

[iFixit.com/Guide/iPhone](http://iFixit.com/Guide/iPhone)





## macstore

AC Adapters

Accessories

Hard Drives

RAM

Tools

Wireless

▶ PowerBook G3

▶ PowerBook G4 Ti

▶ PowerBook G4 Al

▶ iBook G3

▶ iBook G4

▶ MacBook

## ipodstore

iPhone

iPod 1st Gen

iPod 2nd Gen

iPod 3rd Gen

iPod 4th Gen

iPod Photo

iPod 5th Gen

▶ iPod Mini

▶ iPod Nano

Search

ifixit > iPhone Disassembled



2007-06-29 18:44:13

- We've procured our iPhone, and it's on the way to our **photo studio** now.
- We purchased two 8 GB iPhones.
- The phone has arrived!
- Who wants to take bets on how long it'll take us to start selling **iPhone parts**?



2007-06-29 18:49:34

- OK, so here's a quick overview of the basics.
  - \* The iPhone is 4.5x2.4x0.5", and weighs 4.8 ounces (0.3 pounds). For reference, 18 iPhones weigh the same as 1 MacBook Pro.
  - \* The display is 3.5" diagonal, 480x320 resolution. That's 153,600 pixels, or 12% as many as a 15" MacBook Pro.



2007-06-29 18:50:44

- If you can't tell, we're stalling while we figure out how to get it open.
- The iPhone supports four major different wireless protocols.
- The List: Quad-band GSM (850, 900, 1800, 1900 MHz), 802.11b/g WIFI, EDGE, and Bluetooth 2.0 + EDR.

### News

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We've also released a new **iPhone guide** to help walk you through repairs.

We take a **first look at the iPhone**.

### Free Fixit Guides

Sad Mac? Broken iPod? **Fixit yourself.**

Our free Fixit Guides show you how to repair your machine.

Mac | iPod

### Parts Store

Need parts? We have over a thousand Mac and iPod parts in our store.

- + **iPod Batteries from \$14.95**
- + **iPod Screens starting at \$39.95**
- + **8x SuperDrives only \$119.95**
- + **1 GB RAM Chips just \$79.95**



