Professional Players

TEOS Installation & User Manual
Document revision 1.4

Overview

Thank you for purchasing these products. These Players can be used for professional. They have professional functions such as Android Management and IP control. Furthermore, by using optional software, you can add additional convenient features. Before operating the Player, please read this manual thoroughly.

Note that the Player alone cannot control the display's power ON/OFF (only QBIC BXP-100 can be switched off). To be able to manage the device connected to the player, the display must be added in parallel with a control license (TEM-EL).

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Requirements

- Using Manage for TEOS, the installation of the apps can be done from TEOS
- **ADB command required for Portrait mode usage**
- An **Internet access (for Connect for TEOS license in standalone mode)**
- **A set of USB keys formated** in FAT32
- **Connect for TEOS Receiver (refer to the release note to find the latest apps available)**
1. **Signage for TEOS App (please refer to the release note to find the latest apps available)**
2. **Cloud Control for TEOS App (please refer to the release note to find the latest apps available), if your device will be used in the CLOUD**
- **Please refer to https://teos.solutions/resources or https://bit.ly/sonypsetech to find all the details, apps, setup if needed (under TEOS – Corporate Solutions)**
- Signage for TEOS License TEM-ALxY mandatory to use the Android Player in TEOS
- Control for TEOS license TEM-ELxY can be used for an update of apps (Connect for TEOS app for example) from TEOS or for a scheduled reboot
- TEOS android players below are compatible with Connect for TEOS (only TEP-TX5 is not), you can assign a license TEC-SC100

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1.1 Player Compatible models

Generation	Model name	Platform version
FY18	TEP-TX5	Android Version 7.0 (not supported anymore)
FY19-FY20	TEP-X96	Android Version 8.1
FY21	AAV-X96-Max https://aavhardware.com/shop/players/aav-x96-max-signage-player/	Android version 9.0
FY22	QBIC BXP-100 https://www.qbictechnology.com/products/all/BXP-100%20(1)	Android version 10.0

		Android player compatible with TEOS
Performance required*	Resolutions max supported by TEOS Signage	Up to UHD (3840x2160)
	HDMI output format	16/9 formats
	Screen rotation	Landscape, portrait (hidden, only with a command or external app)
	CPU	S905X3 Quad-Core 64bits, RK3318 Quad Core CPU Cortex- A53
	RAM	8GB (minimum)
	Storage	16GB (minimum), 32GB (recommended)
	Operating System	Android 8.1, Android 9, Android 10 root rights is needed
	Media compatible with TEOS	Images: JPG,PNG @ 8MP Videos: MP4 only, up to 4K@60p 40mbps for lanscape and Full HD in portrait @ 8mbps, full HD PDF (converted in images) PowerPoint, pptx (converted in images) Audio: MP3 only Video streaming: Full HD @ 5Mbps per stream (only one stream or video uploaded per page)
Application Pre-installed And compatible TEOS License	TEOS Signage	Yes (license of TEOS Manage software side)
	TEOS Control (API)	Yes
	TEOS Cloud Control	Yes
	TEOS Connect	Yes (license not included)
	TEOS licenses	TEC-SC100 (TEOS Connect for mirroring), TEM-AL1Y/3Y/5Y
Example website	Reference	AAV-X96-Max, new reference compatible QBIC BXP-100
	Website	https://aavhardware.com/shop/players/aav-x96-max-signage-player/

* TEOS is not compatible with all players by default as it can depend on hardware specs
* Please contact us for other player integration/tests. They must be tested with TEOS platform before validation.
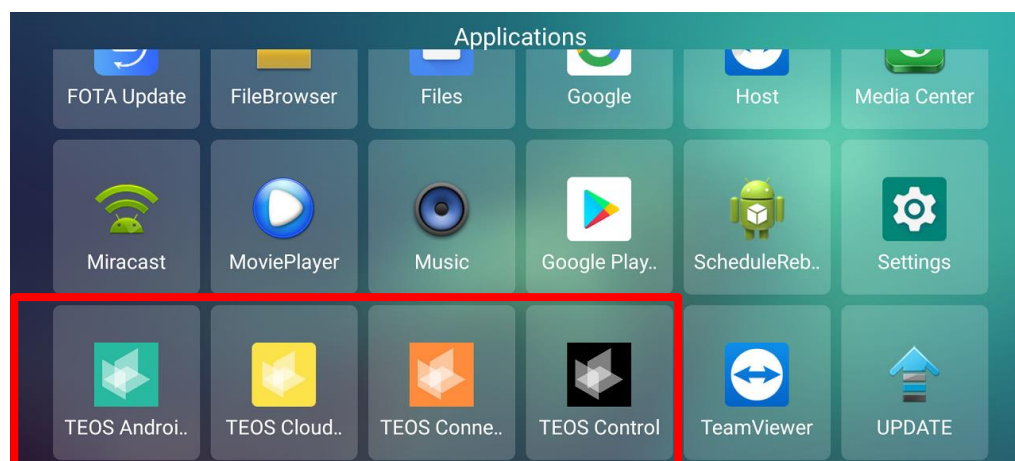
# 2 Configure your player with TEOS
2.1 Check & install new apps

For Manage for TEOS to control the player and send content, two apps need to be installed:

- TEOS Android Player (to show the content)
- Control for TEOS (to receive commands from TEOS and transcode to Android commands)

2.1.1 From player Interface
3 Check the applications **apps for TEOS** are installed:

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4   Check the version: go to settings >apps and check the versions of
your apps going into each of them. Please check Manage for TEOS
release note to find the latest TEOS Apps version compatible with your
platform
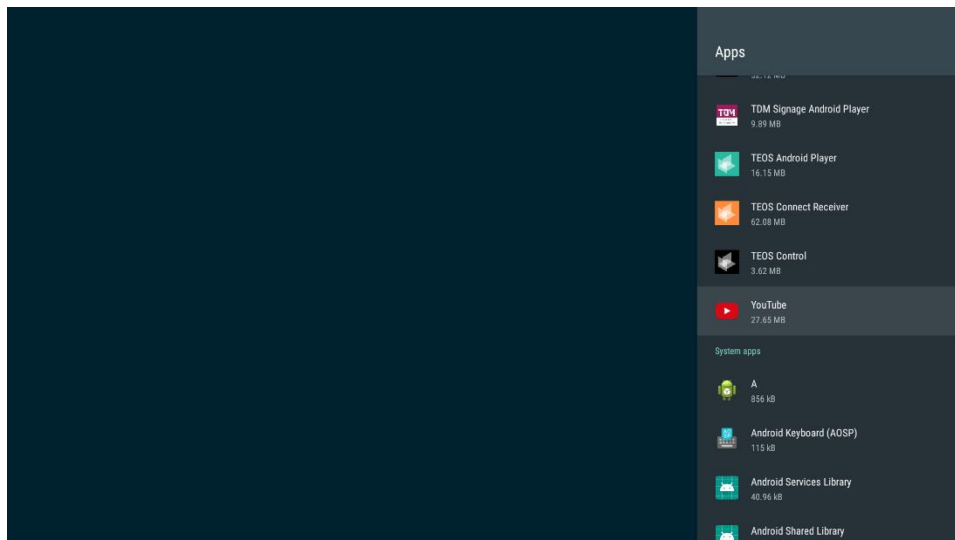
5   If the latest version is not installed, insert you USB stick with both TEOS
apk and go back to menu and AppInstaller. Click on USB memory and the
two apps on the USB stick should be visible. Install them by clicking on
them each and following the installation procedure.
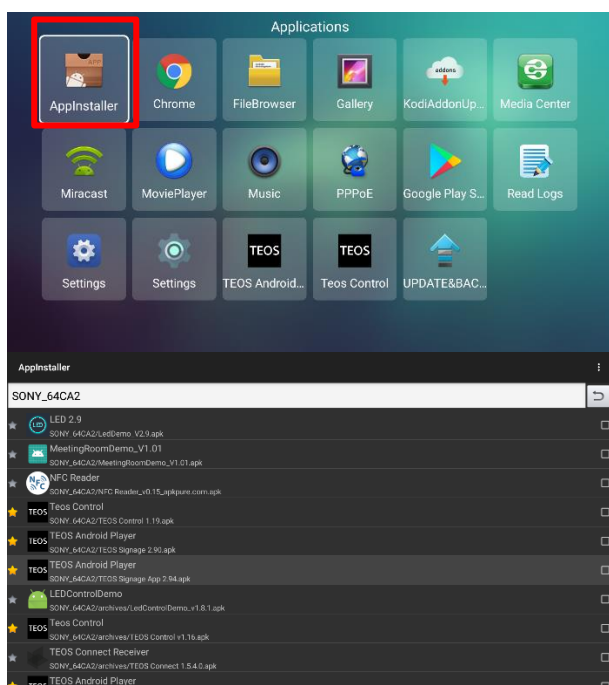
When you have installed both apps and they are up to date, you can remove the USB
stick.

