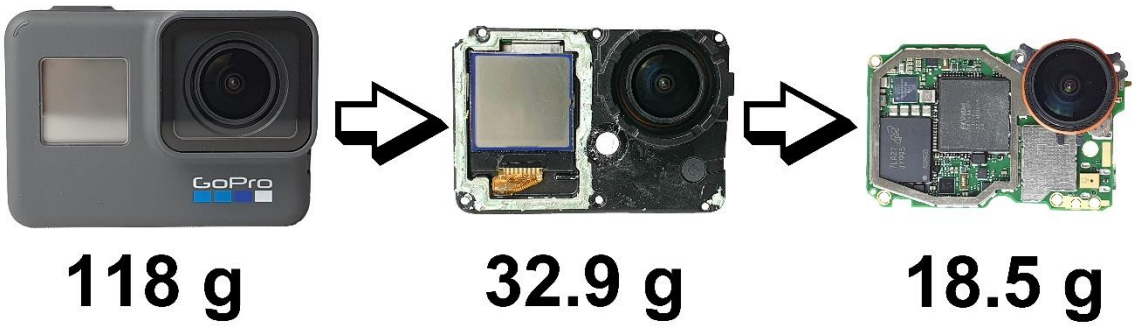
GoPro HERO6 Black disassembly guide



118 g 32.9 g 18.5 g

Disclaimer:
Do this at your own risk. You will lose your GoPro's warranty and you may end up bricking the camera if something goes wrong.

This guide is not authorized by GoPro and your camera is not guaranteed to work afterwards. The methods used in this guide may not be "best practice". I'm merely sharing what worked for me.

Tools

iFixit iOpener
iFixit Spudger
iFixit Halberd Spudger
Tweezers
T4 Torx screwdriver
#000 Phillips screwdriver

Note: *Not sponsored by iFixit. I just like their stuff.*

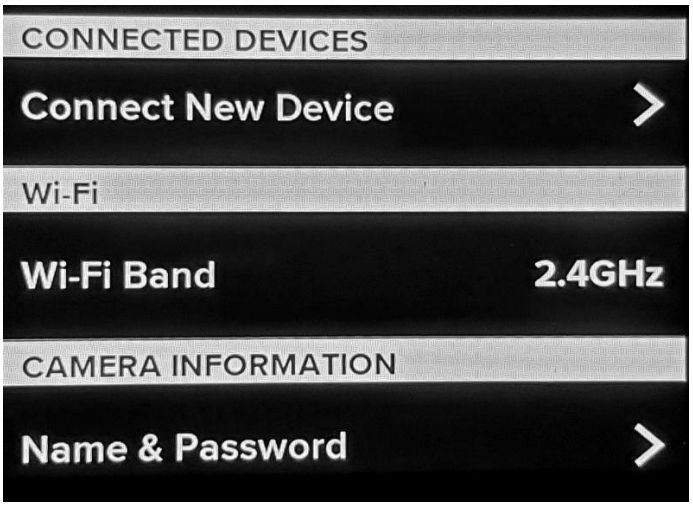
Step 0

Before you start disassembling your HERO6 Black, it is recommended to install an older firmware version: v1.6. According to ReelSteady's FAQ, this version works best with RSGO.

You can download the correct firmware here: https://drivers.softpedia.com/get/SCANNER-Digital-CAMERA-WEBCAM/GoPro/GoPro-HERO6-Black-Camera-Firmware-01-60.shtml

To install it, simply follow the instructions provided by Softpedia.

After you updated your firmware, go to the connections menu and set the WiFi frequency to 2.4GHz. Without the stock WiFi antenna this seems to work better than 5GHz WiFi and it doesn't interfere with your FPV feed.



Step 1

Remove the battery and SD card.

Step 2

Remove the lens cover by pulling on it and twisting it right or left until it pops off.

Step 3

Apply a heated iOpener to the front of the GoPro for a few minutes to soften the adhesive under the faceplate. A hot air gun may also work but be careful to not overheat anything.

This step isn't necessary, but it will make the following removal of the faceplate much easier.

Step 4

Use a spudger to pry off the faceplate. The two holes on the lower right corner of the GoPro are a good starting point.

It is not recommended to use sharp metal tools like a screwdriver for this because there are delicate parts inside the GoPro that are easy to break (specifically the front LCD's ribbon cable).

