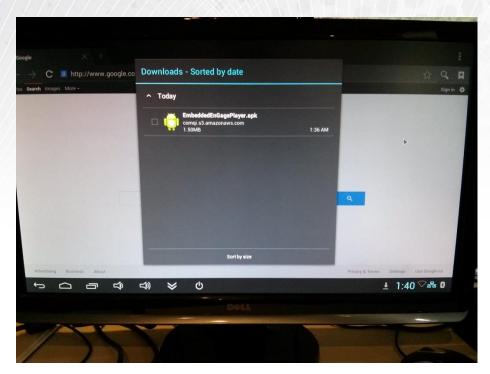


Click OK to accept the warning.

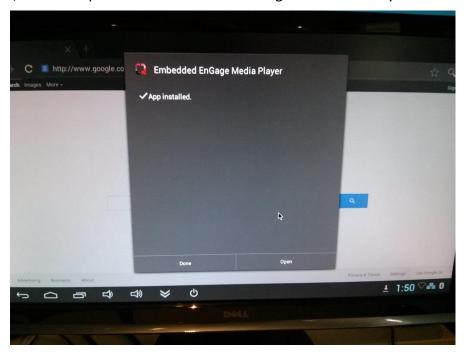


Once the setting is enabled, right click the mouse to close the settings and return the browser.

Click on the downloaded file again to begin the installation. A dialog will appear listing the access required by the software for the device. Click "Install" to accept and start the installation.



Once installed, click the Open button to start the EnGage Embedded Player software.



The Android device should now be ready of commissioning.

#### **Step 1c: Automatic Power On**

It is important to be sure that any Android device employed as a media player automatically powers on without the need to manually press the power button the device. Otherwise, manual intervention will be required any time the device loses power. This auto power-on setting is set in the Android operating system image by the device manufacture. If you are unsure if this capability exists or need clarification about how to configure it, please contact your device manufacture.

# Samsung Smart Signage Player (EEP/SSP Gen1)

The term "Samsung Smart Signage Player" is used as a general term for any Samsung screen capable of running the ComQi EEP software. Currently, ComQi only provides support for Samsung screens that have been certified for running the EEP software.

In order to use a Samsung screen as a media playback device, it must first be configured to start the EEP software upon being turned on and booting up. Once configured, the EEP software will connect to EnGage to pull content and programming.

#### **Set up Instructions**

Since Samsung devices vary by hardware and software version, the instructions vary for each device. The instructions provided herein are general steps required to get the device set up and configured as a media playback device. The buttons and settings on a device may not be exactly as shown in these instructions.

#### **Set up Requirements**

- Samsung Smart Signage screen meeting the minimum hardware and software requirements and power cable.
- The provided Samsung remote control
- A network connection that can freely access the Internet
- Access to an EnGage network configured with an EEP license



<u>NOTE:</u> The Samsung MD32C does not support USB keyboards. Only the supplied remote control can be used to set up the screen.

#### **Step 1a: Connect the Screen**

Be sure the following is connected to the device:

- Connect the network connection to the RJ-45 port on the Samsung sreen
- Connect the power cable to the screen and to a power outlet

Once the device is connected, flip the power switch to the ON position, located on the back of the screen.

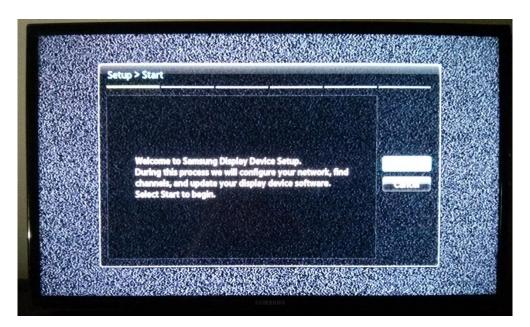
#### **Step 1b: Configure the Networking and Screen**

Power on the screen by pressing the power button on the remote control. A configuration wizard will automatically appear on the screen. Use the arrow and OK buttons to navigate through the setup wizard.

