iPod Nano 4th Generation Teardown

Written By: Luke Soules

INTRODUCTION

We disassembled this iPod on September 10, 2008.

TOOLS:

- Metal Spudger (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)

Step 1 — Teardown

- The iPod Nano 4G!
- Many of the new Nano's features are software-based, but there are still a lot of exciting changes inside.
- We're excited to see exactly how they integrated the curved glass into the case.

Of course we had to get the orange one.

Step 2

- Standard contents included. You have to fork over $80 to get the fancy new headphones with the volume control.
- We're working on the disassembly now.
- By the way, we'd like to congratulate Apple on their environmental progress. The one aspect they forget to mention is ease of repair to ensure reuse. Fortunately, we've got you covered there.
- We'll be making a Fixit Guide for the new Nano soon. Stay tuned!

Step 3

- Nano, nano, fat nano, nano.

Step 4

- The Nano family, minus the 3rd Gen. The new Nano's screen is almost twice the height of the original Nano's.

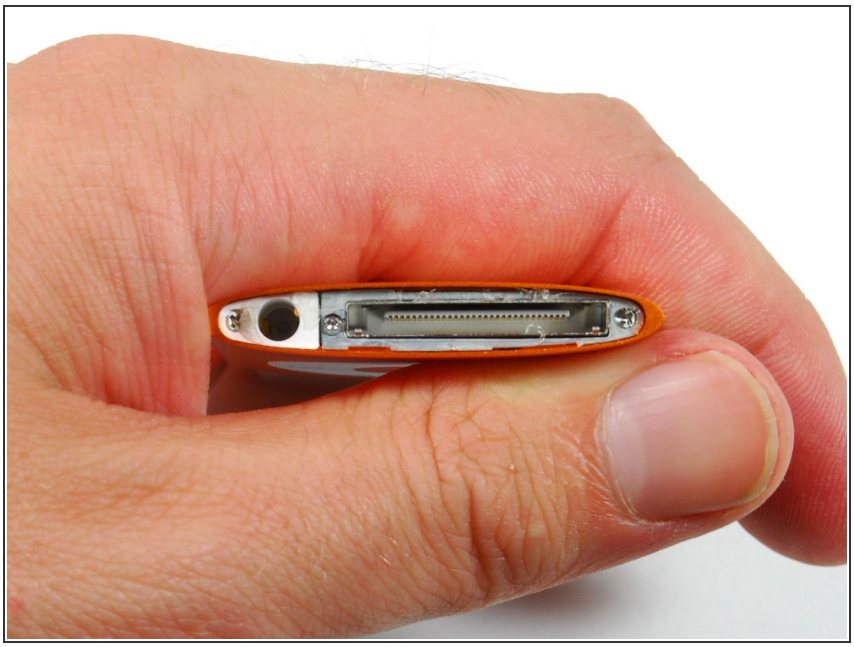
Step 5

- Apple says it's the "thinnest ever." Sure, if you've got a micrometer. But the curved case sure feels nice!

Step 6

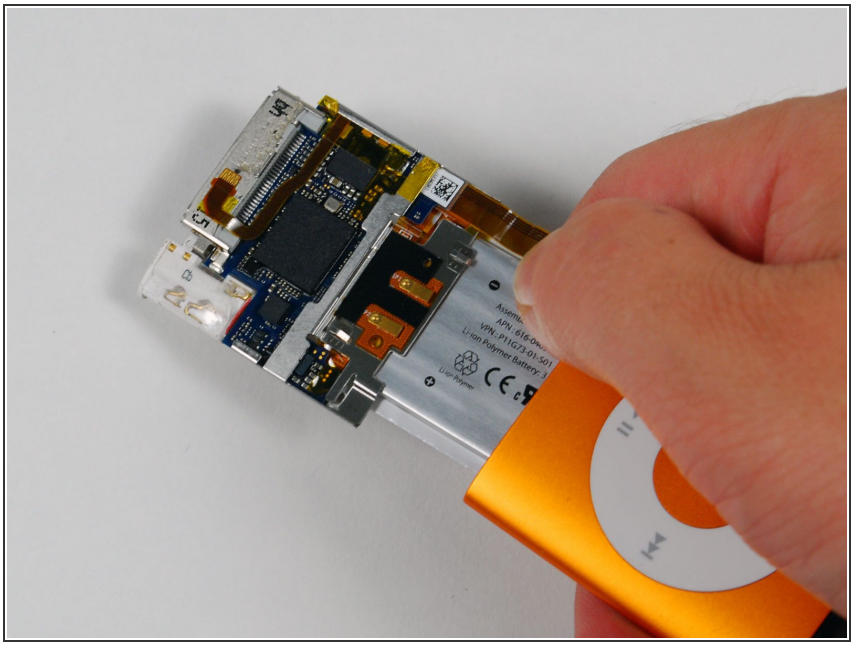
- The top of the Nano, after removing the plastic top bezel.
- This design is very similar to the 2nd Gen Nano, including the incredibly tiny and difficult-to-remove Phillips screws.

