

# Google officially launched 2 mid-range smartphones Pixel 3a and Pixel 3a XL

Google has launched two new phones in the mid-range, affordable segment, as a way to stimulate demand for its flagship services, which are two: Pixel 3a and Pixel 3a XL .

In October 2018, during a press event held in New York City, United States, Google officially unveiled the secret of its top two smartphones, Pixel 3 and Pixel 3 XL, with Hoping to continue with the success of 2017 Pixel 2 and Pixel 2 XL. Up to now, it can be said that the 3rd Pixel model has completed relatively well the assigned mission with impressive sales as well as positive evaluation from the community (Pixel 3 XL is evaluated). is the world's most photographic smartphone with dual front camera, single rear camera and Pixel Visual Core image processing device designed by Google. However, the Pixel 3 and Pixel 3 XL are still essentially flagships, mainly in the high-end segment, while the Mountain View giant's ambitions don't stop there.



## 1. List of the first smartphones to receive Android Q updates

In the most recent quarterly income analysis meeting of Google, Alphabet, CEO Sundar Pichai revealed that sales for the company's smartphone segment are showing signs of continuous decline compared to the original forecast. In particular, the CEO said that the great competitive pressure in high-end smartphone segment is one of the root causes of the problem, coinciding with the decline of the whole industry in global smart phone sales.

Perhaps that is why today, at the annual I / O developer conference, Google has for the first time launched two new models of mid-range, affordable, like is a plan to stimulate demand for its top services, which are 2: Pixel

3a and Pixel 3a XL. But saying that doesn't mean that Pixel 3a and Pixel 3a XL only act as 'fire-fighting' products. In fact, these two phones are all set by Google quite a lot of expectations, as well as possessing strategic advantages for other competitors in the same segment, including as powerful processing chips, the ability to take pictures of the peak, and especially the extremely attractive price. So what exactly are Pixel 3a and Pixel 3a XL phones, we will find out later.



## **Pixel 3a and Pixel 3a XL**

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### **Overview of design**

The first thing to say is that Pixel 3a and Pixel 3a XL inherited quite a lot of lines from the 'big brother' Pixel 3 and 3 XL, to the extent that just by looking at it is hard to distinguish between 2 models of this machine. Is this an option Google chooses to cut down on design costs?



Size is the most obvious difference between Pixel 3a and Pixel 3a XL. In it, 3a owns a "three-ring" measure of 151.3 x 70.1 x 8.2mm, weighs 147gr and is about 5.6 inches wide (diagonally). And 3a XL will be a little wider (of course), at 6 inches. Both possess trendy OLED screens, giving impressive visibility despite having slightly different resolutions. Pixel 3a OLED panels have a FHD resolution of 1,080 × 2,220px (440 pixels / inch) while for Pixel 3a XL is 1,080 x 2,160 (400 pixels / inch). The outer shell will be made of high quality scratch-resistant polycarbonate plastic. Although Google does not have a glass case for Pixel 3a and Pixel 3a XL to optimize production costs, but you can still be assured of durability and aesthetics with this plastic cover.

Hidden inside the high-end polycarbonate frame is the single camera cluster with the renowned Sony IMX 12.2 megapixel sensor, identical to the capital sensor that is delivering impressive success for Pixel 3 and Pixel 3 XL. In addition, it is impossible not to mention the appearance of LED flash cluster and fingerprint sensor designed to customize Pixel Imprint - products that, according to Google, will be able to operate faster and more accurately over time when it Fully understand the fingerprint structure as well as the characteristics of each groove, folds on the user's finger.

Looking at the front, on the near side of the top, you will see the appearance of a proximity sensor and light sensor, arranged around a single 8.1 megapixel selfie camera cluster (Google has clipped the second selfie camera). as on Pixel 3 and Pixel 3 XL to cut costs. Besides being the main speaker cluster, combined with another cluster of external speakers to create an interesting stereo system.



In addition, other 'exterior' equipment on Pixel 3a and Pixel 3a XL includes power key and volume control on the left side, USB Type-C on the bottom of the device and cutting lines. The circle around the phone frame is the place where the noise canceling microphone system is located.

Active Edge - 2 right and left bezel edges are touch sensors, enabling quick activation of the virtual assistant Google Assistant, which is the device that makes the biggest difference between Pixel 3a and Pixel 3a XL before competitor. Also not to mention the very welcome 're-export' screen of the 3.5mm headphone jack on both products.

In general, the design of Pixel 3a and Pixel 3a XL does not have too many highlights compared to its predecessor and is somewhat conservative, making it difficult for these two devices to impress users right from the first look. However, they contain very specific features in Google's design, which can hardly be confused with products from many other manufacturers in the market.

