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CONTENTS



NEWS

- 4 Google shows off the Pixel 4's dual camera after leaks surface
- 7 Google says it's done making Android tablets

NEWS ANALYSIS

- 9 Six burning Pixel 4 questions following Google's official 'leak'

REVIEWS

- 15 EE 5G
- 23 Sony Xperia 1
- 38 Vodafone Smart V10
- 51 Withings Move

ROUND-UP

- 57 Best budget phones



57



15



23



Google shows off the Pixel 4's dual camera after leaks surface

Plus they killed Pixel sales, rumours, and conspiracies in one fell tweet. **MICHAEL SIMON** reports

Well, that's one way to deal with the leaks. Google recently revealed a key feature of the Pixel 4 months ahead of its presumed release following a leak by YouTube creator Unbox Therapy just 24 hours earlier. In the tweet from its Made by Google account (fave.co/2RzXAIV), the company

showed off the back of the Pixel 4, featuring a dual camera array and no fingerprint sensor.

That's a shocking reveal from a company that generally likes to copy Apple's hype game with its press conferences. Leading up to the release of the Pixel 3a at Google I/O, for example, Google teased the arrival of 'a new hero' along with the date of the keynote. However, in true Google fashion, it downplayed the announcement as a mere appetizer with the tag line: "Wait 'til you see what it can do."

In a curious similarity, the image of the Pixel 4 looks a lot like the iPhone 11 renders that have been floating around the web for the past few months. But while Apple's bulbous bump will reportedly house three cameras, the picture of the Pixel 4's square housing only has two cameras inside.

Other than the bump and the grey Google logo, the phone doesn't have the Pixel's signature two-tone design. A design staple from the start, the rear of Google's original Pixel had a shiny glass window above the metal back to help with cellular reception and it continued the look with the Pixel 3's all-glass enclosure. However, if these are final renders – and they seem to be – the back of the Pixel 4 will be plain.

The image of the Pixel 4 back case curiously lacks a fingerprint sensor, which has been on the rear of the phone since the original Pixel. That could mean Google's new handset is adopting an in-display fingerprint sensor like the Galaxy S10 or OnePlus 7 Pro, or possibly a Face ID-style camera unlocking method.

Like the rest of the industry, Google's phones have been subject to rampant leaks. The Pixel 3

rumours were so plentiful, in fact, it spawned a conspiracy theory that Google was playing a game of misdirection and that the actual phone was being kept secret. That turned out to be unfounded when Google unveiled the Pixel 3 during its NYC event.

But while leaks certainly take away some of the excitement leading up to a major launch, revealing such a key feature of the Pixel 4 so early is an equally risky strategy. With confirmation that the Pixel 4 will have a better camera and features than the Pixel 3, why would anyone pay £800 or £900 for Google's flagship phone now? Google has established a strategy of bringing new camera features to older handsets, but with a second camera, it would seem that the Pixel 4 will have features that aren't possible with a single lens.

But whatever the reasoning, we now know that the Google Pixel 4 will finally bring a second rear camera to what's already the best phone for photographers. Now we can all start speculating about how deep the notch on the front will go.



Google says it's done making Android tablets

RIP Pixel Slate and Pixel C. MICHAEL SIMON reports

If you've been waiting for a Pixel Slate 2 or Pixel C 2, we have some bad news: Google has said that it won't be making its own branded tablets any more – Android, Chrome, or otherwise. Google confirmed a report that stated the company was done making tablets. It said the decision was made public at an internal company meeting in June and included two smaller-sized tablets that were in development.

A spokesperson from Google said: “Chrome OS has grown in popularity across a broad range of form factors and we’ll continue to work with our ecosystem of partners on laptops and tablets. For Google’s first-party hardware efforts, we’ll be focusing on Chrome OS laptops and will continue to support Pixel Slate.”

That’s probably for the best. While Google’s Android phones and Chrome OS laptops are among the best in the business, it’s tablets leave much to be desired. They might look pretty in renders, but neither of Google’s consumer tablets were able to hold a candle to the iPad or Surface, and Google hasn’t committed to a regular update schedule. The Pixel C launched in 2015 and hasn’t received a hardware update since then – and it stopped receiving Android updates over a year ago with Oreo 8.1.

Truth be told, Google never really embraced Android on tablets, and Chrome OS is better suited for a convertible laptop form factor. Google transformed the Chrome OS UI with version 70, giving it distinct interfaces for keyboard- and touch-centric form factors, but it’s still more at home as a laptop than a tablet. My experience with the Pixel Slate was less-than-stellar, despite truly gorgeous hardware.

This decision could pave the way for a new Pixelbook this year. Rumours have suggested that Google is working on a follow-up to its premium Chrome OS-based laptop, and the working of its statement conspicuously leaves the door wide open for a new laptop. But if you’re waiting for a smaller or a cheaper Pixel Slate, you’re out of luck.



Six burning Pixel 4 questions following Google's official 'leak'

Google told us a whole lot more about its next phone than how many cameras it will have. **MICHAEL SIMON** reports

Google might have pulled the greatest trick with the Pixel 4. The Made by Google Twitter account confirmed a leak that was just starting to make the rounds: the Pixel 4 will have a second camera on the back, along with a new design that

looks a lot like the presumed iPhone 11. And in doing so, it made the Pixel 4 a whole lot more interesting.

That's because there's a lot more to be excited about than a square camera bump and a new sensor. Google may have squashed a few months of rumours and leaks with the first Pixel 4 image, but it also completely changed my expectations for the upcoming handset. By revealing what should be one of the phone's biggest features months ahead of the game, Google created more hype of the phone.

1. What does the front look like?

Now that we know what the back of the Pixel 4 looks like, the question remains: how big is the display on the front? Google has steadily increased the size of the Pixel and the Pixel XL over the three iterations, but with phones like the Galaxy S10 5G and OnePlus 7 Pro pushing the display size all the way to 6.7 inches, Google could go really big with the Pixel 4.

2. Will the Pixel 4 have a notch?

And then there's those bezels. And the chin. And the notch. Let's face it, the Pixel has never been a phone that people drool over, but recent renders have suggested that Google might be fixing the Pixel's bland design with the Pixel 4. I mean, is it possible they showed us the back early because the front is so beautiful?

3. What will the new camera do?

Okay, so the Pixel 4 will have a dual-camera array on the back. Big deal right? Basically every Android



phone for the past two years has had at least two main cameras for ultra wide, telephoto, and/or depth shots, and the new hotness is triple and even quad cameras. So the mere inclusion of a second lens on the Pixel 4 isn't a reason to get excited.

What's more intriguing is what those cameras will be able to do. With just a single lens, Google has delivered some awesome features on its Pixel phones, including Top Shot, Night Sight, and portrait mode, so we can only imagine what it will be able to do with twice as many cameras. Google already delivered Group Selfie Cam with the dual front camera on the Pixel 3, but we're hoping there's a whole lot more packed into the Pixel 4.

4. Where's the fingerprint sensor?

One thing missing from the Pixel 4 render Google tweeted was the fingerprint sensor. Normally holding



court just below the camera, its conspicuous absence means one of two things: it's moving under the display or into the front camera a la the LG G8's time-of-flight sensor.

It's the second option that's particularly enticing. While the LG G8 was packed with useless gimmicks that let you unlock your phone with your palm and answer calls with a swipe of your hand, Google could be upping the game with the hands-free Soli radar chip, which was first teased at Google I/O way back in 2015. However, rather than use it to control the screen without touching it, Google could use hand gestures to control Assistant or maybe take a photo without struggling to tap the shutter.

5. What's the real killer feature?

If Google is showing off the camera now, what does it have up its sleeve? Yes there will be new photography features and possibly a time-of-flight camera, but will the Pixel 4 also bring a new trademark feature like Active Edge or Call Screen? Most of the Pixel's best features have come from Google's incredible AI, so we'll be waiting for the 'wow' moment during the press conference that trumps the new camera.

6. Does hardware even matter?

Most phone makers go to great lengths to quash leaks and rumours so they can surprise fans on launch day, but Google is flipping the script here. By showing us the back of the phone months before it's revealed, it's taking the emphasis off aesthetics as the most important part of its new phone and putting the focus on what it can do.

Phone fans and reviewers put a lot of stock in what a handset looks like, but the Pixel has always bucked that trend, scoring high marks despite its pedestrian design. Even though this leak is showing off a major change to the Pixel aesthetics, Google is giving us plenty of time to soak in the new look so it won't be an issue – good or bad – when the phone actually arrives. In short, it's saying that what's on the outside doesn't matter, it's what inside that counts. That's always been the case with the Pixel, but now Google is really driving it home.

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BEST CAMERA **PHONES** 2019



**GOOGLE PULLS
ANDROID LICENCE:
5 REASONS
NOT TO PANIC**

+ HEAD TO HEAD

Google Pixel 3a/3a XL



Pixel 3/3 XL



EE 5G

Price: £59 from fave.co/2Nt2Vn5 ★★★★★

5G has been buzzing about for a while – as much as a buzzword can buzz, in fact. It's the next numerical step after 4G but does it really improve smartphone use for the average person?

While it's not as simple as being faster (we'll get to that) 5G has officially launched as a consumer product in the UK. BT-owned EE got there first, and lent me a OnePlus 7 Pro 5G device with unlimited data to test out.

The basic line here is 5G is very fast, but with the caveats that it probably isn't that fast where you live, and it isn't noticeably faster than 4G for most smartphone tasks. Sure, the speed tests slam dunk

4G, but for what people actually do on their phones, me included, I can't yet recommend the significantly higher monthly cost of a 5G contract yet.

Still, it is bloody fast.

Price and availability

EE offers the OnePlus 7 Pro 5G from £59 a month with a £170 upfront handset cost. This gets you 10GB which, frankly, is not enough.

For comparison, you can get the regular OnePlus 7 on a regular 4G contract from EE for £59 per month with a £10 upfront handset cost and 30GB data.

You'd be better off opting for more data, though. 5G is a data hungry technology, as we'll get into, and you can get 30GB data for £69 per month and the phone for £50. Sure, it is expensive, with a 120GB plan hitting £79 per month, but EE offers 'swappable benefits' to counteract chewing through data.



EE offers the OnePlus 7 Pro 5G from £59 a month

These include music or video data passes that allow you to stream from popular apps like Apple Music, Deezer, Netflix or BT Sport without the usage counting against your data plan. This is great as it'll go some way to slowing your data usage, but note that the deals don't include Spotify or YouTube.

You can also buy an unlocked Samsung Galaxy S10 5G (a phone we have not yet tested) direct from Samsung locked to either EE or Vodafone for £1,099. At the time of writing, Vodafone is set to launch its UK 5G network on 3 July, with Three to follow suit in August.

Performance

First, a bit of context. Yes, 5G is fast. But it might not be as big an evolution as 4G was to the regular consumer. 4G represented a huge increase in mobile data speeds over 3G, meaning reliable web browsing and streaming was finally a viable consumer service.

5G isn't just another speed bump. The use of new mobile spectrum does make the network faster but the overall changes to core network structure will increase network capacity as well, and should allow for more devices such as laptops (using powerful mobile chips) to join the party. We have cellular tablets, but they have not become as popular as phones due to similarly priced contracts and device size.

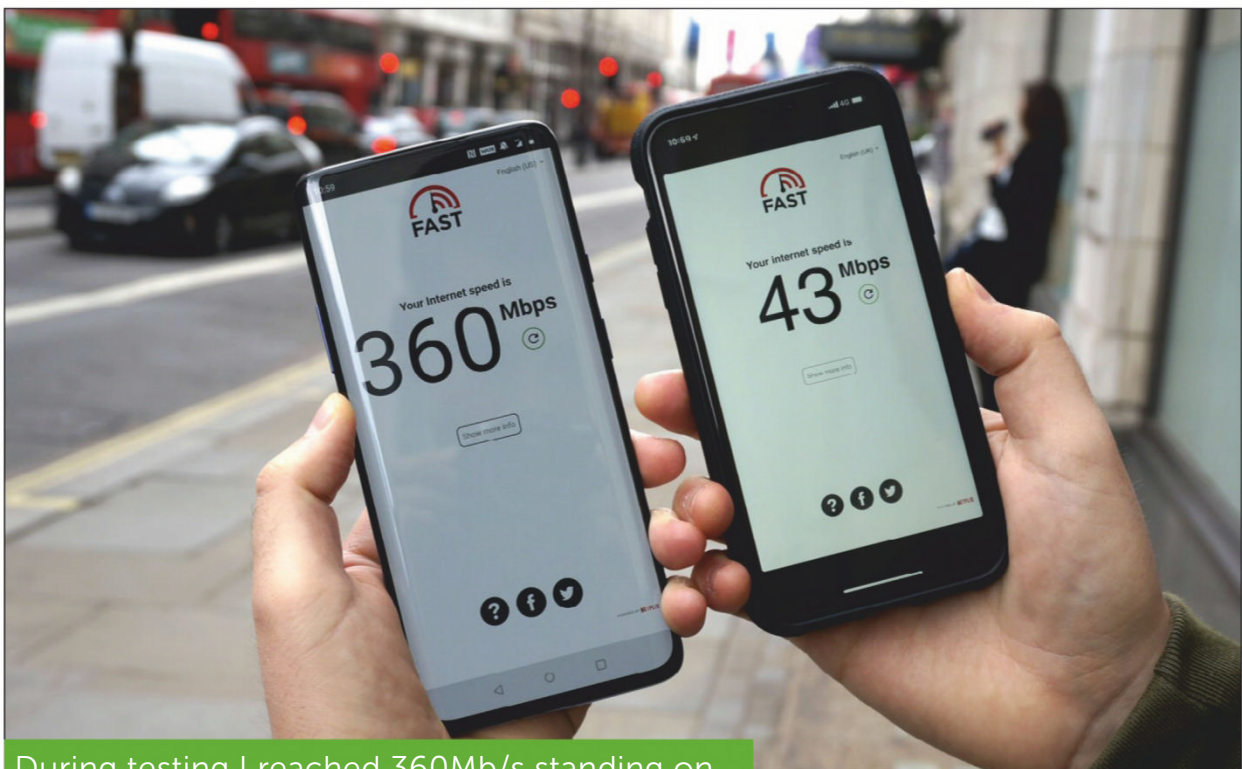
There's also the distinct possibility that home broadband could be replaced by a 5G setup in the not too distant future, such are the gains in bandwidth to outperform fibre optics.

