



Oura Ring 2 Teardown

An iFixit teardown of the Oura Ring 2.

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INTRODUCTION

The Oura Ring has been around for a while now, but it didn't become mainstream news until the NBA got one for each player to try to detect early signs of COVID-19. There are a lot of questions about the effectiveness of the Oura Ring, but one thing's for sure: it's jam-packed with a lot of tech for such a small device.

The Oura Ring is interesting for a whole basket of reasons. If you're a sports fan, you're probably rooting for the Oura Ring 2 to work so we can have basketball back in our lives. If you're a biohacking fan, you might be interested because it monitors your vitals and analyzes your sleep. We've seen a lot of gimmicky devices over the years, but it's in our blood to understand how new tech works—so we took it apart to find out what tech is hiding underneath that .25 OZ of titanium.

Step 1 — Oura Ring 2 Teardown



i This is primarily a video teardown, but intrepid iFixit community members have also submitted their own analyses. One reader in particular spent hours attempting to reverse engineer the Oura Ring 2 through the video, datasheets, and X-rays, and shared the following:

- The two IR LED drivers should be the same type, one for each IR LED.
- There's likely an operational amplifier for signal conditioning for the photo diode before the signal is sent to the microcontroller. (This is commonly done with these type of photo diode based health meters.)
 - If this is not a microcontroller, it could be a temperature sensor (not a thermistor).
- A wireless charging IC, predicted based on its surrounding components and location.
- And finally, a battery fuel gauge IC for probably determining battery health.
- Based on all this, the second image shows the predicted block diagram.

To reassemble your device, follow these instructions in reverse order.