



# Vizio Co-Star Teardown

It's been nearly two years since Google...

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# INTRODUCTION

It's been nearly two years since Google unveiled its [flop](#) of a streaming media player, the [Logitech Revue](#). After a lengthy hiatus from the spotlight, Google TV is back to take the stage. Its lead actor? The ironically-named Vizio ~~Coaster~~ Co-Star.

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## TOOLS:

[iFixit Opening Picks set of 6](#) (1)

[Phillips #00 Screwdriver](#) (1)

[iFixit Opening Tool](#) (1)

[Spudger](#) (1)

[Tweezers](#) (1)

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## Step 1 — Vizio Co-Star Teardown



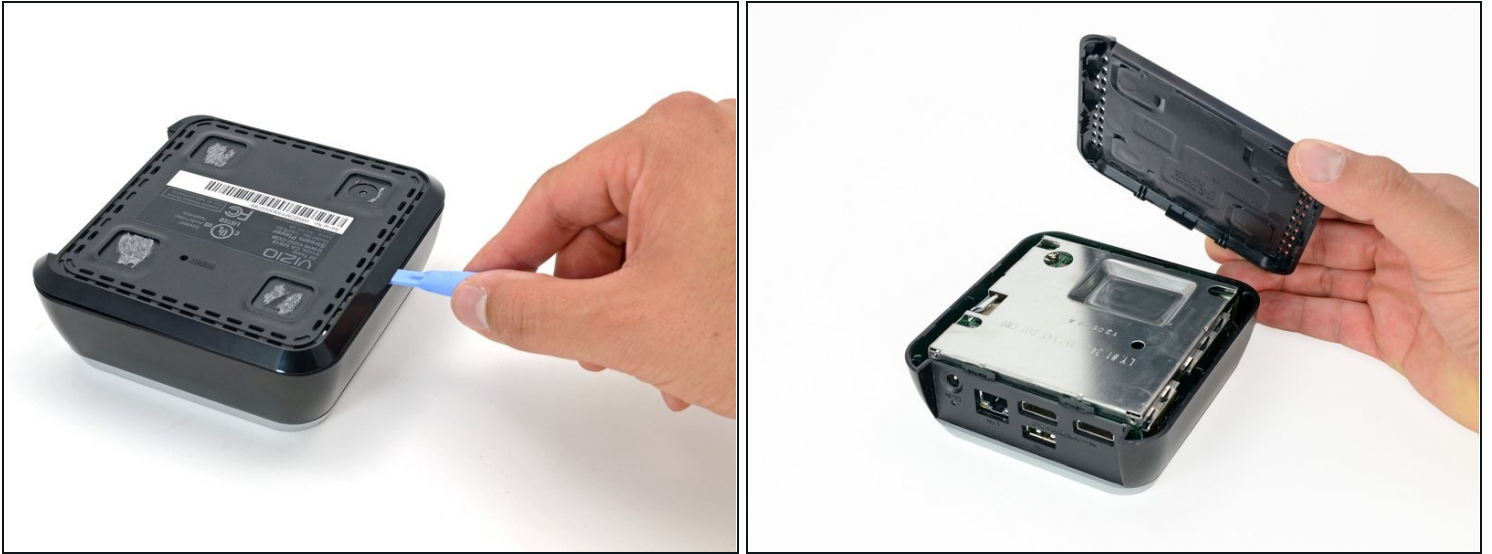
- Providing the market with a \$99 answer to the Apple TV (also \$99), the Vizio Co-Star brings a refreshing reincarnation of Google TV to the world of set-top boxes.
- Notable tech specs:
  - Google TV platform
  - Wi-Fi and Bluetooth enabled
  - Hot buttons for Amazon, Netflix, and M-Go
  - 720p, 1080i, and 1080p resolution support
  - MP3, AAC, and WMA audio playback
  - Universal QWERTY remote with trackpad