But I digress. I was testing the OnePlus 7 Pro 5G for two weeks in London, where EE literally gave me a map with the six best spots for coverage in the capital. When I went to one of these places (Covent Garden, The Strand, Soho and St Paul’s Cathedral among them), the 5G symbol popped into the status bar and speeds would consistently hit between 150- to 400Mb/s.

BT’s basic fibre home broadband speeds are currently advertised as 36Mb/s.

This is pretty amazing for a wireless mobile device. As you can see, it also trounced the speeds of my personal 4G SIM on the giffgaff network.

During a briefing with EE representatives at St Paul’s I got 400Mb/s download speeds using the



During testing I reached 360Mb/s standing on the Strand close to Waterloo Bridge. My giffgaff SIM could hit a quite respectable 43Mb/s

Netflix-owned Fast speed test app (fave.co/2xf3LZx). Ookla's popular Speedtest (fave.co/2RBxNjv) also heralded similar results, but Fast is easier to photograph given its clear user interface.

Some fellow tech reporters have managed to reach insane speeds that I have not found, including an astounding 980Mb/s on a moving train in London. Out and about, I reached 360Mb/s standing on the Strand close to Waterloo Bridge, one of the recommended test spots. My giffgaff SIM could hit an actually quite respectable 43Mb/s – in the middle of Covent Garden it could only hit 3.8, though the EE 5G SIM was at 190.

Still amazing, but it shows the current fluctuation that a short walk from Covent Garden to the Strand (all of four minutes) can nearly double the download speed. It's also worth noting that when I tested it again in exactly the same spot, it only hit a paltry 12Mb/s. Another go and it was back to the high hundreds.

Availability

5G launched on 30 May in London, Cardiff, Belfast, Edinburgh, Birmingham and Manchester. It will then roll out to more cities in 2019 and 2020 in a gradual launch. You can check if 5G is coming to your postcode at fave.co/2xbNFj9.

Real world use

While speeds are astounding within the speed test apps (and crunch through at least 0.2GB of data per test at the highest speeds – I used over 10GB of data in four days just doing them), most everyday consumer apps don't need to use that much data at once.

I didn't notice the extra bump in speed when streaming video on YouTube in most situations. I found it is most noticeably faster than 4G when downloading files for offline use, such as albums on Spotify, which now take under ten seconds to download.

Downloading films on Netflix is about twice as fast as on 4G in most scenarios, with a 500MB film taking all of a minute most times I tested it. That's great for last-minute film downloads at the departure gate, but when it comes to scrolling through social media, watching the occasional video and WhatsApping, 5G doesn't raise the experience.

Streaming video doesn't use more data than on 4G as it is streaming at the same rate. I found I used 0.2GB data for 30 minutes on Netflix – very usual for 4G, too.

The reason the data plans have so much included is because you're likely to never want to use Wi-Fi as

Downloading films on Netflix is about twice as fast as on 4G in most scenarios

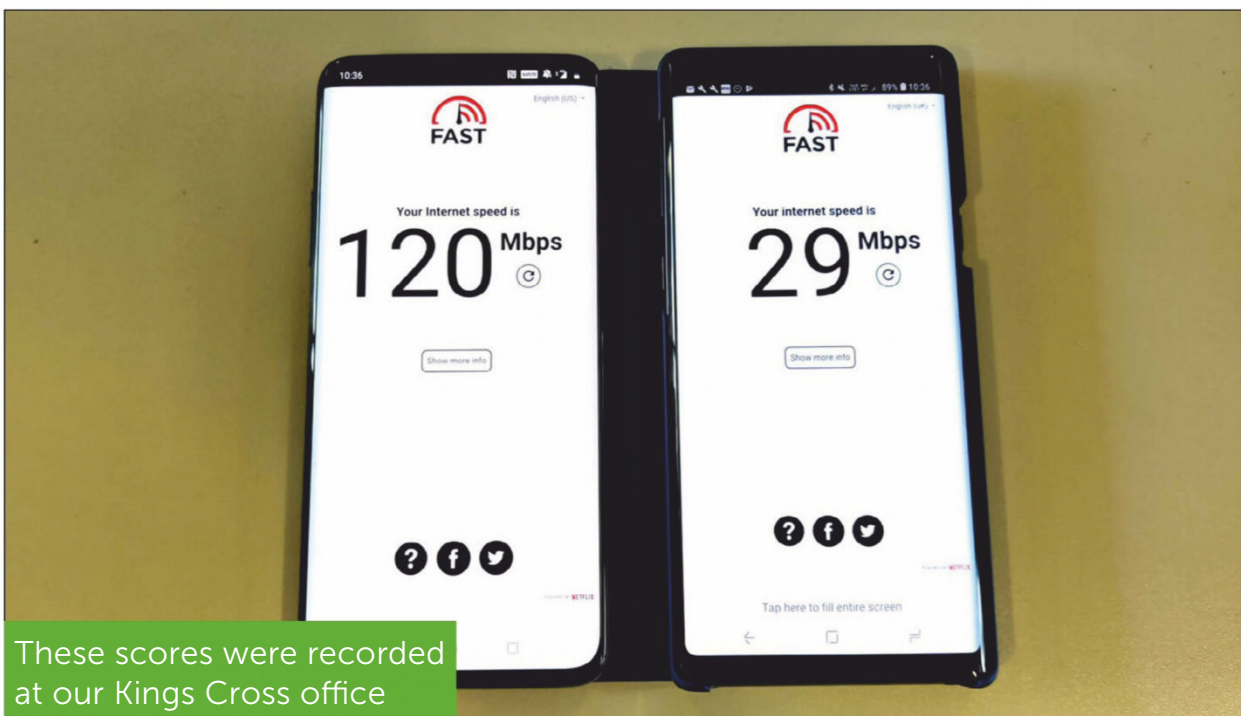


your new data plan will be so fast. At times, literally 200 times faster, as was the case compared to my truly terrible TalkTalk broadband plan.

There’s a more immediate bandwidth advantage to early 5G adopters, though. As fewer people are connected to 5G-specific sites, you actually end up getting faster 4G speeds because of it. A combination of fewer people connected to those sites with the increased backhaul capacity of 5G sites results in a faster 4G speed – as demonstrated here. I took the below image in my office in Kings, Cross which is currently not a 5G site.

Should you get 5G now?

The combination of 5G in London and the already whip-fast OnePlus 7 Pro is a very speedy combination. While 5G isn’t always noticeably faster,



the experience of using this phone is the fastest I've ever encountered. Tap a download icon and things happen straight away – no network congestion, no rotating loading circles.

It's these small things that make the difference in everyday phone use, rather than seeing any real-life advantage to having a 400Mb/s download speed.

Unless you live in one of the 2019 launch cities, you'll probably want to wait. That said, if you're coming to the end of your contract and are going to sign up for another two years, you might be tempted to take the plunge. You'll likely get faster 4G speeds, but check your area first.

On EE you also only have the choice of four handsets, all of which are large and expensive. You might want to wait a year or two for a better selection if they aren't your thing – or if you want an iPhone with 5G, which isn't likely until at least 2020.

Verdict

5G is here, and in the UK EE got there first. Download speeds are insanely quick and everything you do online feels a touch quicker. With an expensive contract and a choice of only four Android phones, you probably should wait a year or so until contracts are cheaper and you actually have 5G coverage where you live. It's not likely to be countrywide until at least 2021 or 2022. But if you are looking for a new phone contract now and live in one of the launch cities, then you might want to consider it for the blazingly fast 5G download speeds, boosted 4G speeds and early adopter bragging rights. **Henry Burrell**



Sony Xperia 1

Price: £849 from fave.co/2RBoErc ★★★★★

Just when we thought Sony had settled into a naming pattern for its flagship phones it changes track again. The grandly named Xperia 1 goes for broke on the latest Sony smartphone philosophy: do what we do best, and unapologetically so.

This means the Xperia 1 is a tall, thin purple 4K smartphone with pretty great cameras. It's an odd, expensive mix of a lot of good things, with some things missing. It's not for everyone, but for once, Sony is comfortable that it isn't – and the phone is all the better for it.

Display

The screen is the place to start with the Xperia 1. After 2017's Xperia XZ Premium boasted the world's first smartphone with a 4K HD LCD display, the Xperia 1 brings you the first ever 4K HDR OLED. Sony loves to be first at smartphone achievements and the display is thankfully excellent.

The resolution is a staggering 3,840x1,644 and has 643 pixels per inch. It's every bit as good as on the industry-best Galaxy S10 but does not have as good daylight visibility. I struggled to see the Xperia 1's display in the brightest conditions.

The move to an incredibly uncommon 21:9 display is so that the Xperia 1 can playback in the same ratio many movies are filmed in. Netflix already displays more than half its films in 21:9, meaning movies on the Xperia 1 are full screen with no letterboxing.



The Xperia 1 has the first ever 4K HDR OLED display

It's also handy to split-screen apps in portrait mode, allowing you to watch video in the top third and use maps in the bottom two thirds, for example – there's enough screen to not make the bottom app too cramped.

There's also no notch on the 6.5in display and leaves Sony as practically the last manufacturer not to introduce one on any of its phones. There's a hint of a forehead, but otherwise this is an unapologetically angular, thin phone that feels more like a sequel to the Xperia XZ1 than the more recent Xperia XZ2 and XZ3.

The company's first OLED on 2018's XZ3 was already good but this one is well calibrated with good colour reproduction, and 4K video looks absolutely amazing on it.

Sony has added a 'creator mode' display setting to go along with the out the box mode, which nicks its CineAlta branding from its high-end video cameras. It basically means faithful reproduction of a specific colour gamut and 10-bit colour HDR specifications.

Sony has also nailed its video image enhancement software, noticeably sharpening video quality via the inclusion of a clever new X1 image processing engine. Watching video on the Xperia 1 is a pleasure, and when the content is 21:9 and in HD, the best on a smartphone at the time of release in June 2019.

Design

That comes at a price, though. Unless you're a film nut who wants a cinema-accurate aspect ratio screen on their phone, the tall design of the phone is weird. While it's slim enough to mean one-handed scrolling



is okay, you can forget about reaching the top of the display with your thumb.

It's not unmanageable but it's very hard to balance in one hand without a permanent pinkie wedged under the bottom edge. Annoyingly, Sony has brought back the side mounted fingerprint sensor (woo!), but in addition to a separate power button (boo!). It was always great to have the sensor on the side under the button. It's very responsive, though – so much so that I actually annoyingly unlocked the phone several times accidentally when holding it as it's right where you want to grip it.

You can still get the 2-in-1 on the Samsung Galaxy S10e, but here with the volume rocker, fingerprint sensor, power button and camera button all on the right-hand side of the phone it's a cluttered design that's hard to get used to.

It doesn't help that the Xperia 1 is one slippery customer – there are slippery glass phones, and then there is the Xperia 1. Put it on any hint of a non-flat surface – sofa arm, book, glass table – and the thing visibly slides towards doom.

Despite the dimensions, I found I grew to really like the Xperia 1's odd form factor. Going back to the iPhone XR made Apple's phone look comically short and chubby, rather than the Sony too tall and thin.

The purple unit I reviewed is not to everyone's taste but is a deliberate hark back to the original Xperia Z of a similar hue that Sony dropped after a while. It's the boldest choice of Xperia 1 – otherwise you can go for black, white or grey.

Cameras

Where Sony excels with its actual cameras, it has usually fallen short with the quality of its smartphone cameras. It supplies hardware to many other manufacturers, but these days smartphone photography is also defined by the software processing that complements great hardware.

The Xperia 1 is the first Sony phone with triple rear cameras: 12Mp f/1.6 main sensor, 12Mp f/2.4 telephoto and 12Mp f/2.4 ultrawide. This is welcome given the XZ3 only had one and lets you get better zoom, but the ultra-wide lens' fisheye warping of the edges of images is off-putting enough to never bother using it.

