



Wiko Pulp 4G Teardown

Teardown from the EU team in Germany. Performed in September 2016.

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INTRODUCTION

One of the many mid segment smartphones from Wiko. We took a closer look at this affordable smartphone.

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TOOLS:

- [64 Bit Driver Kit](#) (1)
 - [iFixit Opening Tool](#) (1)
 - [Tweezers](#) (1)
 - [iFixit Opening Picks \(Set of 6\)](#) (1)
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Step 1 — Wiko Pulp 4G Teardown



- So, what do we have here? This affordable smartphone offers some impressive specs at first glance:
- Qualcomm® Snapdragon Quad-Core with 1.2 GHz
- 2 GB RAM and 16 GB ROM (and additional Micro SD for up to 64 GB)
- 5 inch IPS Display with 1280x720 pixels
- 13 megapixels camera with 1080P video recording at 30 fps
- USB OTG connection, a standard 3.5mm headphone jack, and an integrated Stereo FM Radio receiver
- Android 5.1 Lollipop
- Dual sim: 1 micro SIM + 1 nano SIM

Step 2



- We line a shift5.1 (left) up next to our Wiko Pulp 4G and see some similarities in their designs.
- With the Wiko's official length measuring 143.9 mm from top to bottom, it is only 0.1 mm shorter than the shift5.1.
- We played a very simple game of smart phone Jenga with the phones to see how their widths and thickness...*stack* up to each other.
- Both have the same width: 72 mm. The Pulp4G, on top, is 8.8 mm thick, yet it appears thinner than the 7 mm of the shift 5.1, possibly due to its curved edges.
- The back cover has a different look but is the same kind of snap off.

Step 3



- Starting with the easily removable back cover we begin our journey towards the inside of this smartphone.

Step 4



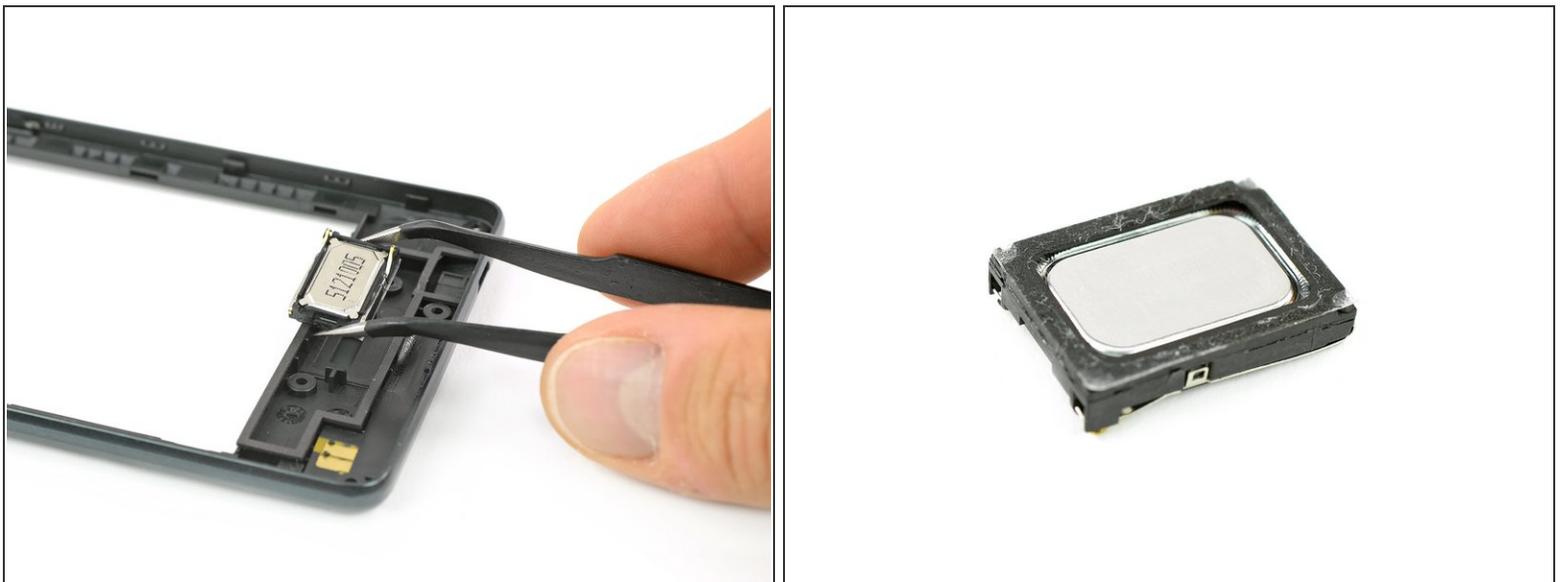
- The user-removable Li-Po battery pops out with the move of a finger.
- With 9.5 Wh (2500 mAh @ 3.8 V), it finds its place ahead of the [iPhone 6](#) with 6.91 Wh (1810 mAh @ 3.82 V) and close behind the [Galaxy S5](#) with 10.7 Wh (2800 mAh @ 3.85 V).