## 2.1.2 Manage for TEOS interface

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From Manage for TEOS version 2.0, you can verify the TEOS apps version, update them or install them.
To do so, go to your Manage for TEOS web interface> Site Configuration> Service Management

Refresh	Name ▽	Device model ▽	IP Address ▽	Status	Behaviour status ▽	Device type ▽	License type ▽	Localization ▽
✎ 🗑 ↻ ⓘ	Dave 10" Tablet	Sony TEB-10SLB	☁ Cloud: d_CF0AB1	? ●	? Unknown	Tablet	Tablet	Dave Lounge
✎ 🗑 ↻ ⓘ	Dave 7" Tablet	Sony APPC-7XPL	☁ Cloud: d_4F3FC4	? ●	? Unknown	Tablet	Tablet	Dave Bedroom

Updates or installation of the apps can be done manually, by scheduling them one by one, or by group. Please note for the first connection with the device, you will have to authenticate the connection with TEOS Server by accepting the request the pop-up message of the player.

If your server is connected to the internet, you can directly get the latest version of apps from our Cloud app server. If not, you can always upload the apps that can be sent to you.
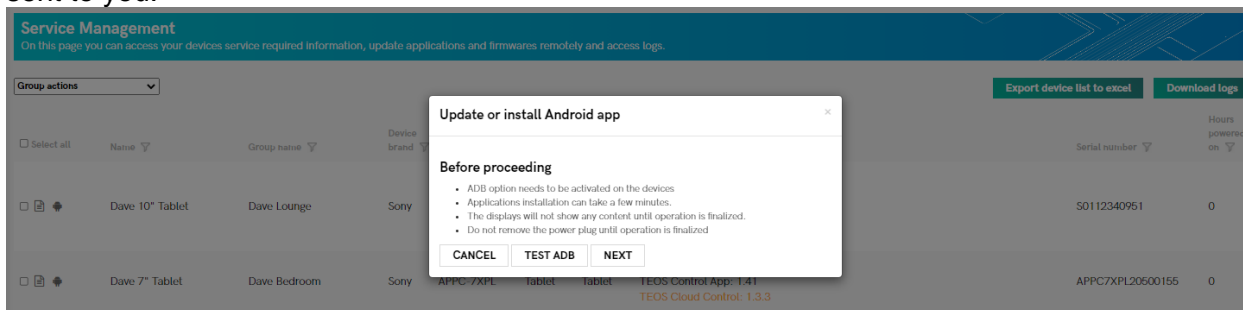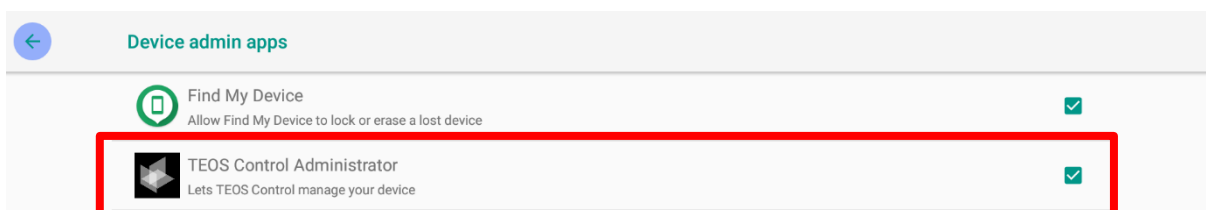

2.2 Configure app administration

TEOS apps need to be the administrator of the players to be able to control the LED, to shutdown or reboot the players and to be able to show content.

Go to settings [Settings] > More settings [More settings] >security> Device administration
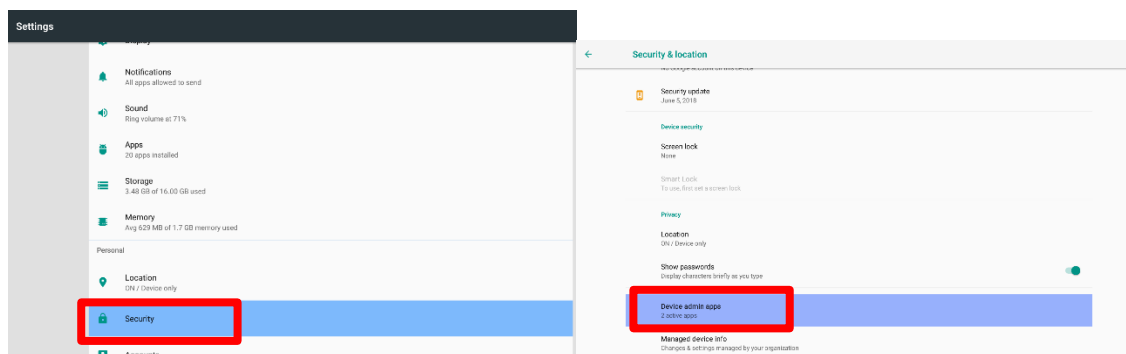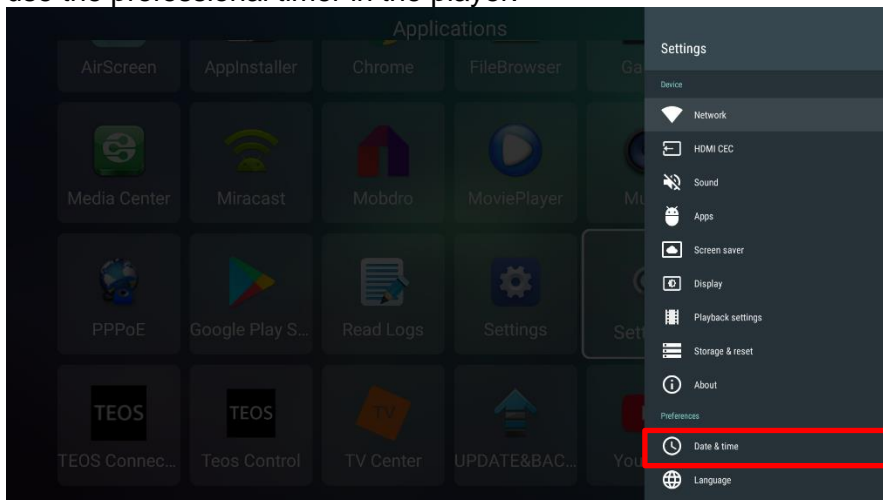

5.1   Tick **Control for TEOS Administrator**:

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After activating Control for TEOS as administrator, go to menu and open Control for TEOS app. The app is not displaying an Interface, it is only a service.

