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Oura Ring 2 Teardown

Written By: Michael Degnan (and 2 other contributors)
Published: July 9, 2020

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TEARDOWN

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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.

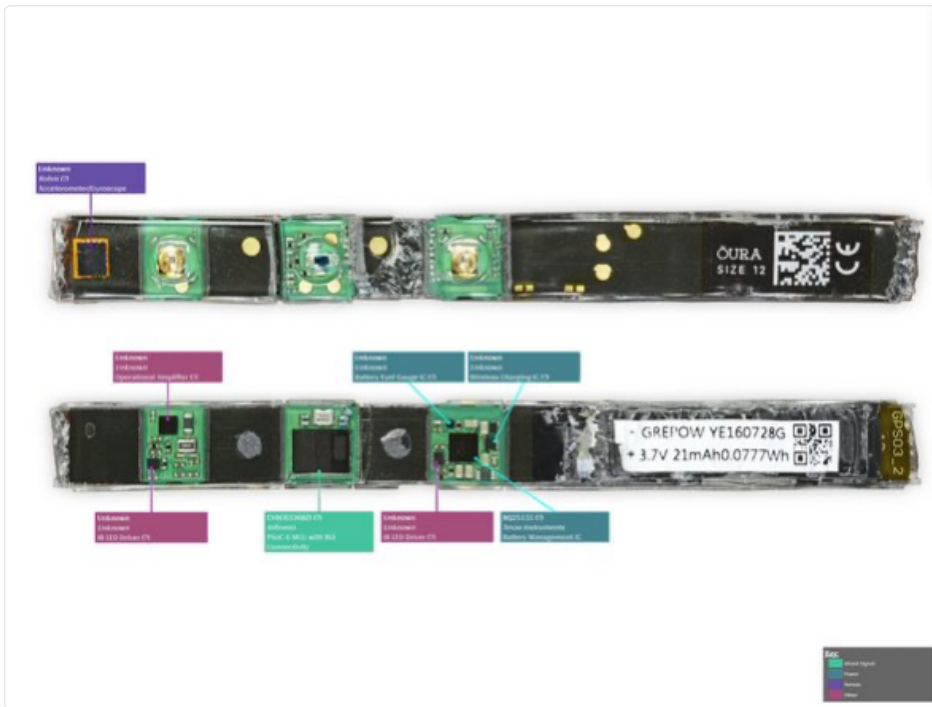
Video Overview

Oura Ring 2 Teardown: Inside the NBA's COVID-19-Detecting Smart Ring



This teardown is **not** a repair guide. To repair your Oura Ring 2, use our [service manual](#).

Step 1 Oura Ring 2 Teardown



① 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.

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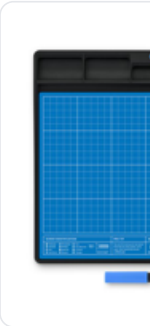


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- Wow, I didn't even know smart rings existed. I also think that it'd be much easier to service if the titanium shell came off in two halves so nothing would have to be bent to service the electronics.

Ethan - Jul 11, 2020

Check out this review of the Oura Ring for a good overview - <https://youtu.be/56RPyoNSrYY>

jtisdale - Dec 16, 2021



Is it possible for you to share SMD Markings on all the devices?

[surya mishra](#) - Aug 19, 2020

same request

[Marsh Cai](#) - Aug 19, 2023

Yes, contact plawat at slimiot dot com

[penta track](#) - Nov 16, 2024

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