1. Why are flagship smartphones more expensive?

## Overview of camera

Not having a separate section to evaluate the photography capabilities of Pixel 3a and Pixel 3a XL is a major shortcoming. Google has been very fond of it, 'a whole new high-end rear camera cluster on Pixel 3 and Pixel 3 XL on its mid-range products, making these two products inherit the ability to capture' hegemony 'in The whole smartphone world is now, not only in the mid-range price segment. Overall, this is an impressive camera cluster with 1,14?m pixel sensor size, aperture f / 1.8, 76 degree viewing angle, autofocus with dual phase detection capability, and a spectral sensor to support Color accuracy, flicker sensor helps to recognize the blinking frequencies of light, thereby calculating the time to take photos with the best light quality, and some other hardware equipment. However, the system of software that controls these impressive features is what makes this camera cluster successful.



## 1. Top smartphones have the best single camera scored by DXOMark

Take a simple example with Take Top Shot, this feature works by shooting a broken frame before and after the user presses the shutter button, then uses AI technology on the device to select a good frame. Most, taking into account small details such as smiles, eyes and eyes. Photobooth is also a nice feature, works similar to a machine learning system with the task of recording the best scenes, such as when people laugh, stick their tongues, make funny faces, wink or kiss. However, the most striking is still Night Sight, which is considered a magic feature on Pixel 3 and 3 XL before. Basically, this feature will keep Pixel camera shutter speeds longer than normal, allowing more light to enter the image sensor. And when there are lots of bright images, more information will be stored in the image, resulting in brighter images. In a way that is easier to understand, Night Sight helps to increase the brightness of super dark images effectively by using AI algorithms, and it also helps to restore colors and sharpness to images.



## 1. How is AI impacting mobile photography?

The Super Res Zoom feature is intended to improve the quality of enlarged photos by combining multiple short exposures to increase sharpness (Google says the results are nearly equivalent to those taken with optical zoom lenses). 2x). In addition, it also features Autofocus Motion Tracking which helps 'lock' objects in the same scene and then adjust the exposure and focus to maintain a basic level of sharpness. Finally, Motion Photos, which allows you to record a short video beside the photo during the capture.

Not only that, the famous HDR + mode of Google is also present on the rear camera cluster of these two models. Basically, HDR + will capture a series of images at different exposures and create a composite image to ensure that details and highlights are not lost during post-production processing. Therefore, while only owning one sensor, the camera can still support portrait mode (erasing fonts), creating bokeh effects (selective blurring), distinguishing the foreground from the background.

Another notable technology is Google Lens, which operates in real time on Pixel 3a and Pixel 3a XL. Basically, Google Lens is a search tool through images on smartphones integrated in Google's Google Photos app. List of objects that this tool can detect more and more, including furniture, clothing, books, movies, music albums, video games, landmarks, buildings, names and secrets Wi-Fi network, drinks, celebrities, home decoration items and many more. Perhaps the most useful feature that Google Lens offers is that it can automatically extract phone numbers, dates and addresses from business cards and quickly add them to the user's contact list.



1. The AI ??behind Pixel's super-high portrait mode is launched by Google into open source

Speaking a bit about the front camera cluster, Pixel 3a and Pixel 3a XL can record video at 1080p resolution at 30fps, (frames per second), 60fps or, 120fps; 4K at 30fps; and 720p with 30fps, 60fps, and 240fps.

The sensor used here has a resolution of 8 megapixels, aperture of  $f / 1.8$ , and a pixel size of  $1.12\mu\text{m}$ . The front camera cluster on Pixel 3a and Pixel 3a XL will not support the wide-angle selfie mode as the two seniors launched late last year due to the absence of the second sensor - a pity. However, this camera group still has the face editing feature, allowing you to apply skin smoothing filters like Natural and Soft, along with Google's highly-respected portrait mode.

1. 9 smartphones have the most unique cameras

## Hardware overview

Pixel 3a and Pixel 3a XL may not own the most powerful chips in the smartphone world today, but the processing power and user experience that it brings (especially with the support of pure Android ) is not to be underestimated.

CPU equipped with Pixel 3a and Pixel 3a XL are 64-bit Snapdragon 670 high-end processors, produced on a modern 10-nanometer process for efficient power consumption. This chip owns a total of 8 cores, including 2 high-performance (Kryo 360) cores, 2GHz, combined with 6 basic performance cores, energy-saving (based on the Cortex A75 and A55 architectures of ARM) has a maximum speed of 1.7GHz.

The graphics card (GPU) on 2 devices is Adreno 616, which can 'scale well' the screen with a resolution above 1080p. Along with CPU and Hexagon DSP, this Adreno 616 GPU chip will also come with Qualcomm's AI tool,

which helps speed up processing many learning tasks from frameworks like Caffe and Caffe2 of Facebook, TensorFlow and TensorFlow Lite, Open Neural Network Exchange (ONNX), and Neural Processing SDK as well as Hexagon Neural Network (NN) of Qualcomm.



