

Operating systems (OS)

OS related questions, flashing, versions, etc.

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What is the operating system?

- Debian 11
- Android 12
- URVE Linux (Buildroot)

Can I change the OS settings?

You can modify any settings in Debian.

Can I change/switch the OS language?

Yes, without a problem.

For more information check: <https://ccm.net/computing/linux/2147-how-to-change-debian-language/> (for example).

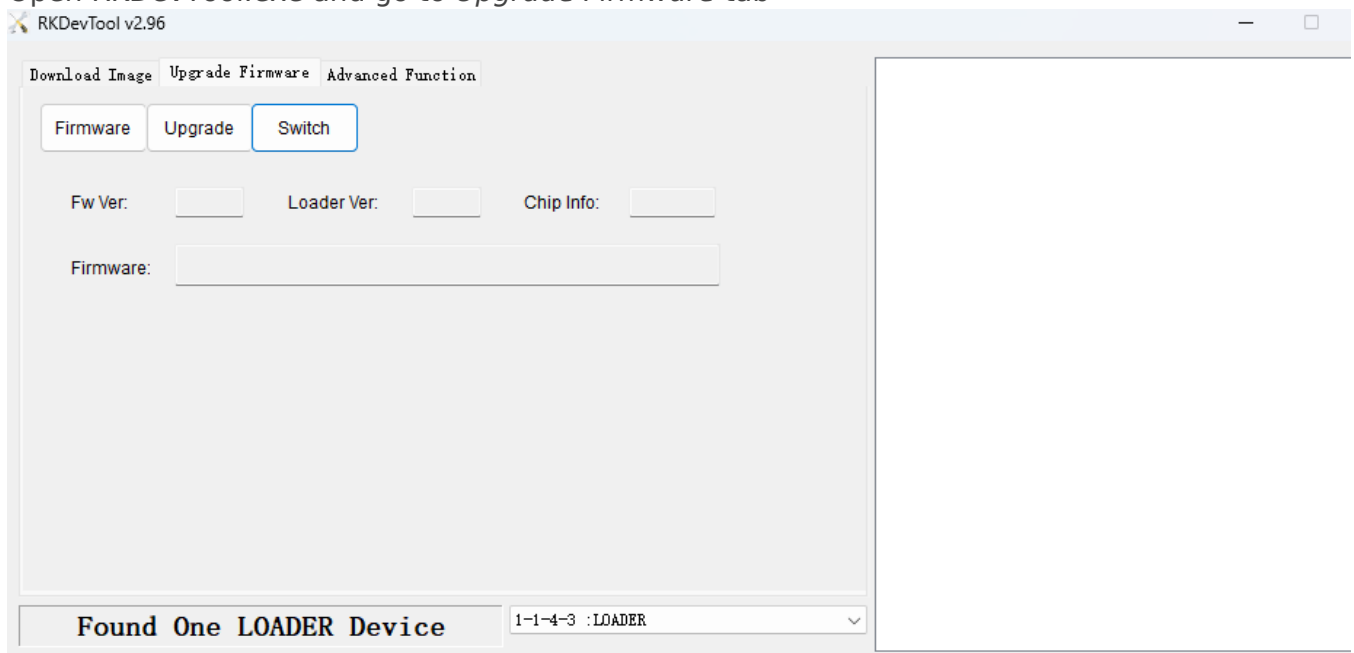
How do I reinstall/reflash the operating system?

