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 (with PIP3) installed with a live environment running.

Flash onto 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.
4. Open up a terminal window on your computer:
    - If on **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.

- Fix Me! (these instructions are incomplete) If on **Windows**:
  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-g12.py rz-udisk-loader.bin

     rest of the code is WIP
     ```

5. Reboot the Radxa to get into Batocera.

Flash onto 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.
   - 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**.
4. Open up a terminal window on your computer:
   - If on **Windows**:
     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-g12.py rz-udisk-loader.bin
```

- If on a generic **Linux** distribution with coreutils and Python3:
  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-g12.py rz-udisk-loader.bin
```

5. 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.
6. Reboot your Radxa and enjoy. 😬