Until now, imaging on Sony's flagship Xperia phones have lagged noticeably behind. The Xperia 1 rights this wrong – partly – by producing outstanding photos in many conditions. It just feels

REVIEW



Standard shot



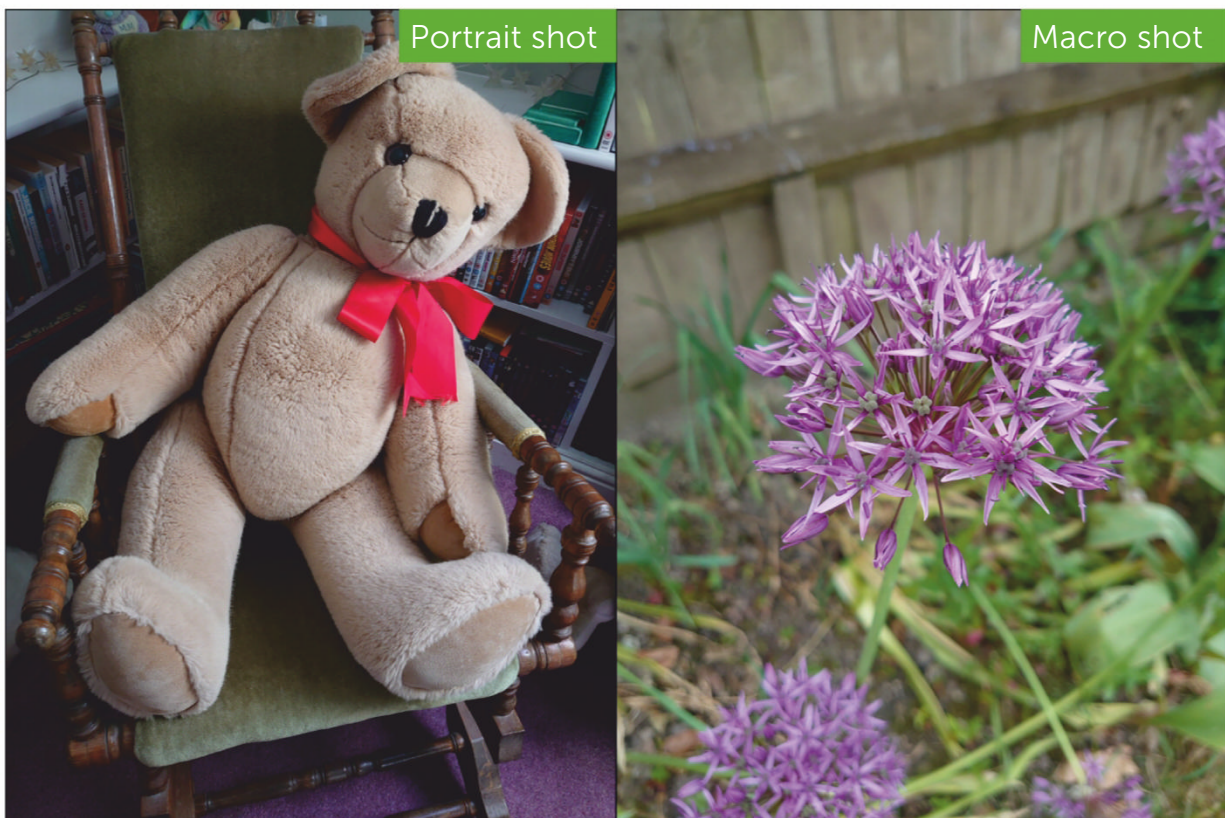
Ultra-wide shot

like you have to fight with the phone a bit in order to get the best results.

This is not a great point-and-shoot camera like the iPhone XS or Pixel 3. Those two phones consistently take great-looking shots with minimal effort. The Xperia 1 is capable of some excellent imaging, but it is a camera setup that rewards you if you know more about photography than the average person.

I found myself having to refocus many shots either by tapping on the display or using the dedicated two-step camera shutter, an addition Sony continues to include and one I love.

Some shots came out perfectly while others looked over exposed or too dark. This is probably down to my lack of pro-photography expertise, but this is my point

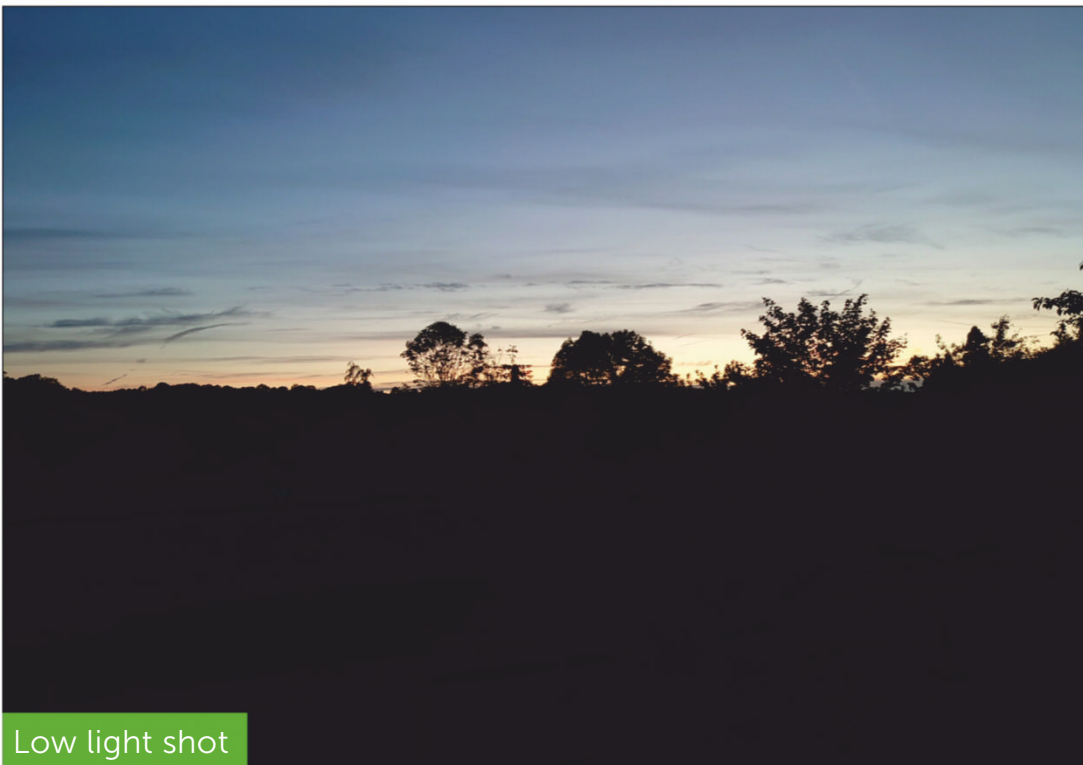


– I can take some ridiculously good photos on the Pixel 3 (if I do say so myself), but the Xperia 1 makes me work much harder.

That said, when I got it right the Xperia 1 took some astonishing photos. Detail is pin-sharp and colours aren't too saturated, though macro shots suffer from a little blur. There is no sign of a dedicated night mode like we've come to expect on phones of this price, which is a shame, but low light shots (as opposed to pitch black) come out well and manage light better than any Sony phone before.

The software-enhanced portrait mode is best left alone, as I got some great results from the natural bokeh of the lenses in auto mode.

Sony is confident enough about the video prowess of the Xperia 1 that it includes a movie-style Cinema



Pro app on the phone to record fully manual video. You will only get good results here if you understand how to use a fully manual video camera. It's fun to play with if you're an amateur though, and a good way into learning how to get good results without a £10,000+ cinema camera.

But, as with video captured in the main camera app, results suffer from lack of decent stabilization. Despite Sony building in a hybrid of OIS and EIS, I found videos shakier than acceptable in the regular camera app (Cinema Pro disables stabilization, so you can use a tripod, slider or alternative).

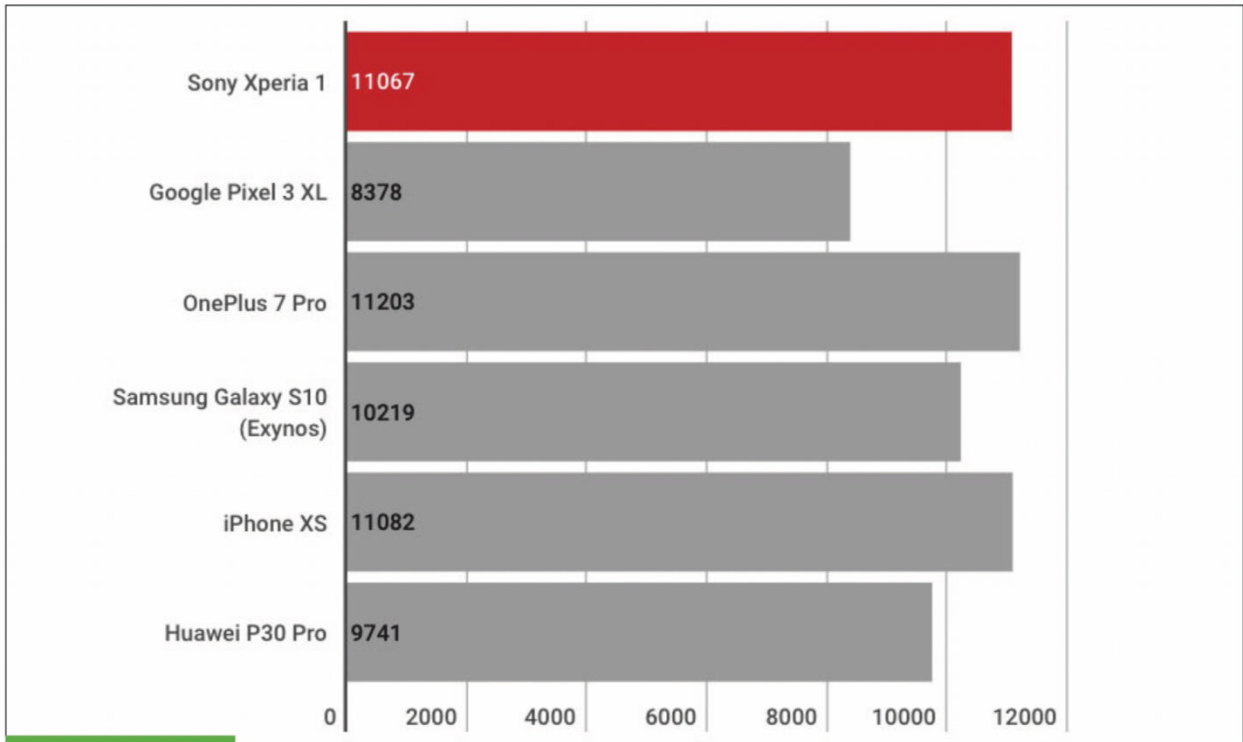
An unfortunate side note is the appalling front facing camera. An 8Mp f/2.0 sensor sounds okay, but Sony has built in infuriating beauty modes into it that are not obviously disabled, and results are always washed out and blurry. Selfies in any sort of low light looked absolutely awful. It's a pretty big oversight and detracts from the phone's appeal considering the beef of the rear triple cameras.

But then again Sony is really leaning into a niche market here. If you love Sony, cameras and cinema, then this is the phone of your dreams. And where other companies might panic that they haven't sold any phones, Sony seems content to buoy its smartphone business with the massive success of its TV, camera and PlayStation businesses and produce quirky products like the Xperia 1.