Step 7



- No surprises here, just like the other end, except one extra screw.
- The 3.2 mm wide dock connector looks pretty big compared to the iPod. Apple's not going to be able to make their iPods much thinner without a new dock connector.

Step 8



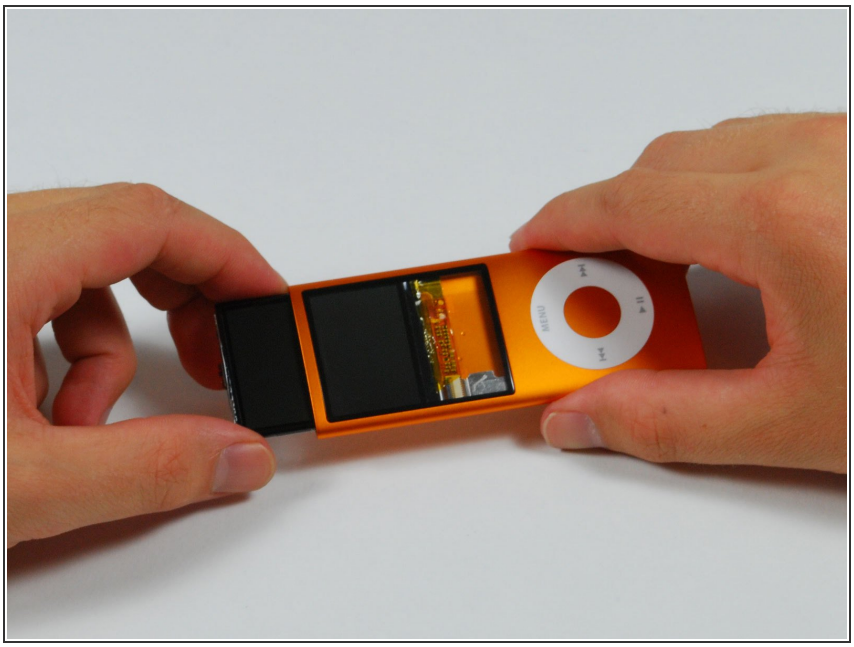
- Unfortunately, just like every other Nano, this iPod wasn't designed with serviceability in mind. Sliding the

insides out of the casing proved quite difficult.

We'll be working on finding a better way to get into this iPod, but for now we'd recommend keeping your new Nano in one piece.

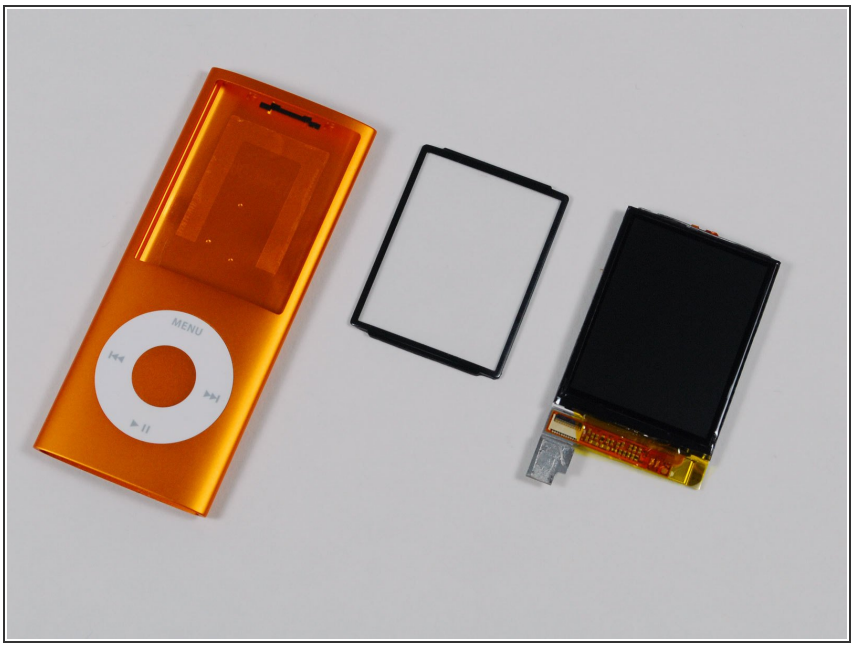
- slide the insides out until the very lowest connector is visible, about 1/4 of an inch. Be sure to undo this connector before sliding the inides out as seen in the picture.