## Step 2



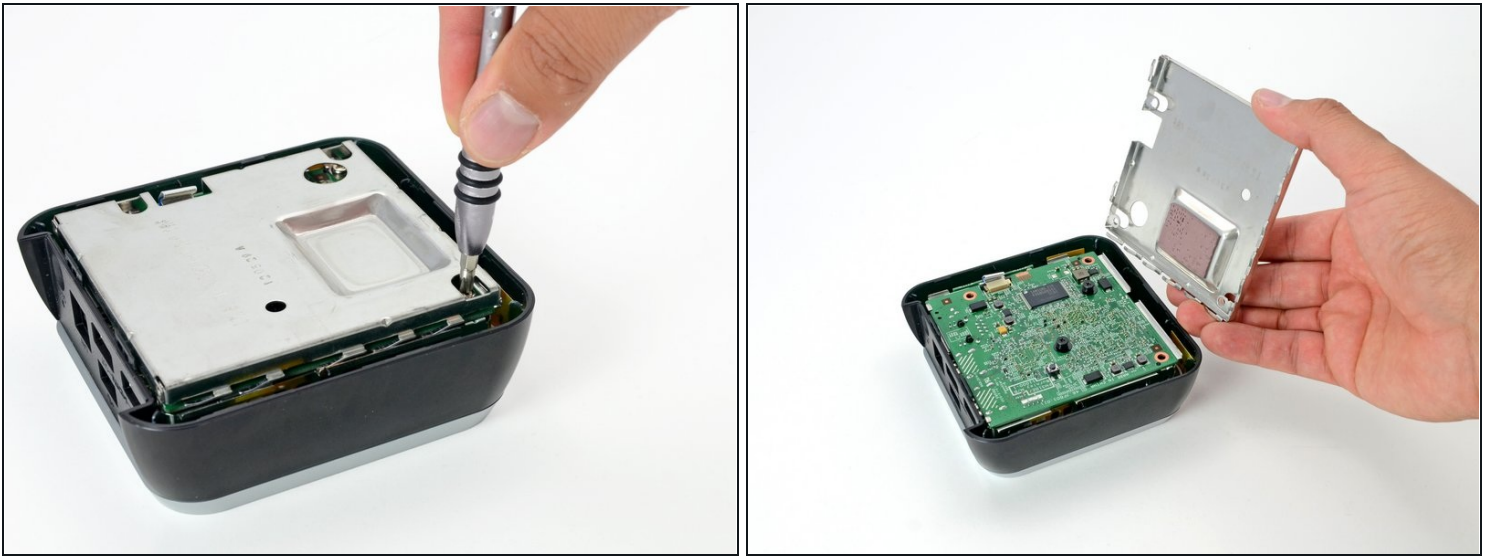
- The rear side of the Vizio Co-Star includes an impressive lineup:
  - USB 2.0 port
  - HDMI-In port
  - HDMI-Out port
  - Ethernet port
  - DC-In Power port
- On the bottom we see the reset switch and four [suspicious-looking](#) rubber feet.  
**⚠ Spoiler alert:** the feet [aren't hiding anything](#).

### Step 3



- A little prying around the edge with a plastic opening tool, and we've got the bottom panel free.
- Comparatively speaking, the Apple TV required [two metal spudgers to open](#), as opposed to a single plastic opening tool here. No need to split hairs; they're both easy to open up, and we love it.

## Step 4



- We pull off what looks like an EMI shield only to find a thermal pad sitting on top of a sea of small resistors.
- It's not often that we encounter cooling for the back side of a motherboard, but Vizio took extra precautions as this Co-Star has no fans.

