Raspberry Pi 5 LoopSign Deployment Guide

With our custom OS for Raspberry Pi 5, you'll have a functional, stable and secure external player for LoopSign. Our OS is based on the Raspberry Pi team's Raspberry Pi OS and uses the latest Chromium browser engine to run LoopSign content.

If you use ethernet to connect the player to network, there is no need for manual setup of the player: Just use the unique code that shows on the screen connected to the player to enroll the player in your LoopSign account.

At first boot, the player will automatically check for and install functional and security updates, and after that it will continue to stay updated by running an automated update procedure every month.

Content

1. What do you need

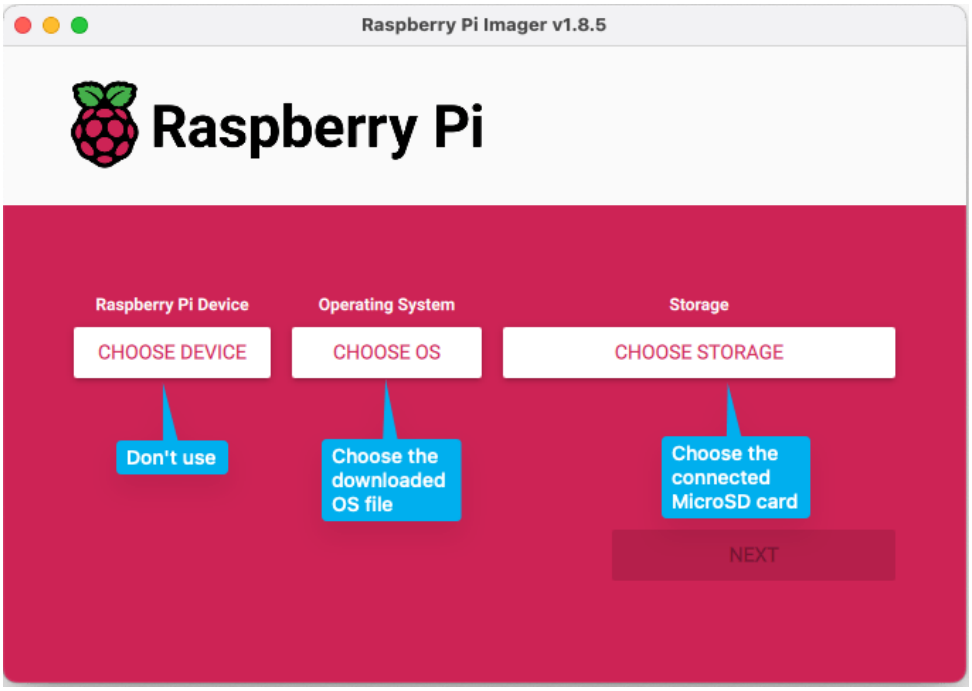
- Raspberry Pi 5
    - Raspberry Pi 5 single-board computer (4 GB RAM or more)
    - Raspberry Pi 5 case.
        - It is highly recommended to use a case with a built-in heatsink or to use a separate small heatsink on the SoC directly.
    - Raspberry Pi 5 power supply (27W)
        - Only use a power supply that will provide enough power to the Raspberry Pi 5, e.g. the official Raspberry Pi 5 power supply. The official power supply for the Raspberry Pi 4 does not provide enough power and will likely corrupt the bootloader of your Raspberry Pi 5. (If you've corrupted the bootloader on your Raspberry Pi 5, please refer to this guide to fix it.)
- Micro HDMI to HDMI cable
- MicroSD card (We highly recommend using Samsung Pro Endurance SD card)

    - Please use Pro Endurance SD card, cause the player has quite frequent reads and writes. A normal SD card will be worn out within a year or two of 24/7 usage. A High Endurance card will last much longer. https://semiconductor.samsung.com/consumer-storage/memory-card/micro-sd-pro-endurance/
    - SD card size 16GB or 32 GB. Larger SD cards are OK, but the extra space will not be utilized.
      Please note that the Pi does not work with all kinds of SD cards. If your Pi runs slow or gets unstable it is probably because of combability or poor-quality SD card.
      Samsung Pro Endurance is highly recommended.
- MicroSD card reader
- Software to write our custom OS onto the MicroSD card
    - Raspberry Pi Imager software: https://www.raspberrypi.com/software/
    - Rufus: https://rufus.ie/

2. LoopSign Image Deployment

- Download the latest Raspberry Pi5 LoopSign Image from LoopSign webpage https://loop24.no/loopsign/how-to-deploy-loopsign/

- Connect an SD card reader to your computer and insert the SD card you want to use.
  - Start Raspberry Pi Imager
  - In Operating System, Choose "Use Custom" and select the file you downloaded
  - Choose storage (the SD Card)
  - Click "Next" and follow the on-screen instructions. Do not apply custom settings when asked.