Step 5



- The mid frame is held in place by eleven [Phillips](#) screws.
- Having removed those screws we use our trusty plastic opening tool to pry away the mid frame.

Step 6



- The only thing that remains inside the midframe is the rear facing loud speaker.
- We are happy to see that it connects to the motherboard via spring contacts, allowing easy replacements in the future.

Step 7



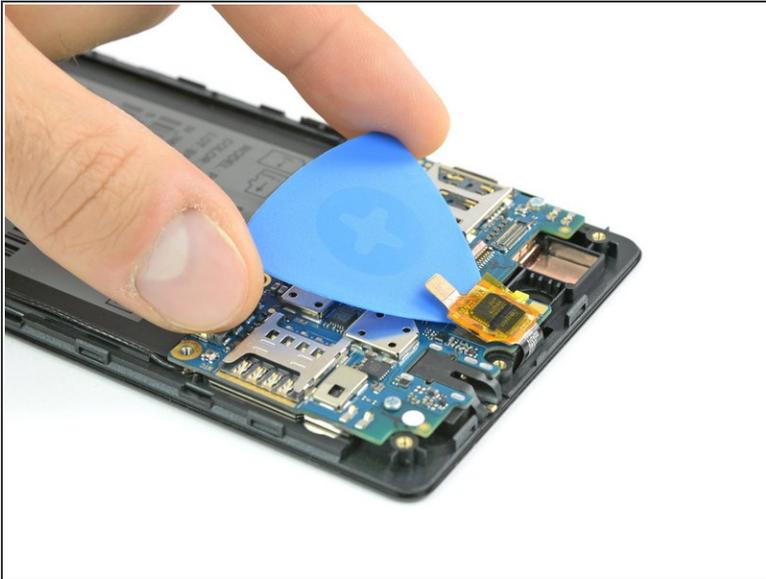
- On the back of the display assembly we find the motherboard at the top section.
- We take a moment to rejoice when we see all those ZIF connectors and bracket-covered press connectors. Then, start swiftly unlocking and unplugging them one by one.

Step 8



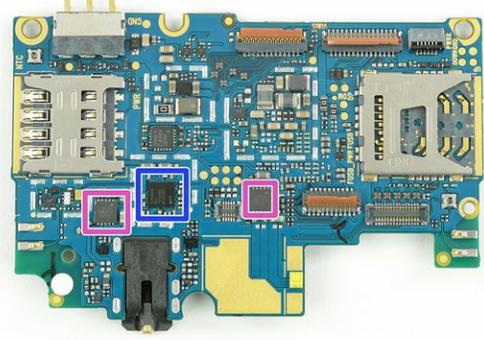
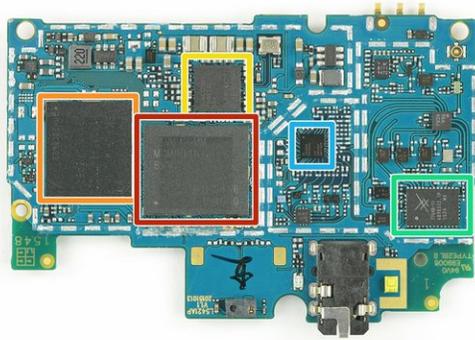
- First thing to come out is the small front facing camera which offers 5 megapixels.
- Second in line is the big brother for the rear facing side which provides 13 megapixels for full HD video recording.

