

# Android 10: Cheat sheet



by **Jack Wallen** in **Mobility** on September 4, 2019, 11:59 AM PST

Android 10's features will transform some phones into more user-friendly, customizable, and secure environments. Here's what developers, businesses, and users need to know about Google's Android 10.0.

Android is still the most widely-used platform around the globe. With a market share that hasn't shifted much since the last iteration (approximately 81.7% around the release of [Android Pie](https://www.techrepublic.com/article/android-p-cheat-sheet/) (<https://www.techrepublic.com/article/android-p-cheat-sheet/>)), Google has a strong grip on the [mobile](https://www.zdnet.com/topic/mobility/) (<https://www.zdnet.com/topic/mobility/>) sector. With the release of Android 10 (formerly known as Android Q), users get a good blend of new features and a polishing of previously released features. Some of Android 10's new features are eye-opening and should go a long way to cement the platform at the top of the mobile space.

Read this Android 10 cheat sheet to get up to speed on Google's latest OS. We'll update this resource periodically when there is new information about Android 10.

**SEE: [How to build a successful developer career \(free PDF\)](https://www.techrepublic.com/resource-library/whitepapers/how-to-build-a-successful-developer-career/)**

**(<https://www.techrepublic.com/resource-library/whitepapers/how-to-build-a-successful-developer-career/>)**

**(TechRepublic)**

**What is Android 10?**

Android 10 is the official name of the latest iteration of Android OS. Since the initial release of Android, Google has used names of various desserts for the platform. Here is a listing of previous names:

- **Android 1.5:** Android Cupcake
- **Android 1.6:** Android Donut
- **Android 2.0 - 2.1:** Android Eclair
- **Android 2.2 - 2.2.3:** Android Froyo
- **Android 2.3 - 2.3.7:** Android Gingerbread
- **Android 3.0 - 3.2.6:** Android Honeycomb
- **Android 4.0 - 4.0.4:** Android Ice Cream Sandwich
- **Android 4.1 - 4.3.1:** Android Jelly Bean
- **Android 4.4 - 4.4.4:** Android KitKat
- **Android 5.0 - 5.1.1:** Android Lollipop
- **Android 6.0 - 6.0.1:** [Android Marshmallow](https://www.techrepublic.com/article/android-marshmallow-the-smart-persons-guide/) (<https://www.techrepublic.com/article/android-marshmallow-the-smart-persons-guide/>)
- **Android 7.0 - 7.1.2:** [Android Nougat](https://www.techrepublic.com/article/android-7-0-nougat-the-smart-persons-guide/) (<https://www.techrepublic.com/article/android-7-0-nougat-the-smart-persons-guide/>)
- **Android: 8.0 - 8.1:** [Android Oreo](https://www.techrepublic.com/article/android-o-the-smart-persons-guide/) (<https://www.techrepublic.com/article/android-o-the-smart-persons-guide/>)
- **Android: 9.0:** [Android Pie](https://www.techrepublic.com/article/android-p-cheat-sheet/) (<https://www.techrepublic.com/article/android-p-cheat-sheet/>)

However, with the 10th iteration of Android, Google is simply sticking with the numerical nomenclature... hence Android 10.

**Additional resources:**

- [Google announces Android rebrand, reveals official Android Q name](https://www.zdnet.com/article/google-announces-android-rebrand-reveals-official-android-q-name/) (<https://www.zdnet.com/article/google-announces-android-rebrand-reveals-official-android-q-name/>) (ZDNet)
- [Android Q: Release date, Live Caption, developer features, and everything we know so far](https://www.zdnet.com/article/android-q-rumors-features-and-everything-we-know-so-far/) (<https://www.zdnet.com/article/android-q-rumors-features-and-everything-we-know-so-far/>) (ZDNet)

- What would you name Android Q? Google says this one's 'hard' (<https://www.cnet.com/news/what-would-you-name-android-q-google-says-this-ones-hard/>) (CNET)
- What Google's Android Q dark mode means for all your other apps (<https://www.cnet.com/news/what-googles-android-q-dark-mode-means-for-all-your-other-apps/>) (CNET)
- Google is finally ready to take on the iPhone and Samsung phones (<https://www.cnet.com/news/google-is-finally-ready-to-take-on-the-iphone-and-samsung-phones/>) (CNET)
- Google Assistant, Android Q, Google Nest Hub Max: Google's big plans for the rest of the year (<https://www.cnet.com/how-to/google-assistant-android-q-google-nest-hub-max-googles-big-plans-for-the-rest-of-the-year/>) (CNET)

## What new features come with Android 10?

Android 10 has a number of exciting features. Some of the new features go a long way to setting Android apart from all other platforms, while others finally bring the operating system up to par with others.