Removing antenna cover



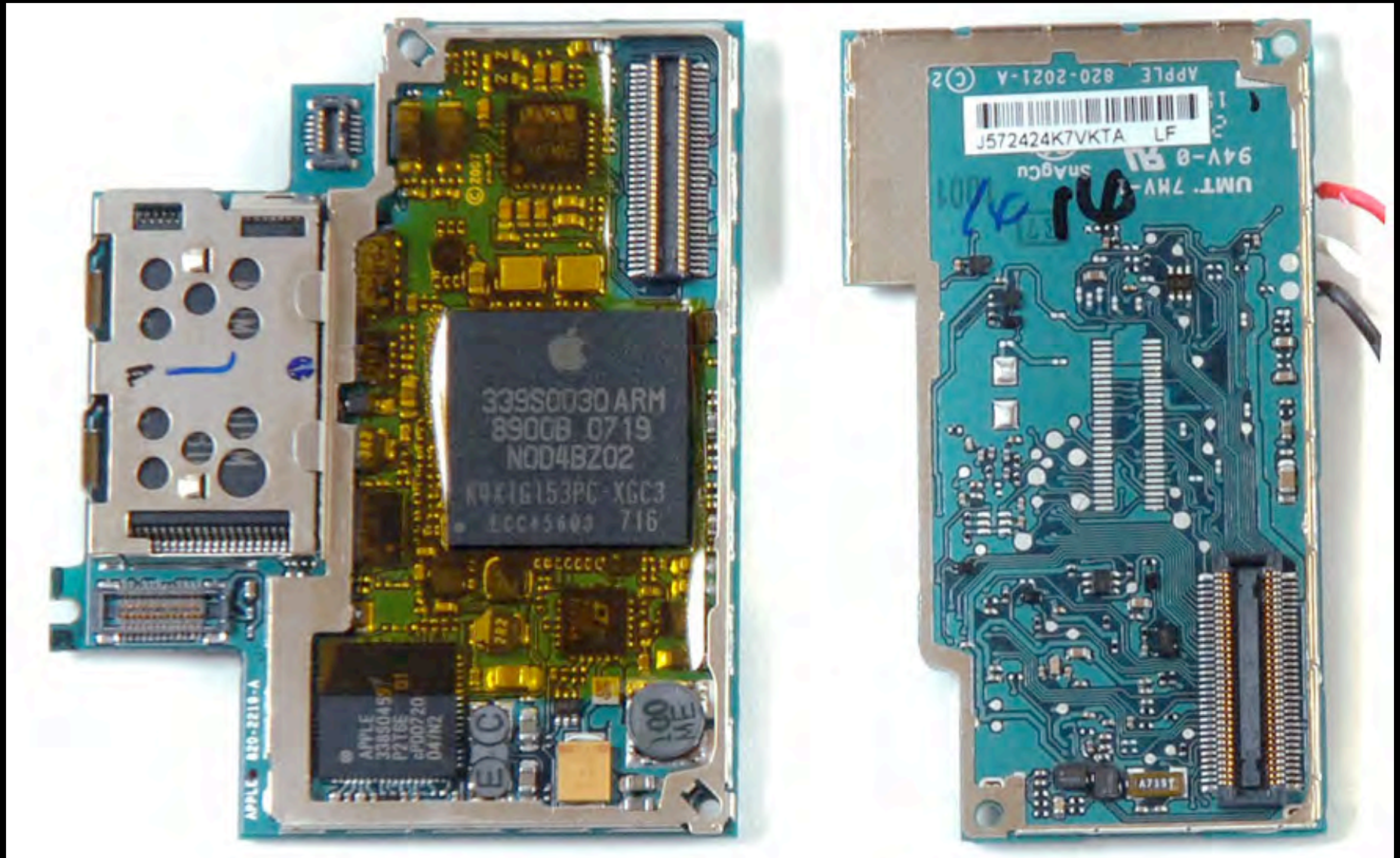
Removing back panel



Desoldering battery wires

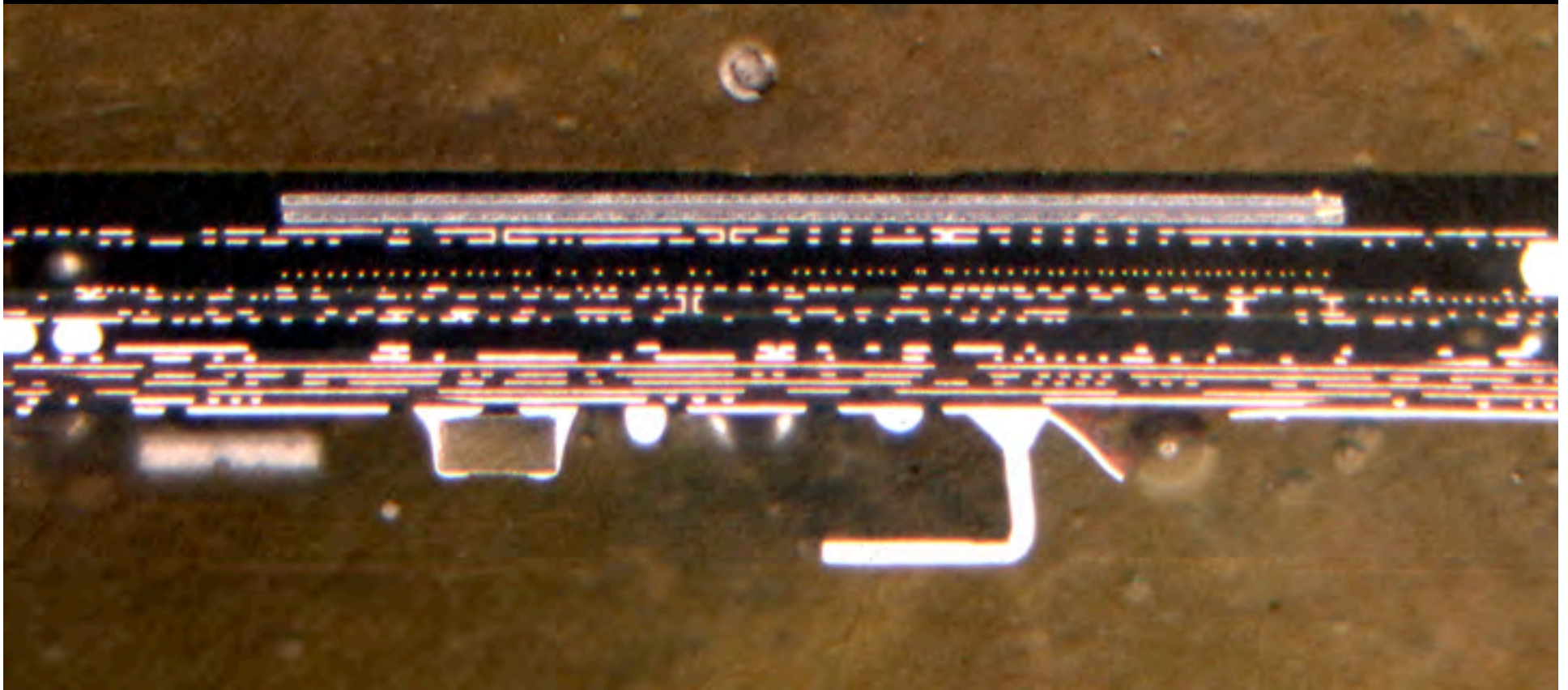