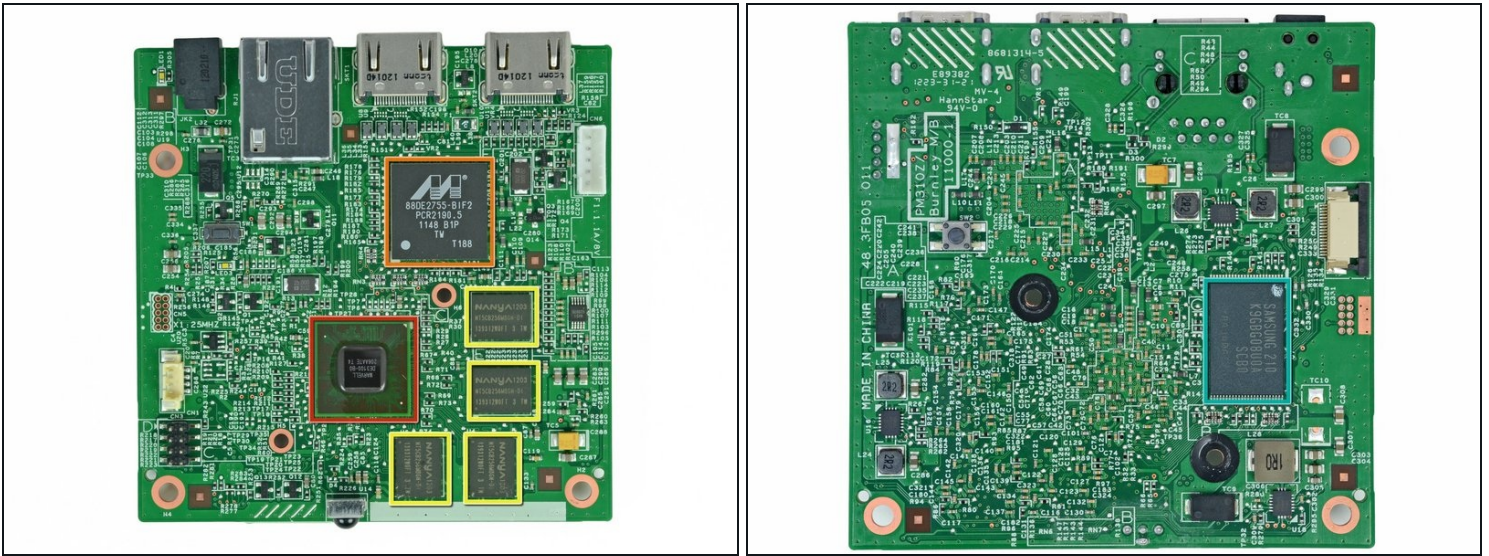
## Step 5



- The only thing standing between us and the motherboard are some screws and two connectors. Say hello to our little friend!
- ① For those of you tuning in at home, a grand total of five screws and two cables must be removed once inside the device to free the motherboard. That's going to give the Co-Star a nice ratings boost.

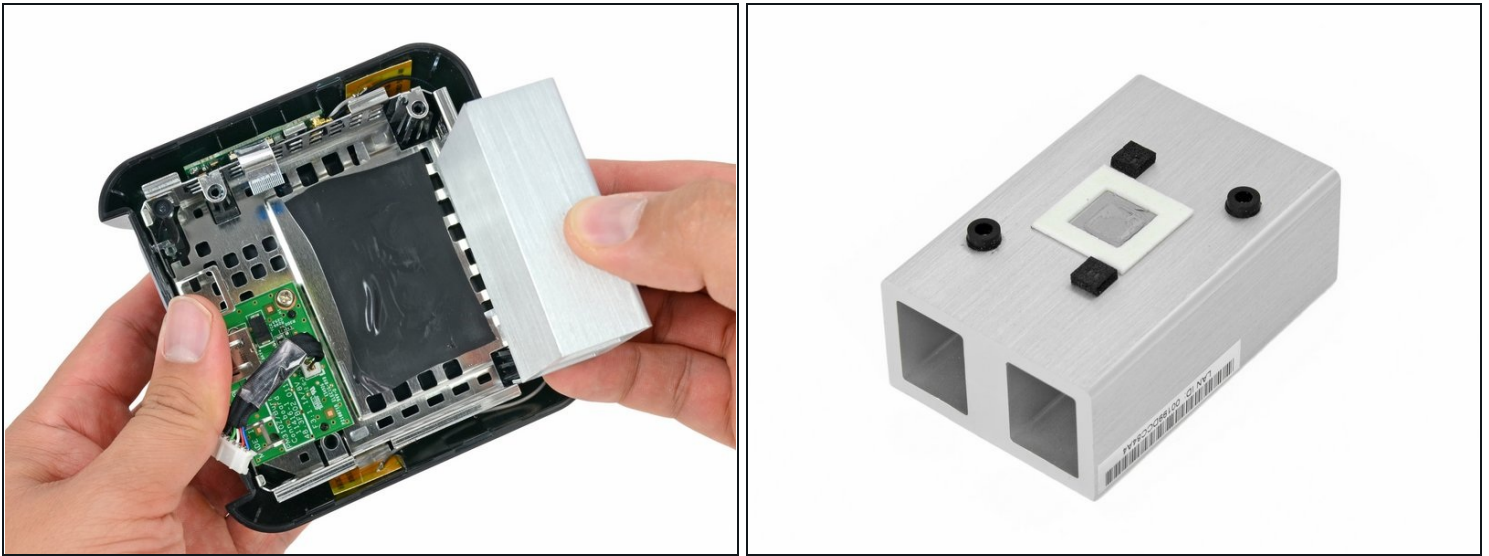


## Step 6



- And here comes the Co-Star's motherboard strolling down the red carpet:
  - Marvell [Armada 1500](#) 1.2 GHz Dual-Core Processor
  - Marvell [88DE2755](#) QDEO Video Processor
  - Nanya [NT5CB256M8GN-DI](#) 2 Gb DDR3 SD RAM (2 Gb x 4 for 1 GB total RAM)
  - Samsung [K9GBG08U0A-SCBO](#) 32 Gb (4 GB) NAND Flash