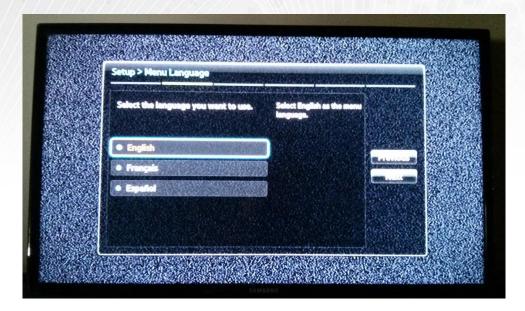


**NOTE:** While navigating the setup wizard, sometimes the OK button will progress to the next step, and sometimes the right arrow must be used to navigate to the "Next" area before pressing the OK button.

Press the OK button to start the Setup Wizard.



Select the appropriate language. Proceed to the next step.

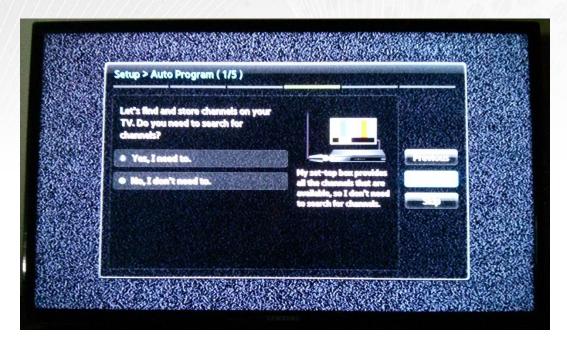


Press the "OK" button to start the automatic networking setup. If the network cable is not connected to the panel a warning message will appear. Connect the network cable to panel before continuing. The configuration of wifi using a connected Samsung USB wifi adopter is not within the scope of this document.

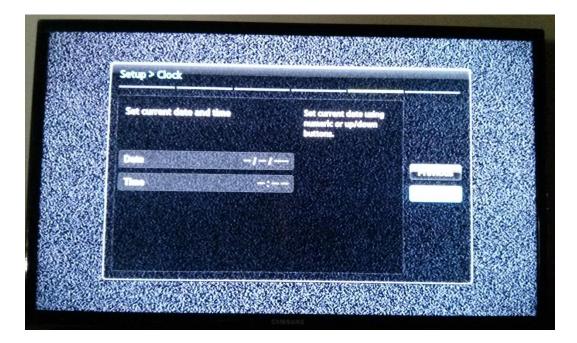


One the networking setup has completed, press the "OK" button to proceed to the next step.

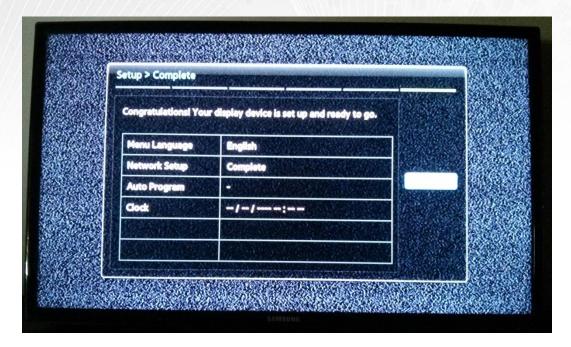
When prompted for the "Do you need to search for channels?" question, select the "No, I don't need to" option and press the "OK" button to proceed to the next step.



Use the remote to navigate and set the date and time options. Proceed to the next step.



The last step of the setup wizard shows a summary of the configuration. Press the OK button on the remote to complete the setup wizard.



#### **Step 1c: Setting up the URL Launcher**

Now that the networking has been configured the screen must be configured to load the EEP software when it's started.

- Press the "Source" button on the remote and change the source to HDMI. (Do not skip this step even if it seems unnecessary).
- Press the "Power Off" button to turn off the screen.

The screen must now be put into "Factory Menu" mode. Once in this mode, do NOT change any settings other than those listed in this document.

WARNING: Changing any other settings in the Factory Menu other than those listed in this document could potential damage the screen.

• Using the remote, press the following combination of keys one at a time.

Mute 1 8 2 Power-ON

The screen will then turn on in Factory Menu mode. If the factory mode does not start, Power off the screen and try again but be sure the remote is correctly pointed at the screen and press the combination of buttons slower.