Step 9



- Removing the LCD.
- One of the most exciting features of the new Nano is what covers the LCD: real glass.
- Earlier iPod Nanos have been incredibly durable. Hopefully, the same will be true of this iPod, even with a glass screen covering. We certainly appreciate the addition of real glass; it's nice to see some of the enhancements from Apple's larger and more expensive devices make it to the Nano.

Step 10

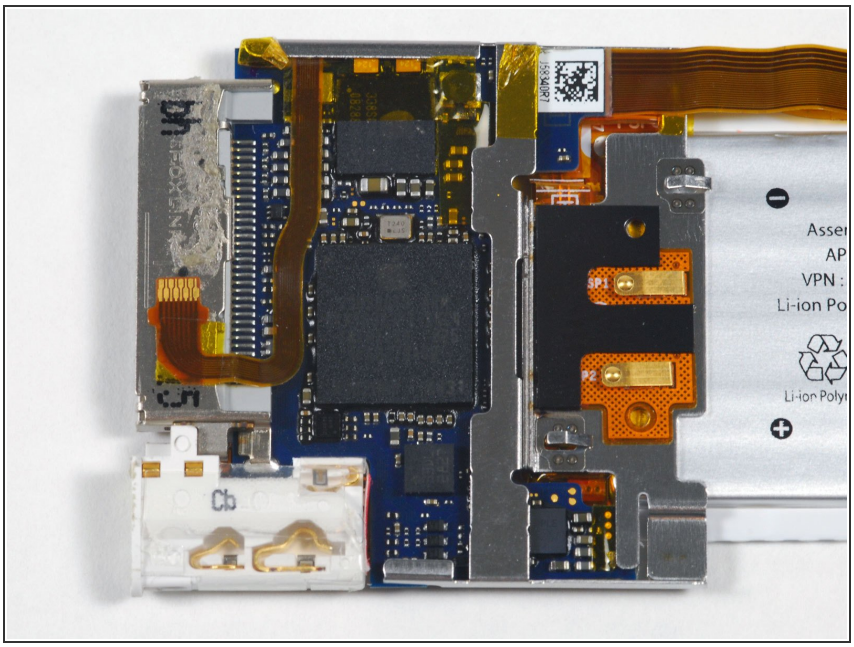


- Fortunately, the glass is separate from the casing. In fact, nothing but the iPod's internals hold the glass in place on the casing.
- The front of the glass is curved to match the front of the iPod. The glass is about .7 mm thick on the edges, and 1.7 mm thick in the middle.
- The new LCD is actually almost exactly the same size as the 3rd Gen Nano LCD. The only difference is that instead of a resolution of 320x240, you now get 240x320.