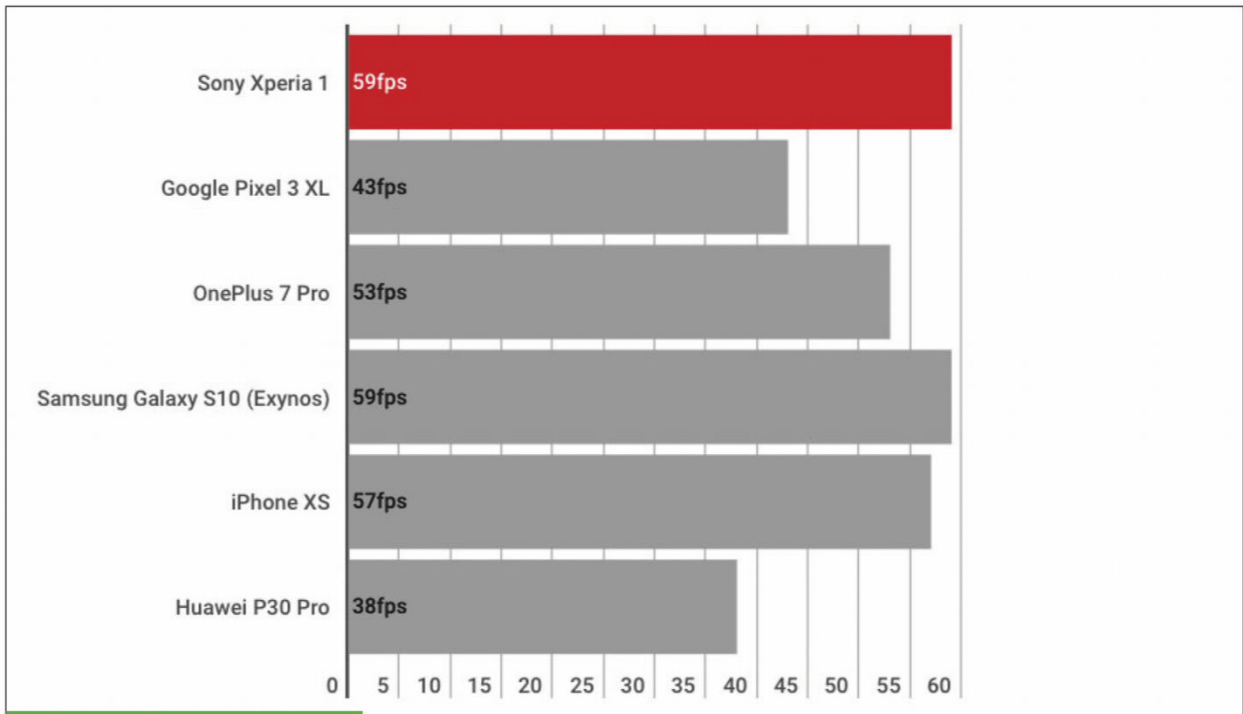
Performance

The Xperia 1 is like a short distance race winner. It screams through every task with ease thanks to the

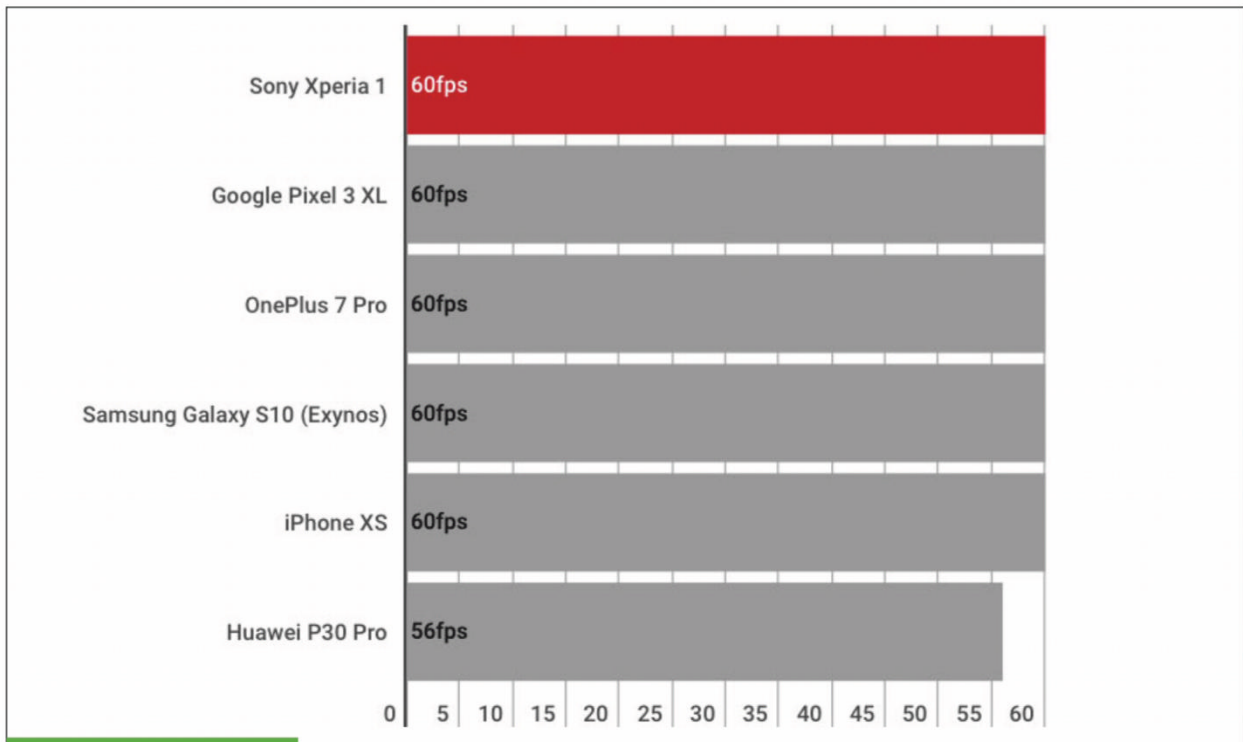
REVIEW



Geekbench 4



GFXBench Manhattan



GFXBench T-Rex

Snapdragon 855. But the battery life is disappointing enough that it doesn't quite cut it over long distances compared to other high-end phones.

Considering it has the first 4K HDR OLED screen in a phone, the 3,300mAh battery is not large enough. I was battery percentage watching more often than I'd like, but having said that I never ran out over the course of a day.

In our battery test it went for eight hours and four minutes before dying, which is miles behind the 11 hours 45 minutes of the Huawei P30 Pro, but it's by no means the worst out there, getting nearly three hours more than our European Galaxy S10 Plus.

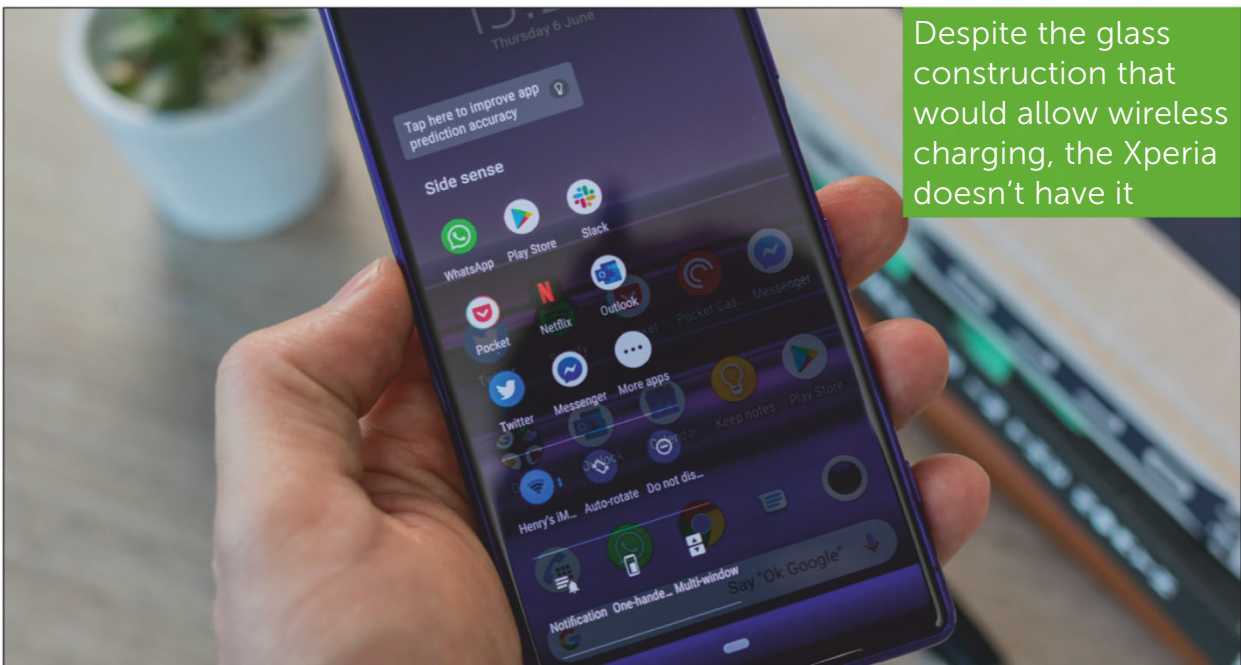
Aside from this, I have zero complaints about performance. It's a ridiculously fast phone, and the

OnePlus 7 Pro is only faster because of its rapid animations and slightly better RAM management. The raw processing power score from the Geekbench app is neck and neck with the iPhone XS:

Features

Sony has added some excellent touches on the Xperia 1, but frustratingly left out others. It has exceptional call quality, something the modern smartphone sometimes neglects. Calls to all networks in the UK were crystal clear and never dropped out, and I noticed the improvement in quality compared to my usual iPhone XR.

There's also IP68 water resistance, perfect for a podcast in the shower. If only the stereo speakers weren't so trebly. Many high-end phones can easily fill a small room with podcasts or radio, but with the Xperia 1 I was reaching for my headphones.



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Cheap constant access to piping hot media

Protect your downloadings from Big brother

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18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



AVXLIVE **ICU**

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>

Luckily there are some in the box, though cheap feeling and sounding in-ears. This is a phone without a headphone jack, but there's a dongle in there to connect the 3.5mm headphones – no USB-C headphones to be seen (though I tested a couple of pairs and they worked fine).

Despite the glass construction that would allow wireless charging, the Xperia doesn't have it. Sony told me it preferred a slim design, whereas a charging coil would make the phone fatter. I don't miss wireless charging, but it's a shame not to see it on an £850 phone. You also don't get any form of face unlock, which is odd, but in keeping with the practically stock version of Android 9 Pie. Sony has kept it very minimal with hardly any changes from what you'll find on an Android One phone. Fingers crossed Sony can keep up with security updates, something the company has been very good with in recent years.

Finally, the side sense gimmick from the XZ3 is on this phone too, and it's still awful. Tap twice on the edge of the screen where it meets the bezel and you are given a software menu of recently used apps, menu options and toggles for one handed mode among other things.

It's difficult enough to get the menu to pop up as your taps have to be very precise, and I found it was always quicker to just go and do the thing you wanted to do normally rather than try and use side sense.

Verdict

The Sony Xperia 1 is a fitting flagship for 2019. It has one of the best displays ever on smartphone,

much improved rear cameras, slick performance and attractively clean software. If you value the unique display above features like face unlock or wireless charging, then it's a good fit for you.

The tall design isn't for everyone, but we like the fact Sony has admitted mainstream defeat. In crafting a phone that appeals to video and cinema lovers it certainly has backed itself into a corner, but if the Xperia 1 is loved by a few people rather than ignored by all people, then Sony has probably achieved its aim.

I found the Xperia 1 a daring, charming smartphone let down only by its temperamental cameras and slightly disappointing battery life. **Henry Burrell**

Specifications

- 6.5in (3,840x1,644; 643ppi) OLED capacitive touchscreen
- Android 9.0 (Pie)
- Qualcomm SDM855 Snapdragon 855 (7nm) processor
- Octa-core (1x 2.84GHz Kryo 485, 3x 2.42GHz Kryo 485, 4x 1.8GHz Kryo 485) CPU
- Adreno 640 GPU
- 6GB RAM
- 264GB/128GB storage
- Three rear-facing cameras: 12Mp, f/1.6, 26mm (wide), 1/2.6in, 1.4µm, predictive Dual Pixel PDAF, 5-axis OIS; 12Mp, f/2.4, 52mm (telephoto), 1/3.4in, 1.0µm, predictive PDAF, 2x optical zoom, 5-axis OIS; 12Mp, f/2.4, 16mm (ultrawide), 1/3.4in, 1.0µm
- Front-facing camera: 8Mp, f/2.0, 24mm (wide), 1/4in, 1.12µm



The Xperia 1 is the first Sony phone with three rear cameras

- Dual-band 802.11ac Wi-Fi
- Bluetooth 5.0
- A-GPS, GLONASS, BDS, GALILEO
- NFC
- Fingerprint scanner (side mounted)
- USB 3.1, Type-C 1.0 reversible connector
- Non-removable 3,330mAh lithium-ion battery
- 167x72x8.2mm
- 178g



Vodafone Smart V10

Price: £105 from fave.co/2RBBYVY ★★★★★

Despite being locked to its network, Vodafone's smartphones are notable for undercutting the price of many rivals.

The Smart V10 is one of the cheapest smartphones you can buy with the latest version of Android, and for its meagre price tag you get a fully fledged experience which warrants a higher price.

While no feature in particular stands out, Vodafone has prioritized the everyday use of the phone, and made compromises in areas the average consumer will rarely notice.

Phone enthusiasts may become frustrated by its limitations, but for many people the Smart V10 will provide everything they're looking for.

Design

Vodafone has redesigned the Smart V10 to look and feel like a modern smartphone. Gone are the thick bezels from its predecessors, replaced by a beautiful 5.9in edge-to-edge display.

The 720p LCD panel itself is pleasing to the eye, providing good detail and impressive viewing angles. The screen gets plenty bright indoors, but in direct sunlight we found it difficult to see at times.

The screen includes a small teardrop notch to house the 8Mp front-facing camera. While in keeping with the current trend of notches in phones, it seems a little unnecessary considering it also has a large chin housing nothing more than an LED notification light, which doubles as a charging indicator.

Nonetheless, Vodafone claims the Smart V10 has an 81 percent screen to body ratio, a hugely impressive figure for a £105 phone. The 19:9 aspect ratio produces a tall, thin chassis that we have become accustomed to with modern phones, making it just too tall for one-handed usage.

On the back, the device borrows another design feature from its more expensive counterparts: dual cameras. The primary 13Mp sensor with autofocus is supported by a secondary 5Mp lens for depth sensing as opposed to a telephoto or wide-angle camera, but the Smart V10 does still offer a software-based portrait mode.

The camera module is slightly raised from the rear of the device, which is 8.2mm thick. Any wobble when resting on a table is very minimal.

The glass casing stretches around halfway down the rear of the device, yet features a Vodafone logo where you might expect a fingerprint sensor on pricier models.