- Using the arrow buttons navigate to the "Control" option. Then select "Config Option", "LFD Config Option", "LF LAUNCHER".
- Change the "Launcher Mode" to "ON.
- Select the "Server URL Setting" option. An on-screen keyboard will appear. Use the remote control to navigate the keyboard and enter the following URL:

http://www.comgi.com/eep



**HINT:** The non-alphabet characters can be found by selecting the "1\*" key on the keyboard.



- Press the "Done" button on the on-screen keyboard to save the URL.
- Press the "Power Off" button to exit the Factory Menu.
- Press the "Power On" button to turn the screen back on.

The ComQi commissioning screen should then be displayed on the screen.



Now that the setup is complete, the screen should always automatically start the URL Launcher and connect to EnGage upon powering on of the screen.

#### **Step 1d: Automatic Power On**

It is important to be sure that any screen employed as a media player automatically powers on without the need to manually press the power button the device. Otherwise, manual intervention will be required any time the screen loses power.

This power-on setting can be found in the screen menu accessed by the remote control. Press the "Menu" button, and then select "System", "Power Control", then "Auto Power On". Change the option to "On" and press the "OK" button. Press the Menu repeatedly until the menu disappears off the screen.

#### **Changing the Setup Options**

In order to access the initial Setup wizard (in case a mistake was made), change the input source via the "Source" button on the remote to TV. Then use the "Menu" button to access the Menu. The Setup can be found in the "System", "Setup" option. Once the setup is complete, switch the input back to HDMI, then power-off and power-on the screen.

# Samsung Smart Signage Player (EEP/SSP Gen2)

The term "Samsung Smart Signage Player" is used as a general term for any Samsung screen capable of running the ComQi EEP software. Currently, ComQi only provides support for Samsung screens that have been certified for running the EEP software.

In order to use a Samsung screen as a media playback device, it must first be configured to start the EEP software upon being turned on and booting up. Once configured, the EEP software will connect to EnGage to pull content and programming.

#### **Set up Instructions**

Since Samsung devices vary by hardware and software version, the instructions vary for each device. The instructions provided herein are general steps required to get the device set up and configured as a media playback device. The buttons and settings on a device may not be exactly as shown in these instructions.

#### **Setting up a New Device**

Set up Requirements:

- Samsung Smart Signage screen meeting the minimum hardware and software requirements and power cable.
- The provided Samsung remote control
- A network connection that can freely access the Internet
- Access to an EnGage network configured with an EEP license
- A USB keyboard (optional, but helpful)

#### Step 1a: Connect the Screen

Be sure the following is connected to the device:

- Connect the network connection to the RJ-45 port on the Samsung screen
- Connect the power cable to the screen and to a power outlet
- Connect the (optional) USB keyboard to the screen

Once the device is connected, flip the power switch to the ON position, located on the back of the screen.

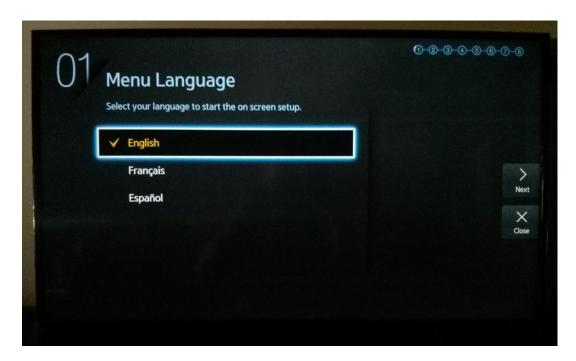
#### **Step 1b: Configure the Networking and Screen**

Power on the screen by pressing the power-on button on the remote control. A configuration wizard will automatically appear on the screen. Use the arrow and OK buttons to navigate through the setup wizard.

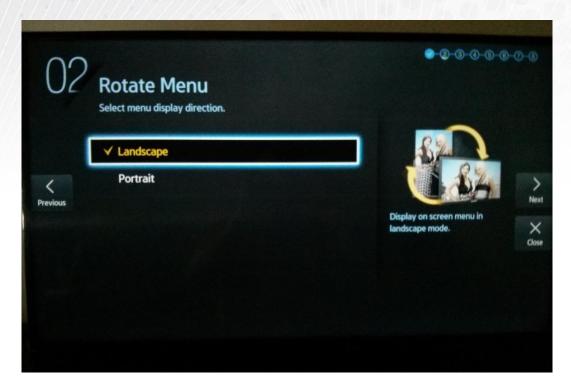


**NOTE:** While navigating the setup wizard, sometimes the OK button will progress to the next step, and sometimes the right arrow must be used to navigate to the "Next" area before pressing the OK button.