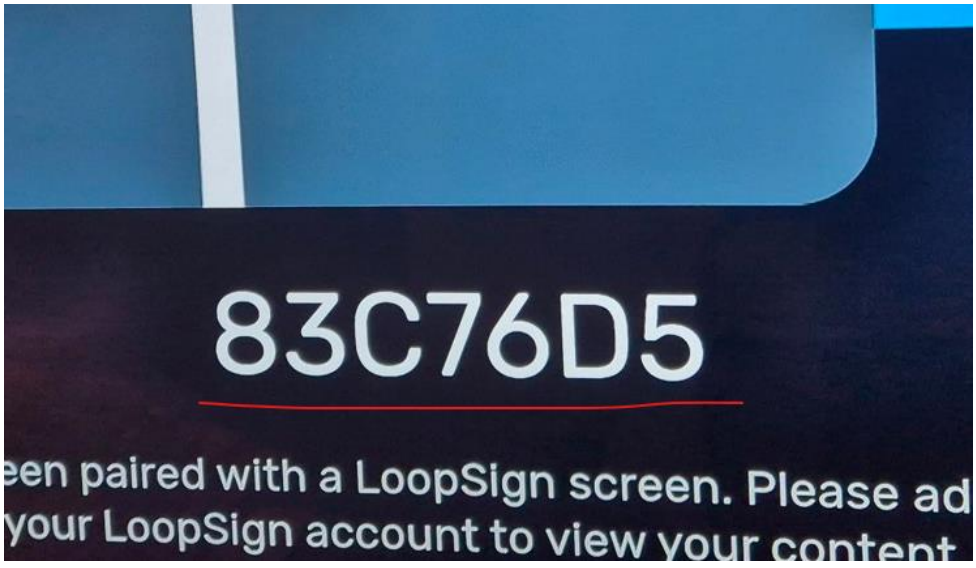


- When the card has been written and verified, eject the card and insert it in the Raspberry Pi.
- **Connect Network and HDMI1 (HDMI port nearest the USB-C power connector).**
- Connect power and wait for a few minutes for initial setup.
- If you do not get a picture after a few minutes, please disconnect/connect power to restart the unit.
- Note that if network is not connected it will take some extra time during startup

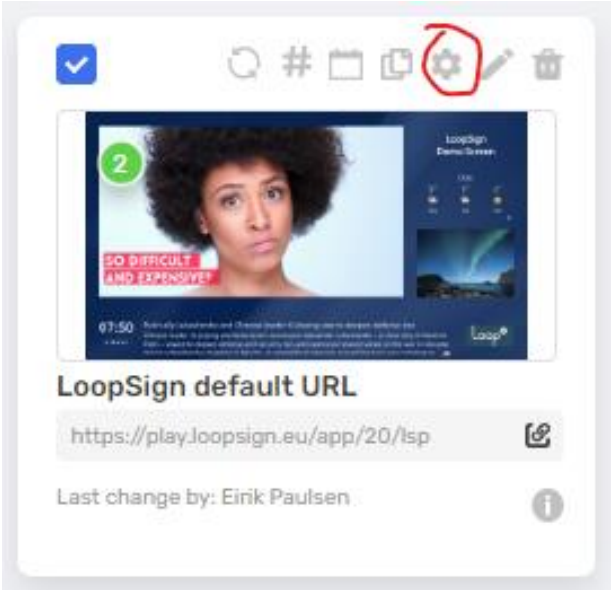
After starting up it will wait for confirmed network connection and then launch LoopSign and show its unique LoopSign hash code. At first boot, the player will check for system updates and install any available, and this process will include a couple of quick reboots.

3. Enroll the player to your LoopSign account

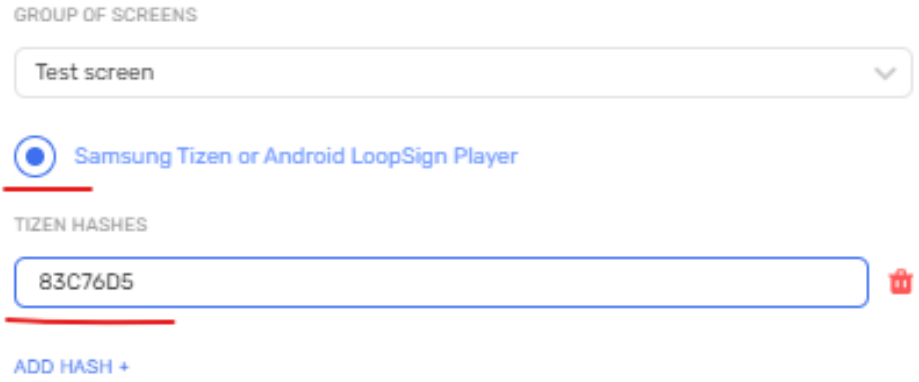
To have the player display the content from your LoopSign account, note the displayed hash code and assign it to your LoopSign screen/account.