In such an affordable smartphone, corners have clearly been cut, but in some cases this is to its benefit. Despite a plastic backing the device does not feel cheap, and this design choice in fact aids durability and grip.

We would have no hesitation in using this phone case-free, something which cannot be said for the vast majority of modern handsets. The power and volume keys are satisfyingly responsive and tactile, and the statement red power button reminds us of recent Pixel devices and provides a striking splash of colour.

The Smart V10 is only available in the Chrome Pewter colour, which looks sleek and polished, once again defying its price tag. The headset included in the box is among the most basic available, but there are a number of very impressive and affordable headphones which still utilize the included 3.5mm jack.

The phone features two speaker grilles, but don't let that mislead you: the right side houses the single mono speaker while the left is simply used as an echo chamber. As a result, it is extremely easy to block the sound when you use the device, but that is far from a problem exclusive to this or any phone.

The sound is in keeping with many single downward firing speakers; it's fine for watching the



occasional video or playing podcasts, but don't expect room-filling audio.

The Smart V10 is charged via Micro-USB as opposed to industry standard USB-C. The 3,400mAh battery does not support any form of fast charging, and in our testing it charged just 22 percent in 30 minutes from empty.

There is also no wireless charging or IP rating for water and dust resistance, but the few drops we got on the device in rainy weather had no adverse effect. No NFC also means this phone can't do contactless payments.

These are minor inconveniences as opposed to deal breakers for many people, and their omissions are more than acceptable in this price bracket. The only variant of this phone is the 32GB model, but this is expandable up to an additional 128GB through the

use of a microSD card, which we would recommend to the majority of people.

We found the internal storage was quickly filled by a few large applications and offline downloads from video and music streaming services.

Performance

The Smart V10 is equipped with a 2GHz Snapdragon 429 processor, described by manufacturer Qualcomm as “the entry-point of mid-tier platforms”. Combined with the Adreno 504 GPU, this phone has slightly lower specs than mid-range models, but is most similar to the Nokia 3.2. As with most aspects of this phone, the performance must be taken in the context of its price. The 3GB of RAM is plenty for the Smart V10 to deal with basic tasks without a hitch, so you will have no problems surfing the web, browsing social media or checking your email, with scrolling and on-screen gestures all fluid and satisfying.

However, we wouldn't recommend this phone for anything beyond the most basic games. Candy Crush runs fine, but while playing higher-intensity games such as Asphalt 9 the frame rate drops horrendously, to the point where it becomes very frustrating to play.

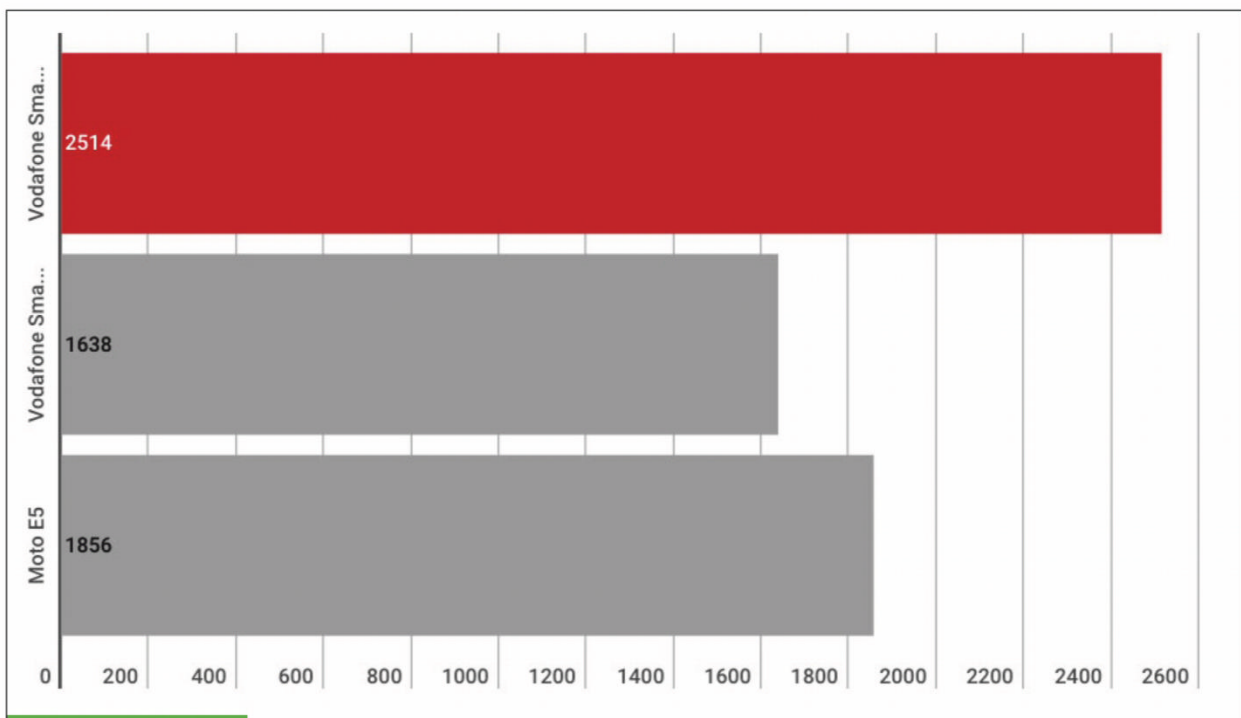
The most significant disparity between the Smart V10 and more expensive handsets is its performance in benchmarks. The T-Rex and Manhattan tests on GFXBench recorded results of 17- and 9fps respectively, a far cry from flagships which regularly maintain 60fps on both tests.

The benchmarks below compare the phone to the older Vodafone Smart N9 and the Moto E5, a

phone with similar specs and price. While this clearly demonstrates the V10's unsuitability to high-intensity tasks, those figures can be misleading. There will be few everyday tasks which put a strain on the internals like these tests do. The phone comes with 3,400mAh battery, more than enough for a full day's usage considering its lower resolution LCD screen.

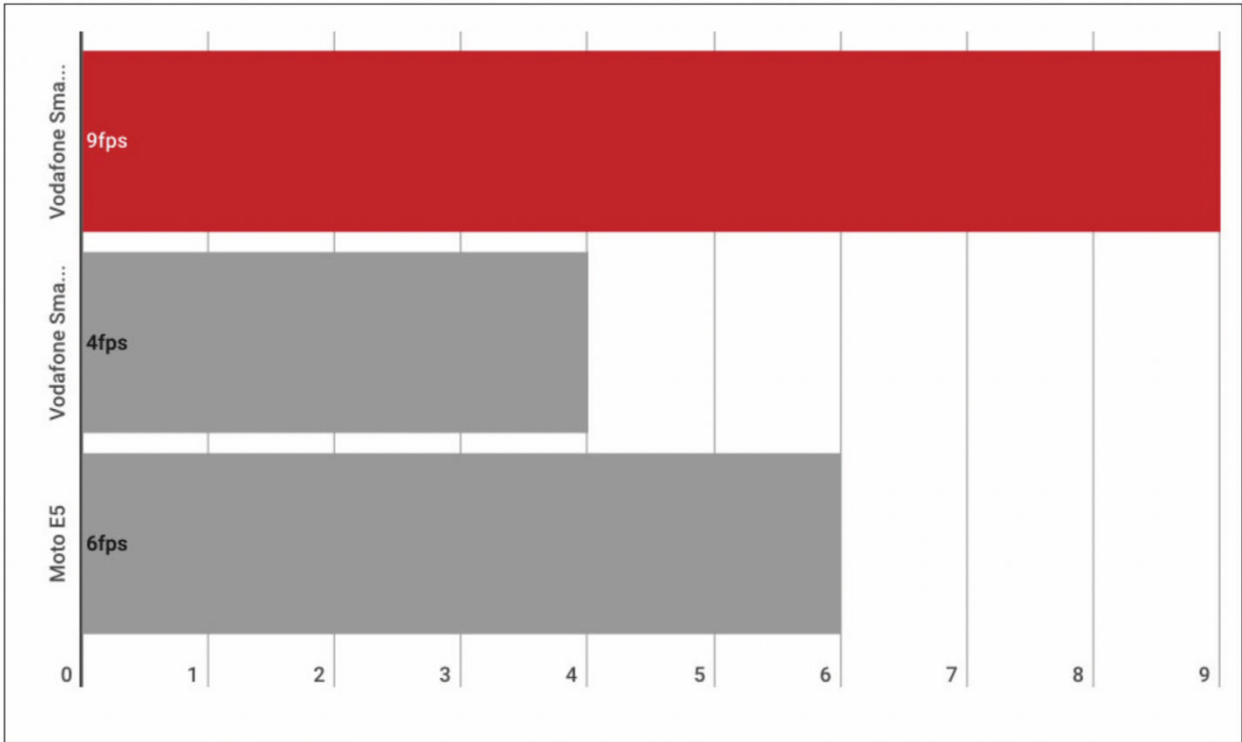
Indeed, in Geekbench 4's battery test we recorded a hugely impressive 10 hours and 29 minutes, which at the time of writing is comfortably in the top 10 for best battery life we've ever tested on a phone at *Android Advisor*. It charts behind only a handful of smartphones, including the OnePlus 7 and industry-leader Moto G7 Power.

We experienced no issues in connectivity with Wi-Fi 802.11 built-in, while 4G performance worked

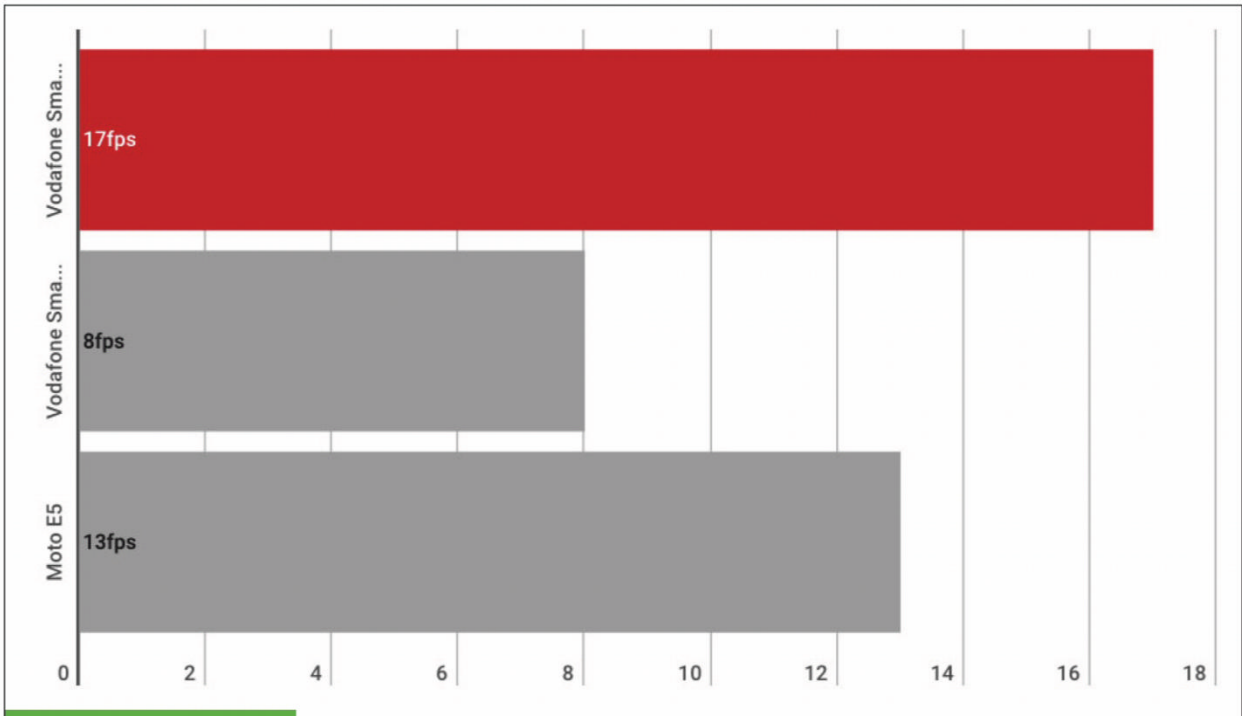


Geekbench 4

REVIEW



GFXBench Manhattan



GFXBench T-Rex

perfectly fine when the signal was strong. Despite Vodafone supposedly having at least 99 percent 4G coverage in the UK, we found the service to regularly drop out, particularly outside of London. However, if you do find somewhere with a strong signal, you can easily use the device as a personal hotspot.

The Bluetooth connection worked consistently well, but it doesn't support the simultaneous playback of audio from two different sources, as is available on Bluetooth 5.0.

Our experience with the GPS was unreliable. Navigating an unfamiliar environment using Google Maps became frustrating, leading to wrong turns on a number of occasions. This is something you should bear in mind if you plan on regularly using your phone as a satnav, although this may have been as much to do with the software as the hardware.

Software

The Smart V10 comes with Android 9.0 Pie out of the box, and we were prompted with an immediate security update after setting up the phone. This is impressive on such a cheap phone, but it remains to be seen how long the device will be supported or if it will get the upgrade to Android Q when it is released later this year.