Step 5

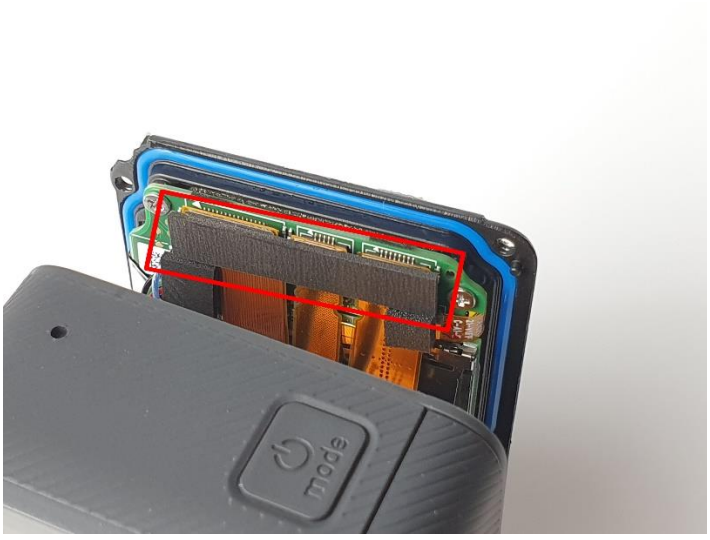
Remove the six T4 Torx screws.

Step 6

Using a spudger, slowly lift the motherboard assembly out of the housing.
Be careful when pulling on the motherboard as it is still connected to the housing by four cables. These cables may break if stretched and/or damage the corresponding connectors on the motherboard.

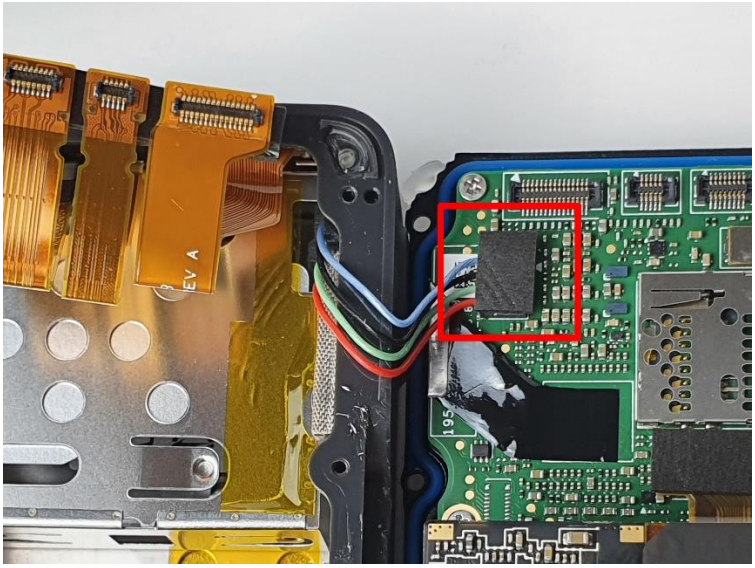
Step 7

Use the flat end of a spudger to pry the three ribbon cables straight up from their sockets on the motherboard.



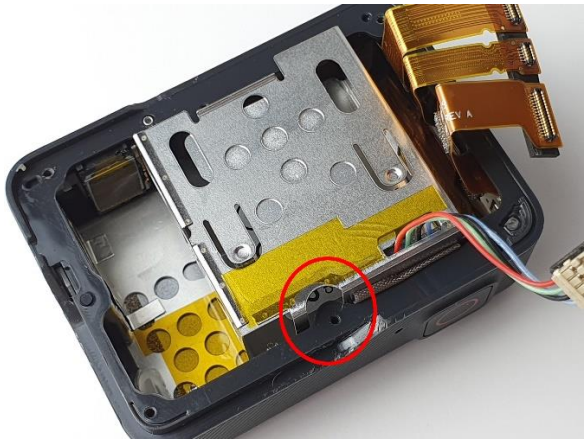
Step 8

Use the flat end of a spudger to pry the battery cable straight up from its sockets on the motherboard.