Select the appropriate language. Proceed to the next step.



Select landscape. Portrait mode is not currently supported. Proceed to the next step.



The network set up will occur automatically. Proceed to the next step.



If the network cable is not connected to the screen, the wireless configuration options will be displayed. Select the wifi access point and type in the password by either using the remote and on-screen keyboard or by typing in the password on the connected USB keyboard.

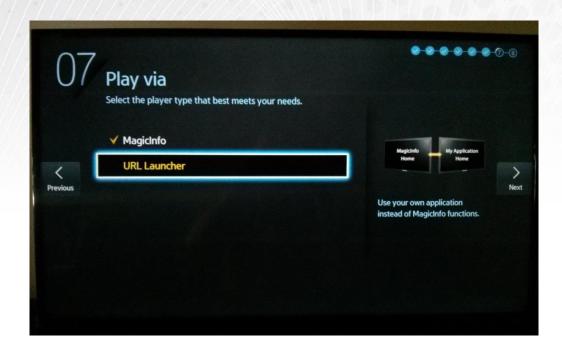
Select the "No TV (display only)" option and proceed to the next step.



Set the date and time using the remote control and proceed to the next step.



For the "Play via" option select the URL Launcher. A URL to the EEP landing page will need to be entered.



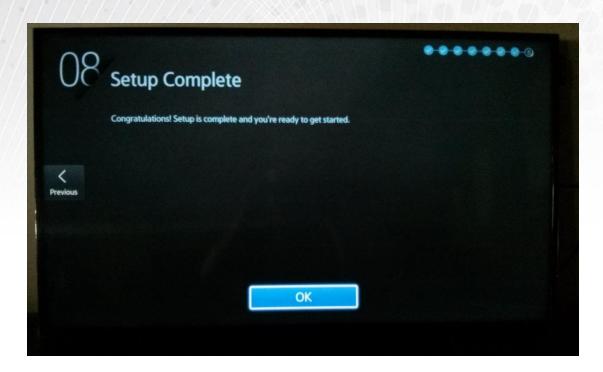
If a USB keyboard is connected the screen, start typing the following URL. Optionally the remote can be used to enter the URL using the on-screen keyboard.

#### http://www.comqi.com/eep



Select "Done" once the URL has been fully entered.

Proceed to the next step. Press the OK button the remote to complete the setup wizard.



Press the "Content (Home)" button on the remote.



Select the "URL Launcher" option.

The ComQi commissioning screen should then be displayed on the screen.



Use the remote and the Content Home button. Select the URL Launcher and the ComQi EEP commissioning page should be visible on the screen.

Now that the set up wizard is complete, the screen should always automatically start the URL Launcher and connect to EnGage upon powering on of the screen.

#### **Step 1d: Automatic Power On**

It is important to be sure that any screen employed as a media player automatically powers on without the need to manually press the power button the device. Otherwise, manual intervention will be required any time the screen loses power.

This power-on setting can be found in the screen menu accessed by the remote control. Press the "Menu" button, and then select "System", "Power Control", then "Auto Power On". Change the option to "On" and press the "OK" button. Press the Menu repeatedly until the menu disappears off the screen.

# **Step 2: Configure EnGage for Commissioning the EEP**

When the EEP software starts for the first time it will automatically connect to EnGage and display the commissioning screen. Before the EEP software can be downloaded to display content from EnGage, it must first be commissioned.

#### **EEP Licenses**

Before an EEP can connect to EnGage, the network must be configured for use with EEP devices and an appropriate license must be available for the network. Please contact the customer support team for more information about obtaining an EEP network license.

#### Step 2a: Create a site within EnGage

Within EnGage, navigate to the Sites tab. Create a new site within the Site hierarchy by click the "Add Site" icon.

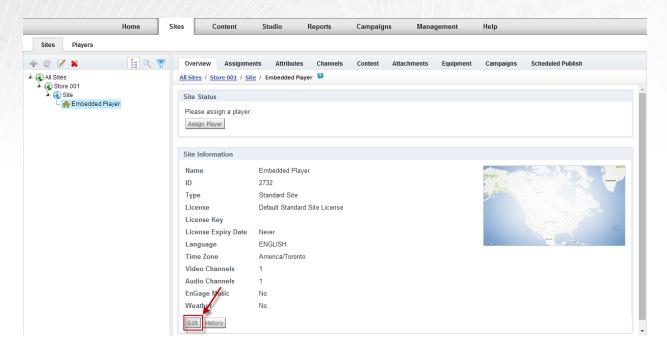


Type in a name for the site and click OK.