2.3. Configure date & time

This section explains how the in-built clock is working and how to configure time and use the professional timer in the player.


Go to settings>date & time, the features available under this menu are:
- Automatic date & time: automatically use network provided time
- Automatic time zone: automatically use network provided time zone
- Set date: manually set date
- Set time: manually set time
- Select time zone: manually set your time zone
- Use 24h format: you can choose 12- or 24-hour clocks

If in your date & time menu, NTP clock synchronization is not available or if you want to schedule the NTP synchronization, y ou can use an external app such as clocksync.
Go into the player menu>apk installer and install the apk clocksync.apk
Can be found also in https://bit.ly/sonypsetech under player for TEOS > apps for TEOS
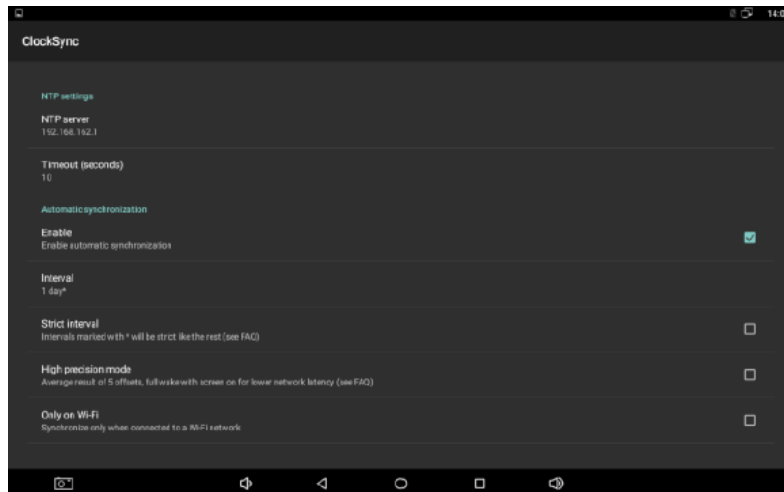
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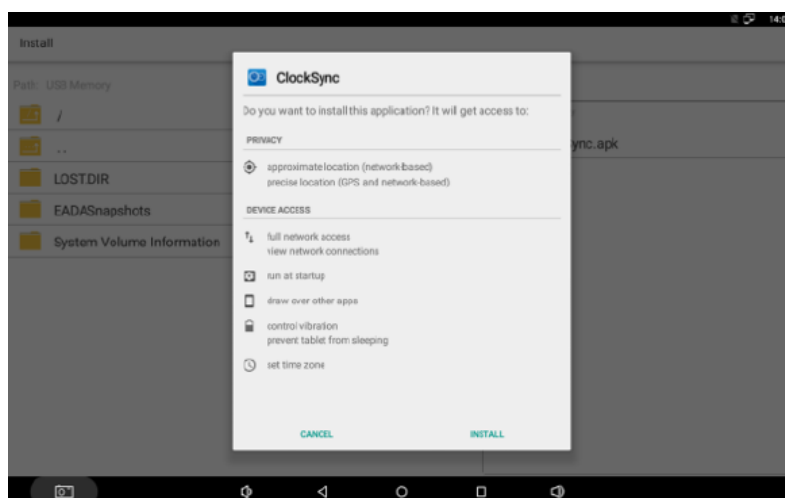
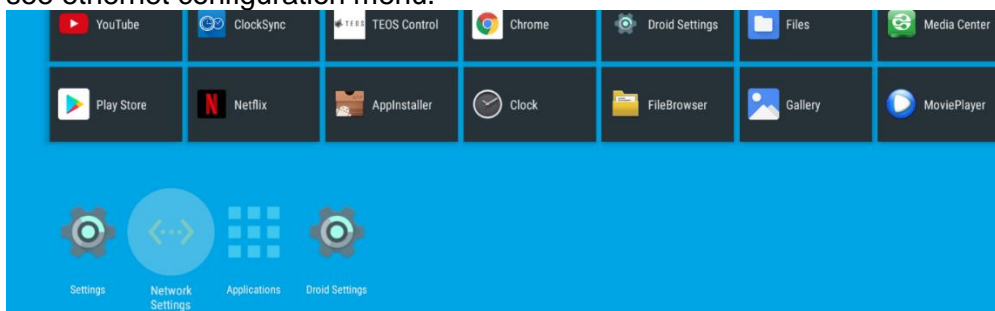1. Open the application clocksync and go to settings

2. Configure NTP server and activate automatic NTP synchronization


2.4. Configure network connection

This section explains all the settings available in the player's network configuration. First go to Settings > Cable. You will see WIFI option and if you click on more you will see ethernet configuration menu.


a) <u>Network WIFI setup</u>:
   Set up internet and local network connections:
   - Easy: In Wireless, go directly to WIFI option, activate It and select the SSID network you want to connect. WIFI is available if there is no ethernet cable connected

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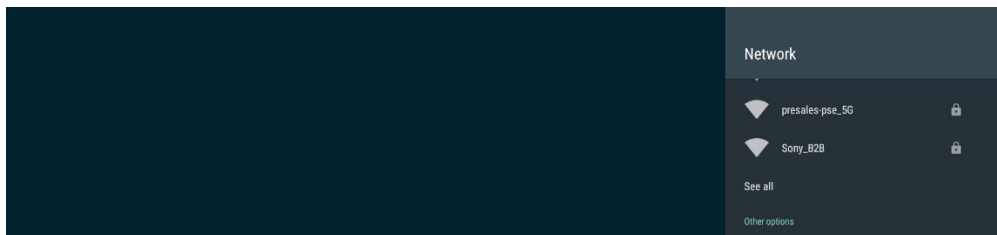
- o Easy: for ethernet connection, only plug the cable, the player is by default in DHCP, which means that the player will take an IP address if your network provides it.