Step 9

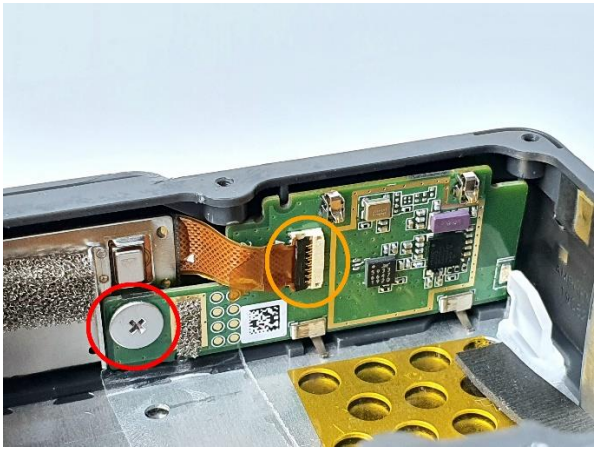
In order to remove the battery compartment, use a spudger to separate it from the back of the touchscreen. Once it comes loose, slide it away from the ribbon cables until the half circle groove matches up. You can then remove it from the housing.



Step 10

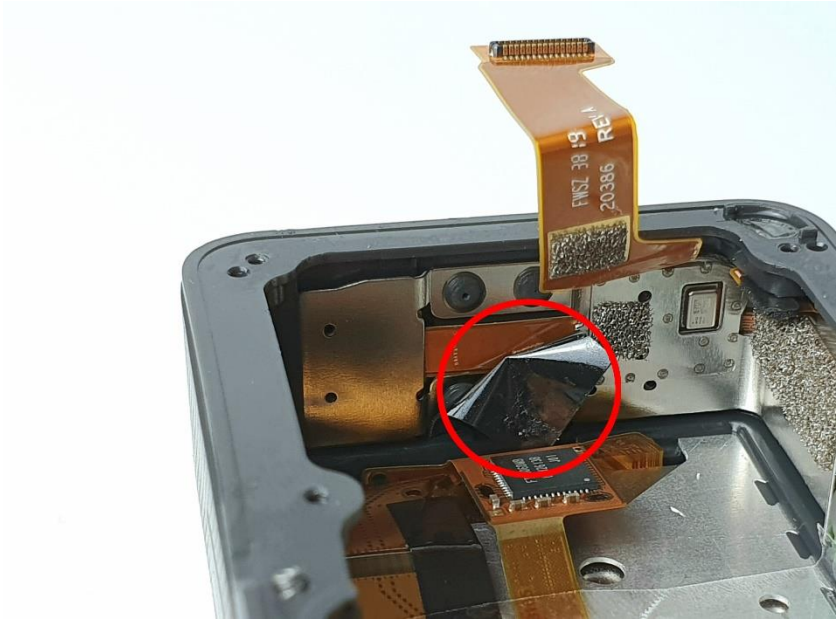
Remove the #000 Phillips screw (red) from the inside of the housing and use a halberd spudger (or a similarly thin, non-metal tool) to lift the retention bracket on the GPS module's connector (orange).

You can then remove the GPS module.



Step 11

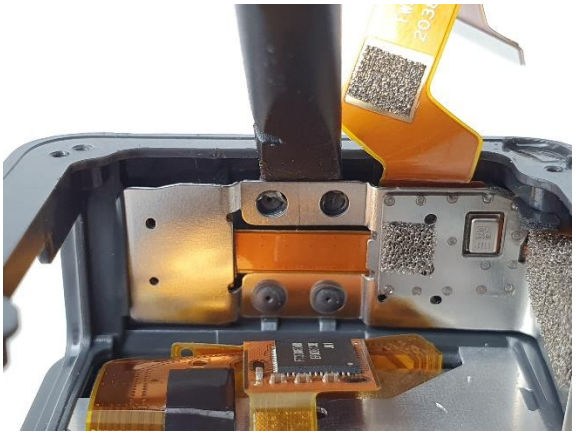
Peel off the protective film that covers the mode button's ribbon cable.