iPhone remnants

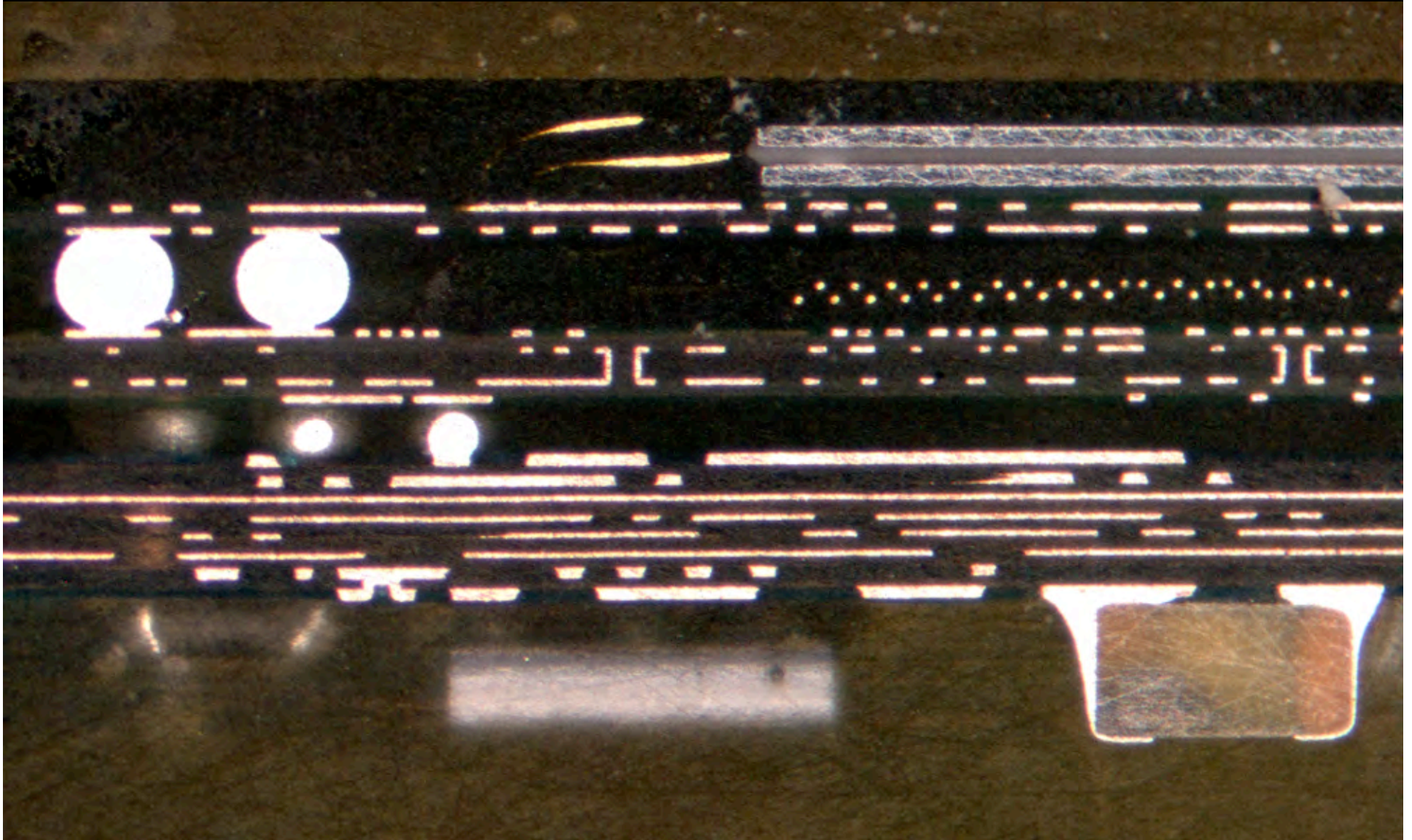


Logic Board

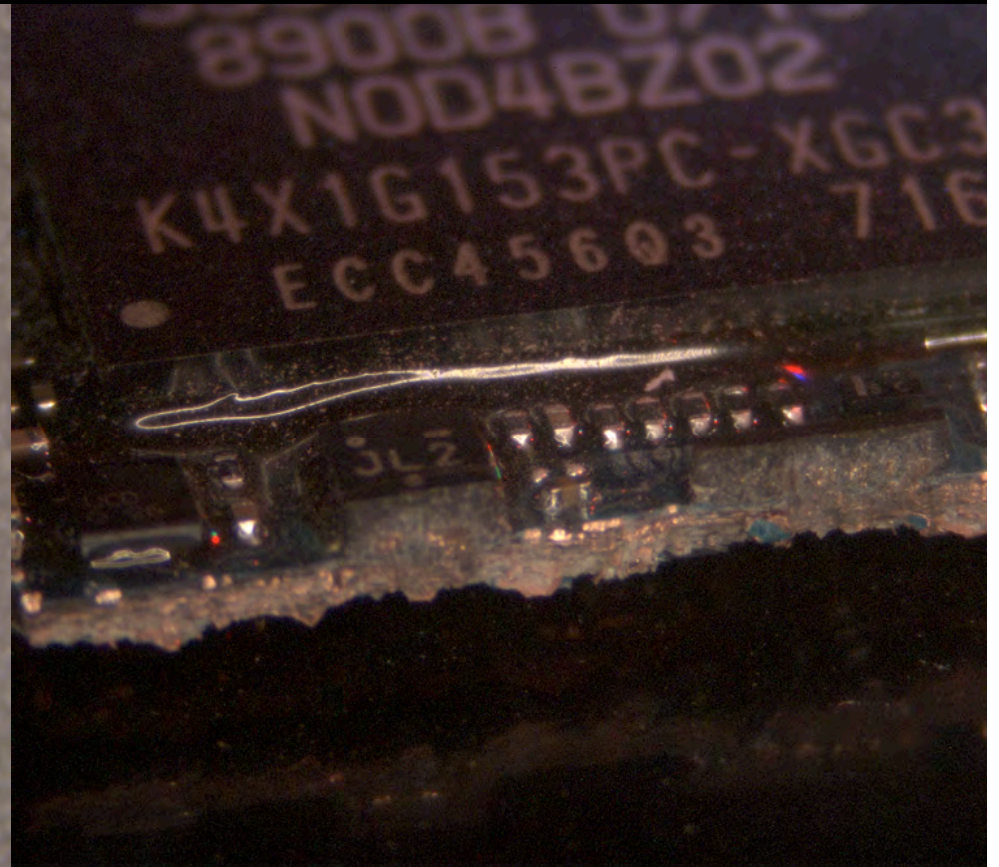
Communications Board