Login to your LoopSign account and enter “Settings” for the screen you want to assign.



Enable “Samsung Tizen or Android LoopSign Player”
Then enter the HASH code from your player.



You can add more players to the same LoopSign screen: Select “ADD HASH”.
Remember to Save settings.

4. Optional Configuration

If you need to do any configuration of the system settings, you’ll have to connect a keyboard and/or mouse. Logitech K400 is a recommended alternative.

Press Alt+F4 to exit the kiosk browser.

a. Configure localization

The Pi is set up with Norwegian keyboard layout and time zone Oslo (Central Europe)
If you need to change this do as follows:
- Open “Raspberry Pi Configuration” from desktop
- Select “Localization” and set whatever settings you prefer.

b. Configure wifi

If you need to connect to a wifi network,
Click the “Double red cross/Arrows” icon in the right lower corner and configure wifi as needed.

c. Configure screen orientation

The player is set to run on a display in landscape mode. If you need to change the orientation to portrait, you can do that by using the desktop application “Screen Configuration”.

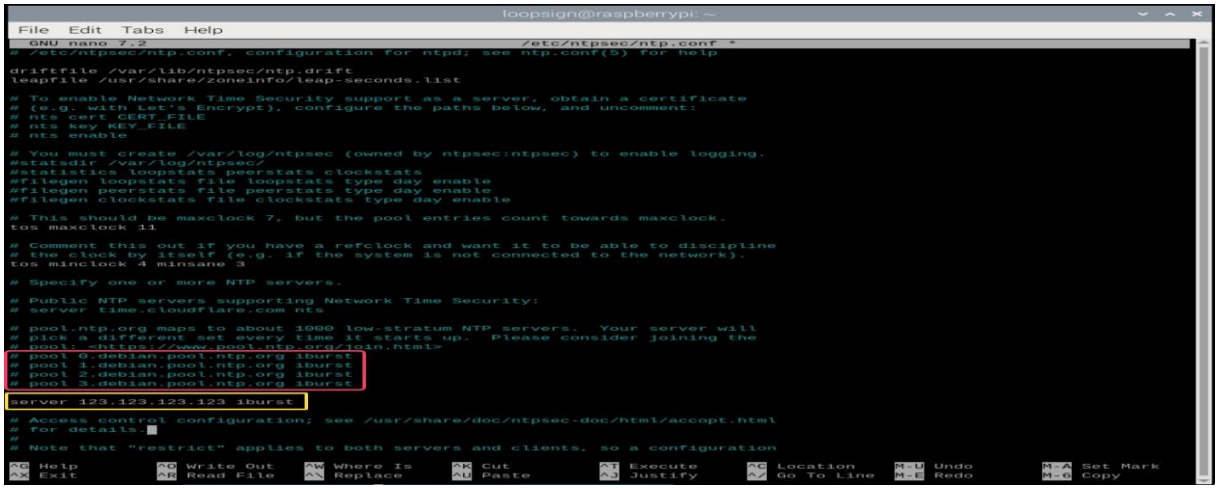
d. Configure custom NTP server

By default, time sync is done by connection to a common NTP server on the internet. In most cases this is OK, however in the case where the network does not have NTP TCP port 123 open you need to specify an internal NTP server for time synchronization.

Our setup for Raspberry Pi supports specifying a time sync server via the local DHCP server, so-called Option 42. If you use Option 42 on your local network, there is no need to modify settings on the Raspberry Pi itself.

If you need to set a custom time server locally on the Raspberry Pi, you need to edit the relevant configuration document of the OS:

- Run the following command in a terminal window to open the configuration document: ***sudo nano /etc/ntpsec/ntp.conf***
- Comment out the default NTP servers as shown in the red rectangle.
- Add your custom server in a new line in the document, as shown in the yellow rectangle.
- Press Ctrl + O to save the edited file, and then press Ctrl + X to exit.



e. Use Raspberry Pi Connect for remote control of the player

The Raspberry Pi team provides a built-in solution for remotely controlling the player: Raspberry Pi Connect. Please see their documentation here to set that up:
https://www.raspberrypi.com/software/connect/