

Acer Chromebook 11 C732 Teardown

This guide is a step-by-step teardown of an...

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INTRODUCTION

This guide is a step-by-step teardown of an Acer C732 Chromebook. The purpose of this guide is to provide a detailed look into the internals of the device. **This teardown is not meant to be followed as a repair guide**.



TOOLS:

- Phillips #1 Screwdriver (1)
- Spudger (1)
- Heavy-Duty Spudger (1)
- Tweezers (1)



PARTS:

C732 Speaker Set (1)

Speakers

These speakers are compatible with the Acer C732 and C733 Chromebooks

- C732 LCD Panel (1)
- C732 replacement battery (1)
 Battery
- C732 Keyboard Assembly (1)
- C732 Track Pad (1)
- C732 LCD Back Cover (1)
- C732 LCD Bezel (1)
- C732 replacement bottom cover (1)
- C732 USB Daughterboard (1)
- C732 Hinge Set (1)
- C732 Motherboard, 4GB (Intel Celeron N3350 Processor) (1)
- C732 Wi-Fi Card (1)
- C732 LCD Cable (1)
- C732 Camera Board (1)
- C732 Microphone Board (1)

Step 1 — Acer C732 Chromebook Teardown







- This teardown applies to the Acer C732 models of Chromebook. For this guide, I used a model with the following specs:
 - Intel Celeron CPU N3350 clocked at 1.10GHz (Quad Core processor)
 - 4 GB of integrated LPDDR4 memory
 - 11.6" (diagonal) LCD backlight HD display.
 - 32 GB of SSD storage
- Specs aside, the overall device is just a few inches larger than a <u>7th gen iPad</u> and is almost three times as thick. But, as you'll soon see, it isn't as difficult to get into this device compared to an iPad.



This unit comes with two regular USB-C ports and two 3.0 USB-A ports. So there is at least one port on the left and right-hand sides of the device. However, the lefthand side of the unit has a standard 3.5 mm headphone jack and a micro SD card slot for storage expansion.



- This machine is model N17Q8. This is the same model Acer has used for all their Chromebook 11 models.
- Much like other devices, Acer includes the warning to not throw your device in the trash.







- Getting inside the device is fairly simple. The case is held together by 12 Phillips #1 screws on the bottom of the device. All the case screws are 6.58 mm, so you don't have to worry about keeping track of these screws.
- Once the bottom case is removed, all the internal components can be accessed fairly easily (same for the trackpad).
 - (i) Acer does recommend using a scribe to open the case up, but the device can be opened up by placing your pointer fingers between the bottom case and the hinges.



- This machine's labeling boasts a 45-watt-hour battery. Acer has said that the battery should last you around 12 hours, but reports say that it will give you around 7 8 hours of use. Given the fact that this device is primarily targeted to students, this is a reasonable run time.
- On this model, there are no screws that lock the battery in place. Other than the cable itself, the only thing that's holding the battery in place is some anti-static tape. This does make swapping out the battery a bit quicker, simply because we don't have to worry about replacing any screws or removing any adhesive from the battery.







- To remove the battery, you will need to remove the anti-static tape covering the port.
- A spudger makes disconnecting the battery safe and easy.
 - (i) On this model, you can disconnect the battery without having to remove it from the device. While this is a nice design choice, there is no consequence for removing the battery as there is no adhesive keeping the battery in place, or screws, that hold the device in place.







- The wireless card includes support for IEEE 802.11a/b/g/n/ac and two antennas that attach to the card with coaxial connectors.
 - (i) This device also has integrated Bluetooth 4.2 but does not have a dedicated antenna for this.





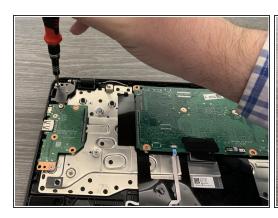
 After removing the card, we can see that IEEE 802.11a/b/g/n/ac wireless connectivity is provided by Intel's "Dual Band Wireless-AC 7265"







- Much like other laptops, this device does have a separate daughter board with additional I/O ports.
 For this device, this board is connected to the rest of the computer with ribbon cables.
- Using a spudger, we can pop the tabs on the zero insertion force (ZIF) connectors and pull on the blue thumb tabs to remove them.







