

# Review: iPhone fingerprint sensor worth extra cost

September 18 2013, by Anick Jesdanun

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The iPhone 5S, left, and iPhone 5c are displayed Tuesday, Sept. 17, 2013, in New York. The 5S offers a fingerprint sensor, a better camera and a faster processor, while the iPhone 5C is largely last year's iPhone 5 with a plastic back and a choice of five colors. (AP Photo/Mark Lennihan)

Passcodes are such a pain that I've relaxed the security settings on my Android phone. I'm willing to forgo the extra safety, just so I'm asked to

punch in the code less often. When I got my hands on Apple's new iPhone 5S, one of the first things I tried was a feature that allows you to bypass the passcode using a fingerprint.

I had a lot of fun unlocking the phone over and over again. Who knew biometric authentication could be such a blast?

The fingerprint sensor alone is worth the extra \$100 you'll pay for the 5S over an iPhone 5C. Both phones will come out Friday. In the week I've had with both, I've also been impressed with the better camera and slow-motion video in the 5S.

The 5C, meanwhile, is largely last year's iPhone 5 with a plastic casing instead of aluminum and glass. This isn't cheap plastic, but a type offering the slippery feel of a shiny ceramic tile. It comes in five colors.

Both phones come with iOS 7, the most radical change to Apple's [operating system software](#) for mobile devices since its 2007 debut. Many of the changes are cosmetic, but there are functional improvements such as easier access to frequently used settings and apps.

I will review iOS 7 separately. Many existing iPhone users won't need more than the free update, which is available starting Wednesday. Neither the 5C nor the 5S offers improvements on the screen size, which remains at 4 inches (10 centimeters) diagonally. But new features and new colors may draw you to one of these new iPhones.

— IPHONE 5S (available in silver, gold or gray; starts at \$199 with two-year service contract, or \$649 without a contract):

When you set up the 5S, you're asked to tap the home button with a finger several times so the phone can create a mathematical representation of your print. To unlock the phone, you simply tap the

home button, and the phone will compare the two taps. You can tap from any angle, even sideways or upside down. This fingerprint ID also works as a way to authenticate the purchase of apps and content within apps.

For security reasons, there are still times you'll need your four-digit passcode, including after 48 hours of inactivity and before adding a new fingerprint. If the phone fails to recognize your print, you can always use the passcode. I had trouble only when my fingers were wet or greasy. One evening, I ordered pizza with an oily pepperoni topping and ate it without a napkin. The fingerprint sensor worked after one slice, but not two. Indian naan bread also threw off the sensor.



The iPhone 5C screen, displayed, Tuesday, Sept. 17, 2013 in New York, is available in green, blue, yellow, pink or white. On the 5C, the background wallpaper on the screen matches the color chosen. If sunny yellow for the yellow model gets annoying, you can change it to Apple's standard wallpaper, or any photo of your choosing. (AP Photo/Mark Lennihan)

Apple says it stores the print data on your phone, in a place that's inaccessible to other apps or to Apple's remote servers. The company also says it's not possible to convert a fingerprint from a police file into something the phone will recognize, as the sensor reads a sub-epidermal

layer of the finger. And the finger needs to be live—cutting off a thumb won't work.

I'm convinced Apple has given a lot of thought to security. If you're still uneasy about the fingerprint scan, you can stick with the passcode. The feature is optional.

Meanwhile, the 5S's camera takes better night and indoor shots. Although the main camera remains at 8 megapixels, individual pixels are larger and thus better at sensing light. The camera's shutter also opens wider to let in more light. For flash shots, the camera fires two bursts of light at once, each slightly different in color. The iPhone adjusts the combination of the two colors automatically to match ambient lighting.

I typically avoid using the flash in any camera because its strong burst of whitish light overpowers whatever's in the room. In a hallway with strong yellow light, for instance, the flashes on my high-end camera and the iPhone 5 made the walls white. The 5S, on the other hand, managed to preserve the yellow. I also got better skin tones on some flash shots taken with the 5S. Using the 5C, faces and arms looked more pale.