Vodafone typically sticks with 'stock' Android for the most part, keeping bloatware to a bare minimum. There are a few apps you will be encouraged to download, but they are non-disruptive and can easily be uninstalled. As with many Vodafone handsets, the Smart V10 includes parental control options,

making it easy to monitor and restrict children's usage, particularly if it is their first smartphone. This is a welcome addition, but it unfortunately doesn't include the Digital Wellbeing functionality that was made available for the first time on Pie.

But the Smart V10 includes Google features that aren't available on some more expensive Android phones, such as smart notifications and access to Google cards to the left of the home screen.

Core Android features such as a blue light filter, quick launching of the camera and easy triggering of Google Assistant are all here. Split screen worked surprisingly well, even with video playback and web surfing taking place simultaneously.

The phone even comes with an FM radio, reminiscent of feature phones of the past as it requires you to plug in headphones to act as a receiver. It is a nice touch and a useful feature in a budget phone.

As mentioned there is no fingerprint sensor, but the Smart V10 features face unlock as well as the traditional password, PIN or pattern-based security options. In our testing this worked well, but it's a little slow and not secure enough to be used for biometrics.

Cameras

We were pleasantly surprised by the cameras on this phone. The dual set-up includes a primary 13Mp shooter supported by a secondary 5Mp sensor for depth detection. More than ever the quality of smartphone photos is dependent on software, as has been shown by Google's Pixel phones in recent years. The Smart V10 includes a simple, clean camera

UI with all the features you'd expect in a modern smartphone camera, such as panorama, slow-mo and manual toggles. The AI camera features smart scene detection, but we didn't see significant differences between when it was turned on and off.

If you temper your expectations and remember that this is a £105 phone, shots from the Smart V10 have an impressive level of detail and dynamic range. They would be serviceable for use on social media, but you might want to step up to a more capable camera if you plan on printing or even framing your shots.

Despite being purely software-based, the portrait photos were remarkable for a phone at this price point. The subject and background were nicely exposed, and edge detection was generally good.



REVIEW



Macro shot



Portrait shot



Low light shot

However, the absence of a telephoto lens means image quality declines sharply when using the digital zoom in all modes.

The front-facing camera is useful for the face unlock but little else. The 8Mp sensor produces washed-out selfies with unnatural colours and the portrait effect is significantly less impressive, so step up to something like the Google Pixel 3a if this is important to you.

On the video side, the Smart V10 supports 1080p video at 30fps. While the quality is decent, it is badly let down by the lack of image stabilization of any kind, meaning footage remains jittery unless you maintain an incredibly steady hand. The microphone on the device is usable, but don't expect audio quality rivalling the likes of the LG V40.

Verdict

On the face of it, a low resolution screen with a notch and chin, Micro-USB slow charging, plastic back and no image stabilization signals a phone that should be avoided. Yet, despite those potential drawbacks, the Smart V10 more than makes up for it with a smooth user experience and impressive cameras for the price.

Considering where it is positioned in the crowded smartphone market, it provides a more complete experience than expected, and could easily have been mistaken for a more expensive handset.

Being able to stand out from the crowd of other phones vying for your attention is especially difficult in 2019, yet the Vodafone Smart V10 manages to do so for all the right reasons. **Anyron Copeman**

Specifications

- 5.9in (1,560x720; 291ppi) IPS LCD capacitive touchscreen
- Android 9.0 (Pie)
- Qualcomm SDM429 Snapdragon 429 processor
- Quad-core 2GHz Cortex-A53 CPU
- Adreno 504 GPU
- 3GB RAM
- 32GB storage (microSD up to 256GB)
- Dual rear-facing cameras: 13Mp, autofocus; 5Mp
- Front-facing camera: 8Mp
- Dual-band 802.11b/g/n Wi-Fi
- Bluetooth 4.2
- A-GPS
- Non-removable 3,400mAh lithium-ion battery
- 151.3x69.9x8.2mm
- 145g



Withings Move

Price: £59 from fave.co/2xbtrX6 ★★★★★

Fitness trackers are a dime a dozen these days, so it's hard for even established players like Withings to stand out. The Move does its best by offering core features at a friendly price and letting the design do the talking – with a bit of help from you. That's because while the standard issue Moves look attractive enough, the real selling point is customizability: you can get a Move in a load of different colour combinations and even pick the design of the watch face itself.

Design

The Move looks more or less like a standard sporty wristwatch. The slim body comes with a rubber-y wrist strap, and is lightweight and unobtrusive enough that you'll almost forget it's there. There's a single button on the right side, and that's about it.

It's available off the shelf in five colour combinations: a black body with black strap (pictured), black body with a mint strap, and a white body with mint, blue, or coral straps. Head into the customization and you get a lot more options: nine different strap colours, ten activity tracker dial colours, five case colours, and 13 different faces ranging from plain colours to interesting Venetian speck designs.

Build quality is mostly solid, and the strap is comfortable, but whatever plastic the face is made of is definitely a bit too soft. After only a week or two of day-to-day wear it's already picked up a few scuffs and scratches, and it's only going to get worse. It's not too bad – nothing that gets in the way of using the thing – but if you worry about keeping your tech pristine then this might get on your nerves.

The face has two dials: the standard watch face and a smaller central dial that goes up to 100. This is your step count for the day, measured not in steps (100 would be manageable even for the laziest among us) but in percentage. That means you can use the accompanying app to set any step goal you'd like, and get real-time updates on your progress from your wrist.

Once you hit 100 percent the dial resets to zero and begins to climb again, so it will still track your

progress beyond your goal. It then automatically resets to zero at midnight every night.

There's other functionality baked in the Move of course, but Withings keeps it all in the app, freeing the watch itself to be simple, minimalist, and easy to read. That means the fitness tracking never gets in the way of the timekeeping, and this is a device you'd be happy to use to replace your existing watch, rather than merely supplement it.

Fitness tracking

So beyond how it looks, what does the Move actually do? The core fitness tracking is the previously mentioned step counter, which is the only bit of data that sits on the watch itself. The Move will record your steps during the day and sync that data with the accompanying Health Mate app, which lets you change your daily goal, get more detailed information on your days steps, and look at historic data.

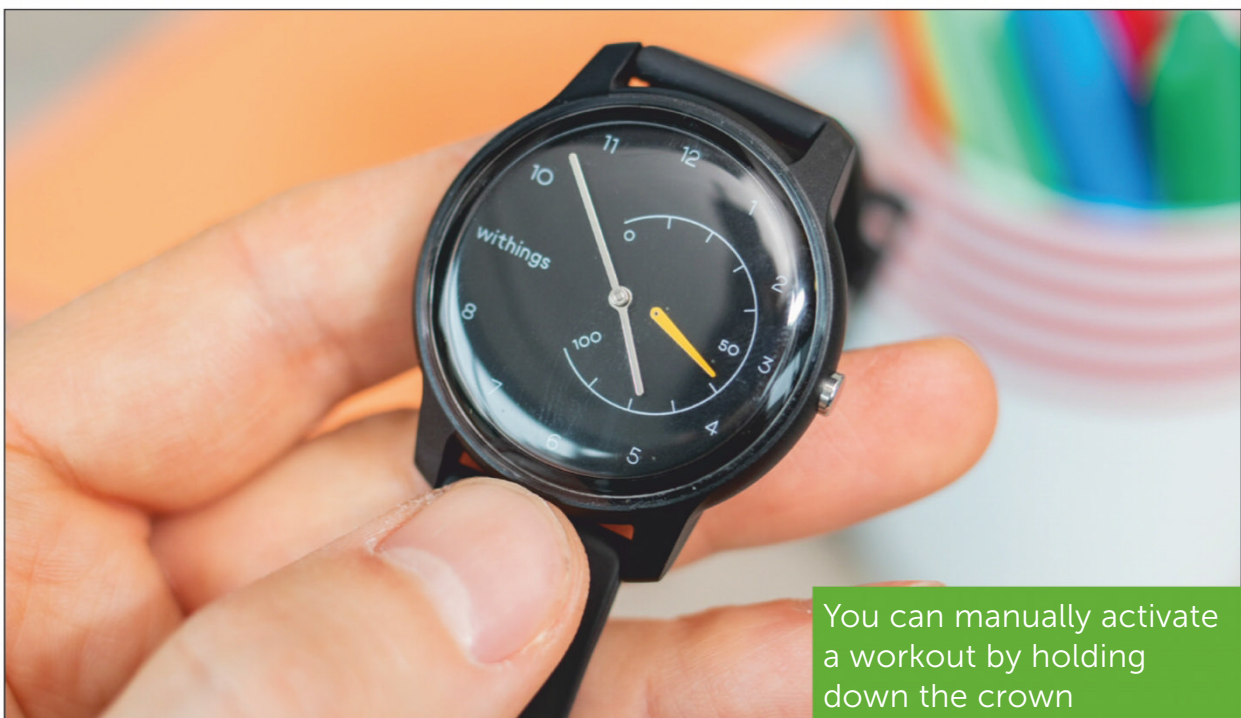
The Move will record your steps during the day and sync that data with the accompanying Health Mate app



Automatic exercise detection means the Move will track your walking, running, cycling, or swimming by default, but you can also manually activate a workout mode to track those or other activities, running from tennis and squash to yoga, and even windsurfing.

Holding down the crown for a second begins the workout, resetting both dials to zero. The regular watch hands then become timers, recording how long you've been exercising, while the step counter displays only your steps during that period. Holding the button again ends the workout, while a quick double-tap lets you see the time and your overall step count before returning to the workout.

Head into the app after you're done and you'll find a recording of the duration, distance and pace (if applicable) and an estimate of your calorie burn – though without a heart-rate sensor you should



definitely take this with a pinch of salt. As long as you keep your phone with you you'll also get a map of your route on a run/walk/cycle, driven by the phone's GPS.

The Move won't just track your activity, though – it's also great at inactivity. Wear it overnight and it'll track your sleep, giving you info on the duration and depth of your rest. It then factors in how regular your sleep schedule is to give you a daily 'Sleep Score' along with feedback on how you can improve it.

You can also take advantage of sleep monitoring for your alarm – you can use the app to set an alarm window, and the Move will try to detect the optimum moment in your sleep cycle to nudge you awake.

You can link the app up to the likes of Google Fit or Apple Health, along with more specific apps like RunKeeper or MyFitnessPal, so it's easy enough to keep all your health data connected. Data should in turn sync from the Move to your phone automatically every few hours, but this seemed a little shaky on my Huawei P30 – though opening the app forces a sync, so as long as you keep an eye on the app every now and then you shouldn't lose any data.

I've already mentioned swim tracking, but in case that didn't give it away, the Move is waterproof. It should be able to survive up to 50m depth – so it'll definitely survive a few laps in the pool or a shower. Pressing the crown underwater breaks the seal and risks damaging it though, and prolonged saltwater exposure isn't good for it either.

There's one final edge that the Move has over most of its rivals: battery life. Forget counting in days or

even weeks, the Move is expected to last a whopping 18 months at a time, so you really won't ever have to think about charging it or worrying about it dying. The downside is that it uses a standard CR2430 watch battery, and to replace it you'll probably need to go to a jeweller or watch shop – especially since botching the job yourself could accidentally ruin the waterproofing.

Verdict

The Move is a slick fitness tracker from Withings that's ideal for anyone who wants to keep things simple. It only does the basics, but it does them well, and the analogue form factor keeps things clean and easy to read. The 18-month battery life is obviously a major selling point, and the customizable designs are a big appeal, too. A heart-rate sensor would really seal the deal, but it's an understandable omission at this price point, and with waterproofing, sleep tracking, and great app support, everything else about the Move is easy to love. **Dominic Preston**

Specifications

- Battery life up to 18 months
- Compatible with Android (6.0 and higher); iOS (iOS 10 and higher)
- Water resistant to 50m
- 195x38x13mm
- 32g



Best budget phones

Buying a cheap smartphone no longer means losing out on all the latest features or performance. **ANDROID ADVISOR STAFF** report

Flagship phones are more expensive than ever, but as the top-end gets better so do more affordable models. It's possible to buy a mobile phone on a budget of under £200 and still get a handset capable of everything you throw at it. The best budget devices are also more attractive in the long-term thanks to cheaper contract prices, though you might prefer to buy these outright and then pay only for your minutes, texts and data.

In our experience, the ideal way to get a cheap phone is to buy it SIM-free then grab a great-value SIM-only deal. You won't be paying £50 per month for a phone for the next two years, and you can swap it for a newer model whenever you fancy it.

Over the following pages we rank the best budget phones on sale right now.

1. **Xiaomi Redmi Note 7**

Price: £199 from fave.co/2KGtORV

Following a Chinese launch in January, the Redmi Note 7 officially is now on sale in the UK, charging straight into the top spot in both our UK and Chinese budget phone charts, knocking the Mi A2 Lite off its perch. It's the first phone from newly spun-off Xiaomi sub-brand Redmi, and as such it marks a huge departure from Redmi as you know it.

Headlining is a 48Mp dual-lens camera, and Redmi Note 7 was actually the first Xiaomi phone to pack such a high megapixel count – though Mi 9 then came along and did it better. There are some similarities between this budget phone and Xiaomi's flagship, but Redmi Note 7 is much more closely aligned in specs and performance with the Oppo F11 Pro, another Chinese phone that has not yet gone on sale in the UK (and may not ever do so).