Prerequisites

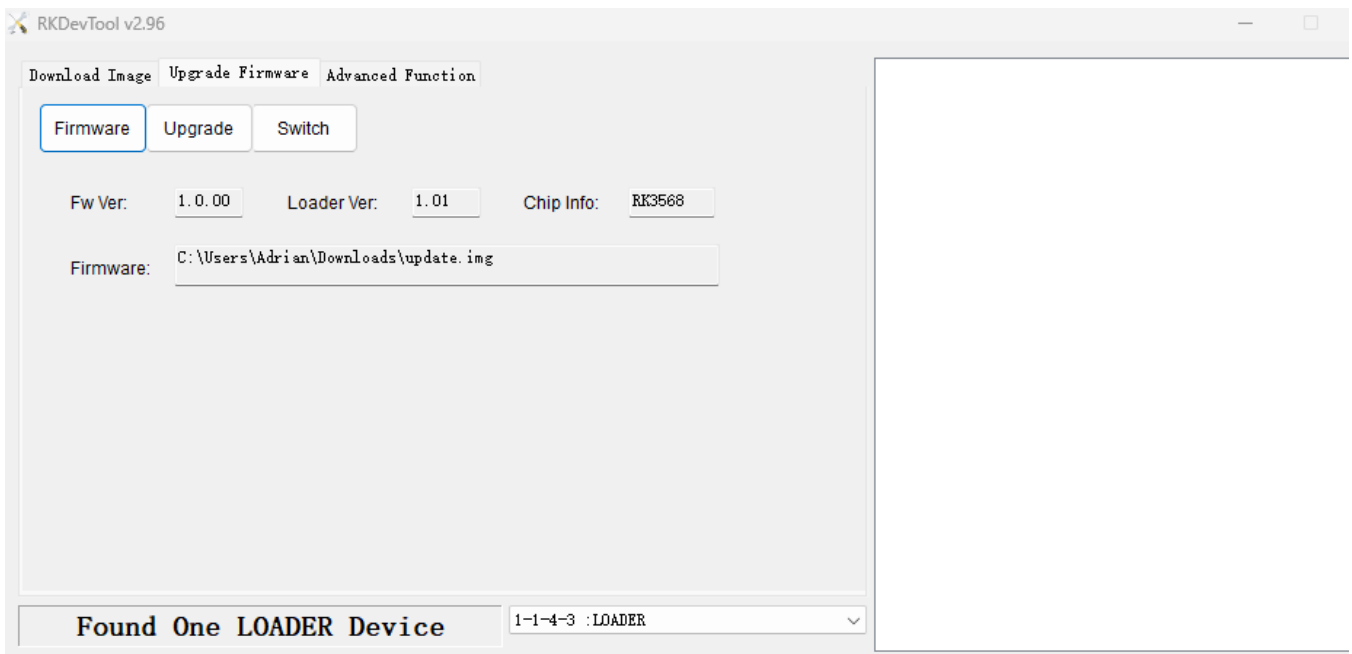
- USB A <-> USB A cable (plug it to middle top USB port)
- Download tools and proper update.img file from <https://urveboard.com/pi/files>
- Install *DriverAssistant* for loader mode support. Reboot after installation.

How to reinstall / flash?

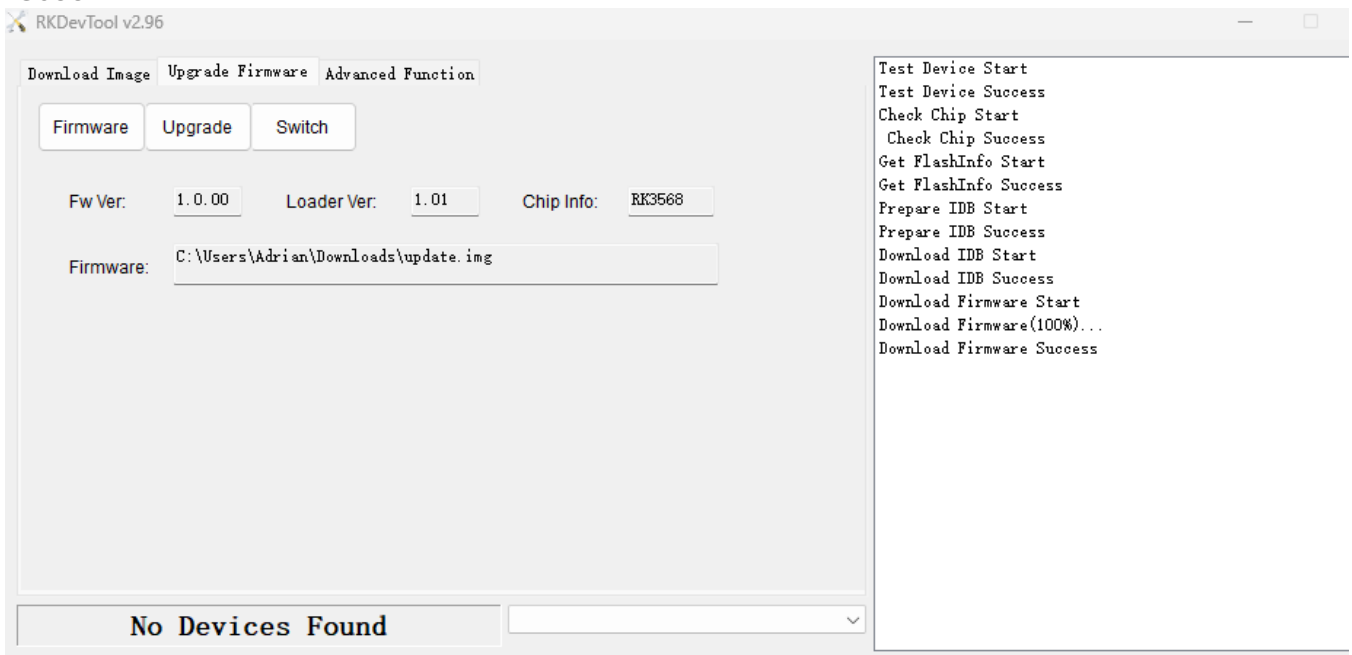
1. Open RKDevTool.exe and go to *Upgrade Firmware* tab