## Step 7



- We're used to the innards of devices being dominated by a single component, but those space hogs are usually [batteries](#) or [power supplies](#).
  - Over a third of the real estate in the Co-Star is inhabited by the aluminum heat sink.
- ❗ You may be asking yourself why the Co-Star has such a huge heat sink?
- The answer lies in air movement. Without fans to circulate air, there is no forced [convection](#). Therefore, the Co-Star must rely on [conduction](#) and natural convection to keep the processor cool.

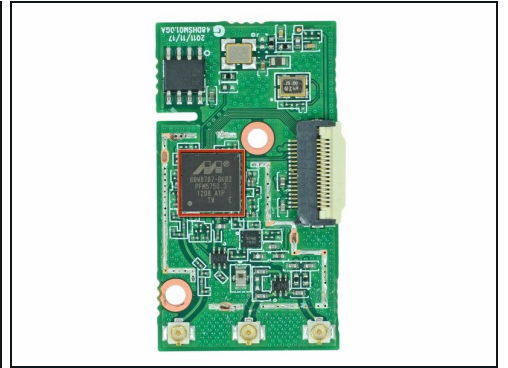
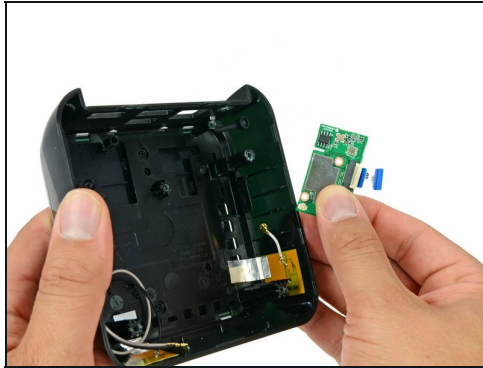
## Step 8



- We remove an additional board to reveal a whole lot of nothin' underneath.
- The board houses the USB port and, well, nothing else.

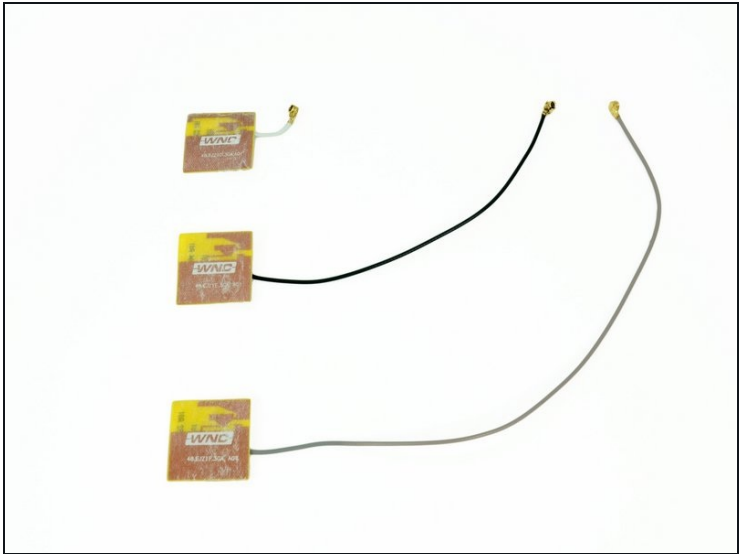
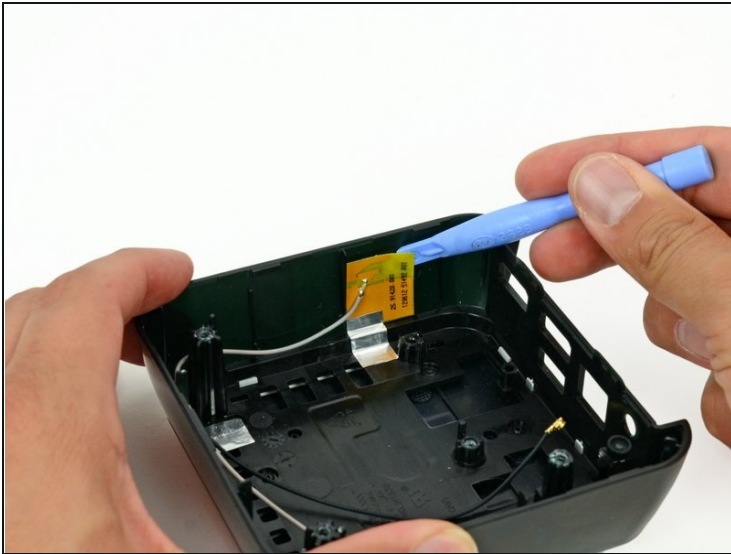