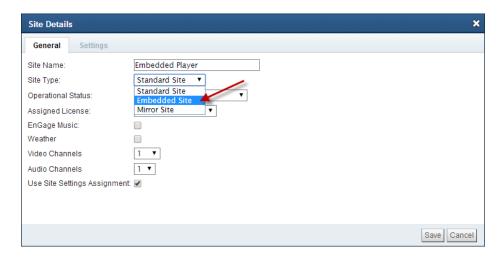


#### Step 2b: Set the site type and license

Once the site is created, click the Edit button on the site Overview tab to set the site type.



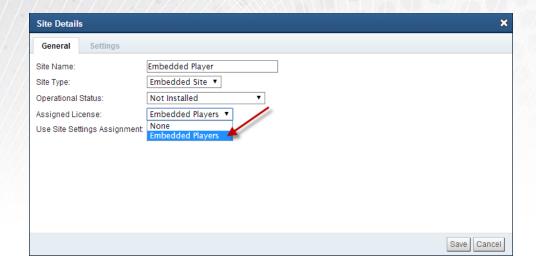
Change the Site Type to "Embedded Site".



Change the Assigned License option to Embedded Players (or the appropriate EEP license selection that's been added to your network)



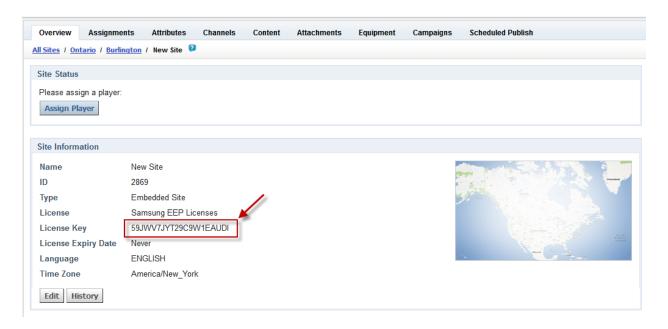
**NOTE:** The name of the license may differ depending on the license issued for your network.



Click "OK" to confirm the warning about site type changes. Then click "Save" to save the site type and license settings.

# **Step 3: Commissioning the EEP**

When the site type "Embedded Site" is selected a license key is generated for the device. This license key will be used to automatically bind the device to the site.



On the EEP's landing screen the license key must be entered. There are two options for entering the key:

- 1. Using a smart phone, scan the QR code and enter the license key into the provided web interface.
- 2. Using the mouse connected to the device or touchscreen to enter the key using the onscreen keyboard.

Once the license key listed on the EnGage site is entered into the landing page on the device or the smart phone web interface, click the "Send License" button.

# **Step 4: Confirming Commission**

Check the site created in the previous step. If the Commission state is OK (green) then the player license key was successfully entered and associated with the site. When the player connects for the first time, a player object will automatically be created in the Sites->Player tab and assigned to the site with the same license.

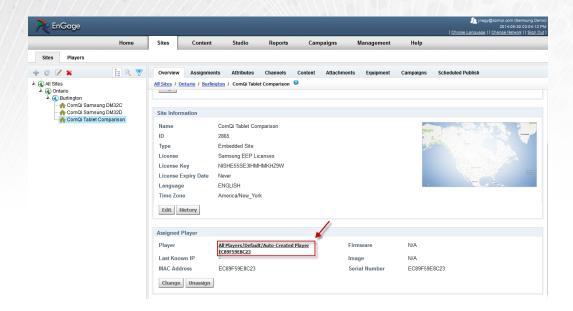
At this point the EEP software should be operating in a similar manner to an EnGage player which will download content and programming from EnGage.