#### 1. Qualcomm introduced a second generation 5G modem speed of 7 Gbps

The remaining features of the Snapdragon 670 include the Qualcomm modem, the X12 LTE, providing upload speeds of up to 150Mbps and download speeds of about 600Mbps, and the Spectra 250 image processor (ISP). ), supports video recording up to 4K at 30fps.

Power supply for the entire hardware system as well as the above software is a 3,000mAh battery equipped on Pixel 3a, and 3,700mAh on Pixel 3a XL. Thus, the battery on Pixel 3a XL has a much larger capacity than that of Pixel 3 XL (3,520mAh), promising a significantly better usage time. Unfortunately, both Pixel 3a and Pixel 3a XL are not compatible with Qi standard wireless charging accessories like the Google Pixel Stand. Fortunately, both devices support fast charging technology of up to 18W (USB-PD 2.0), promising to provide an estimated up to 7 hours of usage in just 15 minutes of charging.

Pixel 3a and Pixel 3a XL both own 4GB RAM LPDDR4X (the same amount of RAM as Pixel 3 and Pixel 3 XL) and also with Pixel Visual Core (PVC), coprocessor chip directly by Google. design. PVC is responsible for assisting the main chip to perform certain functions, providing maximum performance (trillions of operations per second) while still using far less power than a transmission processor. system. According to Google, PVC can help speed up the HDR + feature and support zero shutter lag, while enhancing the ability to handle enlarged image quality with sophisticated AI algorithms.



In terms of storage, both Pixel 3a and Pixel 3a XL have 64GB base memory. Besides an 802.11 a / b / g / n / ac 2 × 2 chip that provides high-speed Wi-Fi connectivity and a wide range of sensors including an accelerometer, gyroscope, magnetometer. (magnetic measurement), manometer (pressure gauge) . help orient the phone in three-dimensional space.

Some other basic connectivity utilities include NFC for smart payment function (via Google Pay or any other platform), Bluetooth 5.0 for pairing with peripheral devices, finally GPS and GLONASS for positioning function.

Another very interesting information is: Pixel 3a and Pixel 3a XL will support eSIM (embedded SIM). Like its predecessors, these 2 phones can be networked without replacing physical SIM. The network configuration will be downloaded automatically through Google's eSIM manager application on Play Store.

1. Learn about eSIM new SIM technology for the future

Finally, both phones are equipped with Titan Security chips, a component integrated on mobile devices that Google borrowed from server security technology to protect sensitive data on Pixel phones.

## **Software overview**

Of course, Pixel 3 and Pixel 3 XL will all run on the latest version of Android 9.0 Pie. In terms of features and applications, besides Google Assistant, the smart assistant of Google, Pixel 3a and Pixel 3a XL is also equipped with a number of exclusive Google features that not all Android phones can own.



First of all, Call Screen - a tool that allows you to know in advance who is calling you, from which to take the next action by 'authorizing' the virtual assistant Google Assistant on your behalf. Talk to strangers calling, to ask them to give you some basic information like who they are and what you want to call. The second is Google Duplex - the new AI platform allows Google Assistant to make phone calls and chat with real people, but the enemy can't even imagine that they are talking to the phone. And many other small software.

In addition, Pixel 3a and Pixel 3a XL will also be bundled with uncompressed image and video storage in Google Photos (unlimited storage. Normally, free users only use the repository on Photos, Gmail and Drive with a maximum limit of 15GB), along with a 3-year support package for exclusive software updates from Google.

1. Google Assistant is updated with a variety of new features to become smarter, even knowing where your mother's home is

## Time of opening and selling price

Unfortunately, there is no information that Google will officially distribute these two phones in Vietnam market. In the United States, Pixel 3a and Pixel 3a XL will be distributed by Verizon, T-Mobile and Sprint (network lock version) and compatible with all major networks. Of course you can also buy international versions via Google Store, Best Buy, Amazon and many other mainstream retailers.



Both will be sold this week in 13 markets around the world, including Australia, Canada, Germany, Italy, Spain, USA, India, Japan, Taiwan, France, Ireland, Singapore and UK. The price for Pixel 3a will start at \$ 399 (about

9.3 million) and with Pixel 3a XL is from 479 dollars (about 11 million). Both products are sold with 3 basic color options, Clearly White, Purple-ish and Just Black, and are included with a Quick Switch Adapter (USB-A to USB-C) converter for people. Users can transfer messages, contacts, photos from older Android or iOS devices to Pixel 3a and Pixel 3a XL more easily.

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