## Step 9



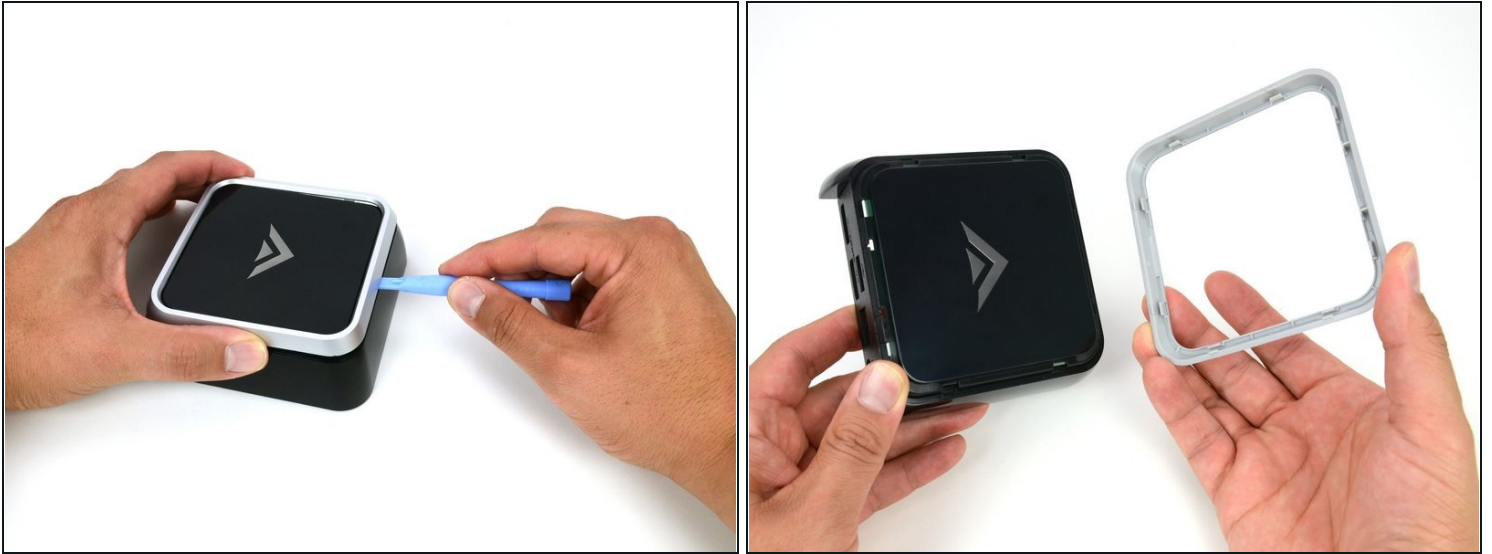
- We use our always-trusty [spudger](#) to disconnect the Bluetooth and Wi-Fi antenna cables from the wireless board.
- A Marvell [Avastar 88W8787](#) WLAN/Bluetooth/FM Single-Chip SoC brings life to what would otherwise be a very bland and boring board.

## Step 10



- A plastic opening tool and a steady hand are all we need to separate the Bluetooth and Wi-Fi antennas from the Co-Star's lower case.
- *This antenna cable is too short.*
- *This antenna cable is too long.*
- *This antenna cable is just right!*

## Step 11



- That's pretty much it for the Co-Star, but we do like to do a thorough teardown here at iFixit, so we took a quick look at this flashy silver bezel. It sadly revealed nothing more than a flashy silver bezel.
- ① Modders, take note: the bezel comes off easily and would probably look pretty slick when painted neon green.

