

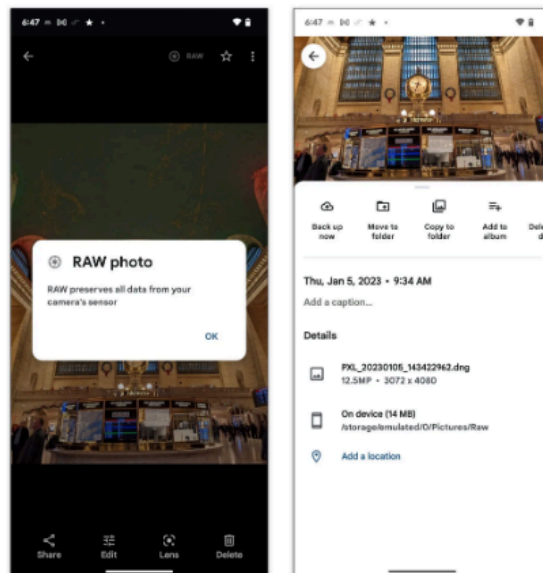
# How to Make Your Smartphone Photos So Much Better

Professional photographers have long used the RAW format and editing software to turn image files into gorgeous pictures — and you can, too.

Editing a RAW file is more work, but it allows the photographer to have more control of the light and color in the image after it's been captured — and in some cases, enough pixels to significantly crop the photo and still have it look sharp. Here's a guide to getting started.

## What is RAW?

“RAW” means raw data — and lots of it. Many phone cameras automatically capture and save images as [JPEG](#) or [HEIC](#) files, which crunch down and discard some of the image data to reduce the file size. However, when you choose to capture images as [RAW files](#), you get uncompressed and unprocessed data from the camera's sensor. Without the compression, RAW images contain more detail and colors to work with. But the files can be *huge*.

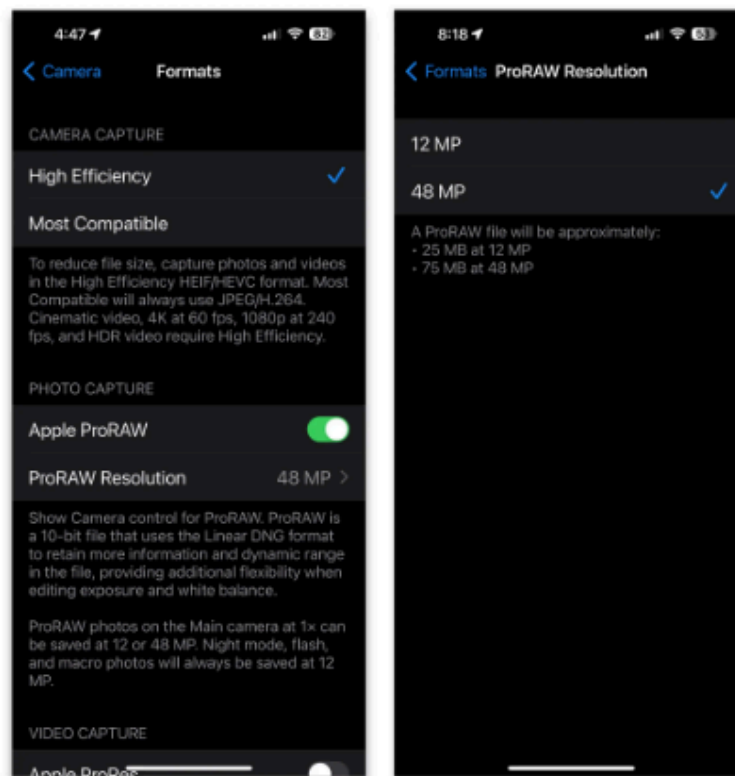


Google Photos makes it easy to identify RAW files on your phone and store them in their own folder. RAW files typically have a file extension of .dng, which is short for "digital negative." Google

There are many specialized camera tools that capture and edit RAW files available in the app stores. (More on those later.) But if you're just dabbling for now, here's how to use the options available on the newest iPhone and Android models, as well as other free tools.

## The iPhone's RAW settings

On an iPhone 12 Pro (or [later](#) Pro and Pro Max models) running at least the iOS 14.3 operating system, you can capture and store RAW files by going to the main Settings app, and choosing Camera and then Formats. Tap the button next to [Apple ProRAW](#), which is Apple's variation on the RAW format. On iPhone 14 Pro models, you can choose the resolution to store your RAW files: 12 megapixels or a whopping 48 megapixels.



