



HP EliteBook x360 830 G5 Repairability Assessment

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INTRODUCTION

TOOLS:

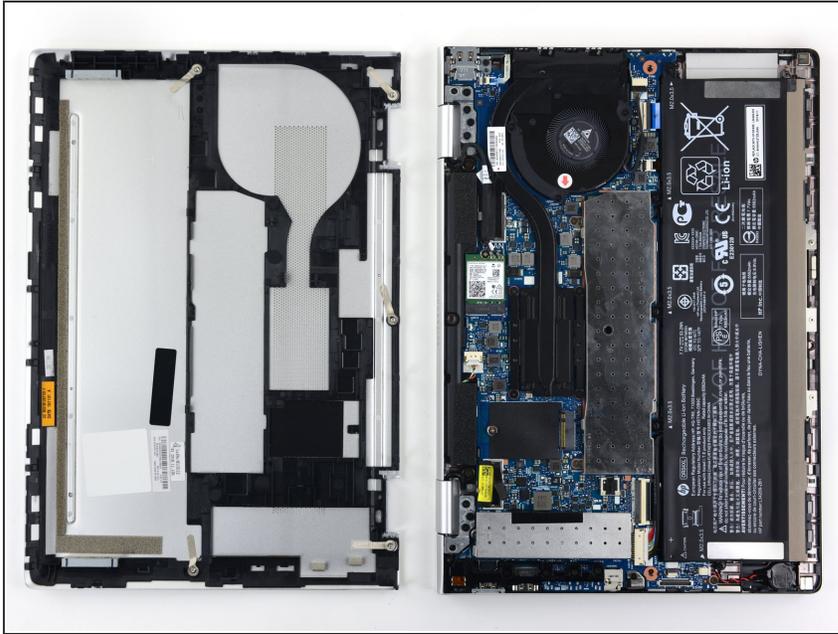
- [T5 Torx driver](#) (1)
 - [Phillips #0 Screwdriver](#) (1)
 - [iFixit Opening Tool](#) (1)
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Step 1 — HP EliteBook x360 830 G5 Repairability Assessment



- Exterior reference photos.
- The laptop isn't ingress-proofed, so many gaps in the keyboard and lower case, including ports, vents, speaker grilles etc. may allow water damage or particle buildup.

Step 2



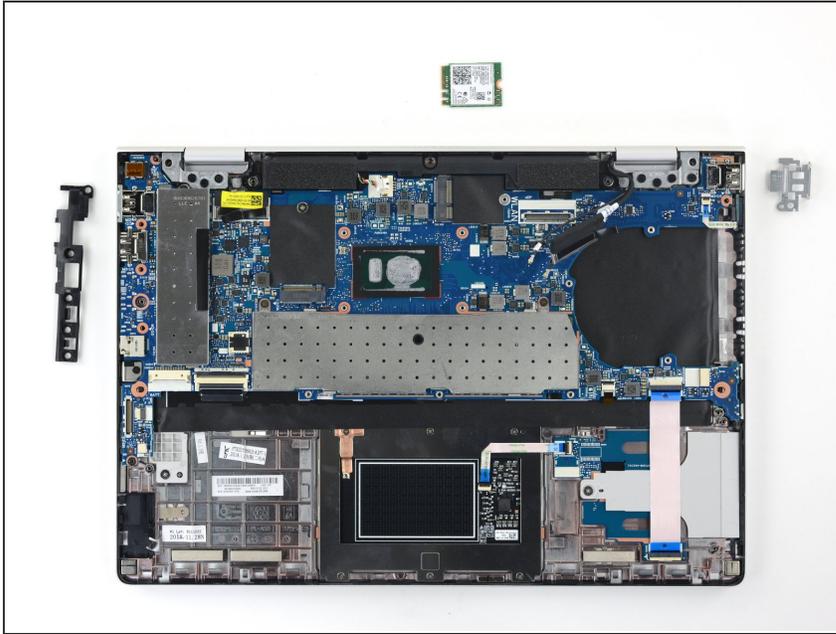
- The lower case is secured by a few captive Torx screws. Torx isn't as common as Phillips, but should better withstand repeated removal, captive screws will also be hard to lose.
- The case is fairly well secured and requires a thin plastic prying tool to gain access; fingernails won't be strong enough and metal tools will likely scratch the laptop surface.
- Unfortunately, the bottom of the case is additionally secured with several plastic clips that can be damaged during opening. The bottom needs to slide rather than be pried open.
- The bottom case contains no major components, making for easy replacement, and the laptop itself has a flat construction that allows access to most components at this stage.