## Step 12



- Just like the [Boxee Box](#), the Co-Star comes with a neat two-sided remote.
- Unlike the Boxee Box though, this Vizio controller is universal and features a touch-sensitive trackpad. Point, Co-Star.
- As a finishing touch, the Co-Star remote has ABXY buttons and a directional pad for OnLive gaming. Not only is that an incredibly unique feature, it gets us all [nostalgic](#) and stuff.

## Step 13



- The battery tray comes right out, but this isn't much of a surprise. How often did you try to "fix" your TV remote by pulling out the old batteries and just switching them around?
- A pair of AA batteries were *included* for the remote. That's a legitimate selling point right there.

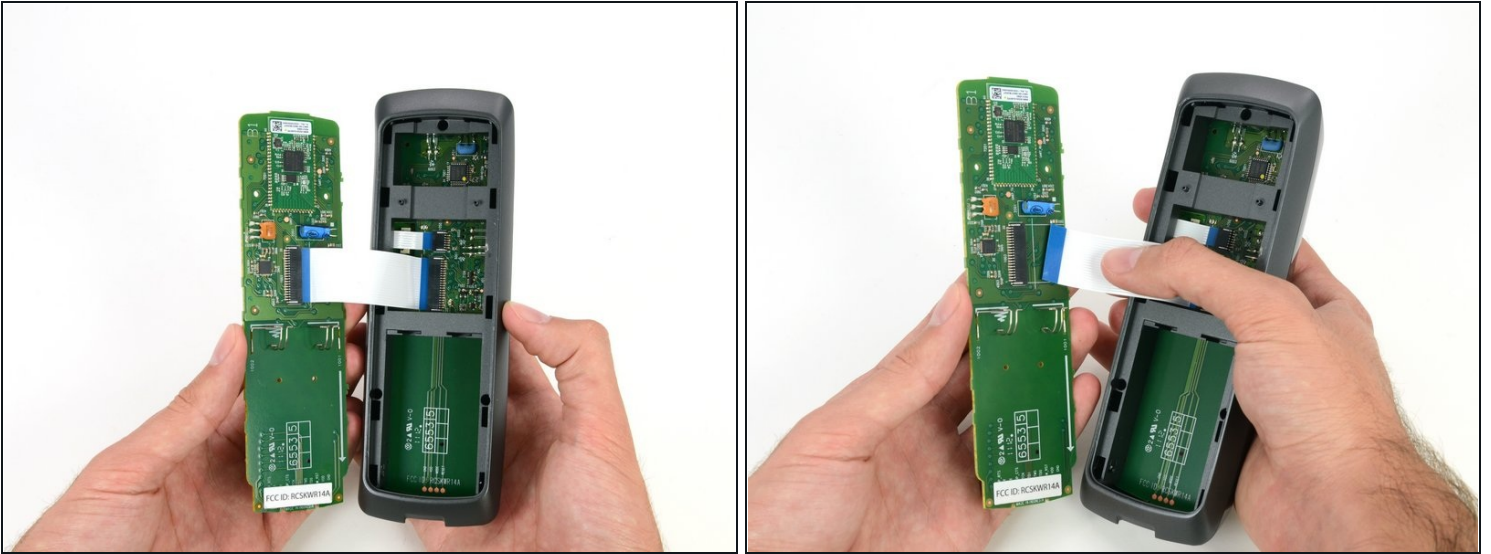
## Step 14



- Here's another opportunity for the modders out there. How cool would it be to have a neon green keyboard bezel to match your Co-Star?
- Whether you're painting it or not, the bezel pries off the keyboard quite easily.
- Following suit, the rubber button cover peels off without a problem.
- Since the button cover and the bezel are the components that usually get the dirtiest, it's great they are easy to remove.