It's also got a large 6.3in Full-HD+ screen and promises all day runtime from a 4,000mAh battery with Quick Charge 4 support. Plus some users will be very happy to see the inclusion of a traditional 3.5mm headphone jack.

The Redmi Note 7 has a large 6.3in Full-HD+ screen and promises all day runtime



Xiaomi has kept down costs by specifying a mid-range Snapdragon 660 chip and 3- or 4GB of RAM, allowing this budget Android to be available from as little as £179. That's for the 3GB RAM, 32GB storage model, while the 6GB RAM, 64GB storage model we review here costs £199. There's also a 128GB storage version at £249. You can choose from Space Black or Neptune Blue colour options.

Design

The Redmi Note 7 is not all that dissimilar in design to the flagship Mi 9, which packs a fractionally larger (6.39in) screen into an ever so slightly smaller chassis. Both have tall 19.5:9 panels and slim bezels – naturally slimmer on the Mi 9, but the only place this is really obvious to the untrained eye is on its smaller chin.

Each also feature a Dot Drop (waterdrop-style) notch to maximize the available screen space and house the selfie camera, which is more obvious on Mi 9 with its larger 20Mp sensor (Redmi Note 7 has a 13Mp front camera). There's also a blink-and-you'll-miss-it slit at the extreme edge between the screen and frame for the earpiece.

Around the back you'll find some more obvious differences, however, with a dual- rather than triple lens camera on the Redmi Note 7, the Redmi rather than Mi logo, and a physical fingerprint sensor. All members of the flagship Mi 9 family now use an in-display fingerprint sensor.

Arguably physical fingerprint sensors typically work better than these early in-display versions, and though it might be a fancy new feature to have the omission is not a game-changer.

We tested the Black version so were unable to enjoy the gradient finish of the Blue model, but in pictures it looks gorgeous. With a glass back and front the Redmi Note 7 has a very premium design for a phone at this price point, and is only fractionally thicker than Xiaomi's flagship family at 8.1mm, though you will notice that glossy frame is plastic rather than metal. That extra space inside the case enables it to include a capacious 4,000mAh battery, too, matching the spec of the recently announced Mi 9T.

Something you won't find on Mi 9 phones (save for the Mi 9T) is the Redmi Note 7's 3.5mm headphone jack, which sits on the top edge of the phone alongside another increasingly rare feature: an IR blaster. While phone makers are rapidly making

the switch over to USB-C audio, there are still plenty of users who want to use their existing earphones without an adaptor. Redmi Note 7 also has a bottom-firing mono speaker for audio.

At 6.3in the display is expansive, and ideal for watching high-resolution video and playing games. This is not the same AMOLED technology on Mi 9, but it's still good for the money, and actually nearly as bright – we recorded 398 nits using a Spyder. With a 2,340x1,080 Full-HD+ resolution everything is super-clear, too.

Although the Redmi Note 7 runs MIUI 10, on our review sample the system-wide Dark Mode setting found in the flagships is not available. It's possible this will come in the next update, with the Redmi running 10.3.2.0 and our Mi 9 running 10.3.3.0. This is useful not only because it seems to be the latest trend to

With a glass back and front the Redmi Note 7 has a premium design for a phone at this price point



do everything in Dark Mode but because it drastically reduces the screen's impact on battery life.

The Redmi Note 7 also lacks the Ambient Display (always-on) mode found in Xiaomi flagships, which can additionally help you maintain battery life by reducing the frequency with which you feel you need to wake the phone to check the time or notifications. That could be an issue here, since Redmi Note 7 has the most ridiculous notification LED we've ever seen – it flashes up below the screen but is the tiniest little dot you could easily miss it completely.

None of Xiaomi's current smartphone line-up is waterproof, though we wouldn't necessarily expect to find this feature at this price anyhow. Xiaomi also keeps down costs by excluding wireless charging from this phone, though it does support Quick Charge 4 and is supplied with a 10-watt USB-C charger.

As with all Xiaomi phones you'll also find a silicon case is supplied, a nice touch given that these are not easily obtainable in UK High Street stores. The Note 7 does feature Gorilla Glass 5 to help protect it from scratches, but it is not infallible.

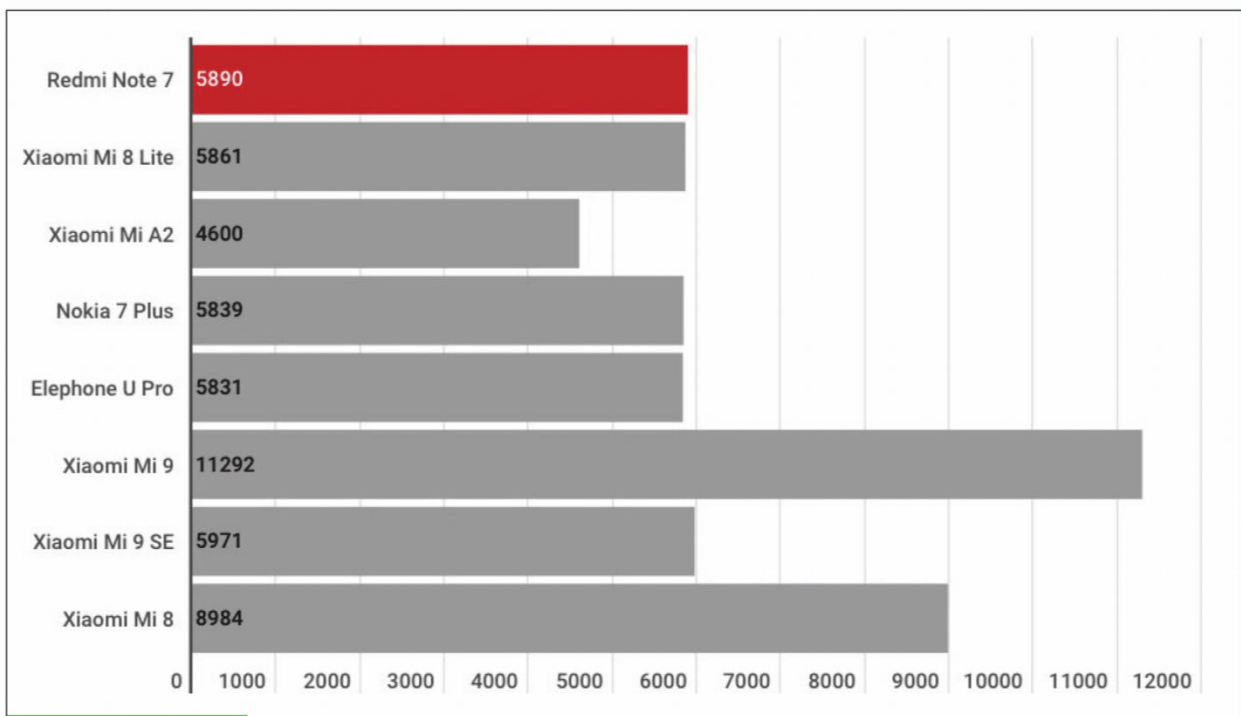
Performance

The Note 7 is fitted with a 2.2GHz Qualcomm Snapdragon 660 14nm chip, which integrates an 850MHz Adreno 512 GPU. This is a step down from the also mid-range Snapdragon 712 and 730 found in the Mi 9 SE and 9T, but there's not a huge difference in performance – at least not anything the average user would be able to perceive – as you'll see in the comparison charts below.

You'll have seen this chip before, in the likes of the Xiaomi Mi 8 Lite, Xiaomi Mi A2, Nokia 7 Plus, Samsung Galaxy A9, Elephone U Pro and so forth. And while the Redmi Note 7 is not significantly faster than any of those other phones that use it, something you should note is that it is significantly cheaper.

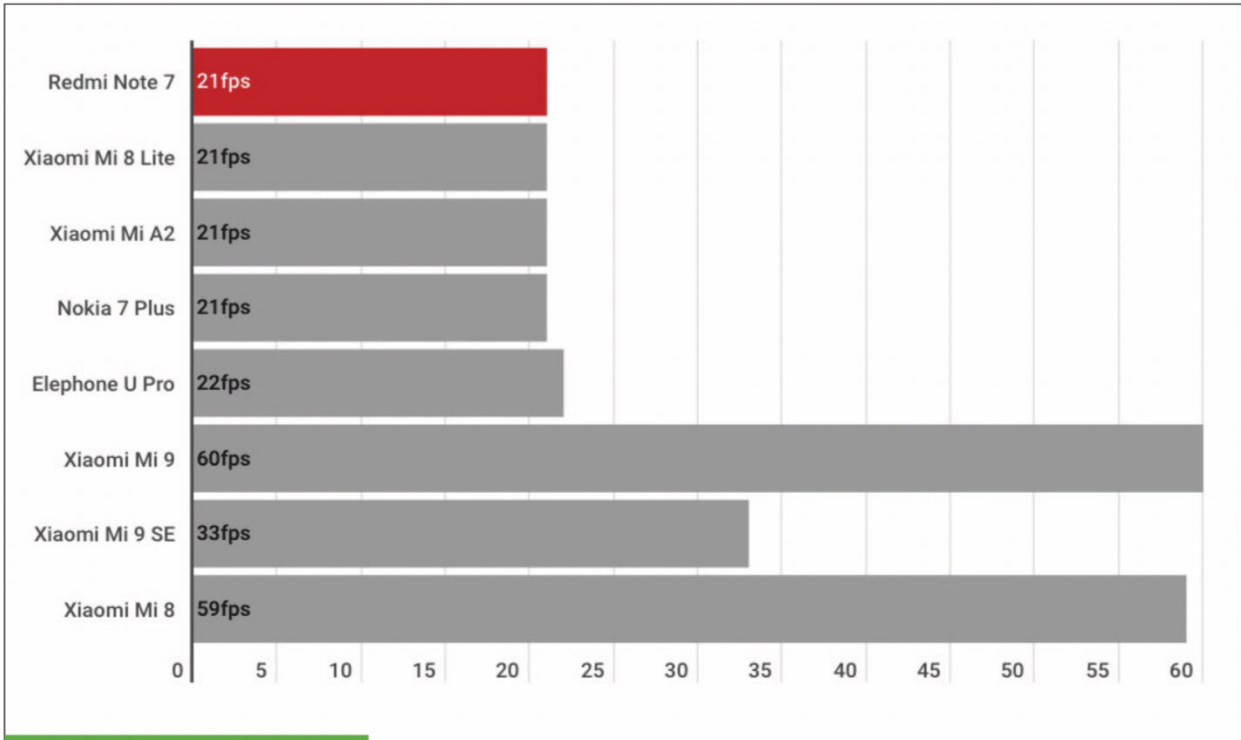
The Redmi Note 7 offers capable – if not flagship – daily performance, and provided you don't turn up the detail too much some very playable frame rates. In GFXBench's T-Rex and Manhattan tests we recorded 46- and 21fps, for example.

The 4,000mAh battery inside is good for a day's use, but no more. In Geekbench 4's battery test we recorded seven hours, 16 minutes, which is actually a pretty middling score and a little lower than we had anticipated given the huge capacity of the battery.

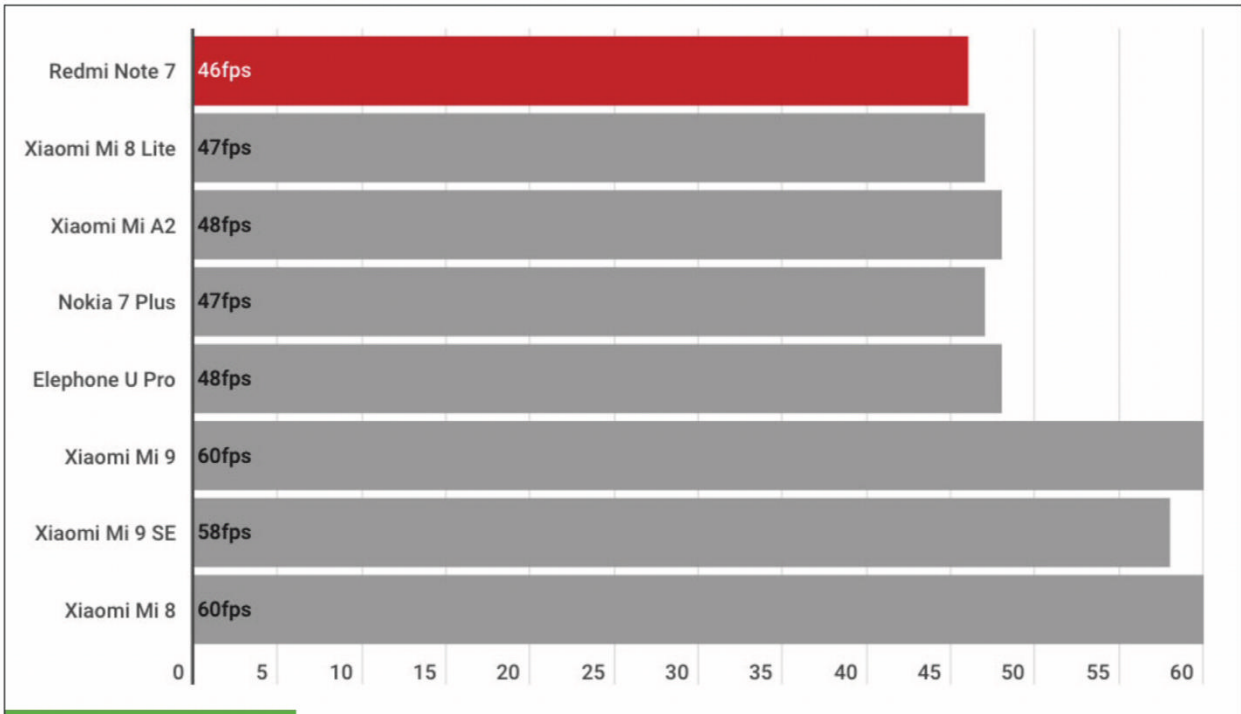


Geekbench 4

ROUND-UP



GFXBench Manhattan



GFXBench T-Rex

As we mentioned earlier on in this review you get a choice of 3- or 4GB of RAM. We tested the latter, and this is the version we recommend for the best performance, especially when it costs only an extra £20.