Step 9



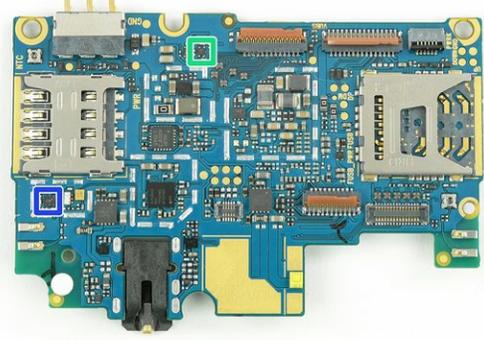
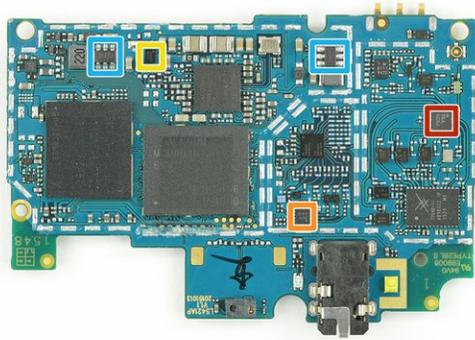
- One of the display cables still clings to the motherboard but can be peeled off easily.
- Just two more Phillips screws to unscrew and we can take the board out for a close inspection.

Step 10



- This is what makes the Wiko Pulp 4G tick:
 - Qualcomm MSM8916 CPU with an [ARMv8 Cortex-A53](#)
 - [SK Hynix H9TQ17ABJTMC](#) 2 GB RAM and 16 GB NAND flash storage
 - [Qualcomm PM8916](#) power management
 - [Skyworks SKY77648-11](#) multimode multiband power amplifier module
 - Qualcomm WTR4905 RF transceiver
 - Qualcomm [WCN3620](#) wireless connectivity IC
 - SGMicro [SGM3140B](#) 500mA buck/boost charge pump LED driver

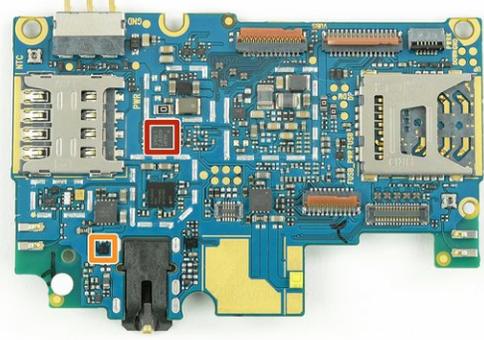
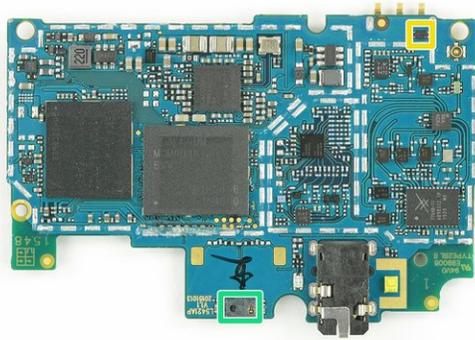
Step 11



- IC Identification, Continued:

- Qorvo [RF1496A](#) SP12T Antenna Switch
- Skyworks [SKY13416-485LF](#) SP6T Antenna Switch
- Texas Instruments [TPD1S414](#) USB Charger OVP Switch w/ ESD Protection
- ON Semiconductor [NCP114AMX310T](#) 300 mA/3.1 V LDO Regulator
- Silergy DC-DC Converters
- Likely Maxscend GNSS LNA