Step 12

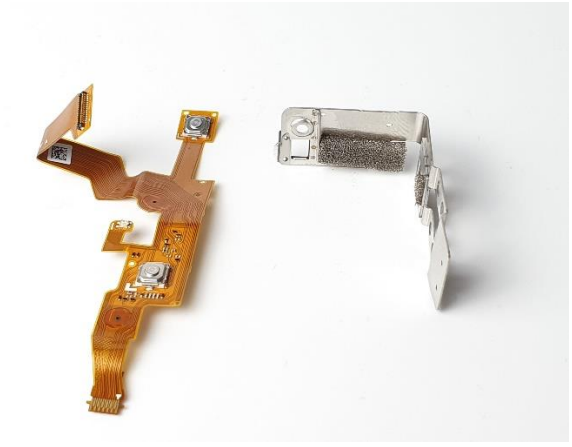
The metal bracket for the buttons is held in place by four plastic rivets. Carefully push a spudger between the bracket and the housing. Be careful once the upper rivets are disconnected from the bracket. The ribbon cable below the spudger can be damaged if you slip off.

When all four rivets are disconnected, you can remove the bracket and the ribbon cable from the housing.



Step 13

Carefully remove the mode/record buttons' ribbon cable from the metal bracket. It is secured with a weak adhesive and should be easy to remove but it's still very fragile and breaks easily. Keep that in mind and don't pull too hard/fast.



Step 14

Congratulations! You now have a naked GoPro that weighs just 32.9 g. Simply reconnect the ribbon cable and use the USB-C connector to power your GoPro from a 5V source.

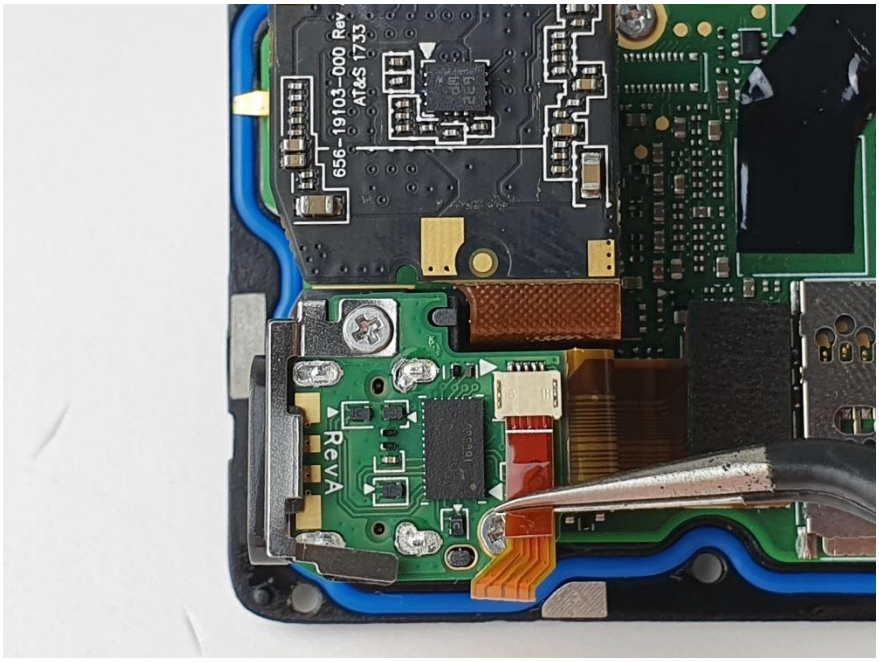
32.9 g is still too heavy for you? Well, continue with step 15 then.

Step 15

Carefully lift the cover plate that sits on top of the USB-C module and peel off the adhesive that attaches it to the sensor’s PCB.