iPhone processor stack



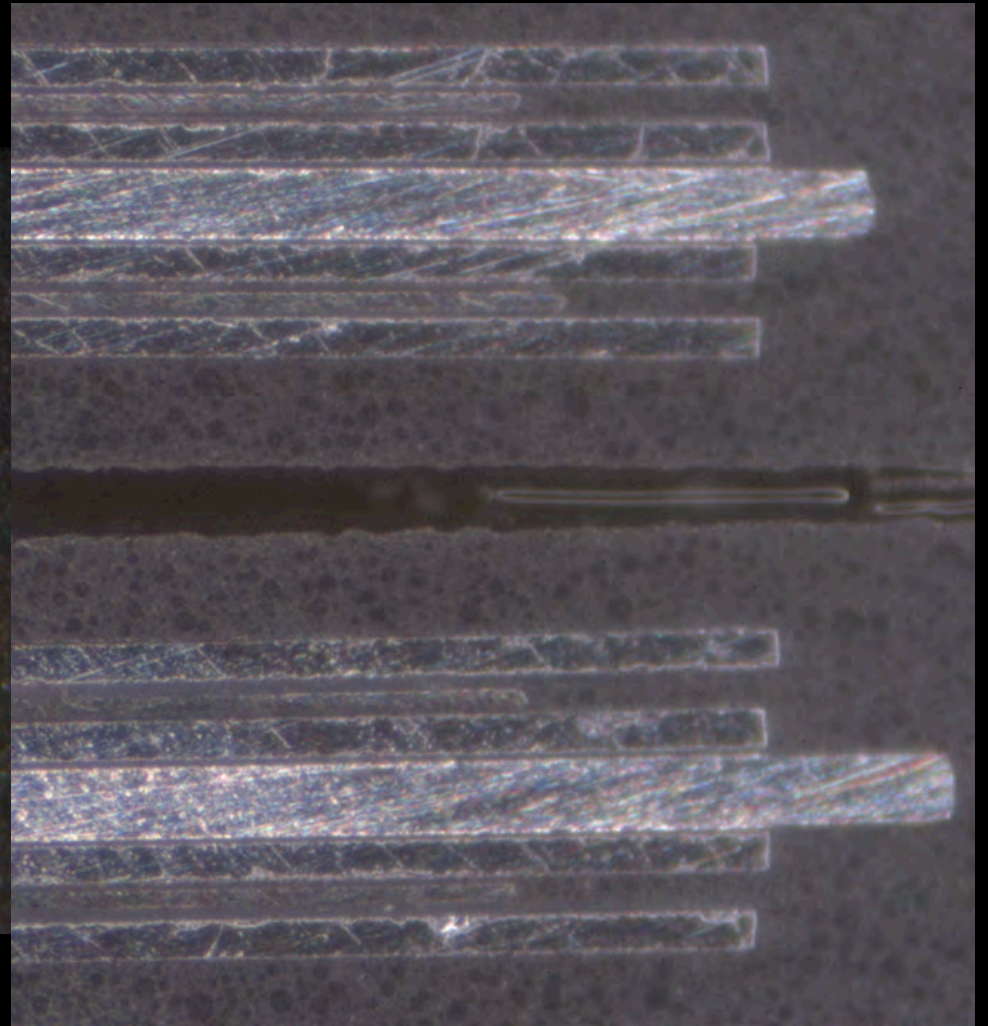
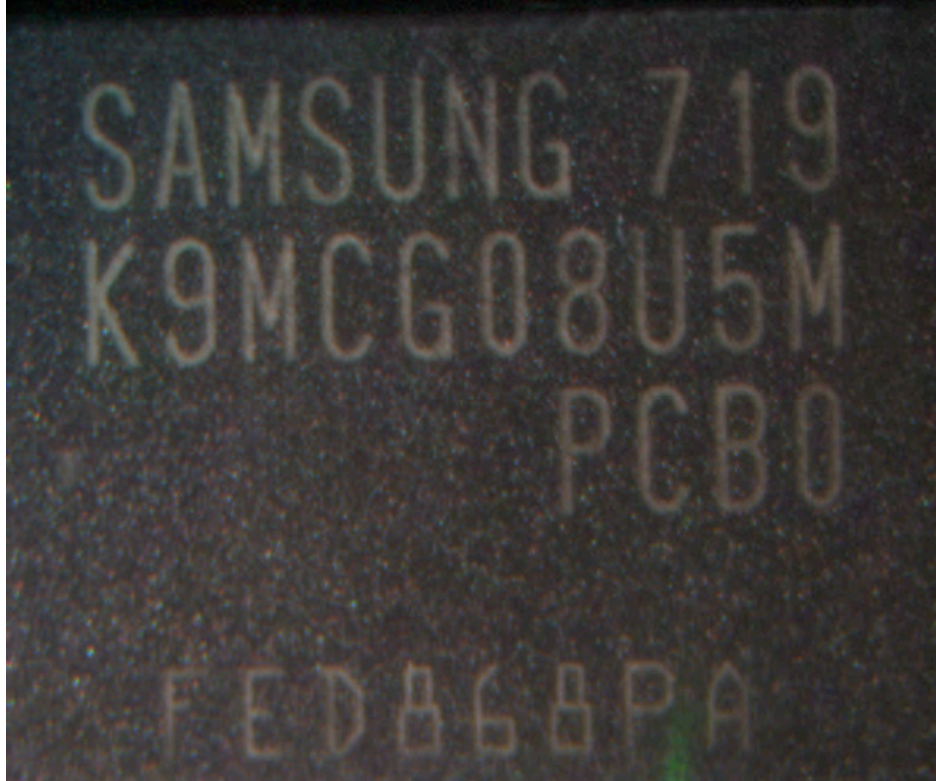
iPhone processor stack showing memory leads