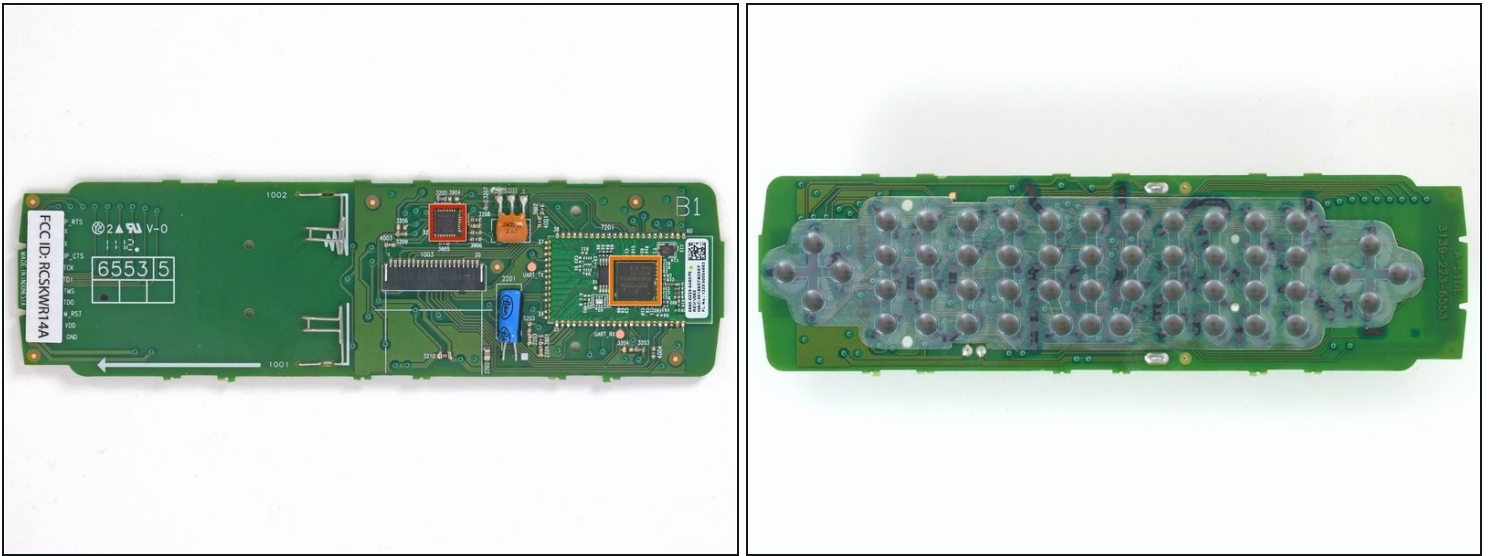


## Step 15



- Buttons on both sides mean lots of data transfer. Luckily, the data cable slides out from connectors on *both* PCBs.
- The Co-Star's remote looks to be as easy to take apart as the media player itself.
- Once again, this isn't really a surprise. Remotes, unlike smartphones or laptops, aren't subject to strict space constraints.

## Step 16



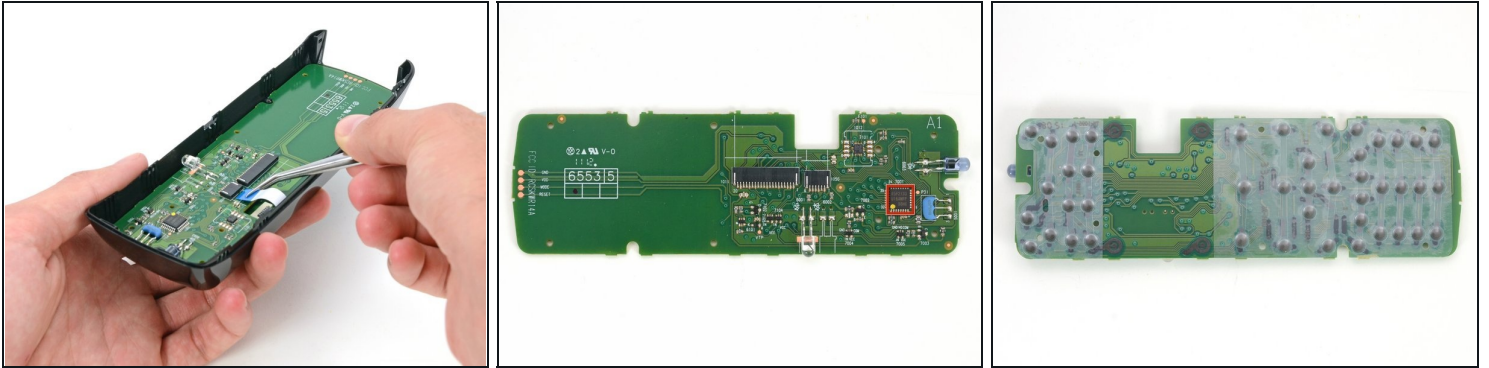
- The keyboard backer sports a couple of ICs:
  - Maxim [MAXQ610](#) 16-bit Microcontroller with Infrared Module
  - Broadcom [BCM20733](#) Human Interface Device Bluetooth 3.0 single chip

## Step 17



- A few Phillips #0 screws and some prying and the lower case of the remote is gone. See ya!
- With the case removed, we learn the screws were pulling double duty and holding the motherboard in place.