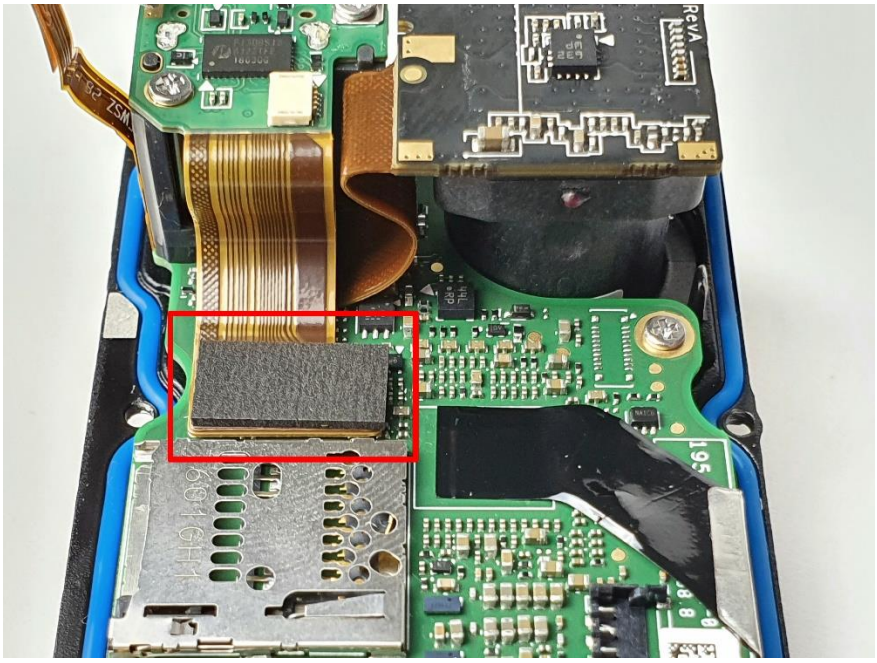
Step 16

Use tweezers to pull on the ribbon cable’s tab and remove it from its socket on the USB-C module.



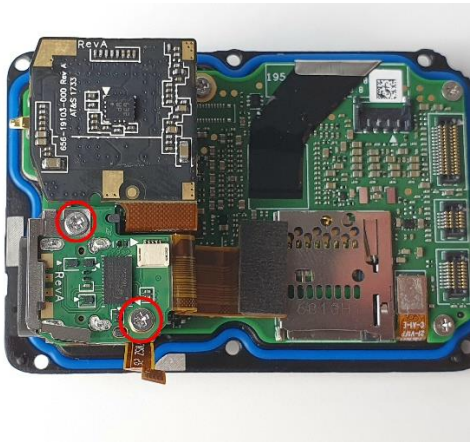
Step 17

Use the flat end of a spudger to pry the USB-C module’s ribbon cable straight up from its socket on the motherboard.



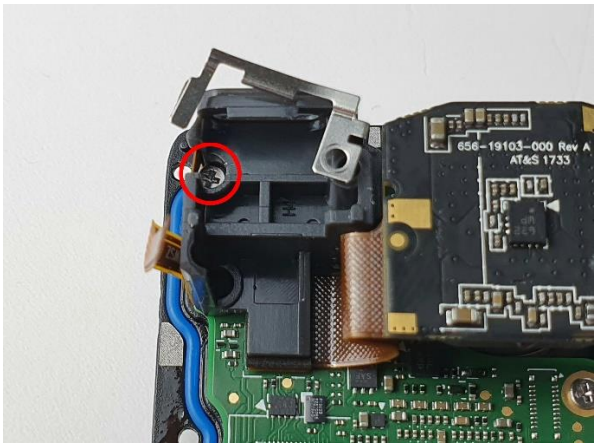
Step 18

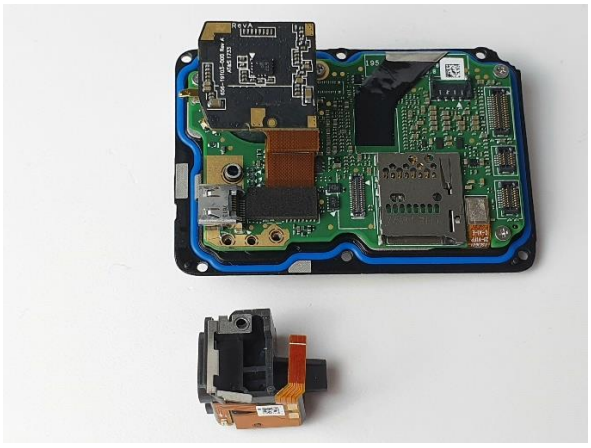
Remove the two #000 Phillips screws. Then remove the USB-C module.