Samsung  
iPhone ARM

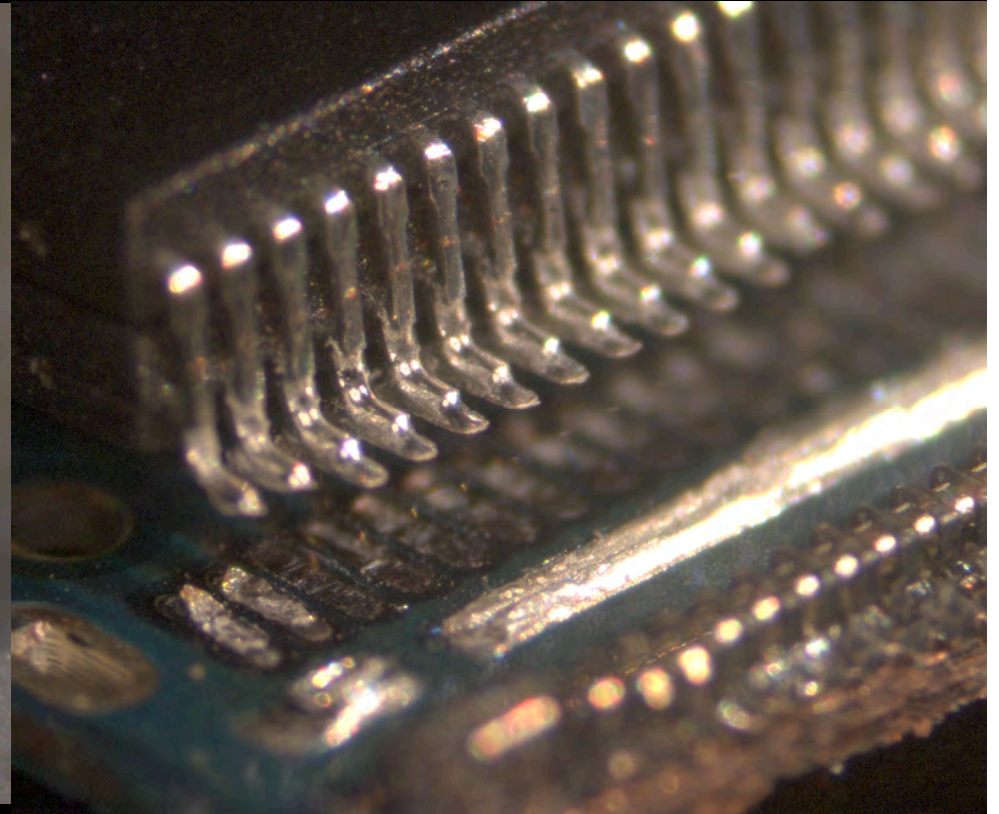
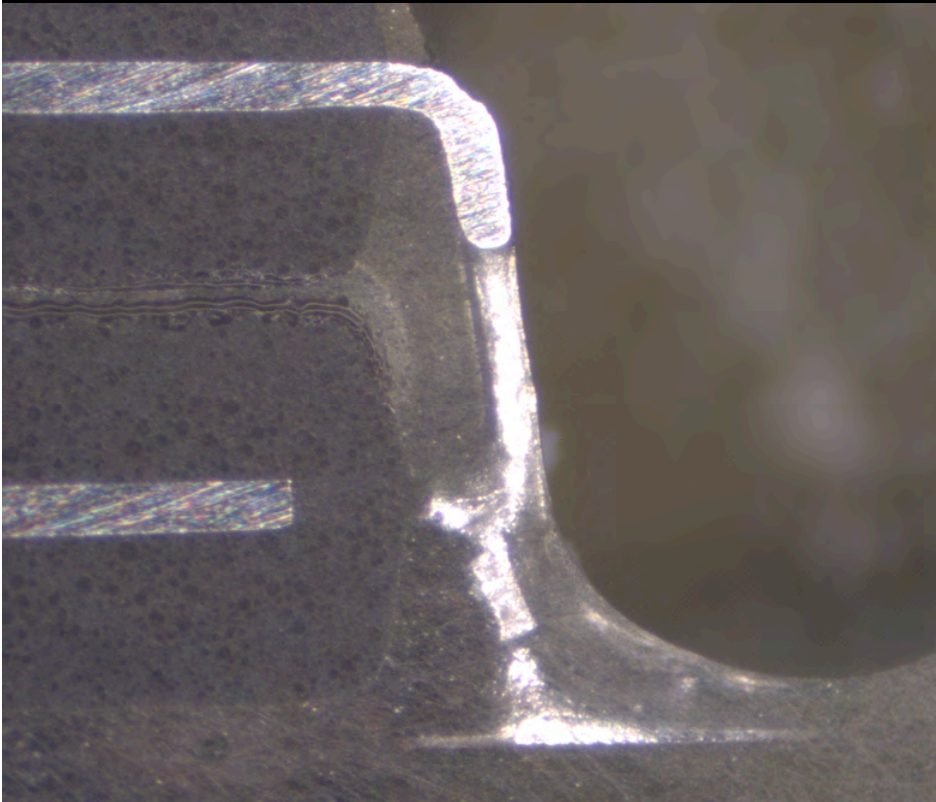
Glue securing  
processor to PCB