- o Expert go to settings >network and select your wireless network: advanced way to setup the Wi-Fi or Wired LAN connection
  - ▪ In Wi-Fi part, a SSID can be selected and a static IP address can be defined
    For this, just press the SSID you want to connect until you get the pop-up to configure the password. You will then see the option "See password" and "Advanced option". Press advanced options and you will be able to configure proxy Information and a static address to the device.
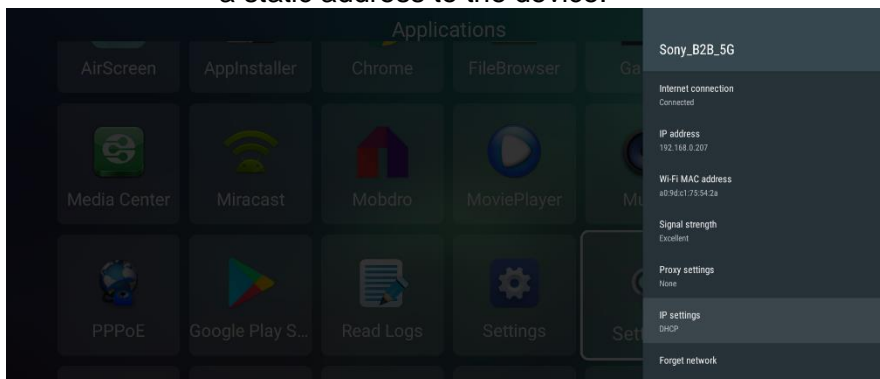
  - ▪ In Wired LAN, it is possible to select DHCP mode to retrieve automatically an IP address or to define a static IP address. Note that it is mandatory to define a gateway and DNS address even if there is no in the network otherwise the device will not be fully configured in the network part.
  - ▪ Proxy settings can be configured, a host name or an IP address can be defined and a port. Bypass proxy addresses can be configured. In Ethernet IP mode, you select if you want to use a DHCP or Static IP connection.

3. Players final configuration with TEOS

To finalize the installation of the player we recommend adding it into TEOS and sending content to it.
First, make sure that network player is configured.
The player needs to be able to contact TEOS Server using DNS approach, please make sure that the player links to your TEOS domain name.

3. Add device in TEOS

4.1 When using TEOS on premise

Go to Manage for TEOS Interface > Administration > Device management. You have different methods to add devices: from an excel Import, from auto discovery option or adding It manually. We will add in this case manually a new device, for that press on "add device"

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a) Insert the room or BRAVIA name
b) Select "display" as device type
c) Select Sony as device brand
d) Model will be automatically field
e) **Insert the IP address of the device**
f) Select the license type
g) Add the device into a device group (create before a group in site configuration)
h) Press **save**

Make sure your BRAVIA is linked to the device group (meeting room type).

Note: If the device Is not reachable via network, or you don't have license for It, you will get a message on top of this tab. If the device Is connected and the configuration done, you must be able to see It in green in both power status and behavior status.

By pressing to the virtual remote, TEOS will do a first adb request to your BRAVIA. **BRAVIA will after ask to allow the connection (debugging), for a security measure** which needs to be done when the ADB connection is setup for the first time, you need to authorize the RSA key from the TEOS server, once this is accepted and saved into the local configuration file the connection can be setup at any time when the display is online.
You will have to accept the connection by Manage for TEOS to be able to see the snapshot from the screen.

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✏️ Edit 🗑️ Delete 📱 ==Execute command== 🔄 Update screen
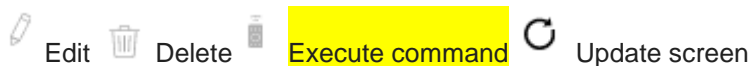
When trying to install a new App in TEOS via Site Management > Service management, and in the device press test ADB, TEOS is doing the same request to the device.
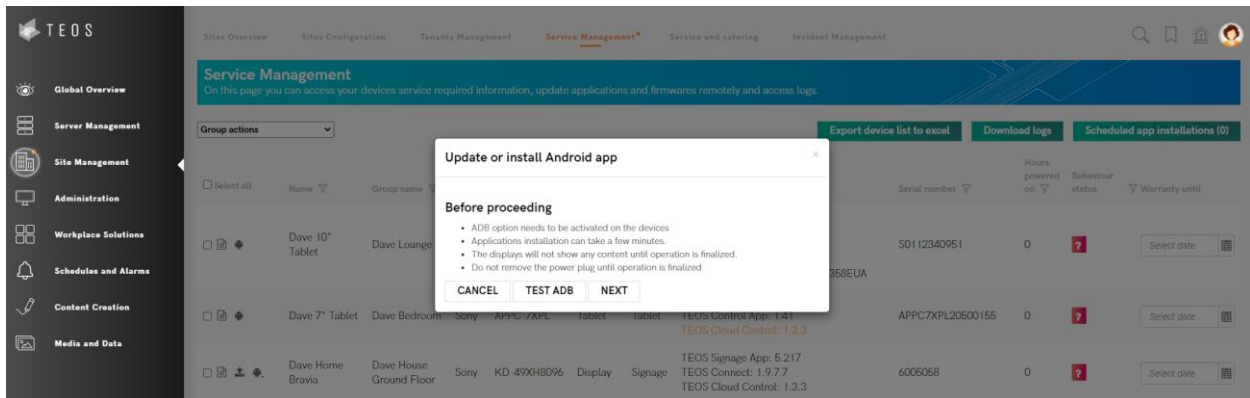
To allow this ADB debugging you have only one possibility, it is by using the real device remote

As soon as the it is allowed, you will be able to see the interface of the device into your virtual remote or in service management, you can test again adb and see it "online".
If the operation failed, a deep reboot (pressing the reboot button of the virtual remote) and opening again the virtual remote will request again for adb connection.
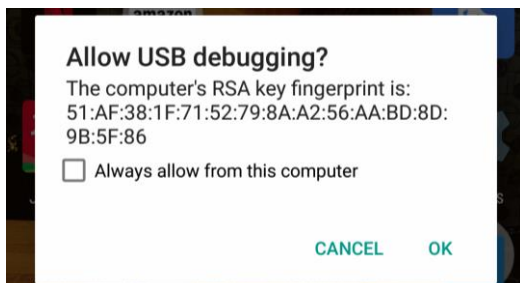
As soon as the it is allowed, you will be able to see the interface of the device into your virtual remote or in service management, you can test again adb and see it "online".
If the operation failed, a deep reboot (pressing the reboot button of the virtual remote) and opening again the virtual remote will request again for adb connection.

4.2 When using TEOS on Cloud (from version 3.0)

Go to your Manage for **TEOS CLOUD Interface** > Administration > Device management.
We will add in this case manually a device to the cloud, for that press on the drop down button on "Connecting cloud-controlled devices" to see the password **automatically regenerated every 1 hour** to insert in the device

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Connecting cloud-controlled devices

To add a cloud-controlled device, install the TEOS Cloud Control app and enter the following connection code. When adding multiple devices on the same network, it is sufficient to only enter the connection code on one device and set that device to *Broadcast on local network.*
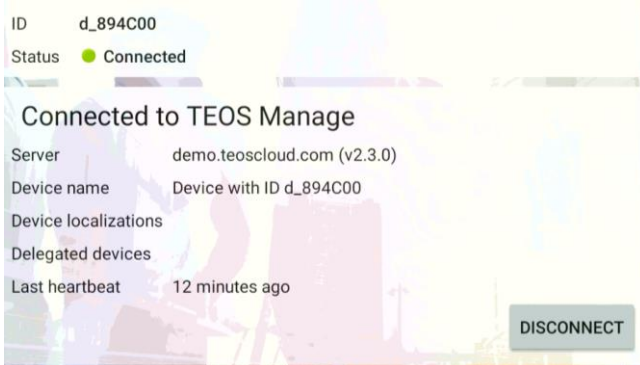
CONNECTION CODE: 3103-9173-791

After connection, the device will appear here and can be configured.