2. In the bottom line you should have *Found One LOADER Device*, if see *No Devices Found* go to [How to switch to Loader mode](#).
3. Click *Firmware* button and select OS image downloaded from [vendor site](#). After a while you should see information about image.



- Click *Upgrade* to reinstall operating system. After few minutes device is ready. Upgrade should end with *Download Firmware success* message. Device should automatically reboot.



How to switch to Loader mode

Option 1:

Connect to the terminal of the device. Write below command:

```
reboot loader
```

Option 2:

Power off the device. Press button near USB C port. While holding this button power on device.

Potential issues

Download Firmware Fail - Note: Communication issues, Certainly please check usb

During upgrade procedure USB connection was interrupted. Check your USB A - A cable. You should reboot device and start everything over.

No found any devices, stop running!

Make sure your device is connected and found. If your device is not found make sure:

- you followed steps mentioned in [How to switch to Loader mode](#)
- you have installed *DriverAssistant*. After driver installation PC reboot is mandatory.
- you have connected URVE Pi to middle top USB port

URVE multimedia application is indicated on your site, is it available in the OS?

It's optional and paid software. It is not installed on URVE Pi's OS.

Can I create my own Debian compilation?

If you want to create your own Debian compilation, check out the manual (<https://urveboard.com/pi/files>).

Does URVE Board Pi come with preinstalled OS?

Yes, the OS comes pre-installed on board (eMMC).

What is the Raspbian RPi compatibility?

Since we are using Debian Linaro on our URVE Pi, after testing we believe that almost all software designed for the Raspbian RPi will work with little or no modifications.

Is it possible to install the OpenBSD operating system on URVE Pi?

Probably yes, but we do not support such a scenario. It could also be hard to run VPU and GPU acceleration on this system.

Is it possible to upload firmware using the USB C port?

No, USB 2.0 OTG port is used for flashing the OS.

Can data be stored on the SD card if the OS (by default) is installed on the eMMC?

Of course.

Does URVE Pi have a built-in watchdog? Does it run in the basic configuration?

It doesn't run in the basic configuration, but adding it to the kernel is trivial, as well as turning it on and "feeding" it.

Debian 11 Autostart

To make a program or script run automatically when the Debian 11 operating system starts up, you can use the autostart feature. This can be accomplished by creating a .desktop file in the `/etc/xdg/autostart` directory.

Steps

1. Open a terminal window.
2. Navigate to the `/etc/xdg/autostart` directory by running the following command:

```
cd /etc/xdg/autostart
```

3. Create a new .desktop file named `test.desktop` by running the following command:

```
sudo nano test.desktop
```

4. Copy and paste the following code into the file:

```
[Desktop Entry]
Type=Application
Exec=/home/linaro/autostart.sh
Hidden=false
NoDisplay=false
X-GNOME-Autostart-enabled=true
Name=MyScript
Comment=Runs MyScript script at system startup.
```

5. Save and exit the file by pressing `Ctrl+X`, then `Y`, and then `Enter`.
6. Ensure that the `autostart.sh` file located at `/home/linaro/autostart.sh` has permissions to run by executing the following command:

```
chmod +x /home/linaro/autostart.sh
```