### Fully Gestural Navigation

The biggest change to the operating system is the navigation control, which is far more efficient than previous methods, especially when using a device with one hand. Gesture navigation was introduced in Android Pie, though what was brought to the table seemed like a bridge to something even better. That something better is Fully Gestural Navigation. This opt-in feature (users can choose to go the old-school three-button method, the two-button method in Android Pie, or the new "no-button" method in Android 10) relies strictly on gestures for navigating the interface. The new navigation includes the following:

- Removal of the Home and Back buttons.
- Swipe up from where the Home button was to go back to the home screen.
- Swipe up from mid-screen to open the app drawer.
- Swipe down to open the Notification Screen.
- Short swipe from either the left or right edge of the screen to go back.
- Short swipe up (from the search bar) and release to open the app list.
- Slight swipe in to display the "peeking in" feature for app sidebars.

Along with the "peeking in" feature, for those who have found the back gesture to interfere with the opening of app sidebars, a new Sensitivity configuration (**Figure A**) has been added to help alleviate this problem (as of Beta 6). This option is found in Settings | System | Gestures

| System Navigation. Tap the associated gear icon to then adjust the sensitivity (from low to high) to avoid confusion between opening an app sidebar and initiating the back gesture.

## Figure A

(<https://tr3.cbsistatic.com/hub/i/r/2019/08/12/3013ab94-2407-4535-be62-5880813600c6/resize/770x/e05cb2a74cefc4d193be91f590df44b8/backsensitive.jpg>)

Chances are, you are not one of the ~3-7% of users who swipe to open sidebars ([according to Android user interface product managers Allen Huang and Rohan Shah](#) (<https://www.zdnet.com/article/android-qs-big-navigation-change-heres-why-it-makes-sense-says-google/>)); instead, you use the "Hamburger menu" to gain access to that feature, so the back swipe shouldn't be a problem.

**SEE: All of TechRepublic's cheat sheets and smart person's guides**  
(<https://www.techrepublic.com/topic/smart-persons-guides/>) (TechRepublic)

## New notification control feature

Notification control (**Figure B**) has a new feature. With the long press of an app alert in the Notification Shade, you can select Interruptive Reminders or Gentle Reminders.

- **Interruptive Reminders:** Alerts will appear in the Notification Shade and the Lock Screen.
- **Gentle Reminders:** Alerts will only appear in the Notification Shade.

### Figure B

(<https://tr3.cbsistatic.com/hub/i/r/2019/05/20/ea9112db-c885-4d99-93b2-8037841d5a8b/resize/770x/475ece9a602fedb655c87d47874ef445/q3.jpg>)

Long pressing an alert allows you to configure how it will behave.

So, if you're worried about the sensitive information of alerts from certain apps making it to the Lock Screen, you now have control over which apps can display said data instead of the feature being On or Off.

## Dark Theme

From the office of "What took you so long" comes the highly-anticipated Dark Theme. When enabled, the entire Android interface will take on a darker color (**Figure C**).

### Figure C



(<https://tr1.cbsistatic.com/hub/i/r/2019/05/20/3b055ecb-8752-4474-b861-662894c9d642/resize/770x/ef3e10f6166642c98181475c1b9ea5cf/q3b.png>)

The Android Dark Theme in action

Why is this important? Two reasons: Battery life and eye strain.

- **Battery life:** With the dark interface, your display will have a less taxing effect on your battery.
- **Eye strain:** With the dark interface enabled, you can work with your device for longer periods, without suffering from eye strain, especially when using the device in dark or dimmer environments.