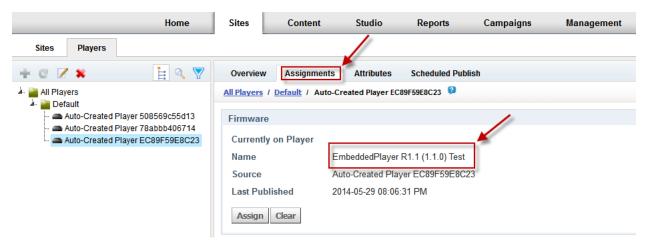
Some EEP devices will require a reboot after the EEP software is installed in order to work properly. Shut down the device (according the device specific power on/off functionality) and turn the device back on. If the EEP software doesn't start automatically, follow the device specific instructions for configuring the automatic startup of the EEP software.

#### **Confirm the Firmware Assignment**

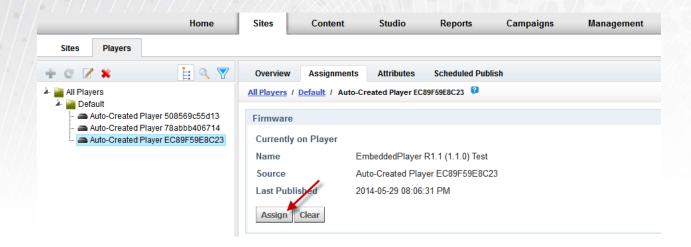
If the device stays on the licensing page, ensure the proper firmware has been assigned. Navigate to the Sites tab in EnGage and select the site that was created in the previous step. On the right side of the Overview page, click the link to the Player.



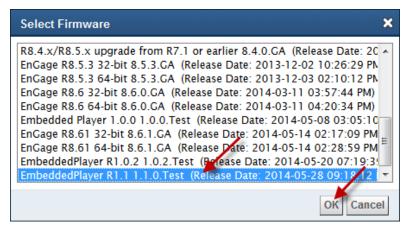
The Players tab should then open and have the associated player selected. Navigate to the Assignments tab and check the currently published firmware version. This firmware name should start with "EmbeddedPlayer".



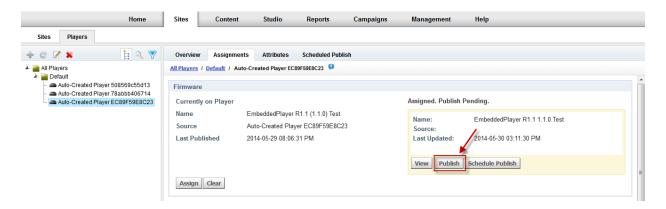
If the firmware name doesn't begin with EmbeddedPlayer, assign the proper firmware to the player by clicking on the Assignments tab. Please contact the Customer Support team for more information about which EEP firmware should be assigned to the device.



Then select the appropriate (usually the most recent version) of the firmware and click OK.



Publish the firmware to the player by clicking the Publish button.



Now that the proper firmware has been assigned, the device should start the EEP software, connect to EnGage, and download the currently assigned timetable and content. The device may need to be restarted after the proper firmware is assigned and published.

#### Post Installation

Once the device has been commissioned and the EEP software restarts, the software may initially show the landing page, but it will quickly switch to a black screen while it connects to EnGage. Once connected, it will download the content and programming that has been published to the associated site within EnGage.

#### **EEP Connectivity**

The EEP uses a polling mechanism to communicate with the EnGage CMS. Periodic connections to EnGage are initiated by the EEP every 2 minutes to check in and report logs back to EnGage. Any changes to the content are checked every 90 seconds.

# **Step 5: Content and Programming within EnGage**

By default, no content is assigned for newly created sites and the device will have only black playback. A Timetable, with content programming needs to be assigned and publish before anything will playback.

Once the EEP device is connecting to EnGage, content can be uploaded, a layout, program and timetable created. The Timetable can then be assigned and published to the site which is associated with the EEP device. Although the process for upload and programming the content is similar that that of the standard EnGage Media Player, the EEP software does not have all the same content playback capabilities. Please refer the functionality matrix for more information.

Changes to content and programming (Timetable) may take up to 5 minutes to change on the device and may take longer depending on the amount and size of the content that needs to be downloaded to the device.

# **Feature Comparison**

The following chart shows a comparison of the features available in the EEP against those of the EnGage Media Player.