iPhone Samsung  
NAND Package

Eight stacked 8 Gb Flash  
(8 GB total) @ 40x



Flash stacked leads @ 7x  
Upper device soldered to lower device

Pulled pads off  
flash package

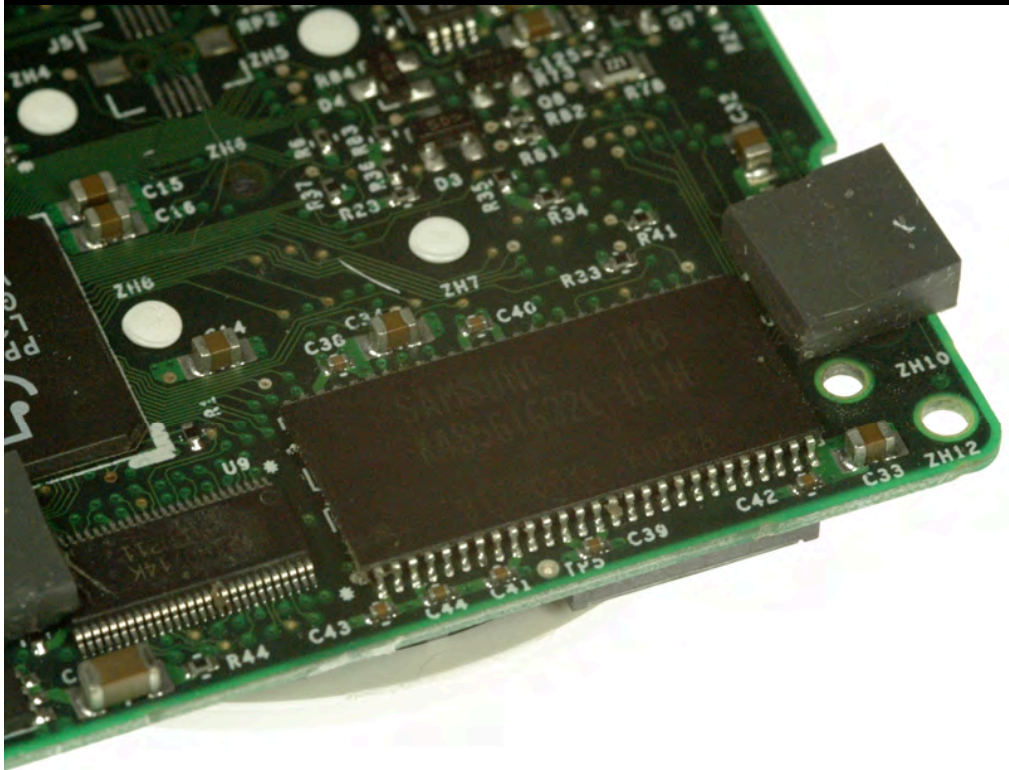
# Things have changed:



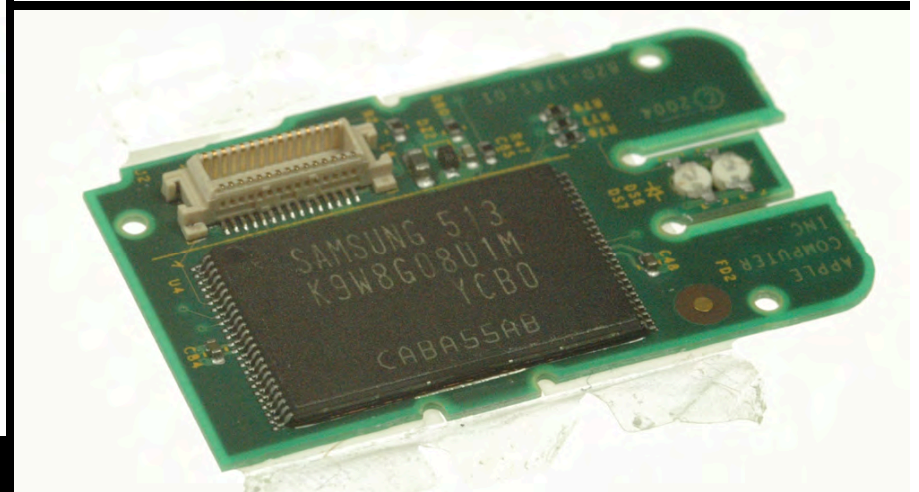
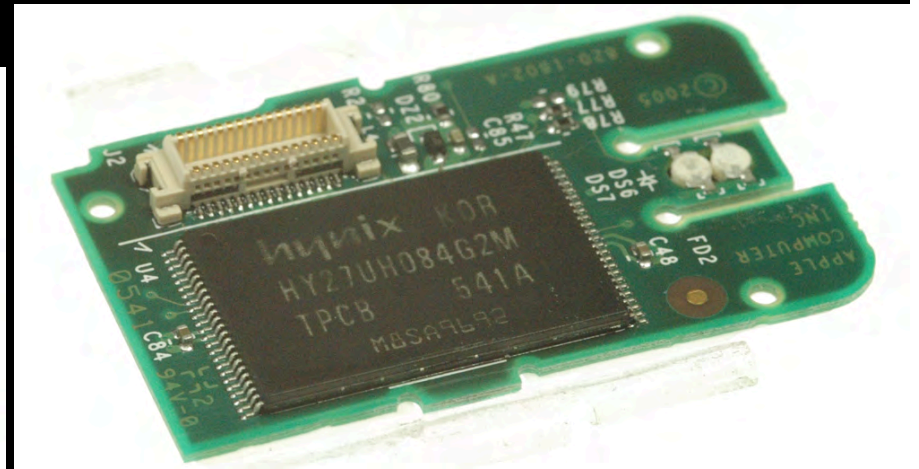
iPod circa 2001



iPod circa 2007

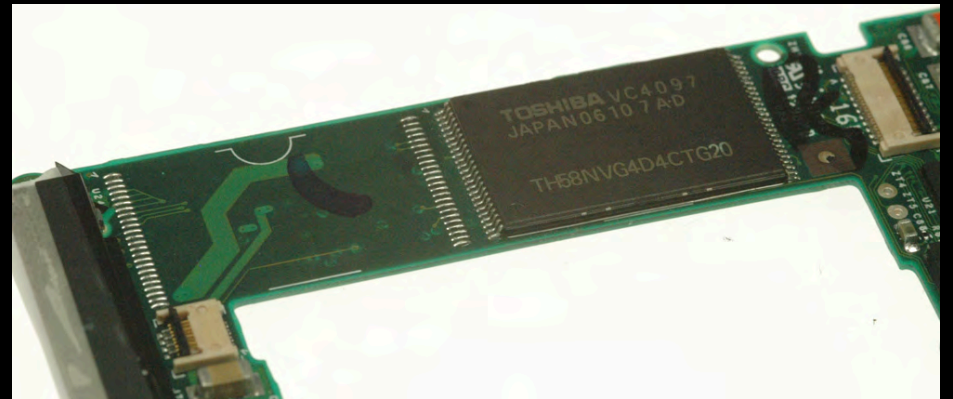
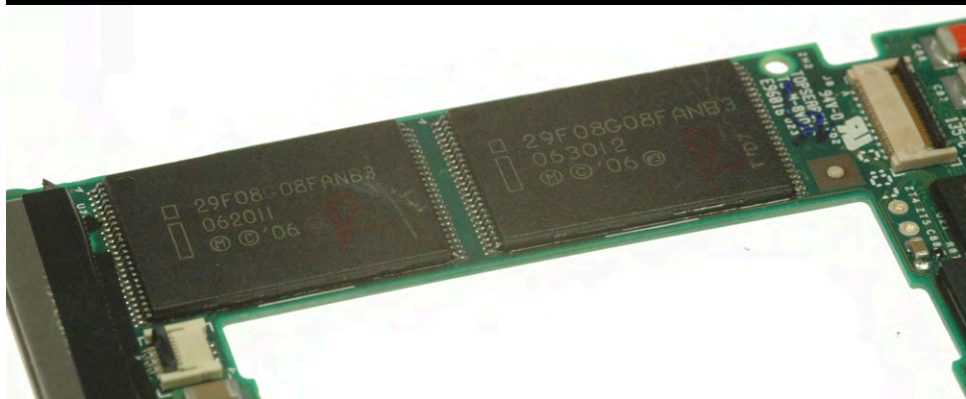
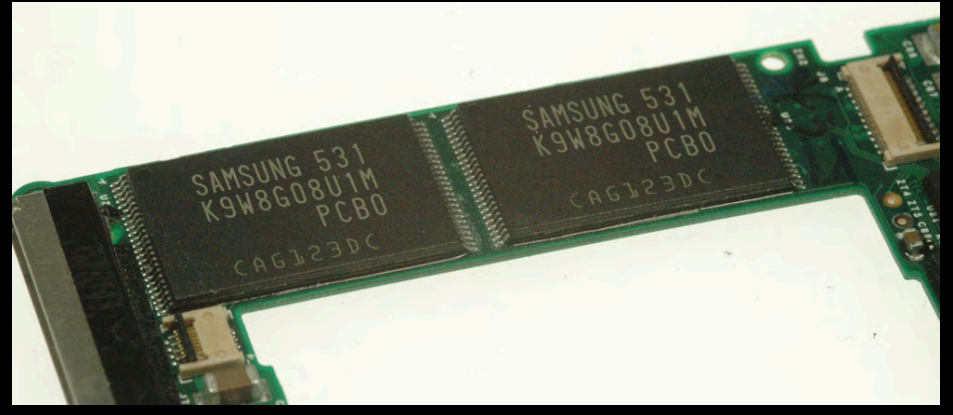
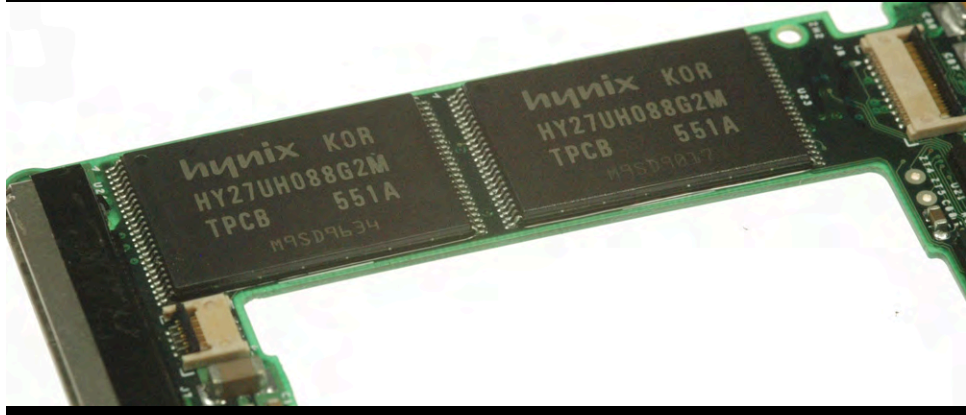