## Live Caption

Another new feature found in Android 10 is Live Caption, which automatically adds subtitles to videos, podcasts, and audio messages. These captions are in real time and system-wide so they aren't limited to specific applications. The Live Caption text box can be resized and moved around the screen. Live Caption will not only be helpful for users who find themselves in situations where audio isn't an option, but what's even more important is Live Caption will be a boon to the hearing impaired.

## 5G compatible

Android 10 will be **5G** (<https://www.techrepublic.com/article/5g-mobile-networks-a-cheat-sheet/>) compatible. That means as soon as the infrastructure is rolled out, Android 10 will be ready to make use of the new technology.

## Project Mainline

Google is introducing Project Mainline. With this new feature, security patches will be automatically pushed to phones through the Google Play Store (in the same way apps are updated). Updates are run in the background and loaded during the next time a device is rebooted.

## Additional resources:

- **What's new in the Android Q Beta 3 release** (<https://www.techrepublic.com/article/whats-new-in-the-android-q-beta-3-release/>) (TechRepublic)
- **Google I/O: 14 Android OS modules to get over-the-air security updates in real-time** (<https://www.zdnet.com/article/google-io-14-android-os-modules-to-get-over-the-air-security-updates-in-real-time/>) (ZDNet)
- **How to pin and unpin apps in Android Q** (<https://www.techrepublic.com/article/how-to-pin-and-unpin-apps-in-android-q/>) (TechRepublic)
- **Google brings nonbinary emoji to Android Q** (<https://www.cnet.com/news/google-brings-nonbinary-emoji-to-android-q/>) (CNET)
- **Google hears from developers regarding storage changes in Android Q** (<https://www.zdnet.com/video/google-hears-from-developers-regarding-storage-changes-in-android-q/>) (ZDNet)

## What enhancements are in Android 10?

### Expansion of Smart Reply

One Android feature that's getting some much-needed polish by way of expansion is Smart Reply, which uses [machine learning](https://www.techrepublic.com/article/machine-learning-the-smart-persons-guide/) (<https://www.techrepublic.com/article/machine-learning-the-smart-persons-guide/>) to anticipate what you might say in reply to a message. Although the feature was available in Android P, it was limited to Google-only apps. With the release of Android 10, Smart Reply is now built into the notification system, so any messaging app can suggest replies in notifications. Smart Reply also uses AI to predict your next action. For example, if someone texts you an address, you can tap that address to open it in Google Maps.

### **Privacy features for Google Maps**

Speaking of Google Maps, the app/service will be getting some privacy-specific features. One feature is Incognito Mode. This mode will enable users to search for and navigate to locations without data being saved to or linked back to a Google account.

### **Digital Wellbeing's Focus Mode**

Google's Digital Wellbeing will get a new feature called Focus Mode that allows users to select certain apps they want to avoid during a period of time. During the chosen period, those apps will be grayed out and their notifications hidden from view.

### **Gender Inclusive emoji**

For those who like to use emoji, Google will bring gender nonconforming emoji to Android 10. Called Gender Inclusive, there will be 53 such emojis added to the platform.

### **More user-friendly App Permissions**

App Permissions now have a much more user-friendly approach. Instead of the app offering little more than ON/OFF sliders for each app within a service (such as body sensors, calendar, call logs, camera, etc.), the new layout makes it very clear what apps have permission for a specific service and retains the simplicity of allowing or denying an app permission to access any given service (**Figure D**).

### **Figure D**



(<https://tr3.cbsistatic.com/hub/i/r/2019/05/20/2cf1f6ef-4d96-4390-a785-c130ea5be232/resize/770x/53b19f4fbd94703e5d974d04adebdda2/q3c.jpg>)

Per service permissions can now be configured.