7. Reboot the system to verify that the script runs automatically at startup.

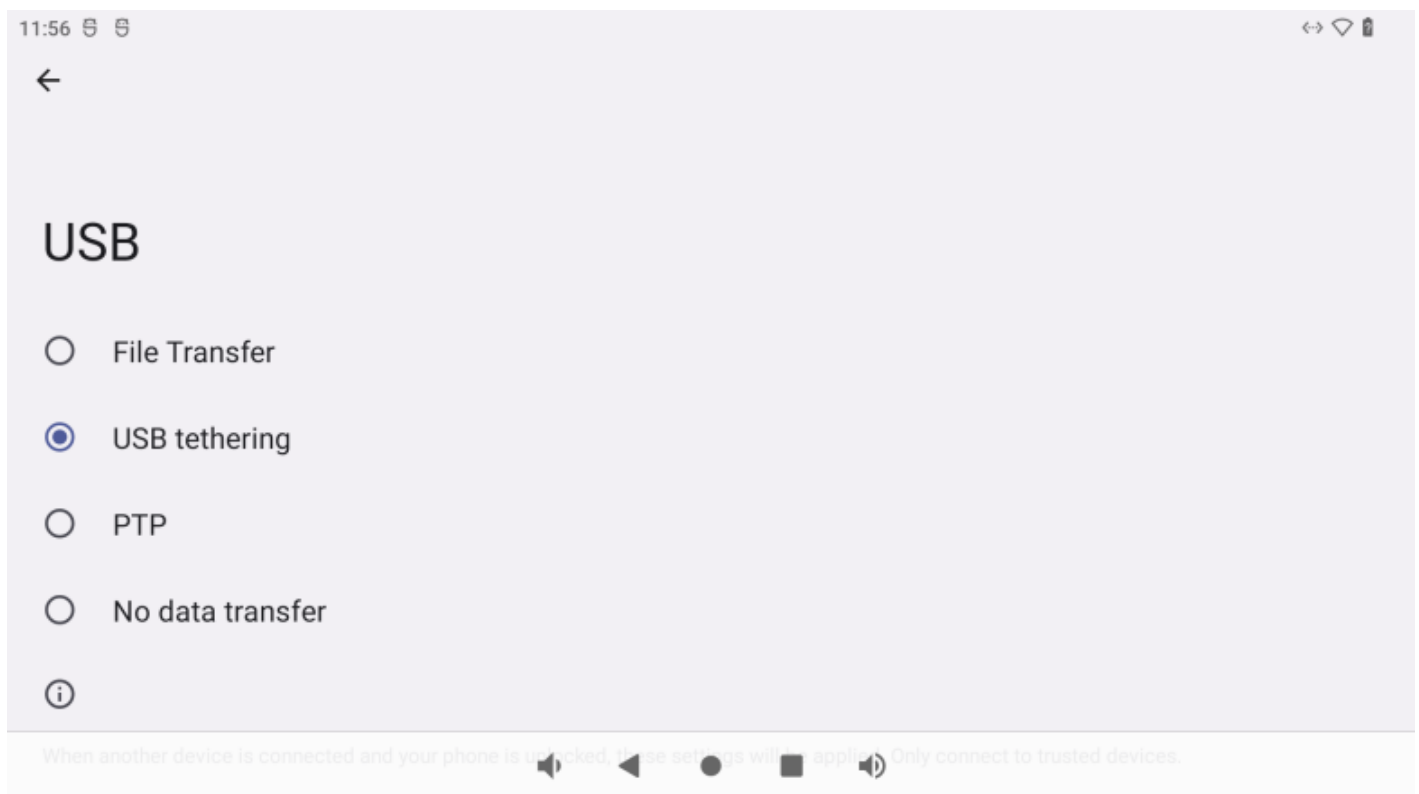
Congratulations! Your script will now automatically run at system startup on Debian 11.