Now from the device, make sure it is connected to the internet. Open the app Cloud Control for TEOS (version 1.4.2 minimum) and insert the password, press connect.
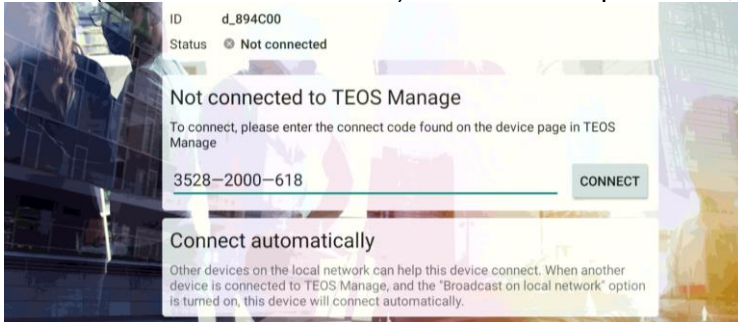
The device will then connect automatically to your cloud account without any additional action.

The ID shown in the device will appear in the AV device list after a refresh of the page and will be shown and this end of it.
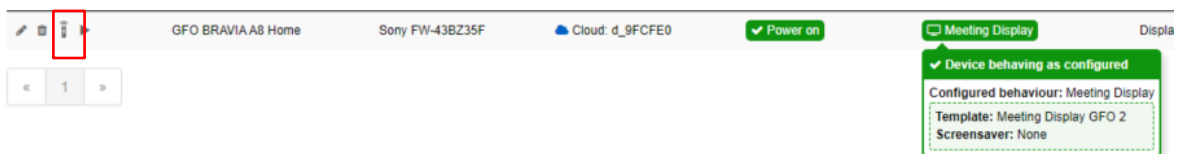
You can then setup it by clicking on the edit button:

- i) Insert the room or device name
- j) Select "display" as device type
- k) Select Sony as device brand
- **l)** Model will be automatically field
- m) Select the license type
- n) Add the device into a device group (create before a group in site configuration)
- o) Press **save**

3.1. ADB Setprop

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In some environment it is possible that the adb connection needs to be again requested even if the authentication as been done, If allowing the key again; this key is sometimes added as a duplicate in /data/misc/adb/adb_keys. To bypass this symptom, you have to send an adb command adding the property ro.adb.secure=0 to the build.prop file, this starts in ADB in a way where it will allow all connections without asking for authentication.

For that you will need an adb console. If you use Manage for TEOS, you can use the adb server into Manage for TEOS. For that open a command prompt and do:

- cd <yourManageforTEOSManagePath/www/backbone/adb
- do the command adb connect <ip address of your device>
- do the following commands:
  o adb shell
  o mount data
  o echo -n 'mtp,adb' > /data/property/persist.sys.usb.config

Source:
https://gist.github.com/varhub/7b9555cdd1e5ad785ffde2300fcfd0bd

3.2. Portrait and special resolution in HDMI output

To do this operation, you will need adb access. For that you will need an adb console. If you use Manage for TEOS, you can use the adb server into Manage for TEOS. For that open a command prompt and do:

- cd <yourManageforTEOSPath/www/backbone/adb
- Adb connect <YourIPdevice>

Configure wm size with the command "wm size" from ADB you can configure a resolution (maximum of the player is UHD (3840x2160) which should be used by the player, for example:

- wm size 600 x 3840

In **case rotation is needed** we used an app called "Rotation – Orientation Manager".

Within the app you can configure the rotation you want, please make sure you enable "Auto start" in the settings menu to rotate the display automatically after a reboot. You can download it HERE (rotation manager version 16.1) you can find it as well under https://bit.ly/sonypsetech under Player for TEOS > Apps for TEOS

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In case rotation is activated please also create an action schedule which will start the Signage application after the daily reboot, this because after a reboot the Signage app and the Rotation app are both automatically starting. In case the Signage app has started earlier it will not use the correct resolution, with the action schedule you can make sure that it does.

Within TEOS you can create content based on the resolution of the display, some LG stretch displays are using 600 x 3840

Warming on this step important to have everything fine after reboot
In case rotation is activated please also create an action schedule which will start the Signage application after the daily reboot, this because after a reboot the Signage app and the Rotation app are both automatically starting. In case the Signage app has started earlier it will not use the correct resolution, with the action schedule you can make sure that it does

3.3. Disable Battery saving mode on Android 9
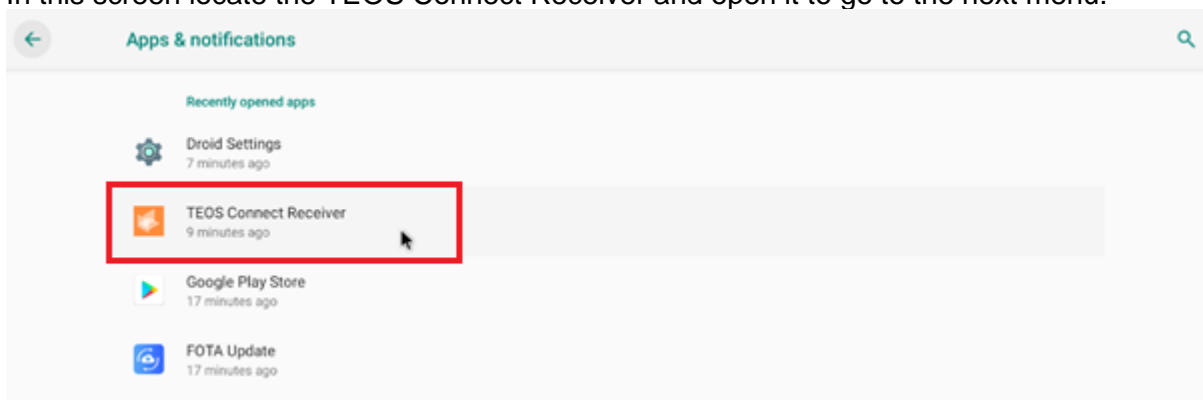
1. In the home-screen of the device, go to Droid Settings.
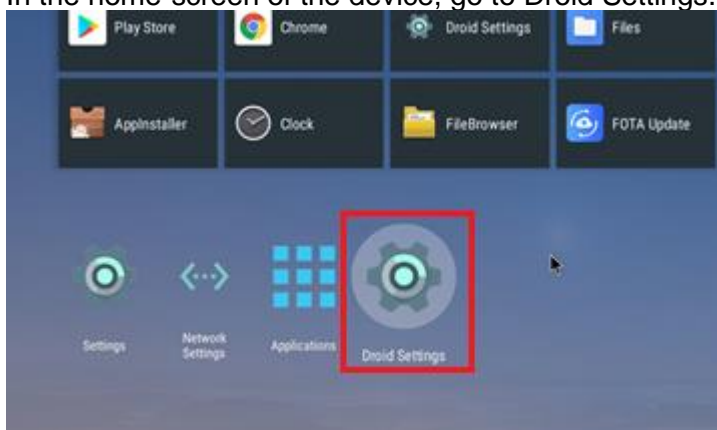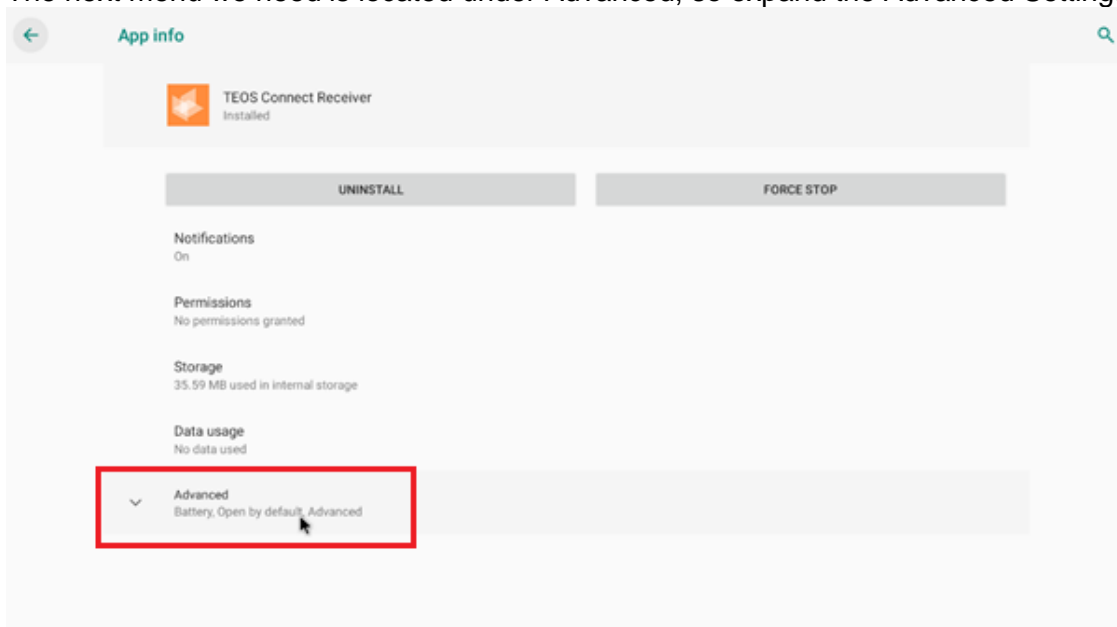

