Mainline kernel for Fairphones
2026 update

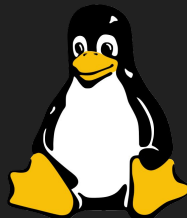Luca Weiss

About me

- **Luca Weiss**
- Software Longevity Team at Fairphone
- postmarketOS Core Contributor
- OpenRazer Maintainer

These are my own opinions :)

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A quick look back (Fairphone 4 & 5)

- State of support from two years ago ➡️
  - (around FOSDEM 2024)
- A lot of "Broken", only basic functionality supported
  - No camera, no modem, no sensors

Fairphone 4

Features	
Flashing ⌄	Works
USB Networking ⌄	Works
Battery ⌄	Broken ⭐
Screen ⌄	Works
Touchscreen	Works
Multimedia	
3D Acceleration	Works
Audio ⌄	Broken
Camera	Broken ⭐
Camera Flash	Works
Connectivity	
WiFi	Works
Bluetooth	Works
GPS	Broken
NFC ⌄	Broken
Modem	
Calls	Broken ⭐
SMS	Broken ⭐
Mobile data	Broken ⭐
Miscellaneous	
FDE ⌄	*Untested*
USB OTG ⌄	Broken ⭐
HDMI/DP ⌄	Broken
Sensors	
Accelerometer ⌄	Broken ⭐
Magnetometer ⌄	Broken ⭐
Ambient Light ⌄	Broken ⭐
Proximity	Broken ⭐
Haptics	Works

Fairphone 5

Features	
Flashing ⌄	Works
USB Networking ⌄	Works
Battery ⌄	Works
Screen ⌄	Works
Touchscreen	Works
Multimedia	
3D Acceleration	Works
Audio ⌄	Broken ⭐
Camera	Broken ⭐
Camera Flash	Works
Connectivity	
WiFi	Works
Bluetooth	Works
GPS	Broken ⭐
NFC ⌄	Broken
Modem	
Calls	Broken ⭐
SMS	Broken ⭐
Mobile data	Broken ⭐
Miscellaneous	
FDE ⌄	Works
USB OTG ⌄	Partial
HDMI/DP ⌄	Works
Sensors	
Accelerometer ⌄	Broken ⭐
Magnetometer ⌄	Broken ⭐
Ambient Light ⌄	Broken ⭐
Proximity	Broken ⭐
Hall Effect ⌄	Works
Haptics	Broken ⭐

⭐ Works now!

State today (Fairphone 4 & 5)

- On both devices a lot of functionality works!
- Mostly on "Works" with some "Partial" now
- Audio is the most significant pain point now
  - Speaker, microphone, call audio (see next slide)
- Cameras needs user space improvements (tuning, autofocus, etc.)
  - See "Raw to Real and Green to Great: Open Source Camera Tuning for Linux Devices with libcamera" (Sunday 13:30-13:55)
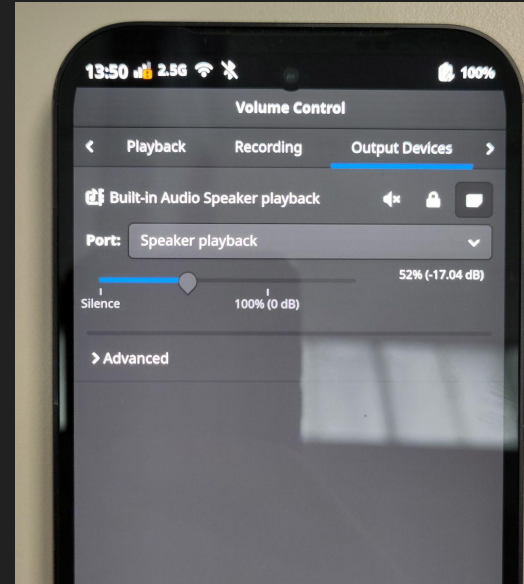- Stability/reliability is also not 100% there yet

Fairphone 4

Features

Feature	Status
Flashing ∨	Works
USB Networking ∨	Works
Internal storage ∨	Works
SD card ∨	Works
Battery ∨	Partial
Screen ∨	Works
Touchscreen	Works

Multimedia

3D Acceleration	Works
Audio ∨	Broken
Camera	Partial
Camera Flash	Works

Connectivity

WiFi	Works
Bluetooth	Works
GPS	Broken
NFC ∨	Broken

Modem

Calls	Partial
SMS	Works
Mobile data	Works

Miscellaneous

FDE ∨	Works
USB OTG ∨	Works
HDMI/DP ∨	Broken

Sensors

Accelerometer ∨	Works
Magnetometer ∨	Works
Ambient Light ∨	Works
Proximity	Works
Haptics	Works

Fairphone 5

Features

Feature	Status
Flashing ∨	Works
USB Networking ∨	Works
Internal storage ∨	Works
SD card ∨	Works
Battery ∨	Works
Screen ∨	Works
Touchscreen	Works

Multimedia

3D Acceleration	Works
Audio ∨	Partial
Camera	Partial
Camera Flash	Works

Connectivity

WiFi	Works
Bluetooth	Works
GPS	Works
NFC ∨	Broken

Modem

Calls	Partial
SMS	Works
Mobile data	Works

Miscellaneous

FDE ∨	Works
USB OTG ∨	Works
HDMI/DP ∨	Works

Sensors

Accelerometer ∨	Works
Magnetometer ∨	Works
Ambient Light ∨	Works
Proximity	Works
Hall Effect ∨	Works
Haptics	Works

What's coming next (Fairphone 4 & 5)?