Activating OTG Mode

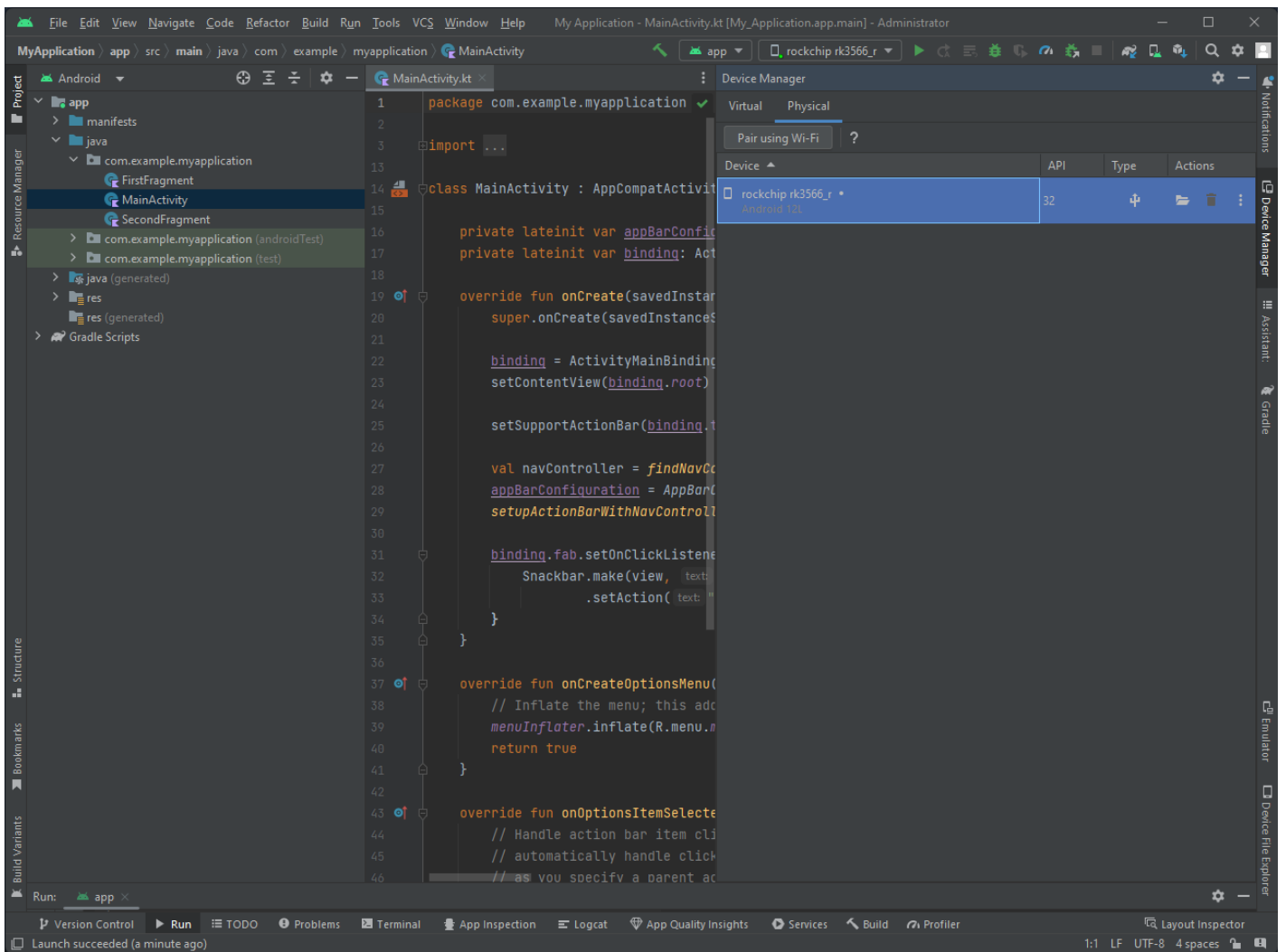
By default, URVEPi operates all four USB ports in host mode. To switch the top-middle port to OTG mode and connect your PC to it using a USB-A cable, you need to do it manually. This means that you won't be able to transfer files from your USB-C connected PC, as this port only works as a power source and acts as an RS232 emulator.

To change this behavior and force the device into OTG mode, you need to enter the following command as a superuser:

```
su
echo peripheral > /sys/devices/platform/fe8a0000.usb2-phy/otg_mode
```



Once in OTG mode, you need to set "**File Transfer**" or "**USB Tethering**" in "**Settings**" / "**Developer options**" / "**Default USB Configuration**" and you can use ADB software to connect to your URVEPi. If you using Android Studio you should see URVEPi as "rockchip rk3566_r" device.



To switch back to the default mode, simply enter the following command as a superuser:

SU

```
echo host > /sys/devices/platform/fe8a0000.usb2-phy/otg_mode
```

With these simple commands, you can easily control the behavior of your URVEPi's OTG mode to suit your needs.