The Camera settings of the iPhone 14 Pro and Pro Max include an option to capture RAW images at a resolution of 48 megapixels, which makes for incredibly detailed and large files with plenty of cropping room. Apple

Then open the [iOS Camera app](#), line up the shot and choose the RAW feature at the top right of the screen. Now all you have to do is tap on the shutter button to save the file to the camera roll.



You might not want to always use 48-megapixel RAW files because they can be so large. Even with the RAW setting enabled, you can decide when you want to use it by tapping the RAW button on or off in Apple's iOS Camera app when it comes time to take a picture. Apple

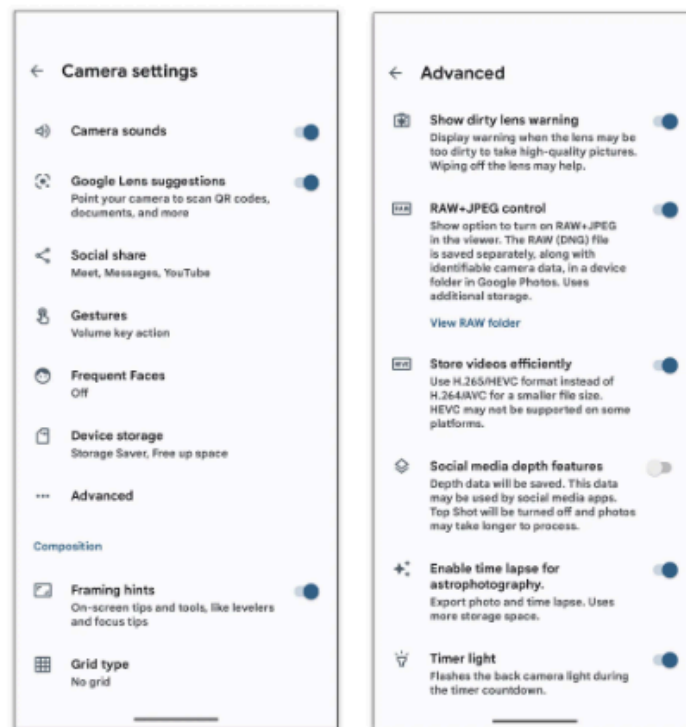
A 48-megapixel file allows for photos with good detail even with significant cropping, but the file size of each photo can be 75 megabytes or larger. If you have an iPhone with a terabyte of space, the larger file sizes are less of a problem, but phones with less storage can run out of space fast.

Only images taken with the iPhone's main camera can be saved at the 48-megapixel resolution. Those snapped with the phone's wide-angle or telephoto cameras (or photos captured in night mode or with a flash) are automatically saved at the 12-megapixel resolution.

# RAW options for Android

Finding the RAW settings on an Android phone varies based on the device and its manufacturer, so check your phone's support site for specific instructions.

If you have one of [Google's Pixel phones](#) running Android 13, go to the Camera app and tap the Down arrow in the upper-left corner, then choose More Settings and then Advanced. Next, tap the button next to RAW + JPEG control. The camera will capture the image in both JPEG and RAW formats, but it saves the larger files into a separate RAW folder on the Google Photos app.