### Additional resources:

- Google Assistant is 10x faster and knows where your mom lives  
(<https://www.cnet.com/features/google-assistant-is-10x-faster-and-knows-where-your-mom-lives/>) (CNET)
- 5 things you should know about Android Q's privacy settings (<https://www.cnet.com/how-to/5-things-you-should-know-about-android-qs-privacy-settings/>) (CNET)
- Google releases Android Q beta 2, adds notification Bubbles  
(<https://www.zdnet.com/article/google-releases-android-q-beta-2-adds-notification-bubbles/>) (ZDNet)
- Google expands ML Kit capabilities for building machine learning into mobile apps  
(<https://www.zdnet.com/article/google-expands-ml-kit-capabilities-for-building-machine-learning-into-mobile-apps/>) (ZDNet)
- At Google I/O, Sundar Pichai to talk Assistant, Android Q amid scandals  
(<https://www.cnet.com/news/at-google-io-sundar-pichai-talks-assistant-android-q-amid-scandals/>) (CNET)

### What security features are in Android 10?

There are a few Android 10 features that focus primarily on security. The first feature is called Scoped Storage. In order to give users more control over their files, as well as limit file clutter, Android 10 changes how all apps access files found within external storage. To make this more secure, all apps on Android 10 are given a sandboxed view into the external storage space.

Android 10 also gives users more control over when apps are able to access device location information (**Figure E**).

### **Figure E**

(<https://tr1.cbsistatic.com/hub/i/r/2019/05/20/e6b7a81c-e773-4c96-8b9d-d62df77e7bd3/resize/770x/53aab761eafc0d26dbc77034c686f403/q3d.jpg>)

Users can define when an app has access to location information.

Users are now able to configure if an app has access to location information either while in use (foreground only) or all the time (foreground and background). In other words, if you opt for foreground only, when an app isn't in use, it won't have access to location information.

Interruptions have become fewer with Android 10, thanks to new restrictions to background activity starts. By restricting when an app can start activities, it will not only minimize interruptions for users, it will also allow users to control what's shown on the device display.

One new addition that should go a long way for device security is that Android 10 now transmits randomized MAC addresses by default. Along those same lines, an app must have `READ_PRIVILEGED_PHONE_STATE` privileged permissions in order to access a device's non-resettable identifiers (such as IMEI and serial number).

In order to protect user privacy, manual configuration of the Wi-Fi networks list will be restricted to system apps and device policy controllers. If an app doesn't fall into one of those two categories, configuration of Wi-Fi networks will not be allowed.

### **Additional resources:**

- [The Pixel 3A is official: Here's what you need to know](https://www.zdnet.com/article/the-pixel-3a-is-official-heres-what-you-need-to-know/) (<https://www.zdnet.com/article/the-pixel-3a-is-official-heres-what-you-need-to-know/>) (ZDNet)
- [Android Q gets security updates without rebooting](https://www.zdnet.com/video/android-q-gets-security-updates-without-rebooting-cnet/) (<https://www.zdnet.com/video/android-q-gets-security-updates-without-rebooting-cnet/>) (ZDNet)
- [Future Android versions to support Electronic IDs](https://www.zdnet.com/article/future-android-versions-to-support-electronic-ids/) (<https://www.zdnet.com/article/future-android-versions-to-support-electronic-ids/>) (ZDNet)
- [Android Q to get a ton of new privacy features](https://www.zdnet.com/article/android-q-to-get-a-ton-of-new-privacy-features/) (<https://www.zdnet.com/article/android-q-to-get-a-ton-of-new-privacy-features/>) (ZDNet)

### **How can developers start using Android 10?**

- Now that Android 10 has been officially released, anyone with a supported device can update (once it becomes available to said device) and start using the platform. Currently, the following devices are supported.
- All Pixel devices
- ASUS ZenFone 5Z
- [Essential Phone](https://www.cnet.com/reviews/essential-phone-ph-1-review/) (<https://www.cnet.com/reviews/essential-phone-ph-1-review/>)
- [Huawei Mate 20 Pro](https://www.cnet.com/reviews/huawei-mate-20-pro-review/) (<https://www.cnet.com/reviews/huawei-mate-20-pro-review/>)
- LG G8
- [Nokia 8.1](https://www.cnet.com/news/nokia-8-1-launches-in-dubai-costs-around-450/) (<https://www.cnet.com/news/nokia-8-1-launches-in-dubai-costs-around-450/>)
- [OnePlus 6T](https://www.cnet.com/reviews/oneplus-6t-review/) (<https://www.cnet.com/reviews/oneplus-6t-review/>)
- OPPO Reno
- realme 3 Pro
- [Sony Xperia XZ3](https://www.cnet.com/reviews/sony-xperia-xz2-review/) (<https://www.cnet.com/reviews/sony-xperia-xz2-review/>)
- TECNO SPARK 3 Pro
- Vivo X27