- Fairphone 5
  - Audio: ~~Speaker, Microphone,~~ USB-C analog audio, Call audio(?)
  - Camera: Main camera (CAMSS C-PHY support is "resolved")
  - Getting patches upstream!
  - **Looking for contributors:** NFC, ToF sensor
- Fairphone 4
  - Audio: Speaker, Microphone(?), Call audio(?)
  - Camera: Focus coils (VCM)
  - Cleaning up charger/fuel gauge support
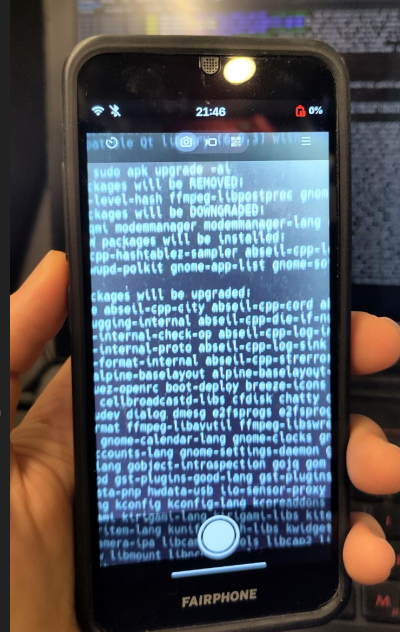 - **Looking for contributors:** NFC, ToF sensor

Fairphone 2 & 3

- Fairphone 3
  - Getting occasional improvements when there's time
  - Since 2024: USB-C handling, lots of upstreaming (haptics, Wi-Fi, Bluetooth, ADSP, modem, display, GPU, camera I2C)
  - Speaker is working (except FP3+), camera is work-in-progress!
  - Thanks to **msm8953-mainline** contributors for maintaining the kernel fork!
- Fairphone 2
  - No feature development in recent years
  - GPU doesn't work anymore since v6.17 (vram carveout was removed)
    - Now hard-requires IOMMU support (no fully working patches yet for msm8974)
  - ⇒ Mostly EOL from my side :(

Fairphone (Gen. 6)

- Announced 25 June 2025 (7 months ago)
- Basic usable support is there!
- **Primary focus:** getting full display support (unblocks GPU as well)
- Next up:
  - Getting current functionality upstream
  - Sensors are WIP (user space + fastrpc in kernel)
  - Took first steps for camera support

Features	
Flashing ⌄	Works
USB Networking ⌄	Works
Internal storage ⌄	Works
SD card ⌄	Works
Battery ⌄	Works
Screen ⌄	Partial
Touchscreen	Works
Multimedia	
3D Acceleration	Broken
Audio ⌄	Broken
Camera	Broken
Camera Flash	Works
Connectivity	
WiFi	Works
Bluetooth	Works
GPS	Broken
NFC ⌄	Broken
Modem	
Calls	Partial
SMS	Works
Mobile data	Broken
Miscellaneous	
FDE ⌄	Works
USB OTG ⌄	Works
Sensors	
Accelerometer ⌄	Broken
Magnetometer ⌄	Broken
Ambient Light ⌄	Broken
Proximity	Broken
Hall Effect ⌄	Works
Haptics	Works
Barometer ⌄	Broken

Are we Daily Driver yet?

- **Fairphone 5,** depending on your definition: *now* or hopefully *soon*?
  - Other Fairphones not yet, they require more contributions!
- Set up of [postmarketOS hardware testing automation](#)
  - Automated tests, like reboot test, kernel upgrade, etc.
- Non-kernel improvements are also needed!
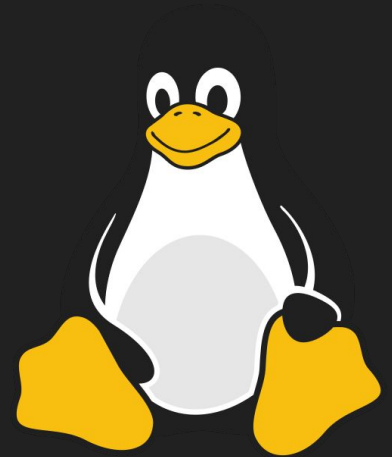 - Distribution side (postmarketOS), UI, apps, etc.

Phosh

Plasma Mobile

GNOME Mobile

Thank you!

Questions?

LOVE ALL ANIMALS
GO VEGAN!