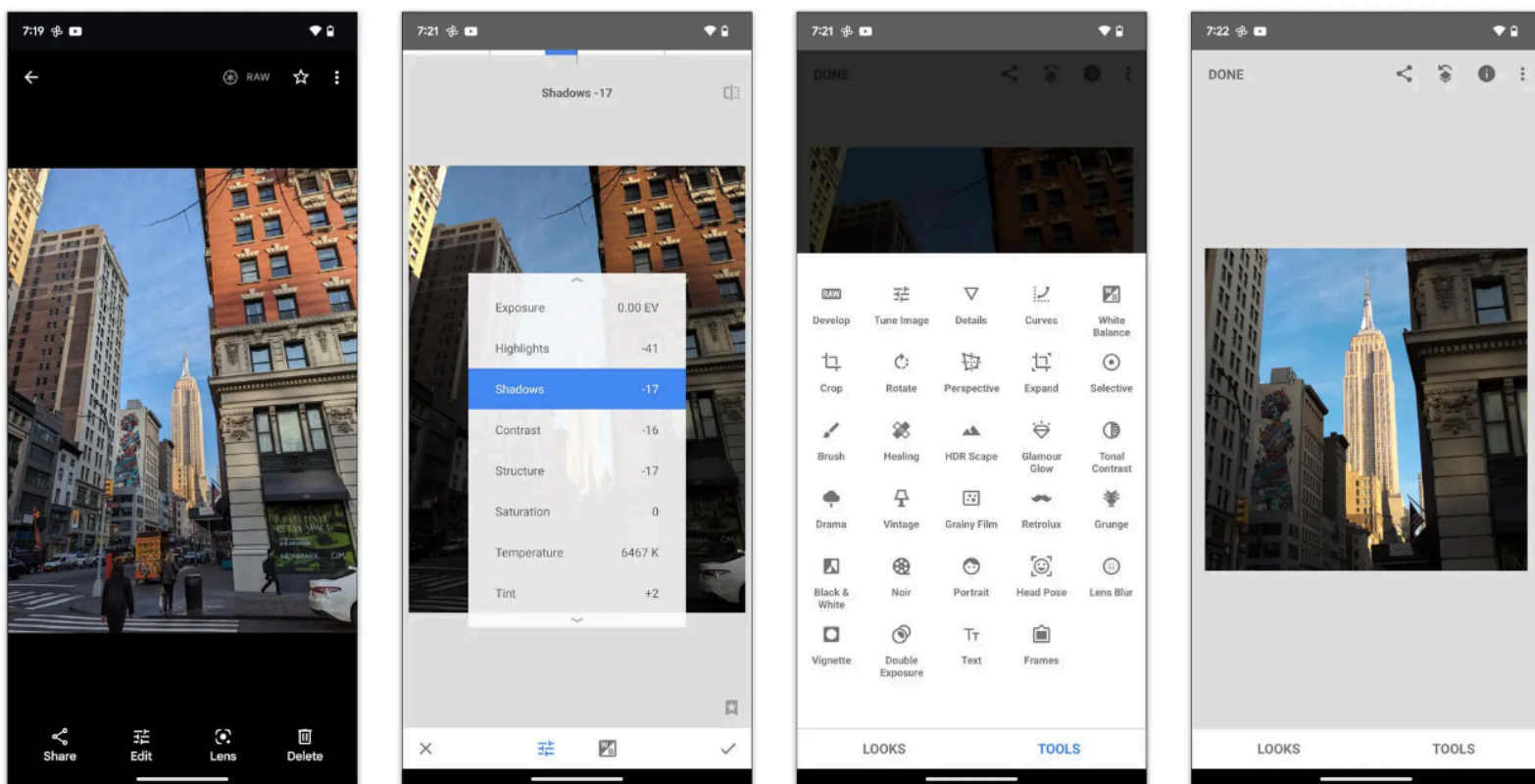
RAW settings will vary based on the phone and camera app. As shown here in the standard Google Camera app on a Google Pixel 7 running Android 13, open the app's settings, select Advanced and on the next screen, turn on RAW + JPEG Control to have the phone save both a RAW and a JPEG copy of each photo you take. [Google](#)

On Samsung's Galaxy phones, the [Camera settings](#) includes a Pro mode and advanced picture options to save images as RAW files. In the settings, go to "Format and advanced options" and tap the button for RAW copies. For late-model Galaxy phones, [Samsung also recently released](#) its free [Expert RAW camera app](#), which is available in the Galaxy Store.



## Edit your RAW files

If you have an iPhone, you can use Apple's [Photo app to edit RAW files](#). For Android phones, Google Photos offers "limited" support for the format, but its older photo-editing app, [Snapseed](#), has a tool to edit RAW files. The Snapseed app, which is free and works on both [Android](#) and [iOS](#), has a support site with [an online tutorial](#) and an [instructional video](#) on YouTube for beginners.