Step 19

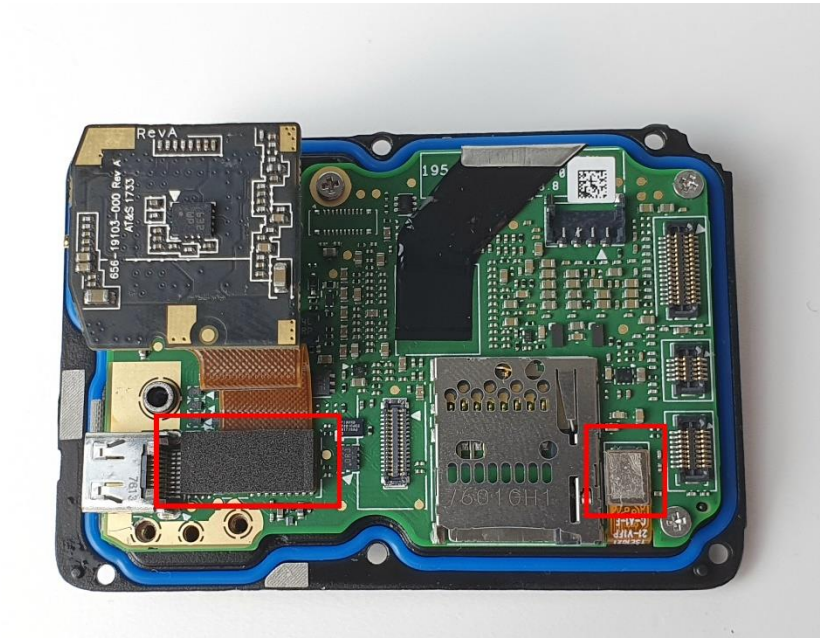
Remove the #000 Phillips screw. Then remove the USB-C/HDMI housing.





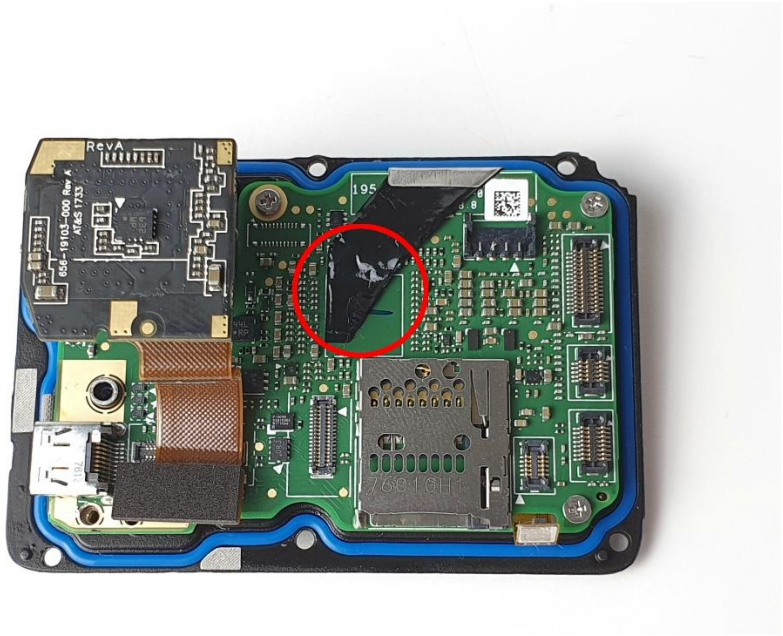
Step 20

Use the flat end of a spudger to pry the sensor's and front LCD's ribbon cables straight up from their sockets on the motherboard.