Step 3



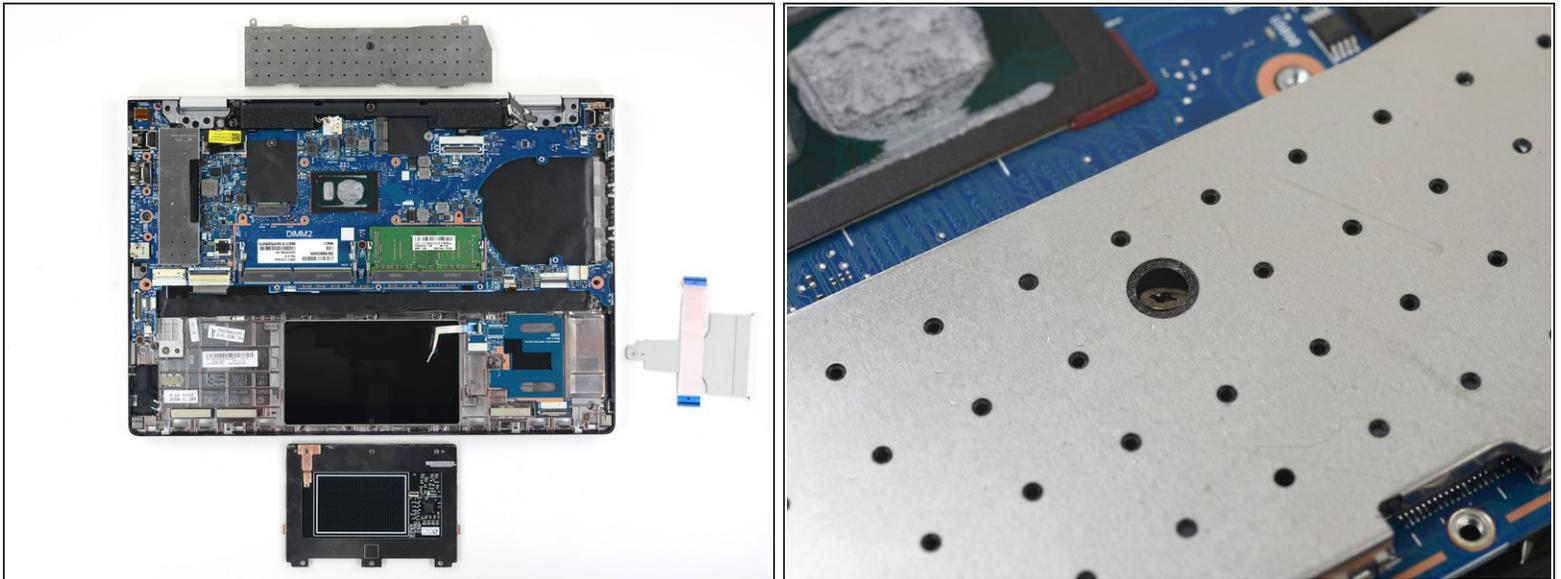
- The battery is immediately accessible after removing a couple standard screws. No adhesive holds it down.
- A laptop battery is consumable—even if it's kept in mint condition, the battery will wear down and need replacing. An easily accessible battery is very important for the life of the device, as well as its end-of-life recycling.
- The heat sink and fan are modular. They're immediately and easily removed by loosening captive Phillips screws. Access to these components is desirable for maintenance and cleaning.
- The BIOS/CMOS battery is also immediately accessible. While these batteries are very low power and often last a long time, they will eventually need replacing, so easy access is appreciated.