Night shots without the flash are also sharper. Sometimes, cameras overcompensate for low light by making the few points of light too bright. The 5S typically has those scenes properly balanced.

Of course, these improvements won't make all photos better. Many shots appear the same whether taken with the 5, the 5C or the 5S. In other shots, differences are subtle.

The 5S can also shoot slow motion video. You can choose the parts you want in slow motion and regular speed, and you can change your mind later. A burst mode lets you snap 100 shots in 10 seconds, compared with 40 seconds on the 5C. The phone picks out the best moments and

filters out duplicates. The front-facing camera is better than the one on previous iPhones. It has larger pixels for low-light videoconferencing.

Many of these features are possible because of Apple's faster A7 processor. A companion chip, the M7, handles motion-related data without draining as much of the battery, something useful for fitness trackers. All this power is so new, apps taking advantage of them weren't available for me to test.



In this photo taken Wednesday, Sept. 11, 2013, new plastic iPhones 5C are displayed during a media event held in Beijing, China. Last year, eager buyers in Beijing waited overnight in freezing weather to buy the iPhone 4S. Pressure to get it—and the profit to be made by reselling scarce phones—prompted some to pelt the store with eggs when Apple, worried about the size of the crowd, postponed opening. Just 18 months later, many Chinese gadget lovers responded with a shrug this week when Apple Inc. unveiled two new versions of the iPhone 5. (AP Photo/Ng Han Guan)

— IPHONE 5C (available in green, blue, yellow, pink or white; starts at \$99 with two-year [service contract](#), or \$549 without a contract):

Plastic colors aside, the 5C is mostly the same as the iPhone 5 it replaces, with the older A6 chip and a main camera that's not as good in low light. Because the chip is slower, it couldn't do slow-motion video or take as many shots per second. But it does have the 5S's improved front-facing camera.

The 5C is for those who really want the bright color. If you can afford the additional \$100 and can do with silver, gold or gray, get the 5S instead. The fingerprint sensor will make security less annoying, and the better camera will be more useful in documenting life. A hundred dollars isn't that much when you compare it with the full price of the phone.

## **About the new iPhones**

The iPhone 5S and 5C go on sale Friday at 3:01 a.m. EDT (0701 GMT) through Apple's website and at 8 a.m. local time around the world at Apple retail stores. Wireless carriers and other retailers plan to sell them, too. Initially, they're available in the U.S., Australia, Canada, China, France, Germany, Hong Kong, Japan, Puerto Rico, Singapore and the United Kingdom.

Apple is discontinuing last year's iPhone 5, but will still offer the 2011 edition, the iPhone 4S. That's now free with a two-year agreement.

## **Details on the past iPhones, along with new ones**

Apple will start selling two new iPhones this Friday, its seventh and eighth models since the iPhone made its debut in 2007. Here are details on the past iPhone releases, along with the new ones.

- iPhone, June 29, 2007, starting in the U.S. (announced Jan. 9)
  
- iPhone 3G, July 11, 2008, starting in the U.S., Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the U.K. (announced June 9)
  
- iPhone 3GS, June 19, 2009, starting in the U.S. (announced June 8)
  
- iPhone 4, June 24, 2010, starting in the U.S., France, Germany and Japan and the U.K. (announced June 7).
  
- iPhone 4S, Oct. 14, 2011, starting in the U.S., Australia, Canada, France, Germany, Japan and the U.K. (announced Oct. 4).
  
- iPhone 5, Sept. 21, 2012, starting in the U.S., Australia, Canada, France, Germany, Hong Kong, Japan, Singapore and the U.K. (announced Sept. 12).
  
- iPhone 5C, Sept. 20, 2013, starting in the U.S., Australia, Canada, China, France, Germany, Hong Kong, Japan, Puerto Rico, Singapore and the U.K. (announced Sept. 10).
  
- iPhone 5S, Sept. 20, 2013, starting in the U.S., Australia, Canada, China, France, Germany, Hong Kong, Japan, Puerto Rico, Singapore and the U.S. (announced Sept. 10).

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