 There are three 4.65 mm screws holding the daughterboard in place. Two of those screws hold a screen hinge in place. Once the screws are removed, you are going to need to lift the hinge to remove the board.





- The USB-C port can be seen in the top left corner of the first picture, with the USB-A port right below it.
- In the second picture, we flipped the board over to show some of the additional information on the board.
 - Through some additional digging, I was able to find the manufacturer part numbers are the following: 55.GVJN7.001.







- Now that we have the daughterboard removed, we can start working on getting the motherboard out. We can start by removing the screws holding the other hinge in place.
- Once these screws are out, we can separate the screen from the rest of the computer.

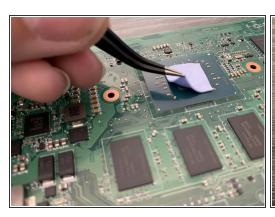
Step 13



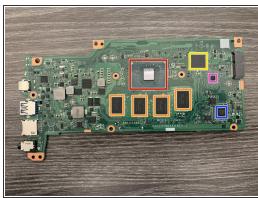




 Once we have the hinges free, all we have to do is remove the three screws and lift the motherboard out.

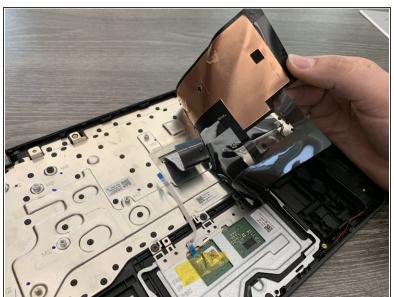


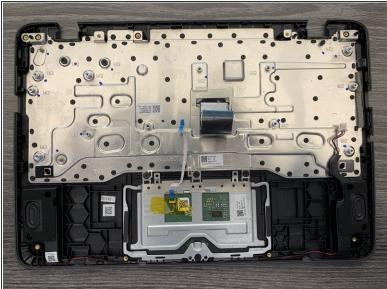




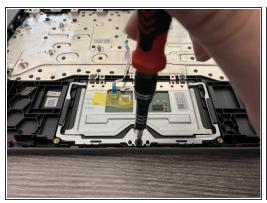
- Front side of the motherboard:
 - Quad-Core Intel Celeron CPU N3350 (labeled as (H46417 01 E88)
 - SanDisk 32 GB eMMC Memory (labeled as SanDisk SDINADF4 32 GB)
 - SKhynix 4 GB RAM (labeled as SKhynix H9HCNN8KUML)
 - NUVOTON EC Micro-controller (labeled as NPCX588GGA0BX)
 - TPM (H1 Secure Microcontroller)

Mhile it is nice to not have to deal with a mess of thermal paste, the thermal pad will need to be replaced since we removed the motherboard from the heat spreader.





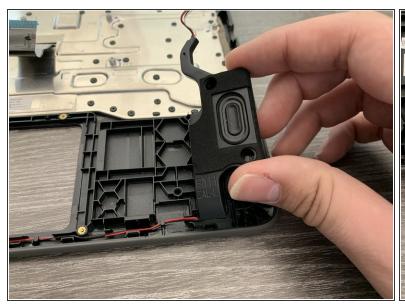
- Once the motherboard is removed, you'll see a heat spreader. This can be peeled off and what you're left with is a naked keyboard.
 - it is worth pointing out that this model of Chromebook has the key switches riveted to the lower body, making it impossible to replace the switches without replacing the lower body of the device.







- The trackpad can be removed with ease. At this point, the only thing holding it in place is 4 screws.
 Once those are out, we can take it out of the keyboard.
 - (i) While the steps thus far have shown that the heat spreader and motherboard have been removed, you don't need to take them out if you need to replace the trackpad. The placement of the motherboard does allow us to peal the heat spreader up just enough so that we can get at the screws and remove the trackpad.