Step 4



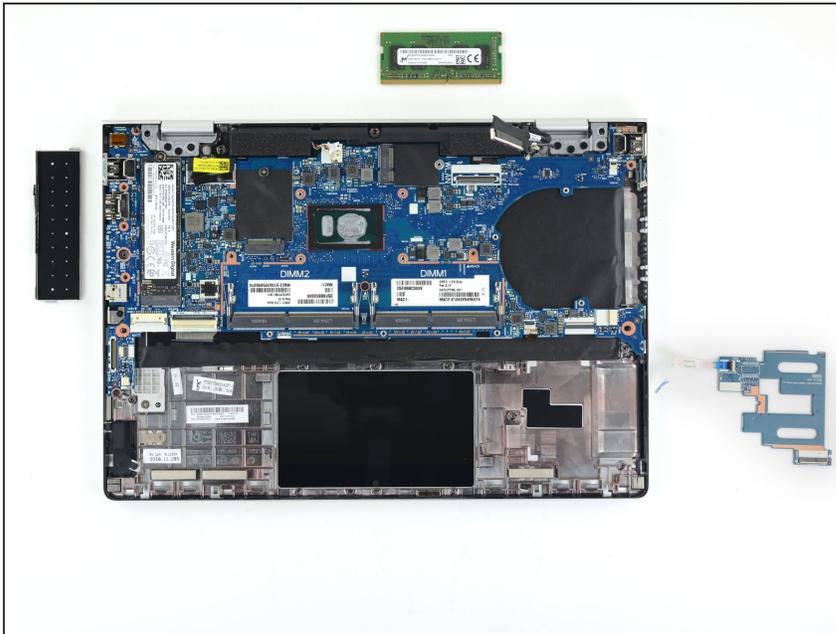
- Also immediately accessible is the modular wireless card and a couple non-essential port cover/stabilizers.
- The ports are unfortunately soldered to the mainboard meaning that failure will be costly to repair. Brackets to support the ports are welcome reinforcement, hopefully postponing an expensive repair, if not preventing it entirely.

Step 5



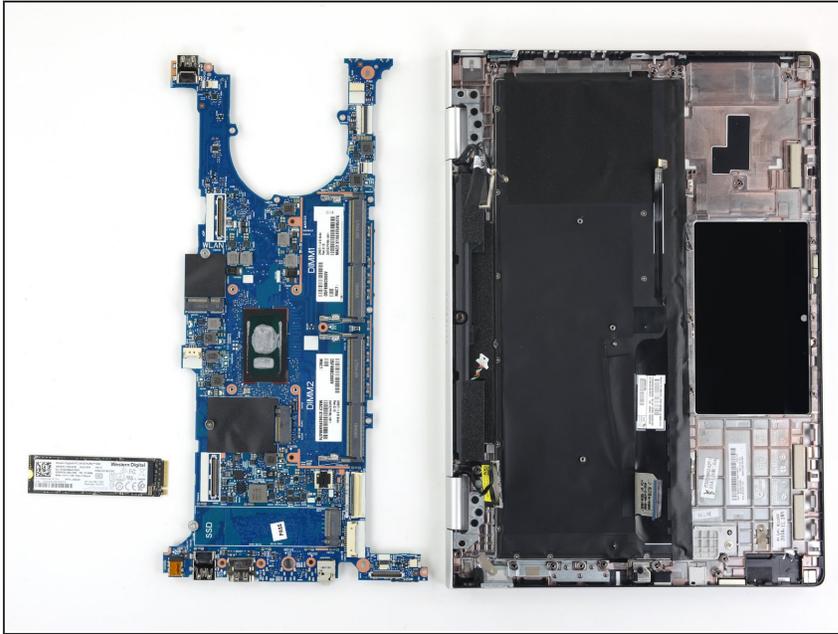
- With the battery removed, the following components are accessible:
 - The trackpad assembly, which is secured with standard screws and no glue.
 - The peripheral port, or in this case, spaceholder plug with an interconnect cable adhered to it.
- The EMI shields on the motherboard are also immediately accessible, although the average user would never know it.
 - In addition to the exterior screws, the shield is secured with clips. There is also a screw hidden in the center that is hard to access, but not necessary to remove at this stage.