2. In the next screen go to More Settings.
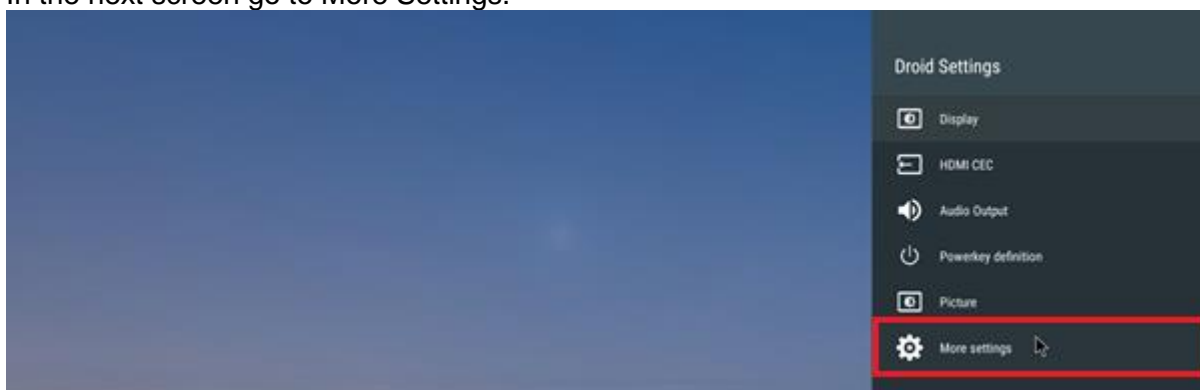
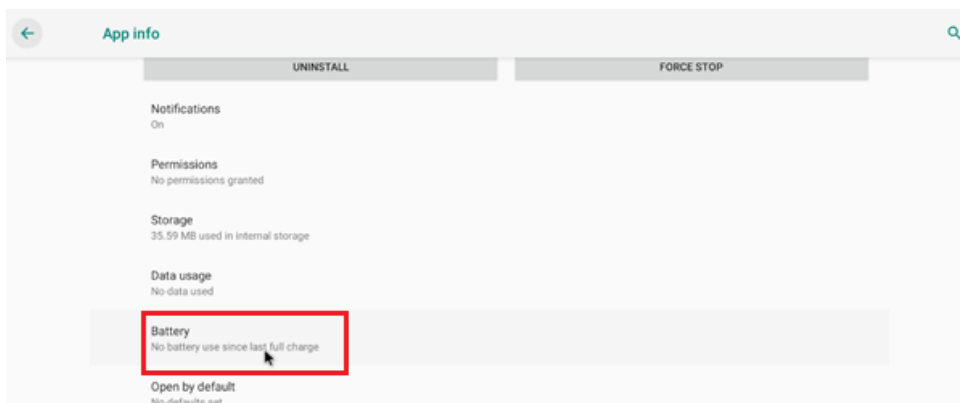3. Next navigate to "Apps & notifications".

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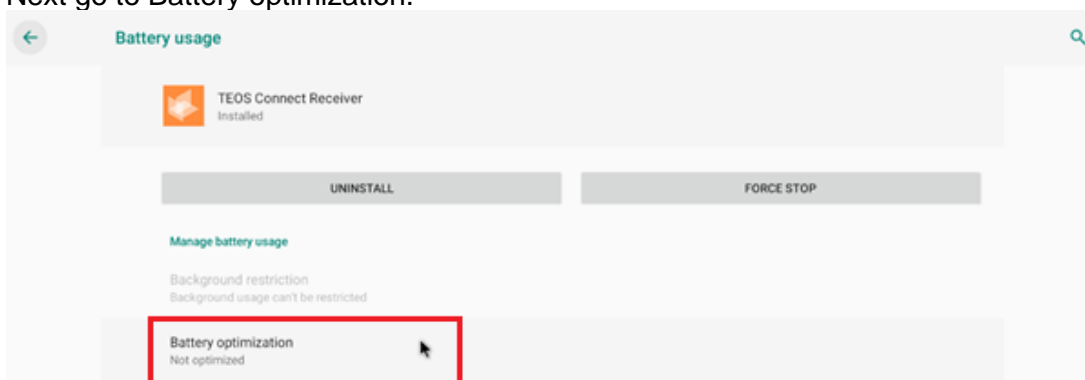4. In this screen locate the TEOS Connect Receiver and open it to go to the next menu.