- Next up are the two stereo speakers located in the bottom corners of the device. These can be removed by simply lifting one speaker straight up, navigating the wire out from the tabs, and lifting the other speaker out of its housing.
 - (i) The speakers cannot be removed unless you first remove the trackpad.

Step 18



 The speakers have the following manufacturer part number:
 23.GUKN7.001







- Now that the bottom half of the device is done, we can finally look at the screen assembly.
- Getting into the assembly only requires a spudger. Once you have released the first tab, you can
 easily use your hands to remove the bezel.







- With the bezel removed, we can start working on getting our screen out.
- On this model, there are only 4 Phillips head screws holding the screen in place. Once these screws are taken out, we will need to flip the screen on its front.
 - The screen is still being held in place by the display cable behind the screen.

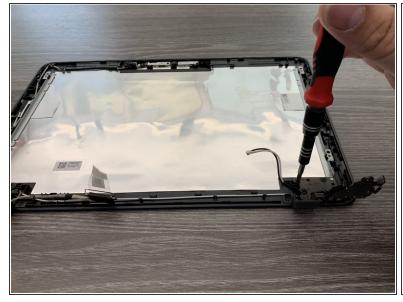






- Once the screws are out, we can flip the screen out and get access to the 30-pin connector.
- Once we release the display cable connector, we can separate the screen from the assembly.

Step 22

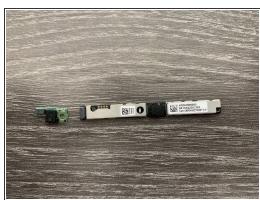




• It's also worth pointing out that the screen hinges can be removed. The only thing holding them in place are 3 Phillips head screws.

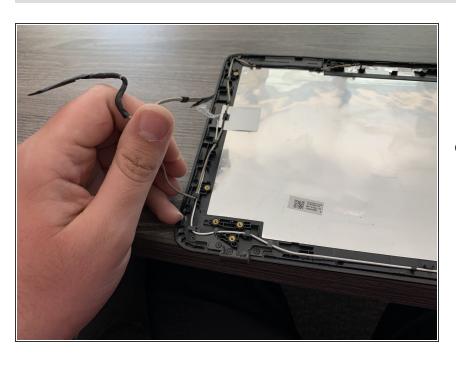






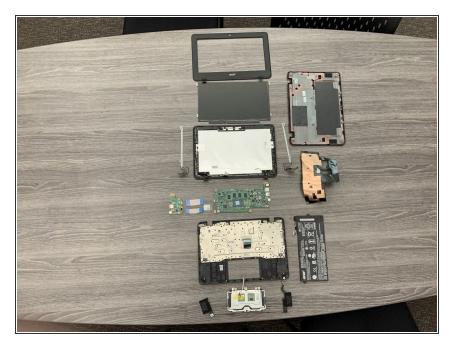
- At the very top of the panel, we can see the 1280 x 720 webcam (labeled as part number KS0HD06003), along with the microphone just to the left of it (manufacturer part number 23.GUMN7.001).
 - (i) Both the microphone and the webcam are adhered to the panel, but it is a considerably weak adhesive and can be broken without any heating tools.

Step 24



 Finally, we have the display cable (manufacturer part number 50.GUKN7.005). Just like our

speakers, we can remove the display cable by moving the cables past the plastic tabs on the panel.



- Acer Chromebook 11 C732
 Reparability Score: 8 out of 10 (10 is easiest to repair).
- The easily removable case and the battery does allow for easy access to most components. Matter of fact, most of the components are pretty easy to get to and replace.
- Lack of adhesion allows you to easily remove and replace the battery.
- You only need 1 Phillips head screwdriver for all your repairs.
- The thermal pad might give you some problems if moved.
- A majority of the I/O ports are soldered directly to the logic board.
 If a port breaks, then you are going to need micro-soldering skills if you want to replace it.
- Upgrading the RAM or internal storage is nonexistent.
- Keyboard switches are impossible to replace due to the riveting.