Wiko Pulp 4G Teardown

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

Written By: Tobias Isakeit
INTRODUCTION

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

For more teardowns and other cool stuff, follow us on Facebook, Instagram, or Twitter.

TOOLS:

- 64 Bit Driver Kit (1)
- iFixit Opening Tool (1)
- Tweezers (1)
- iFixit Opening Picks (Set of 6) (1)
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
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 H9TQ17ABJTM 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 motherboard) 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

- 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.