Step 6



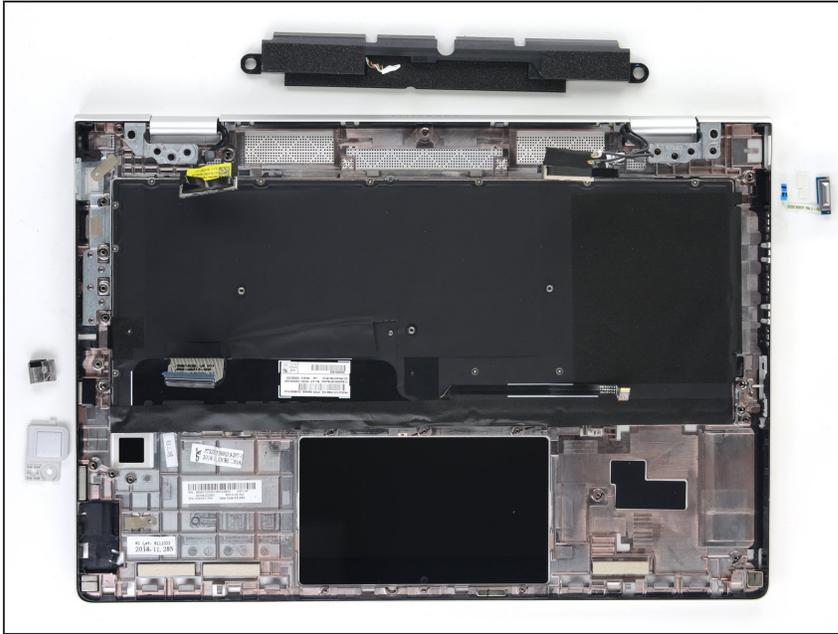
- Once the shields are removed, the SSD and RAM can be replaced, with no other disassembly needed. Their modularity is highly desirable—both for protecting user data and for prolonging device life by allowing upgrades.
- That said, hiding the components under shields is a barrier to repair. If this is the only EMI solution available, a label alerting users to the presence and upgradability of the underlying components would be ideal.
- With the peripheral plug out of the way, the associated PCB can now be removed. The modularity seen here is nice, making for less expensive replacements.

Step 7



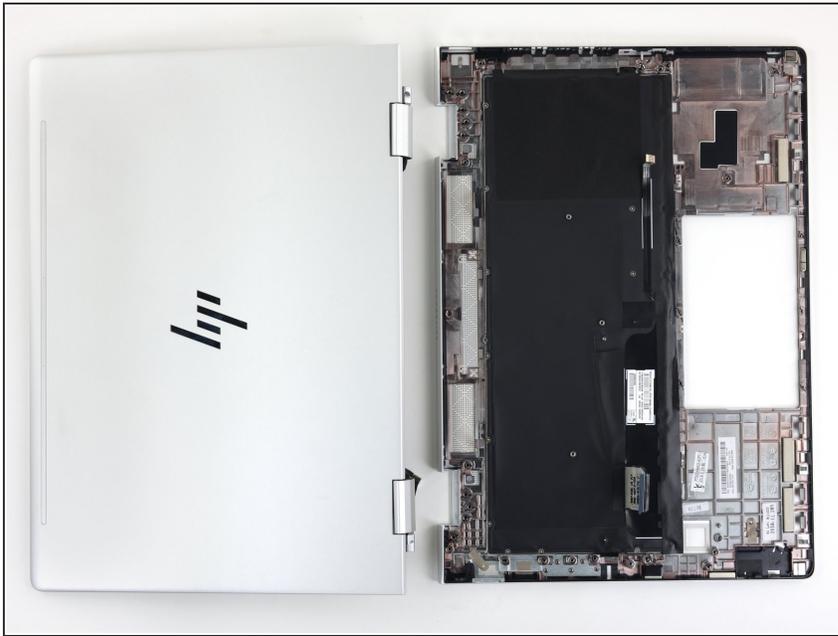
- The motherboard is removable after the heat sink assembly, and after some (mostly labeled) connectors are disconnected.
- The motherboard contains the CPU, volume buttons, and ports.
- High-wear components like ports and buttons make for very expensive replacement when they're soldered to the motherboard.
- The modularity of the memory and standard PCIe SSD are welcome.