Gen 1 HDD-based iPod  
32MB Samsung NOR



Gen 1 Shuffle  
above: 512 MB Hynix  
below: 1 GB Samsung

# Gen 1 iPod Nano 2 GB



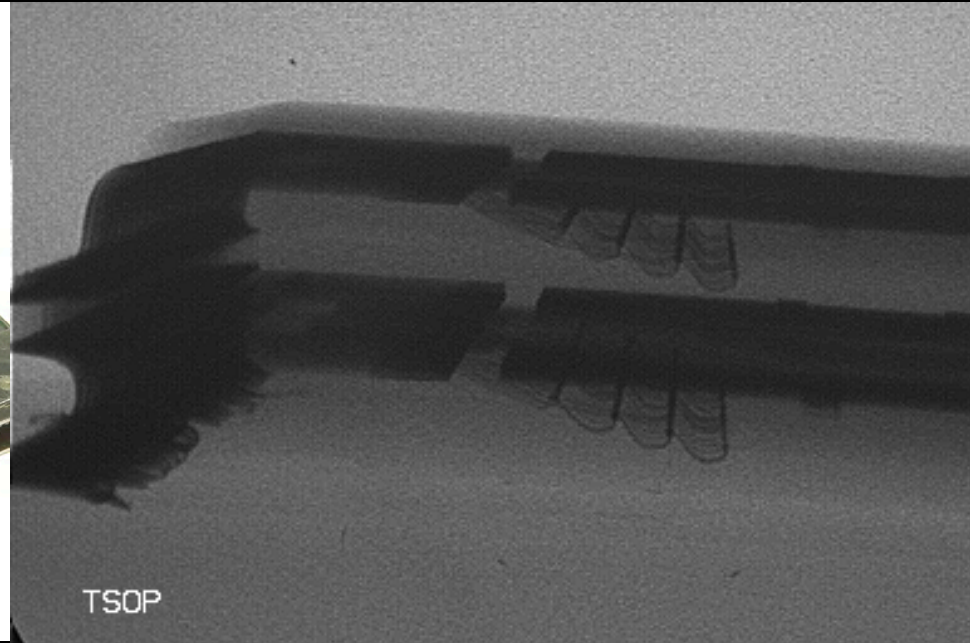
above: Hynix  
below: Intel

above: Samsung  
below: Toshiba

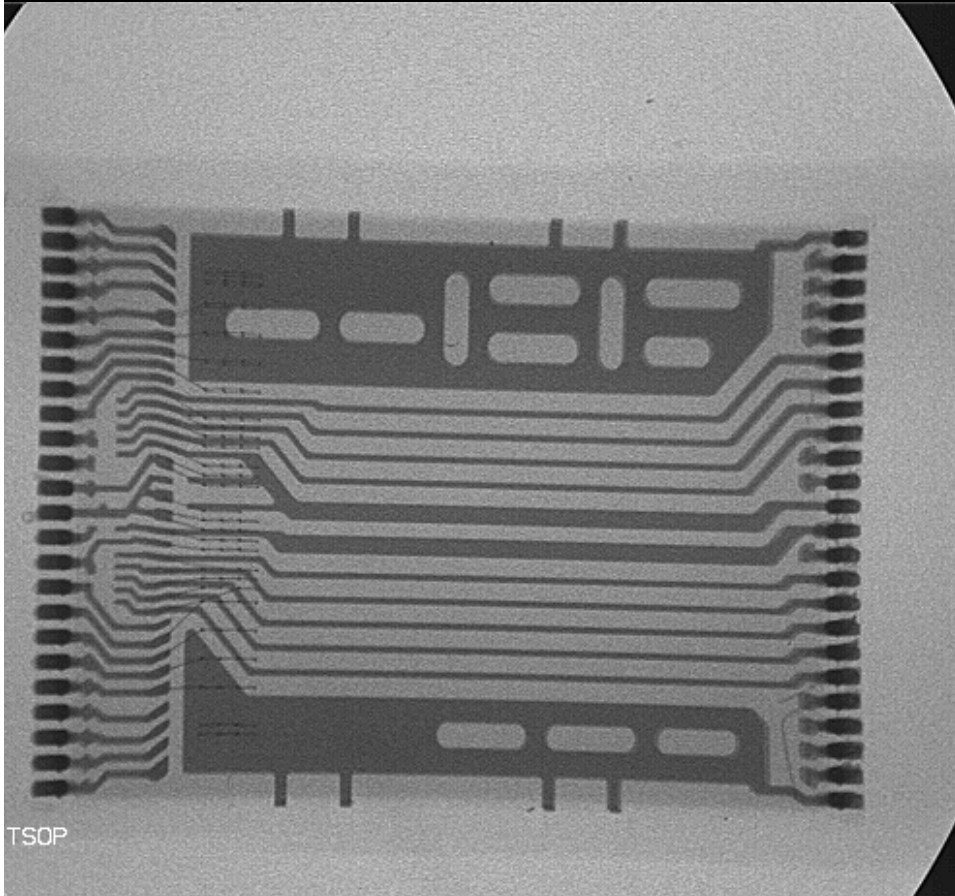
# Gen 2 iPod Nano 8 GB



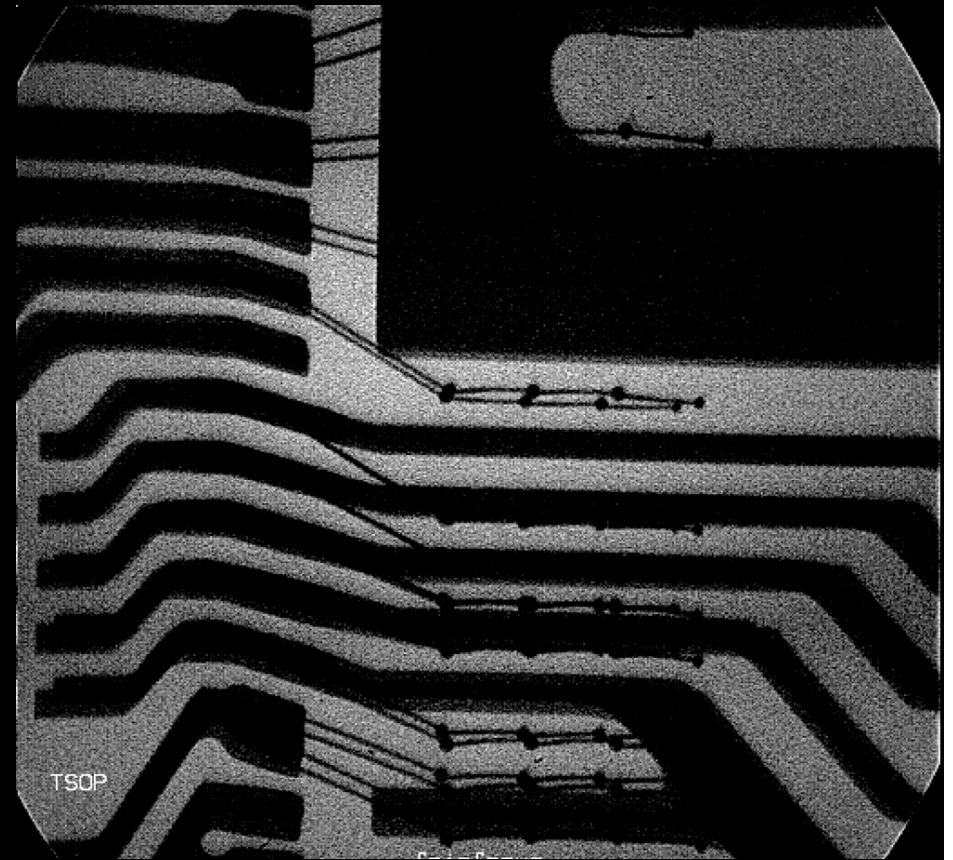
8 GB Samsung  
NAND



Toshiba 8 GB  
Stacked TSOP X-Ray  
Terraced Wirebonds

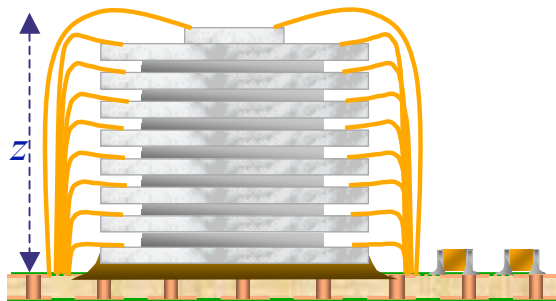


Toshiba Leadframe



Wirebonds to  
leadframe

Coming soon to an iPod near you:



8-high and beyond  
stacked wire-bond



128 GB Compact  
Flash format SSD  
using VCI stacking





1.866.61.FIXIT



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iPhone

Troubleshoot

Sell

Help

Contact



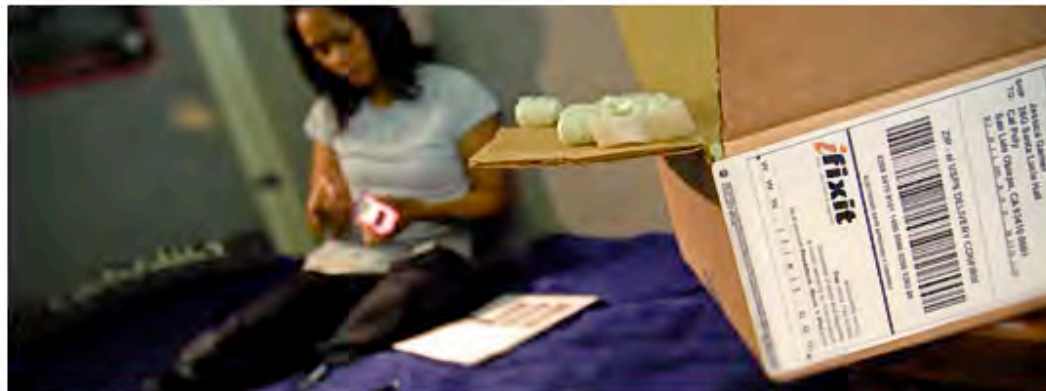
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iFixit > Store

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### easy as...

- 1 Pick a category
- 2 Pick an attribute
- 3 Pick a subcategory

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Your cart is empty.