Step 12



- Sensor identification:
 - TDK Invensense MPU-6881 3-Axis Accelerometer/Gyroscope
 - AKM Semiconductor AK09911 3-Axis Electronic Compass
 - Rohm BU52021HFV Hall Sensor
 - Proximity Sensor

Step 13



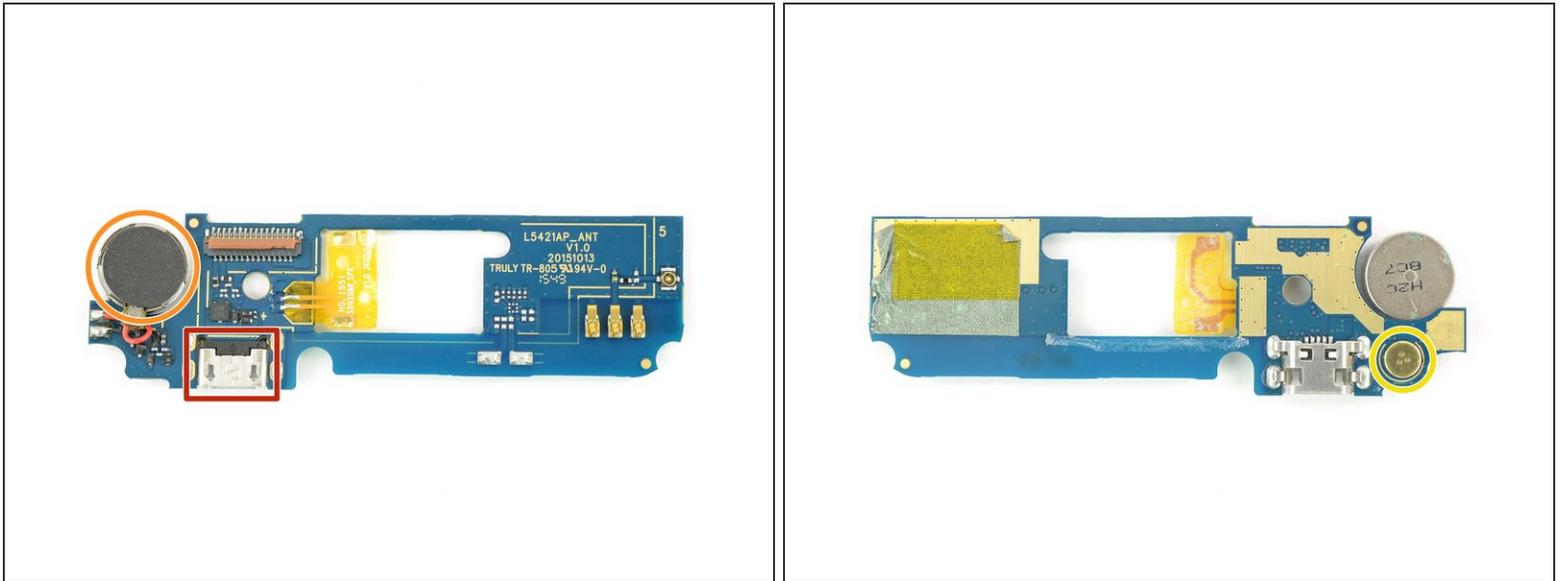
- Behind the mother board we remove a rubber gasket that goes around the headphone jack and holds the lens for the LED flash.
- Last part at the top section is the earpiece speaker.

