

Install LineageOS on bullhead

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Basic requirements

⚠ IMPORTANT: Please read through the instructions at least once before actually following them, so as to avoid any problems due to any missed steps!

1. Make sure your computer has **adb** and **fastboot**. Setup instructions can be found [here](#).
2. Enable [USB debugging](#) on your device.

Unlocking the bootloader

i NOTE: The steps below only need to be run once per device.

⚠ WARNING: Unlocking the bootloader will erase all data on your device! Before proceeding, ensure the data you would like to retain is backed up to your PC and/or your Google account, or equivalent. Please note that OEM backup solutions like Samsung and Motorola backup may not be accessible from LineageOS once installed.

1. Enable OEM unlock in the Developer options under device Settings, if present.
2. Connect the device to your PC via USB.
3. On the computer, open a command prompt (on Windows) or terminal (on Linux or macOS) window, and type:

```
adb reboot bootloader
```

You can also boot into fastboot mode via a key combination:

- With the device powered off, hold `Volume Down + Power`.

4. Once the device is in fastboot mode, verify your PC finds it by typing:

```
fastboot devices
```

✓ **TIP:** If you see no `permissions fastboot` while on Linux or macOS, try running `fastboot` as root.

5. Now type the following command to unlock the bootloader:

```
fastboot flashing unlock
```

6. If the device doesn't automatically reboot, reboot it. It should now be unlocked.
7. Since the device resets completely, you will need to re-enable USB debugging to continue.

Installing a custom recovery using **fastboot**

2. Connect your device to your PC via USB.
3. On the computer, open a command prompt (on Windows) or terminal (on Linux or macOS) window, and type:

```
adb reboot bootloader
```

You can also boot into fastboot mode via a key combination:

- With the device powered off, hold `Volume Down + Power`.

4. Once the device is in fastboot mode, verify your PC finds it by typing:

```
fastboot devices
```

✓ **TIP:** If you see `no permissions fastboot` while on Linux or macOS, try running `fastboot` as root.

5. Flash recovery onto your device:

```
fastboot flash recovery <recovery_filename>.img
```

✓ **TIP:** The file may not be named identically to what stands in this command, so adjust accordingly.

✓ **TIP:** Some devices have buggy USB support while in bootloader mode, if you see `fastboot` hanging with no output when using commands such as `fastboot getvar ..`, `fastboot boot ...`, `fastboot flash ...` you may want to try a different USB port (preferably a USB Type-A 2.0 one) or a USB hub.

6. Now reboot into recovery to verify the installation:

- With the device powered off, hold `Volume Down + Power`. On the next screen choose Recovery Mode.

Alternatively, on some devices and recoveries you can use fastboot to boot directly into the freshly flashed or any other desired recovery:

```
fastboot boot <recovery_filename>.img
```

✓ **TIP:** The file may not be named identically to what stands in this command, so adjust accordingly.

Installing LineageOS from recovery

1. [Build](#) a LineageOS installation package.
 - Optionally, download additional application packages such as [Google Apps](#) (use the `arm64` architecture).
2. If you are not in recovery, reboot into recovery:
 - With the device powered off, hold `Volume Down + Power`. On the next screen choose Recovery Mode.
3. Now tap **Wipe**.
4. Now tap **Format Data** and continue with the formatting process. This will remove encryption and delete all files stored in the internal storage.
5. Return to the previous menu and tap **Advanced Wipe**, then select the `Cache` and `System` partitions and then **Swipe to Wipe**.
6. Sideload the LineageOS `.zip` package:
 - On the device, select "Advanced", "ADB Sideload", then swipe to begin sideload.
 - On the host machine, sideload the package using: `adb sideload filename.zip`
7. (Optional): If you want to install any additional add-ons, repeat the sideload steps above for those packages in sequence.

i NOTE: If you want Google Apps on your device, you must follow this step **before** booting into LineageOS for the first time!

8. (Optional): Root your device by installing [LineageOS' AddonSU](#) (use the `arm64` package) or by using any other method you prefer.

⚠ WARNING: Depending on which recovery you use, you may be prompted to install additional apps and services. We strongly advise you to opt out of installing these, as they may cause your device to bootloop, as well as attempt to access or corrupt your data.

Get assistance

If you have any questions or get stuck on any of the steps, feel free to ask on [our subreddit](#) or in [#LineageOS on freenode](#).



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