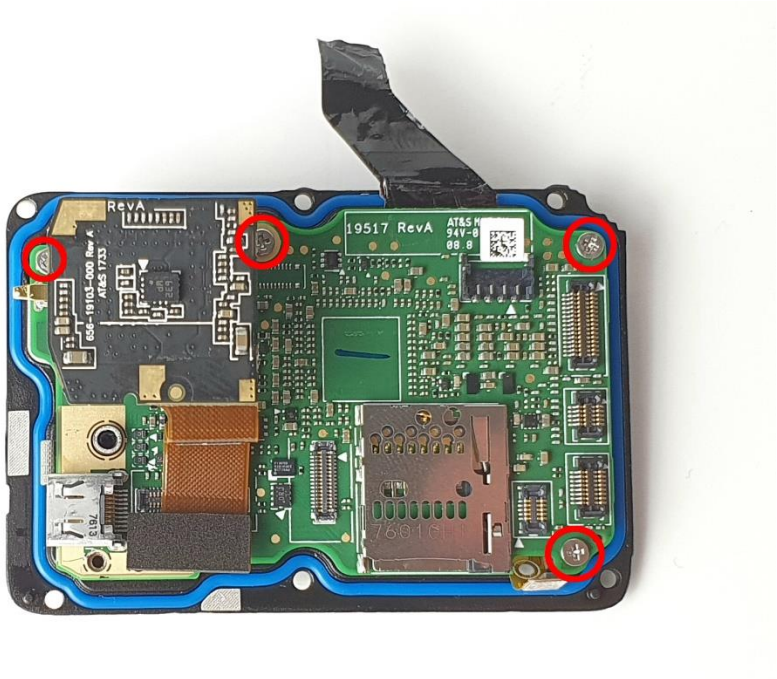
Step 21

Carefully peel off the metal film on the back of the motherboard.



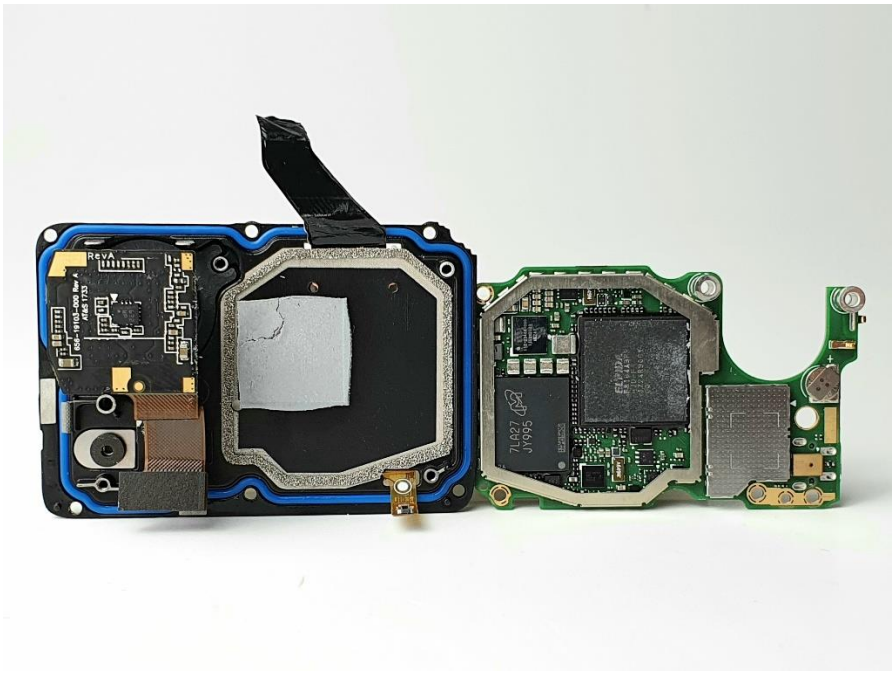
Step 22

Remove the four #000 Philips screws.



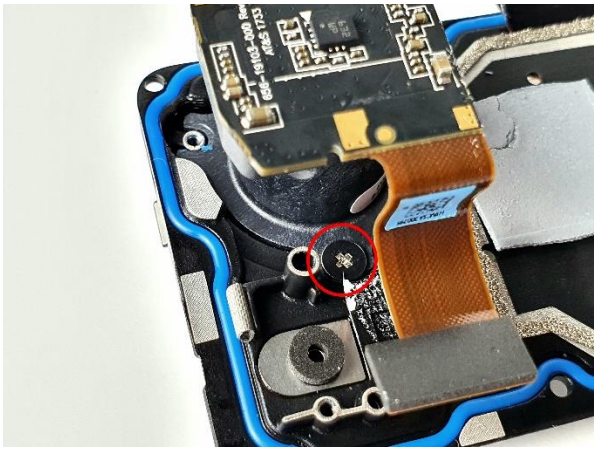
Step 23

Remove the motherboard from the midframe.



Step 24

Remove the #000 Phillips screw. Then remove the sensor assembly from the midframe.



Step 25

Congratulations! You now have a naked GoPro that weighs just 18.5 g. Simply reconnect the sensor, the button's ribbon cable + USB-C module and use the USB-C connector to power your GoPro from a 5V source.

If you don't want to use the fragile ribbon cables, you can buy a BEC board from BetaFPV that includes a 5V BEC to power the GoPro, a status LED and two buttons (mode + record): https://betafpv.com/products/bec-board-for-gopro-hero