5. The next menu we need is located under Advanced, so expand the Advanced Settings.
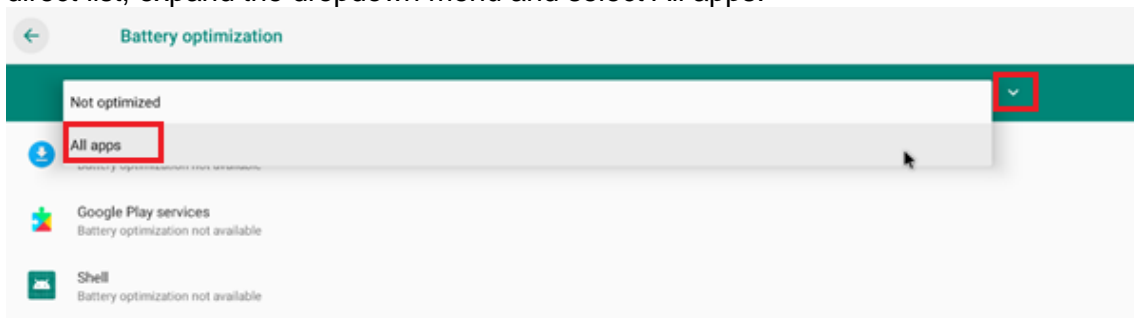

6. We want to change the Battery saving options, so open to the Battery menu.
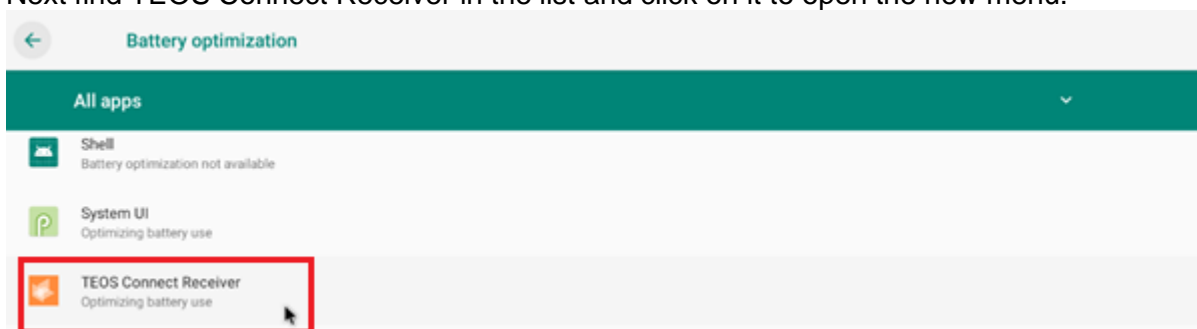
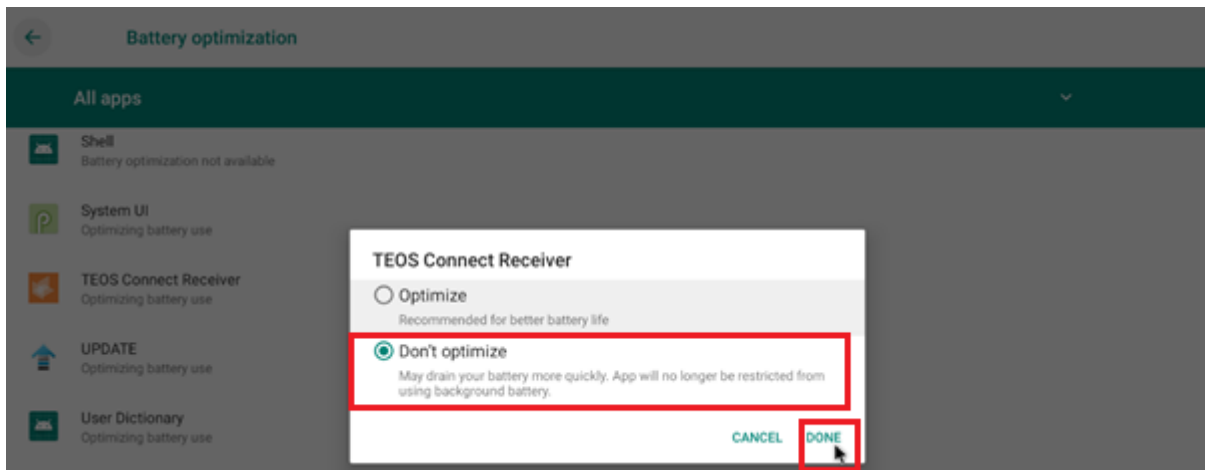**SONY**

Next go to Battery optimization.

7. Next, we need to find TEOS Connect Receiver. If TEOS Connect Receiver is not in the direct list, expand the dropdown menu and select All apps.

8. Next find TEOS Connect Receiver in the list and click on it to open the new menu.

9. The last step is to select "Don't optimize" and afterwards press DONE.

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Connect for TEOS should now be able to run in the background and remain active for connection requests.

3.4. QBIC BXP-100 Configuration

From Factory, the player QBIC BXP-100 can arrive with a configuration which requires adjustments to be able to use it with TEOS. Make sure to use a firmware version which is rooted

Make sure the player is connected in HDMI and with network. You have 2 methods of configuration with the player:

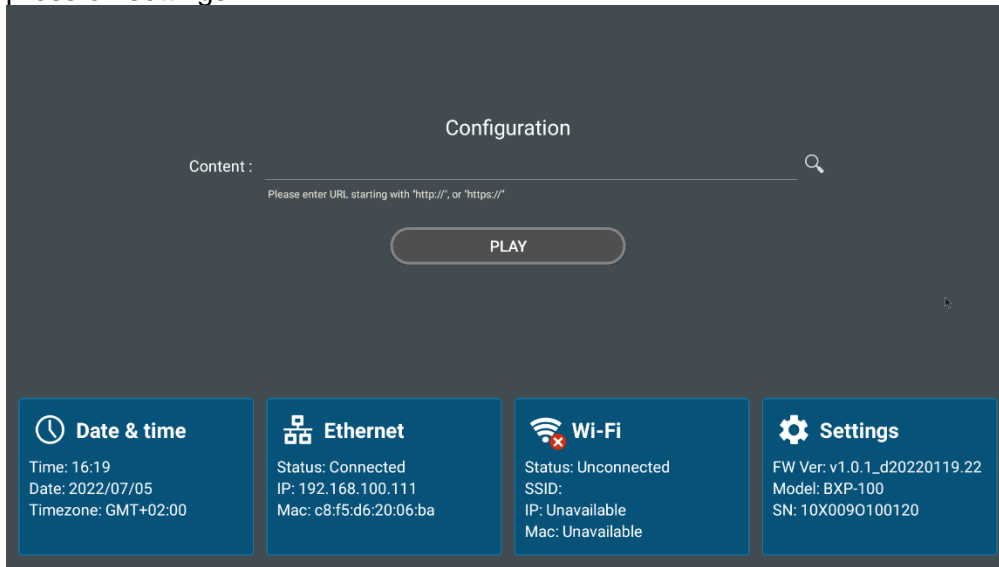1) Complete remote configuration via the following URL and being in the same network:
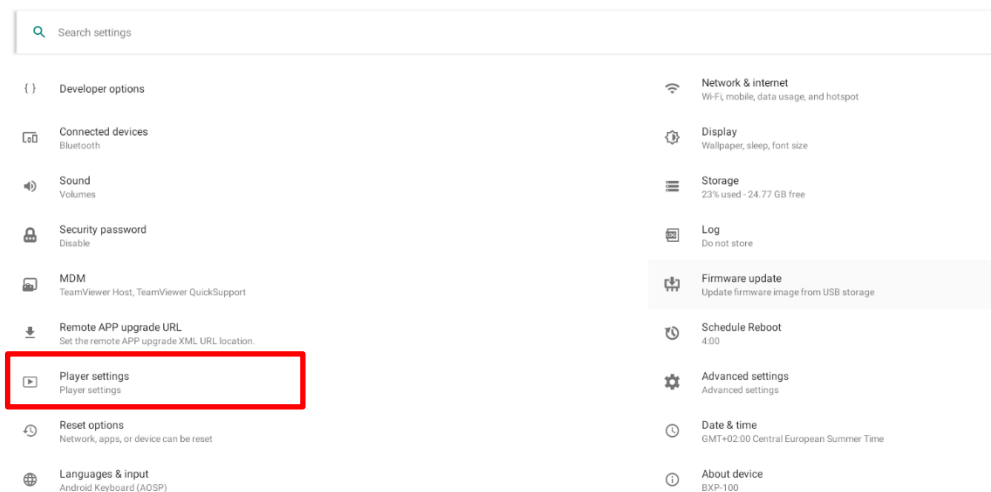http://share.qbictechnology.com/external_share/qrc/

