

Radxa Zero



Under construction. Be warned, some sets of instructions are incomplete.

Some manual steps are required to install custom operating systems onto the Radxa Zero. You will need a computer with Python 3 (including PIP3) installed.

Flash Batocera to the Radxa Zero's micro-SD card

This involves editing the eMMC, however only the bootloader will be flashed onto it. Batocera will be flashed onto the micro-SD card.

1. [Flash Batocera](#) onto the micro-SD card using an external reader.
2. Connect the Radxa Zero to the computer via USB2/PWR OTG USB-C port (can use a USB-C-to-USB-C or USB-C-to-full-sized USB-A cable). This is the port closest to the corner.
3. Press the USB button underneath the board.

Flash to micro-SD card using Arch Linux

1. Run the following:

```
sudo pacman -S fastboot wget python3-pip
sudo pip3 install pyamlboot

wget https://dl.radxa.com/zero/images/loader/factory-loader.img
sudo boot-g12.py factory-loader.img
sudo fastboot flashing unlock_critical
sudo fastboot flashing unlock

wget https://dl.radxa.com/zero/images/loader/rz-fastboot-loader.bin
sudo boot-g12.py rz-fastboot-loader.bin
sudo fastboot erase bootloader
sudo fastboot erase 0
sudo fastboot erase 1

wget https://dl.radxa.com/zero/images/loader/rz-udisk-loader.bin
sudo boot-g12.py rz-udisk-loader.bin

wget https://dl.radxa.com/zero/images/loader/u-boot.bin
sudo dd if=u-boot.bin of=/dev/sdx bs=512 seek=1
```

2. (Optional) Remove the downloaded files if you never intend to flash again.

Flash to micro-SD card using Windows



These instructions are incomplete. Attempt at your own peril!

1. Ensure [Python 3](#) is installed with the PIP3 module (check with `pip3 --version` while inside an interactive Python environment) and accessible in your command prompt from any directory.
 - You may have to install the driver using [Zadig](#):
 1. Install and run Zadig.
 2. Confirm that the device is GX-CHIP and that its USB ID is 1B8E:C003.
 3. Choose **libusb-win32** as the driver and install it.
 4. Download [Google's Windows Android driver](#).
 5. Right-click `android_winusb.inf` and click **Install**.
2. Download and extract [Android's SDK Platform Tools for Windows](#) to get the fastboot tool.
3. Navigate to the `platform tools` folder.
4. Download [rz-udisk-loader.bin](#) and save it to the `platform tools` folder.
5. Open a command prompt with administrative privileges and navigate to the `platform tools` folder:

```
cd "C:\path\to\platform tools\"
```

6. Run the following (you should be in the same directory as where you saved the `rz-udisk-loader.bin` file to):

```
pip3 install git+https://github.com/superna9999/pyamlboot
boot-gl2.py rz-udisk-loader.bin

rest of the code is WIP
```

7. Reboot the Radxa to get into Batocera.

Flash Batocera to the Radxa Zero's eMMC

1. Remove any Micro-SD card that you might have in the Radxa Zero.
2. Connect the Radxa Zero to the computer via USB2/PWR OTG USB-C port (can use a USB-C to USB-C or USB-C to full-sized USB-A cable). This is the port closest to the corner.
3. Press the USB button underneath the board. The Radxa is now attempting to connect to your computer as a USB device.

Flash onto eMMC using Linux

1. Install `python3-pip` for your distribution.
2. Run the following:

```
sudo pip3 install pyamlboot
wget https://dl.radxa.com/zero/images/loader/rz-udisk-loader.bin
```

```
sudo boot-gl2.py rz-udisk-loader.bin
```

3. Check `lsusb`, you should now have a device that reads Bus 001 Device 082: ID 1b8e:2200 Amlogic, Inc.
4. Run `lsblk` or `blkid` to discover the mount point of your Radxa Zero (it is now acting like an ordinary USB storage device)
5. Run the following:

```
dd if=/dev/<your radxa mount point> of=<batocera>.img
```

6. Reboot your Radxa and enjoy! 🤪

Flash onto eMMC using Windows

If on **Windows** you may have to install the driver using [Zadig](#):

1. Install and run Zadig.
2. Confirm that the device is GX-CHIP and that its USB ID is 1B8E:C003.
3. Choose **libusb-win32** as the driver and install it.
4. Download [Google's Windows Android driver](#).
5. Right-click `android_winusb.inf` and click **Install**.

When you no longer have an “unknown USB device” attached and it's coming up as the Radxa, continue on with the following:

1. Ensure [Python 3](#) is installed with the PIP3 module (check with `pip3 version` while inside an interactive Python environment) and accessible in your command prompt from any directory.
2. Download [rz-udisk-loader.bin](#) and store it somewhere easy to access.
3. Open a command prompt with administrative privileges and run the following in the same directory you saved the BIN file to:

```
pip3 install pyamlboot  
boot-gl2.py rz-udisk-loader.bin
```

4. At some point the Radxa's internal eMMC should have appeared as a regular USB storage device on your computer. [Flash Batocera](#) onto it as you would any other micro-SD card.
5. Reboot your Radxa and enjoy. 🤪

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