	EnGage Embedded Player	EnGage Player
Connectivity		
Connectivity	HTTP/HTTPS	HTTP/HTTPS, FTP/FTPS
Connectivity recovery	None	Automatic network configuration failover options
Wired/Wireless	Hardware dependent, Wifi in RP210	Ethernet. Optional Wifi/3G/4G
Connection Model	Polling – updates may take up to 5 minutes	Continuous – updates are near real-time
Activity logging without a network connection	Yes	Yes
Inter-player content sharing	No	Yes
Content		
Touch support	Yes, multi-touch via HTML5	Yes, multi-touch via HTML5 or Flash
Media	H.264 Video, WebM video, images, HTML5, some Flash	Almost all video codecs, almost all image formats, HTML5, Flash
OSM Messages	Yes; page support in R1.2	Yes
HTML5 content	Yes	Yes
Content Metadata	Yes	Yes
Video On Demand	No *	Yes
EnGage Touch Elements	No	Yes
Player Variables	Yes	Yes
Data Channel Support	Yes	Yes
Dynamic Tracks	R1.2	Yes
Campaign Tracks	R1.2	Yes
Spatial Tracks	No	Yes
PlayNetwork Music	No *	Yes

Playback		
Multiple zones of content	Yes	Yes
Expression Evaluator Support	Yes (some limitations)	Yes
Events and Commands	No *	Yes
Personal Safety Messaging	No *	Yes
Conditional Playback	Yes	Yes
Externally accessible Player API	No	Yes
Inter-zone synchronization	No *	Yes
Inter-player synchronization	No	Yes
Audio Programming	Background audio zone only (shares audio output with primary zones)	Independent audio timetable and/or background audio zone. Background audio zone can run on separate audio output.
Player		
External Device Integration	No *	GPIO, scanners, sensors, beacons, sniffers, TV in, Video in
Screen Control	No *	Yes, RS-232 on its own schedule
Audio Channels	1	Up to 2
Video Channels	1	Up to 6
System controlled device configuration	No	Yes
Complete platform control	No, only player can be remotely upgraded	Yes, player and operating system can be remotely updated
Platform Security	Varies	Highly secure
Fan-less	Y (most)	Y (some)
Power	< 10 watts	Some < 40 watts
Robustness	Power on reset	Power on reset, hardware watchdog
SNMP monitoring	No	Yes

<sup>\*</sup> possible future enhancement

# **Frequently Asked Questions**

#### **General EEP Questions**

Q. Is the Embedded Player capable of doing X?

**A.** The EEP software does not have all the same functionality as the x86 EnGage player. Please refer to the EEP feature comparison.

**Q.** When setting the Site Type in EnGage to an Embedded Site I see an error that says "No such License found. (License ID 0 MAC/Serial: AUTOH6VE1KJE)". What does that mean?

**A.** The embedded player license hasn't been set up properly for your account. Please contact the customer support team to confirm an appropriate EEP license has been set up for your network.

**Q.** Even after the device/screen has been commissioned in EnGage and the connection light it green, all I see on the screen is the license page. It doesn't play my programmed content.

**A.** Make sure that the player has been assigned an appropriate EEP firmware in the Payers->Assignments section of EnGage.

Q. The EEP software doesn't start up automatically when my device reboots?

**A.** Each device should be configured to start the EEP software when the device reboots. Follow the device specific instructions in the EEP User Guide to configure the EEP software to start automatically.

**Q.** After a power outage my device requires that someone press the power button to turn it on again. How do I configure the device to start automatically when power is lost?

**A.** Each device should be configured during the initial setup to turn on automatically when power is applied. Follow the device specific instructions in the EEP User Guide to configure the automatic power on of a device. Some devices, such as Android devices require that this functionality be enabled in the operating system software provided by the device manufacture. Please contact the manufacture if this is the case.

#### **SSP Device Specific Questions**

Q. I'm seeing "Please Check your network." on the screen, what does that mean?

**A.** The network is not connected (LAN Cable disconnected or IP not set). Be sure the network cable is fully inserted into the RJ-45 jack on the screen and the networking has be configured.

 $\textbf{Q.}\ \text{I'm}$  seeing "Network Connection Lost" on the screen, what does that mean?

**A.** The screen cannot connect to the EEP software or landing page. This could be a problem with the networking or firewall.

Q. I'm seeing "Check your URL Input" on the screen, what does that mean?

**A.** There is a problem with the entered URL or the URL was left blank. Double check that the full URL was entered and there are no typos.