- Vivo NEX S
- Vivo NEX A
- Xiaomi Mi 9 (<https://www.zdnet.com/product/xiaomi-mi-9/>)
- Xiaomi Mi MIX 3 5G (<https://www.zdnet.com/product/xiaomi-mi-mix-3/>)

If your device is supported, installing Android 10 is as simple as checking for (and running) a system update.

### **Additional resources:**

- [Why you should migrate to the Android Q Beta program](https://www.techrepublic.com/article/why-you-should-migrate-to-the-android-q-beta-program/) (<https://www.techrepublic.com/article/why-you-should-migrate-to-the-android-q-beta-program/>) (TechRepublic)
- [How to use the new app permissions in Android 10](https://www.techrepublic.com/article/how-to-use-the-new-app-permissions-in-android-10/) (<https://www.techrepublic.com/article/how-to-use-the-new-app-permissions-in-android-10/>) (TechRepublic)
- [How to become a developer: A cheat sheet](https://www.techrepublic.com/article/how-to-become-a-developer-a-cheat-sheet/) (<https://www.techrepublic.com/article/how-to-become-a-developer-a-cheat-sheet/>) (TechRepublic)
- [Hiring kit: Android developer](https://www.techrepublic.com/resource-library/whitepapers/hiring-kit-android-developer/) (<https://www.techrepublic.com/resource-library/whitepapers/hiring-kit-android-developer/>) (TechRepublic Premium)

### **When was Android 10 released?**

Android 10 has officially been released. At the moment, it is only available to the supported Pixel devices. All other devices should receive the update soon after. By the end of Q4, 2019, all supporting devices should have received the update to Android 10.

### **Additional resources:**

- [Mobile device security: Tips for IT pros \(free PDF\)](https://www.techrepublic.com/resource-library/whitepapers/mobile-device-security-tips-for-it-pros-free-pdf/) (<https://www.techrepublic.com/resource-library/whitepapers/mobile-device-security-tips-for-it-pros-free-pdf/>) (TechRepublic)
- [BYOD \(bring-your-own-device\) policy](https://www.techrepublic.com/resource-library/whitepapers/bring-your-own-device-policy/) (<https://www.techrepublic.com/resource-library/whitepapers/bring-your-own-device-policy/>) (TechRepublic Premium)
- [The 10 best ways to secure your Android phone](https://www.zdnet.com/article/the-ten-best-ways-to-secure-your-android-phone/) (<https://www.zdnet.com/article/the-ten-best-ways-to-secure-your-android-phone/>) (ZDNet)
- [The 10 best smartphones you can buy right now](https://www.zdnet.com/article/10-best-smartphones/) (<https://www.zdnet.com/article/10-best-smartphones/>) (ZDNet)
- [Best mobile VPN services for 2019](https://www.cnet.com/news/best-mobile-vpn-services/?ftag=CMG-01-10aaa1c) (<https://www.cnet.com/news/best-mobile-vpn-services/?ftag=CMG-01-10aaa1c>) (CNET)

- [Best to-do list apps for managing tasks on any platform](https://download.cnet.com/news/best-to-do-list-apps-for-managing-tasks-on-any-platform/) (<https://download.cnet.com/news/best-to-do-list-apps-for-managing-tasks-on-any-platform/>) (Download.com)
- [Smartphones and mobile tech: More must-read coverage](https://flipboard.com/@techrepublic/smartphones-and-mobile-tech-kbse2r2nz) (<https://flipboard.com/@techrepublic/smartphones-and-mobile-tech-kbse2r2nz>) (TechRepublic on Flipboard)

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Jack Wallen is an award-winning writer for TechRepublic, The New Stack, and Linux New Media. He's covered a variety of topics for over twenty years and is an avid promoter of open source. For more news about Jack Wallen, visit his website [jackwallen....](#)

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