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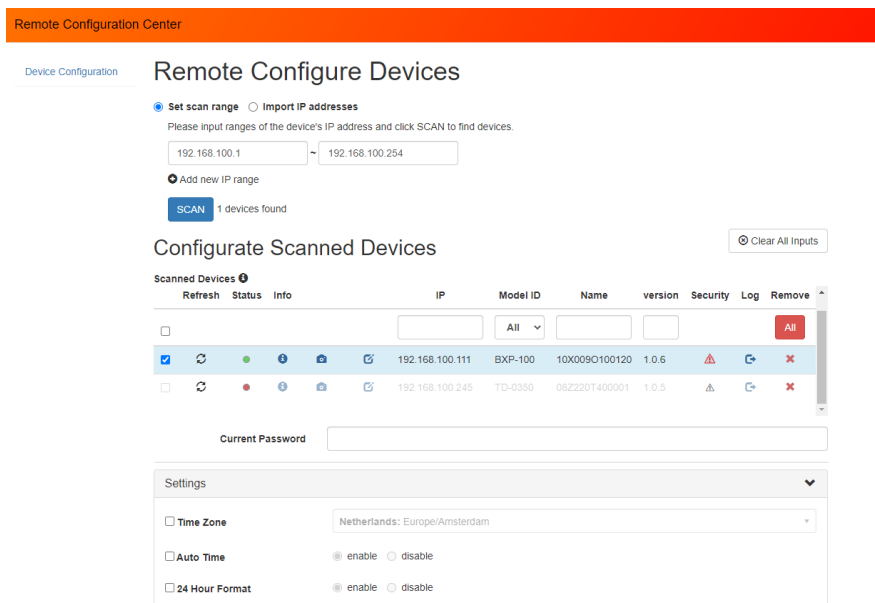
2) Using the GUI on the player, which will be explained under this documentation.
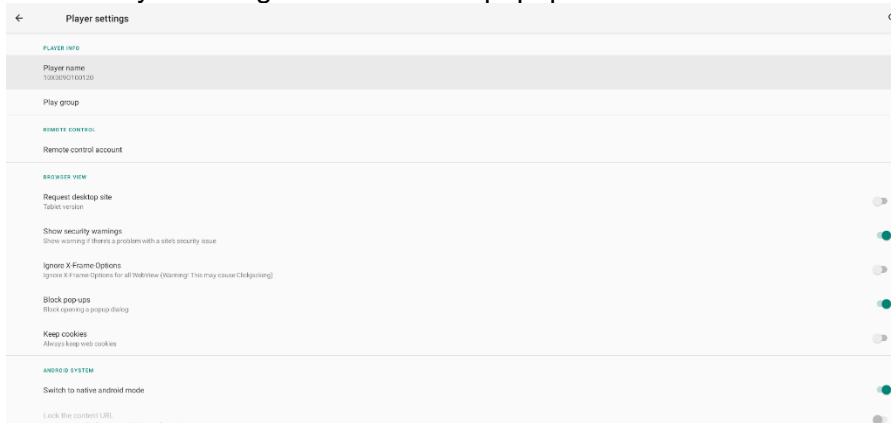
For the configuration start by connecting a keyboard and mouse to the player and press on settings


Go to player settings

Under Player settings enable : block popups and switch to native Android mode
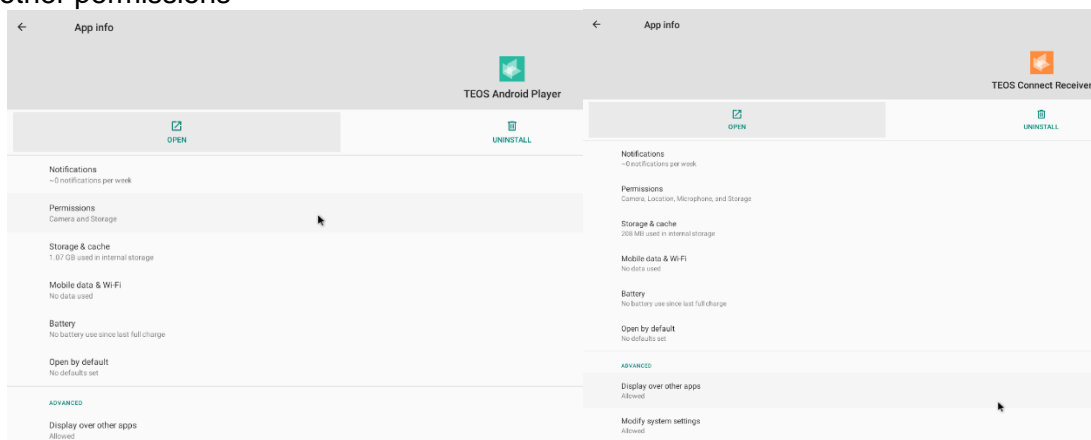
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Go back to settings and go to about device > build and press 7 times into the build
number you will have developer options visible into the settings

Go back to settings and developer options and enable stay awake and enable ADB
and ADB over TCP-IP (port 5555)

Go to home > menu > file explorer and install the TEOS applications via USB: TEOS
Control 1.49 minimum version, TEOS Android Player 5.295 and TEOS Cloud Control

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When all the applications are installed go to settings > advanced settings > security and under device admin apps allow TEOS Control (this for TEOS to be able to switch off the device)
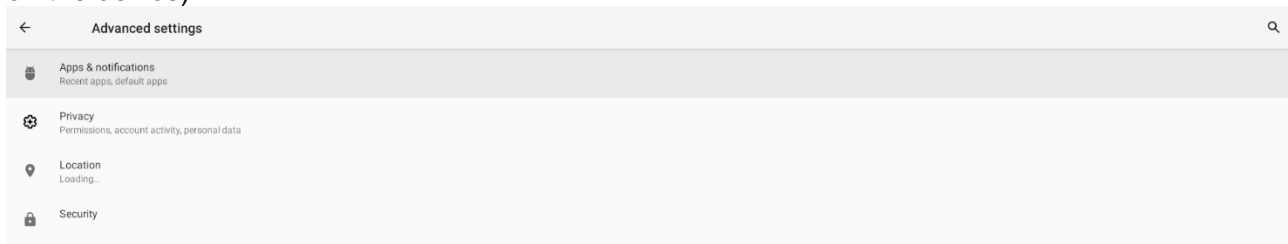
Go back to settings > advanced settings > Apps & Notification and allow in each TEOS application the permission to display over app and the storage, camera and other permissions

Add the device into TEOS and push content

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Visit us on
https://teos.solutions