Step 8



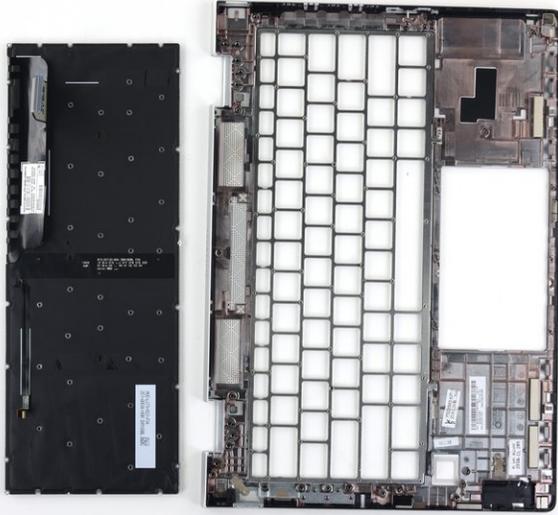
- The motherboard blocks easy access to the speakers and fingerprint sensor (a placeholder in this case), so these components are best accessed after the board is removed.
- The fingerprint sensor is unlikely to need replacing, but better access to the speakers would be appreciated considering their proximity to the grille where there's increased risk of water damage.
- The power button is not easy to pry out of its recess even with the motherboard removed, and could likely be removed earlier. The modularity of this button is appreciated considering the number of components soldered on the main board.

Step 9



- The display is actually removable upon opening the bottom case, which is great for repairability.
- That said, the cables are tough to wrangle, making hinge removal a little tricky.

Step 10



- The keyboard assembly can be removed intact after some large stickers and a few dozen screws are removed.
- This procedure is not ideal, but not terrible—lengthy, but not especially challenging. Presumably the stickers are fulfilling an EMI need and should be replaced, but doing so without damage will be a challenge. Removing and replacing the many small screws will also be a marathon.
- The only components left in the upper case are some magnets, conductive foam, volume rocker cover, and a light guide.

Step 11



- Prying the display out of its housing is somewhat difficult to begin (especially without heat), but overall it's quite simple and an improvement on past displays.
- The webcam slider provides a fairly safe access point, the thin adhesive is easy to slice through, and the lack of breakable plastic clips makes removal and reassembly much easier.
 - The display must be opened from the top so that the bottom end can slide out. Starting from the base will likely break clips and maybe a board.
 - Another potential failure point is the thin plastic bezel, seen separating in the second image. Ideally this will not need to be transferred to a new part as it may be damaged in the process.
- The display is quite easy to disconnect, and no cables or components are in danger during the prying procedure.
- The display houses no additional components, allowing for quicker replacement.

Step 12



- After removing the display you can replace:
 - Upper sensor assembly, on a shorter, more robust board than seen in the 1040 G5
 - Several antennas secured by copper tape, which may be a challenge to remove and replace intact
 - And the labeled hinges, with labeled plastic cable securers.
- Ideally the antennas won't fail, but their cables run through the hinges, which means some stress over time. The copper tape will complicate replacement.

Step 13



- The HP EliteBook x360 830 G5 earns a **9 out of 10** on our repairability scale (10 is the easiest to repair):
 - SSD, RAM, and battery are accessible and removable.
 - Manufacturer provides free user-accessible repair documentation.
 - All screws are standard Phillips and Torx.
 - Overall mostly modular, but the motherboard contains both ports and CPU making for expensive repairs.