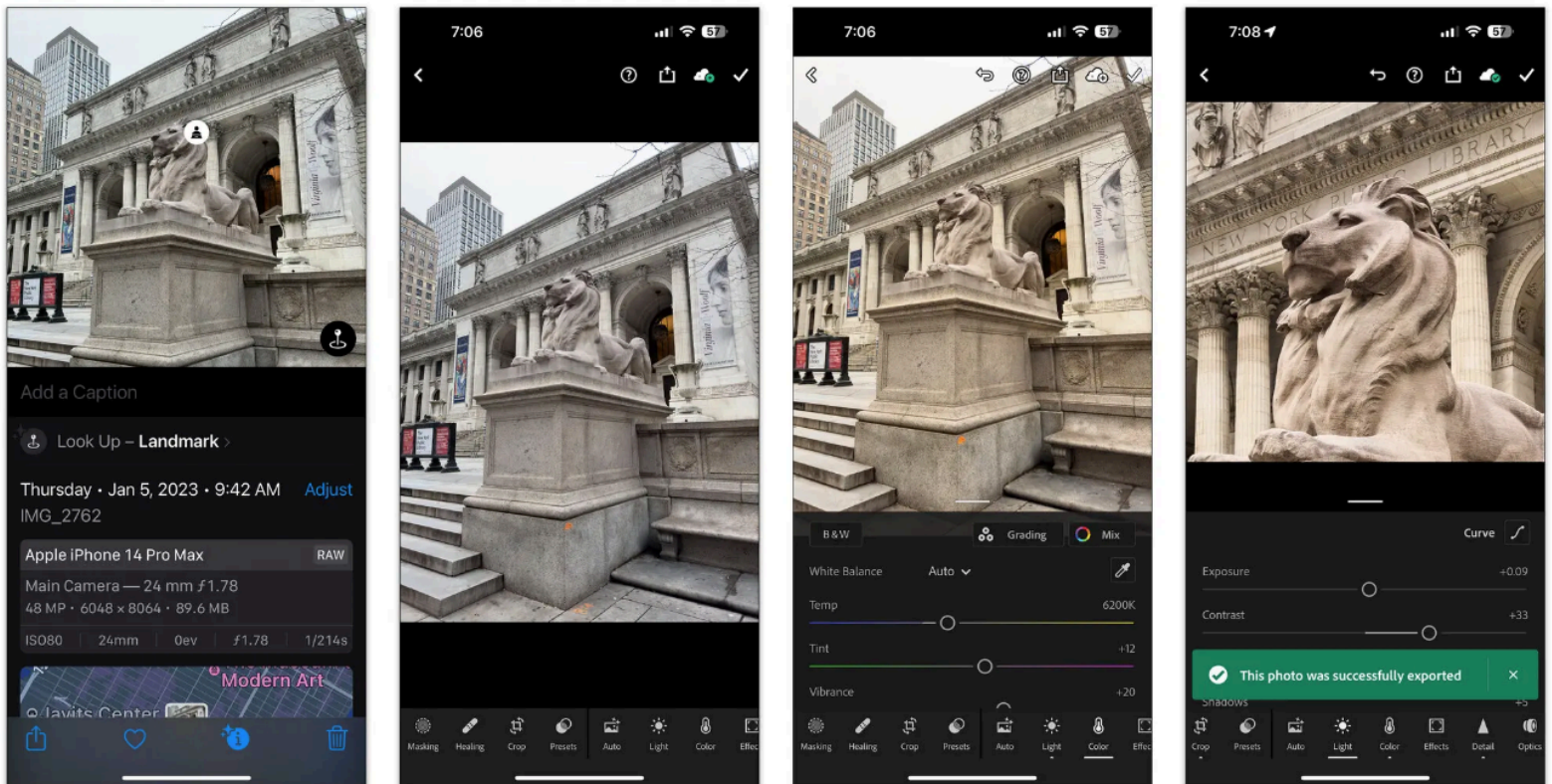
The free Snapseed app for Android and iOS provides plenty of editing tools for your RAW files — and your standard JPEG photos as well. Google/Snapseed

At first glance, RAW files can seem flat, murky and bulky. But once you start to process them in a compatible photo-editing program, you can take advantage of all that extra data.

In the editing app, you can use the onscreen slider and other controls to adjust an image's [white balance](#), which neutralizes color casts; change the exposure; pull parts of the picture out of shadows; deepen colors and more.

Some photographers prefer to handle RAW files using tools in [Adobe Lightroom](#), which have mobile versions for [Android](#), [iPhone](#) and [iPad](#) devices (free, with [in-app purchases](#)). Adobe's site has a [tutorial](#), as do many websites specializing in digital photography.

To edit your photos on a bigger screen, you can store the files in a cloud server or transfer the file from your mobile device to a desktop computer using Wi-Fi or [AirDrop](#), and then use either Adobe Lightroom's [subscription desktop version](#) or one of the many desktop photo apps (including Apple's [Photos](#) for Mac).



Adobe Lightroom is another app for editing photos, including RAW files. In addition to controls for an image's light and color, the app can crop. On a 48-megapixel Apple ProRAW image, even big crops can maintain a sharp image, thanks to all the data in the file. Apple; Adobe

Once you are ready for more advanced techniques using RAW files, you can buy or subscribe to the myriad specialized photography apps in your app store, including [VSCO](#) (for [Android](#) and [iOS](#)) and [ONI Photo RAW](#) (also for Android and iOS). For those using iPhones and iPads for editing, you could also consider the apps [Halide Mark II](#), [Darkroom](#) and [RAW Power](#).

When you're done editing your RAW image, you can save it as a JPEG or other common formats for sharing, printing or [making art](#) out of.

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