Step 14



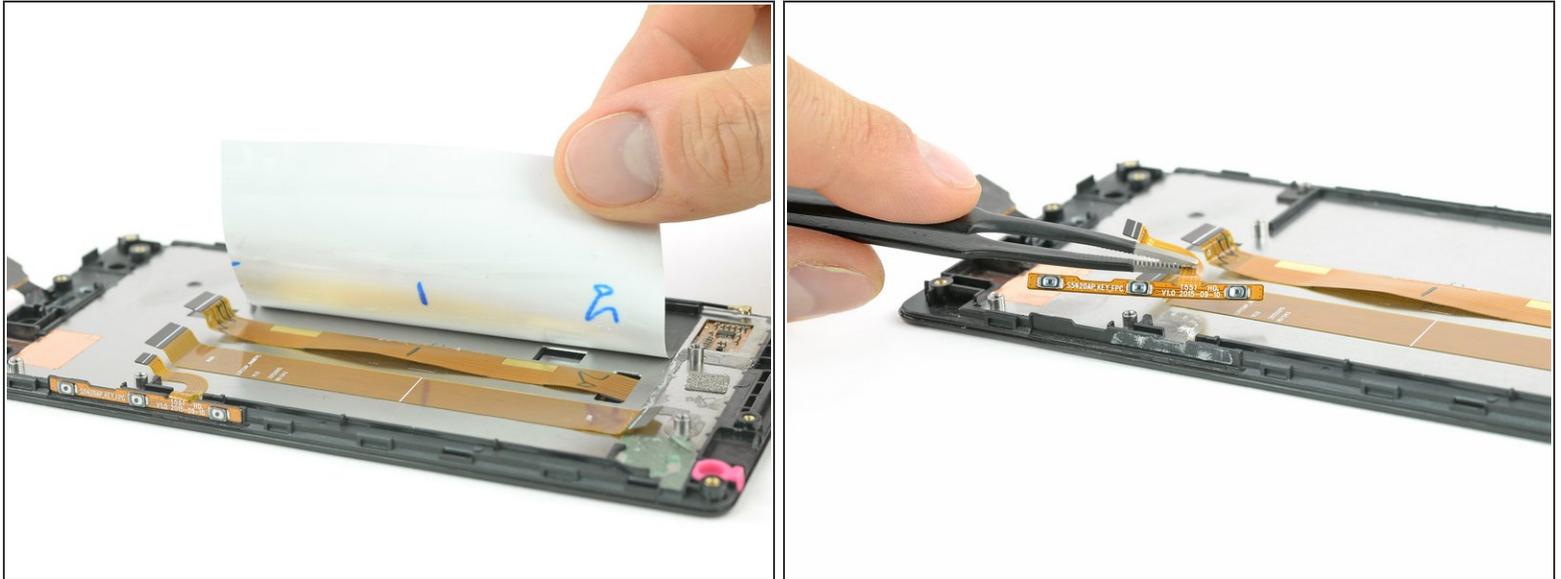
- At the bottom of the display assembly we find a daughter board with some components.
- First we disconnect the cable coming from the motherboard and pry out the vibrator.
- Next we peel off a small connector plate and disconnect the antenna cable.
- Now we are ready to carefully pry out the daughter board itself which is glued in with some double sided tape.

Step 15



- Being able to detach the daughter board completely from the cable (and therefore from the mother board) is a big advantage over the [shift5.1](#).
- On the other hand, all of the components are soldered to the board, which makes repairing them individually a bit trickier.
 - USB port
 - Vibrator
 - Microphone

Step 16



- Speaking of the connection cable, we peel off the big sticker and find the second display cable running underneath and directly into the display itself.
- With the sticker gone it is possible to also take away the power and volume buttons.
- We stop here, leaving the connector cable in place.

Step 17



- We take a moment and sum up what we've discovered.

Step 18 — Final Thoughts

REPAIRABILITY SCORE:



- Wiko Pulp 4G Repairability Score: **7 out of 10** (10 is easiest to repair)
 - Replacing the battery is easy as pie with the swappable back cover.
 - This phone doesn't use excessive glue nor proprietary screws—we found only Phillips throughout the entirety.
 - Most of the components can be replaced separately.
 - The motherboard and daughterboard are connected via a detachable cable.
 - Unfortunately, the components on the daughterboard are soldered on, making a repair on an individual component difficult.