Step 11

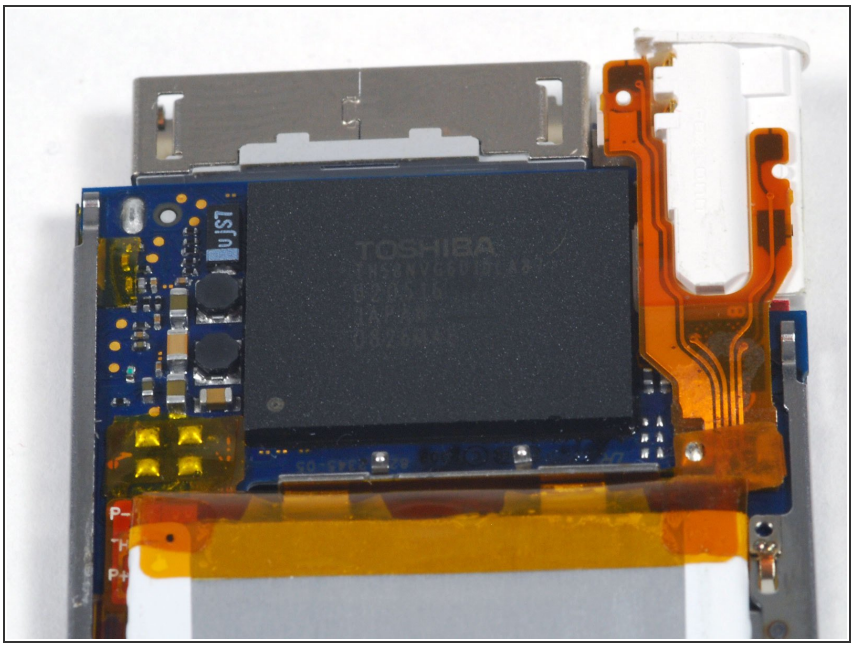
- The battery isn't very large, but then again, neither is the iPod. Apple claims this slim battery will keep the Nano playing music for 24 hours.

Step 12



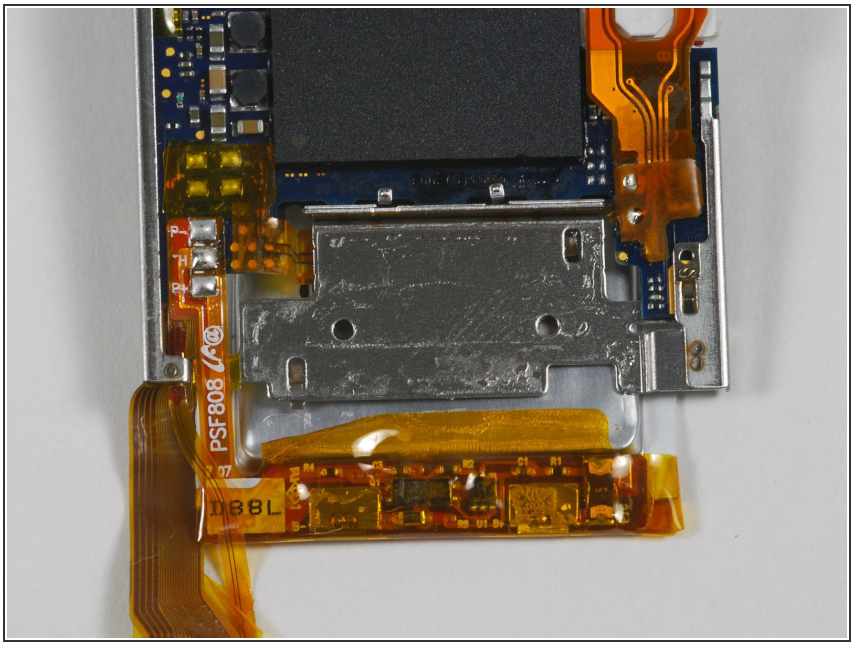
- The top of the logic board. We're working on identifying the chips.
- The main processor appears to be an Apple-branded ARM processor manufactured by Samsung with DRAM on-package. Based on the date code, this processor was manufactured in early July of 2008.
- Markings on the main processor: 339S0049 ARM, K4X56323PI-KGC4, YWE025QH 825, APL0278A00, N1B2HOP 0831
- Apple-logo chip above the processor: 338S0687-AC, 08288HBB
- Small black chip below the main processor: 33DL, 2827
- Shiny Apple chip in the bottom right: 338S055C, 189N0824, SGP

Step 13



- The other side, dominated by the 8 GB Toshiba flash chip.
- On the chip: TH58NVG6D1DLA87, U20516, JAPAN, 0826MAE

Step 14



- Unfortunately, the battery is soldered to the logic board. Replacing the Nano's battery isn't going to be easy.

Step 15

- All the parts. The main board is incredibly small, especially considering all the features packed into this iPod.

1