## Step 18



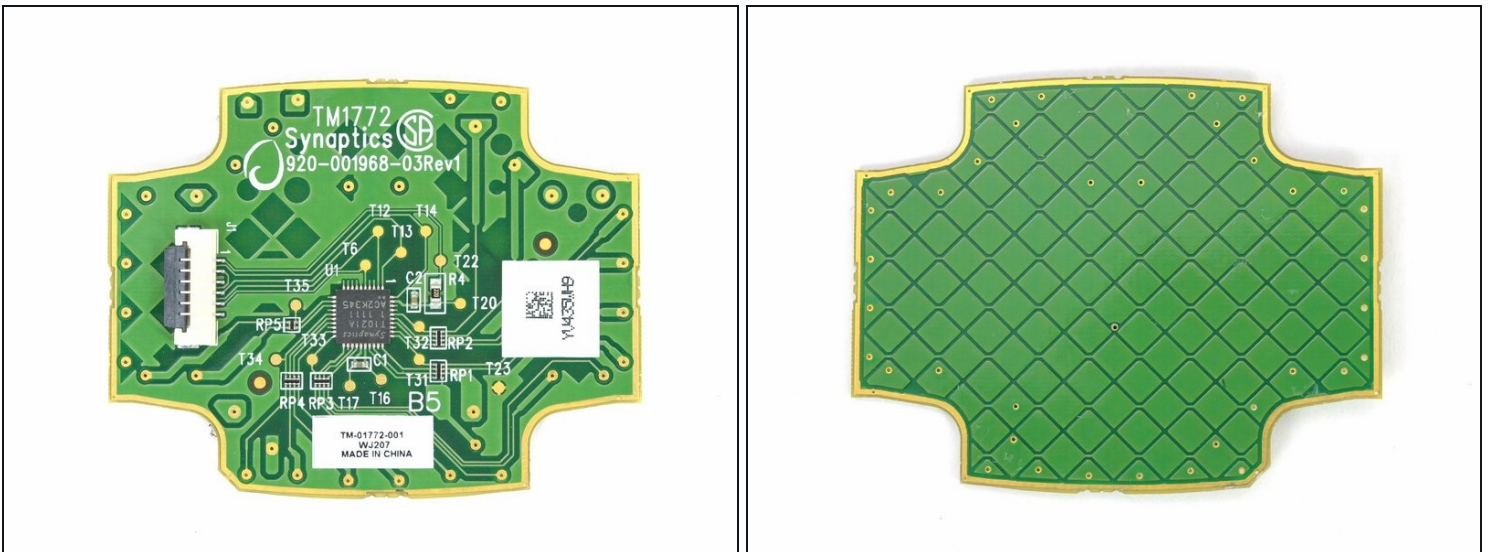
- *Yoink!*
- We grab a handy pair of [tweezers](#) and gently pluck out the trackpad data cable before removing the other board.
- This board is powered by a Renesas R5F2133 16-bit microcontroller.
- No flash photography, please, but this PCB does host the two IR blasters, with one conveniently on the side for the QWERTY keyboard.

## Step 19



- Peeling back the remote's keypad is as easy as [peeling a banana](#). Underneath is the capacitive touch trackpad.
- A **lot** of strong adhesive is used to hold this board in place.
  - If this comes loose, your movie night will be [gone with the wind](#), hence the generous amount of adhesive.
- Excess adhesive [usually](#) doesn't get in our way. With a little bit of patience, our [iFixit guitar picks](#), and a spudger, we free the trackpad from the frame.

## Step 20



- The trackpad is controlled by the popular Synaptics [T1021A](#) Touch Controller, also used in the [Logitech Revue](#).
- Which reminds us, it's time to *revue* the Vizio Co-Star's repairability.



## Step 21



### REPAIRABILITY SCORE:



- Vizio Co-Star Repairability: **8 out of 10** (10 is easiest to repair)
  - The outer case only requires a little bit of prying with a plastic opening tool to open.
  - The only screws used in the Co-Star are standard Phillips #0.
  - Most of the components are easily accessible and thus easily replaced in case of failure.
  - Removing the remote's QWERTY keypad is painless, making regular cleaning a relatively simple task.
  - An abundance of glue securing the trackpad to the front of the remote makes removal difficult.

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