Subtotal: **\$0.00**

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iPhone

iPod 1st Gen

iPod 2nd Gen

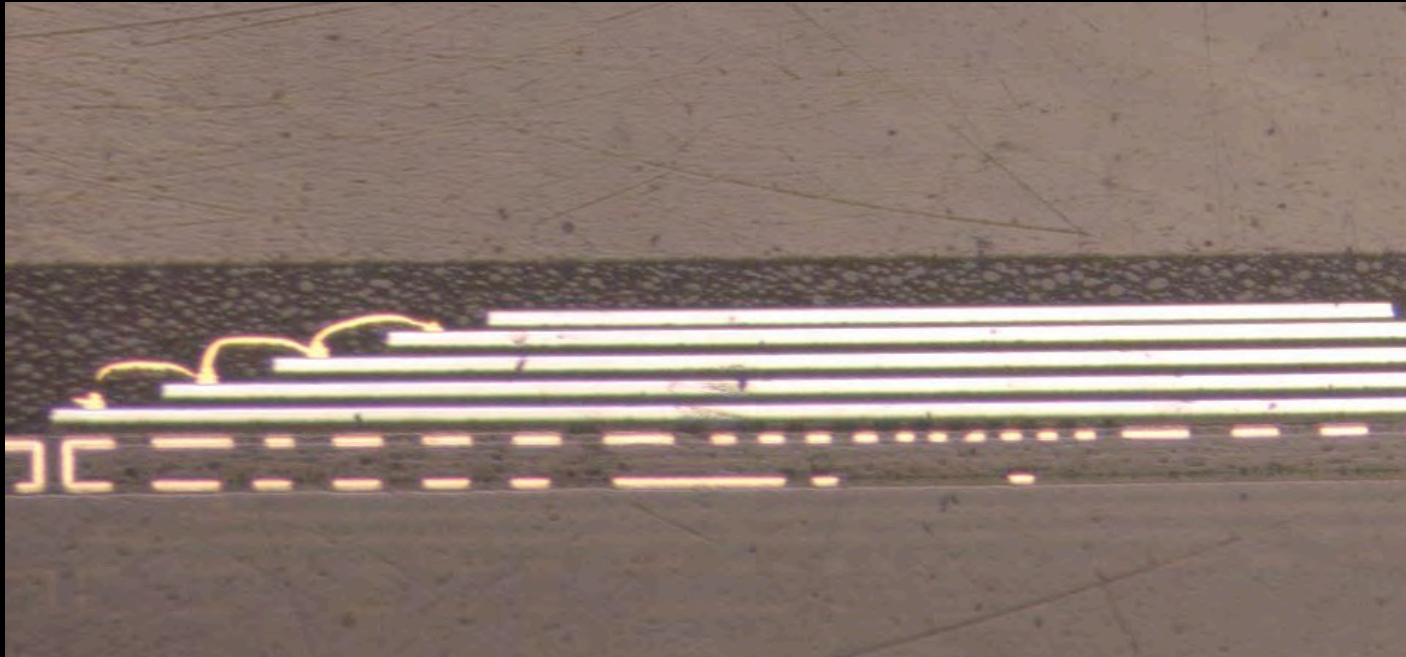
iPod 3rd Gen

iPod 4th Gen

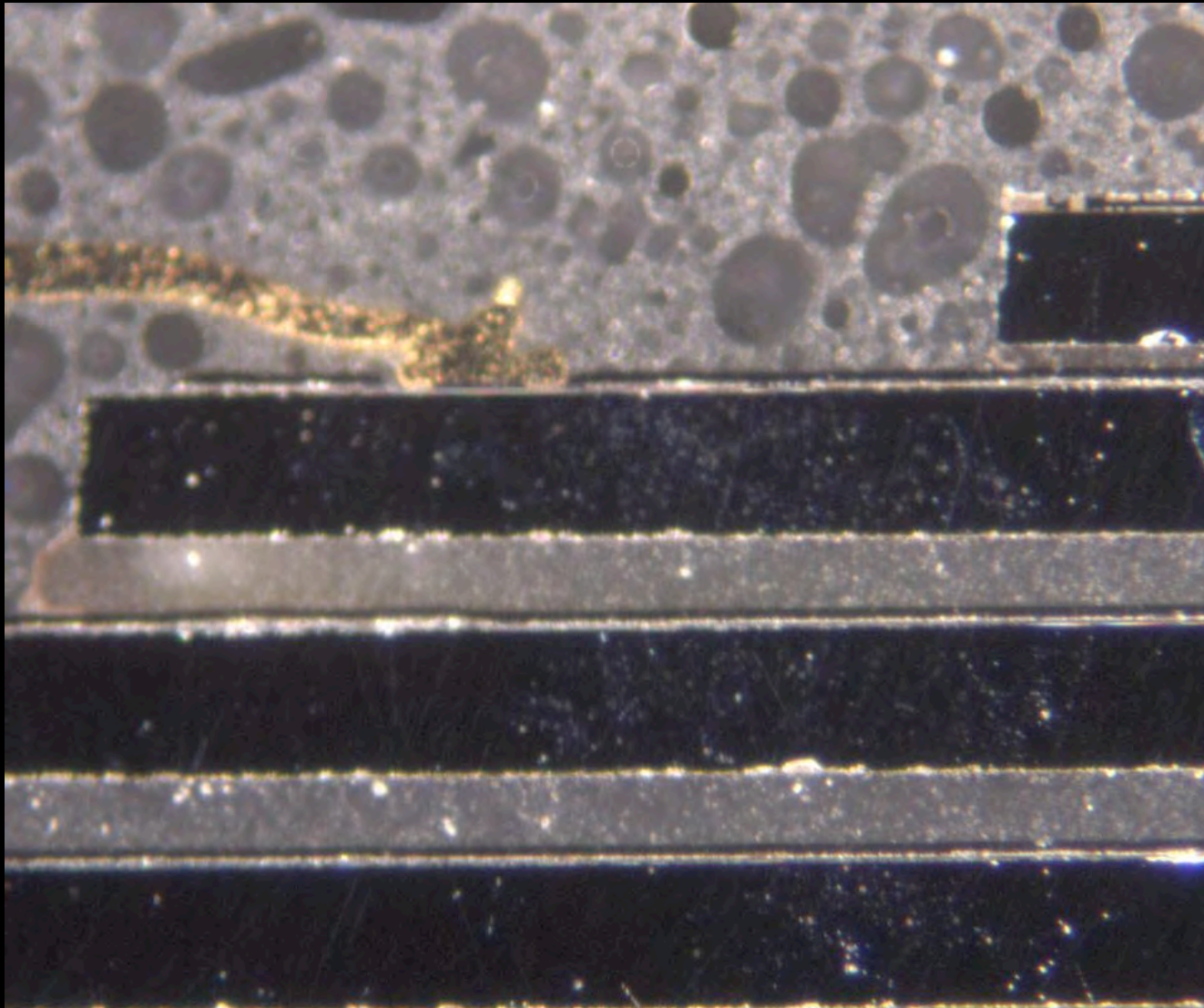
iPod Photo



Device markings on flash chip contained within  
the Sony MemoryStick Duo memory card



Stacked wirebonds are formed by placing the ball bond upon the stitch bond of the previous wirebond loop.



8 micron bondline  
Thickness bet.  
Controller and  
Top Flash Die

70 micron die  
Thickness

20 micron  
bondline  
thickness  
between flash die  
in stack

Polyimide Coating



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Guides

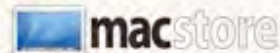
iPhone

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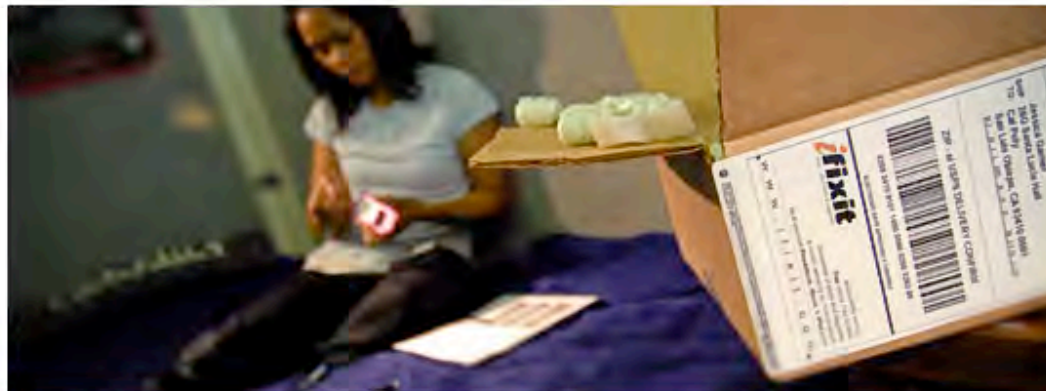
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