A major advantage of Redmi over Mi is its support for storage expansion, so there's no reason why you shouldn't opt for the lower-capacity version and bolt on extra storage later, if and when you need it. Redmi Note 7 can accept microSD cards up to 256GB via a hybrid SIM tray – you must choose between dual-SIM functionality and storage expansion. If you do opt for a second SIM instead, know that either SIM slot can be used for 4G data, but unlike with the Mi 9 family you can't use 4G on both at once.

In terms of connectivity there's also dual-band 802.11ac Wi-Fi, Bluetooth 5.0, GPS and an IR blaster. You won't find NFC for making mobile payments, so if this is important to you step up to the Mi line.

Cameras

For a budget phone the Redmi Note 7's cameras are pretty good, though not quite as good as the marketing might have you believe.

The star of the show is a 48Mp lens that by default actually takes 12Mp shots. This is because it combines four pixels into one, averaging out the quality, exposure, colours and so on to create one significantly better-looking super pixel.

This is paired with a 5Mp secondary lens for blurred background (bokeh) shots, and together the Note 7 is capable of some decent – if a little dull –

ROUND-UP



Standard shot



HDR shot



photography, given good lighting. Zoom right in and some noise is visible, but zoomed out the results are more than acceptable for a sub-£200 phone.

In low lighting the camera has more work to do, and even in Night mode it still struggles. Here you need to be really careful to keep the camera still for what feels like forever as it processes the shot. Though it did a good job of picking out different colours, including the different shades of black, text can be a little fuzzy and edges less well defined. Not a bad result, but equally not the best.

This is an AI camera, which means Xiaomi's software can intelligently set an appropriate preset for the shooting scenario. The app is very easy to use, and you can quickly switch between photo and video,

Portrait, Night, Square, Panorama and Pro modes, and there's a shortcut for preinstalled Google Lens right within the app, too.

There's also an option to shoot in 48Mp, though all this is going to really do for you is gobble through your storage, since the results are not any better for the extra pixels.

The Redmi Note 7 supports 1080p video capture at 30- or 60fps with image stabilization, but 4K and slow-mo video is off limits.

Around the front is a 13Mp AI camera for selfies, and in this mode the app offers quick access to various beauty settings.

Software

The Redmi Note 7 runs MIUI 10, which is a custom version of Android 9 Pie. Since we're using a Global ROM model it comes preinstalled with Google services and an English-language keyboard and interface, so setup is as simple as on any Android phone.

You will find Xiaomi offers its own version of most Google apps, which does mean there's some duplication here, and most cannot be deleted (or removed from the app tray-less home screen, though you can tuck them away in a folder where they will remain out of sight and out of mind). This is for good reason, since Chinese ROM MIUI devices don't have those Google apps. Some of these apps are pretty decent, however, so either use them, or don't – there's enough storage that you don't really need to worry about them. We noted earlier that the Redmi Note 7 currently lacks the Dark Mode and Ambient Display

The Redmi Note 7 runs MIUI 10, which is a custom version of Android 9 Pie



found on the Mi 9 family. The software is pretty much the same in other respects, and there are some great extras only found on Xiaomi phones such as Dual Apps and Second Space.

A Split-screen mode is also found in the recents menu, with is accessible either from the on-screen button or by swiping from the bottom of the screen and then pausing before lifting your finger in the gesture-only Full Display mode.

While the notification LED is so pathetic that you're likely to miss it completely, you do get individual app control over which are allowed to display notifications on the lock screen or float at the top of the screen, which means only the most important will be allowed to distract you. Finding your way around the settings may not be immediately obvious, however.

Verdict

Redmi Note 7 is a very decent mid-range phone with a budget price. In the UK budget smartphone market none of its similarly priced rivals (think Mi A2 Lite, Honor 10 Lite, Moto G7 Power) even come close.

In design it's not all that far removed from Xiaomi's flagship, with a similarly large and almost as bright display, but it's not of the same quality. In performance most users would not be able to separate Redmi Note 7 and Mi 9 SE, and it's as capable as many phones costing £350.

Compared to the flagship line it adds microSD support and a headphone jack, but loses the wireless charging, in-display fingerprint sensor and NFC for mobile payments. The triple-lens camera is here reduced to a dual-lens model, but still has a huge 48Mp lens headlining.

On paper the capacious 4,000mAh battery looks amazing; in reality you should get a full day's use from it. **Marie Black**

Specifications

- 6.3in (2,340x1,080; 409ppi) IPS LCD capacitive touchscreen
- Android 9.0 (Pie); MIUI 10
- Qualcomm SDM660 Snapdragon 660 (14nm) processor
- Octa-core (4x 2.2GHz Kryo 260, 4x 1.8GHz Kryo 260) CPU
- Adreno 512 GPU
- 3GB/4GB RAM
- 32GB/64GB/128GB storage, microSD up to 256GB



The Redmi Note 7 is a very decent mid-range phone with a budget price

- Dual rear-facing cameras: 48Mp, f/1.8, (wide), 1/2in, 0.8µm, PDAF; 5Mp, f/2.2, depth sensor
- Front-facing camera: 13Mp, f/2.0, 1.12µm
- Dual-band 802.11ac Wi-Fi
- Bluetooth 5.0
- A-GPS, GLONASS, BDS
- Fingerprint scanner (rear mounted)
- USB 2.0, Type-C 1.0 reversible connector
- Non-removable 4,000mAh lithium-polymer battery
- 159.2x75.2x8.1mm
- 186g

2. Xiaomi Mi A2 Lite

Price: £199 from fave.co/2KFBofC

This isn't the first time we've seen Xiaomi's Mi A2 Lite, because in China it's better known as the Redmi 6 Pro.

But the Mi A2 Lite is more appealing to a UK audience thanks to its easier (now official UK) availability and more familiar operating system, running Android One rather than MIUI. The pictures within this article are in fact of the Redmi 6 Pro, which was announced before the Android One version, but the design and features are identical.

Xiaomi's budget line can be rather confusing. As well as this Redmi 6 Pro there's the standard Redmi 6 and cheaper still Redmi 6A (the latter two are now both officially available in the UK). The 6 Pro or Mi A2 Lite has very little in common with either of those phones, as we'll outline below. It looks a lot more like the mid-range 6X (which is confusingly the MIUI variant of the Android One-powered Mi A2), but the hardware is very different.

Design

The Mi A2 Lite is almost unrecognizable from its cheaper Redmi 6 and 6A brothers, instead looking a lot more like the Mi A2 – here the most notable difference is the lack of a screen notch on the Mi A2.

Even before you turn it on you'll notice it has a metal body, whereas the cheaper models are plastic. It's not a unibody design, and there's a noticeable ridge between the screen's plastic bezel and the metal frame. There are also plastic top and bottom end caps at the rear, which should improve cellular signal, but even despite this the overall feeling in the hand is much more premium.

At the back the A2 Lite has the same centrally mounted fingerprint scanner as the Redmi 6 and Mi



A2, and like the latter its dual-camera sits vertically with the LED flash in the middle of the arrangement. The Redmi 6's flash instead sits to the side looking more like an afterthought.

You'll also spot the speaker grille that is rear-facing on the 6 and 6A has been moved to the bottom edge, with drilled holes sitting either side of the Micro-USB port – perhaps the biggest giveaway of this phone's budget roots.

There is just one speaker here, with the other row of holes concealing one of the phone's two mics – you'll find the other on the top edge, where it also offers an IR blaster.

If we can't have our phone's speakers at the front then the next best place is at the bottom – on the rear as they appear on the two cheaper models they tend to fire sound directly into your palm. While we're

on the subject of audio, the three cheapest Redmi 6 phones offer a 3.5mm headphone jack at the top but the Mi A2 does not.

Unique to this phone in the Redmi 6 series is an enlarged slot-loading SIM tray that can accept both two SIMs (Nano) and a microSD card up to 256GB in capacity. Given that it already offers 64GB internally, storage is very generous, but we're impressed that it doesn't force us to choose between two SIMs and storage expansion.

The Mi A2 Lite or Redmi 6 Pro is a fraction taller than its cheaper siblings, but you wouldn't expect Xiaomi to have been able to achieve so much with the extra room. Not only is there a 4,000mAh battery inside, which is 1,000mAh more than you get with the 6 or 6A, but Xiaomi has also been able to fit a larger screen – 5.84in up from 5.45in. The Mi A2 is fractionally larger still at 5.99in, and without the notch.

And here's where we get to the major aesthetic difference within the Redmi 6 family. Whereas the 6 and 6A are fitted with HD panels, this model has a 19:9 Full-HD+ display. There's a notch at the top, as seen on the Mi 8, which includes the front-facing camera, earpiece and sensors.

The screen is fantastic quality for a budget smartphone, with its IPS display tech offering realistic colours, excellent clarity, and a maximum brightness of 456cd/m² in our tests. More than anything else, though, its 19:9 aspect ratio and notch just make it look a lot more special.

The Mi A2 Lite/Redmi 6 Pro still has a fairly chunky bottom bezel, despite the fact its navigational buttons

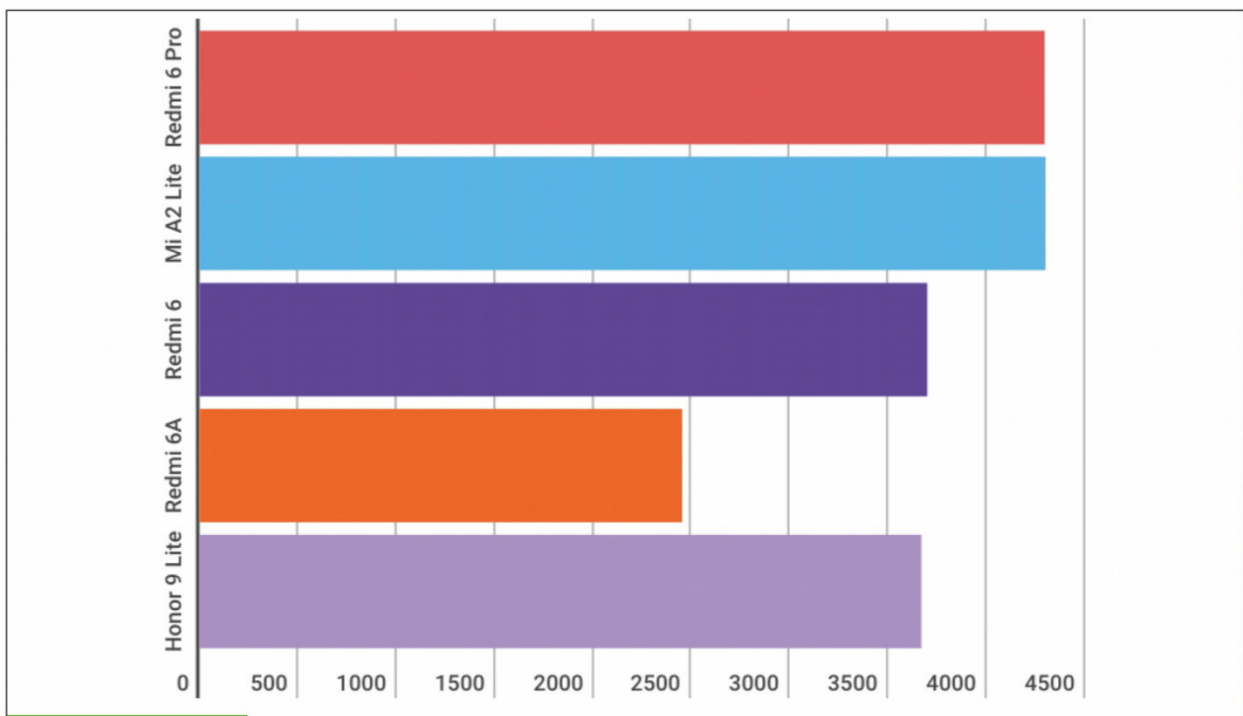
are on screen (or not, if you opt for full-screen gestures within MIUI 9). But it's smaller than you see on the Redmi 6 and 6A, and the side- and top bezels are pleasingly slim.

Overall, it looks and feels great in the hand – not like a flagship, but also nothing like a budget phone.

Performance

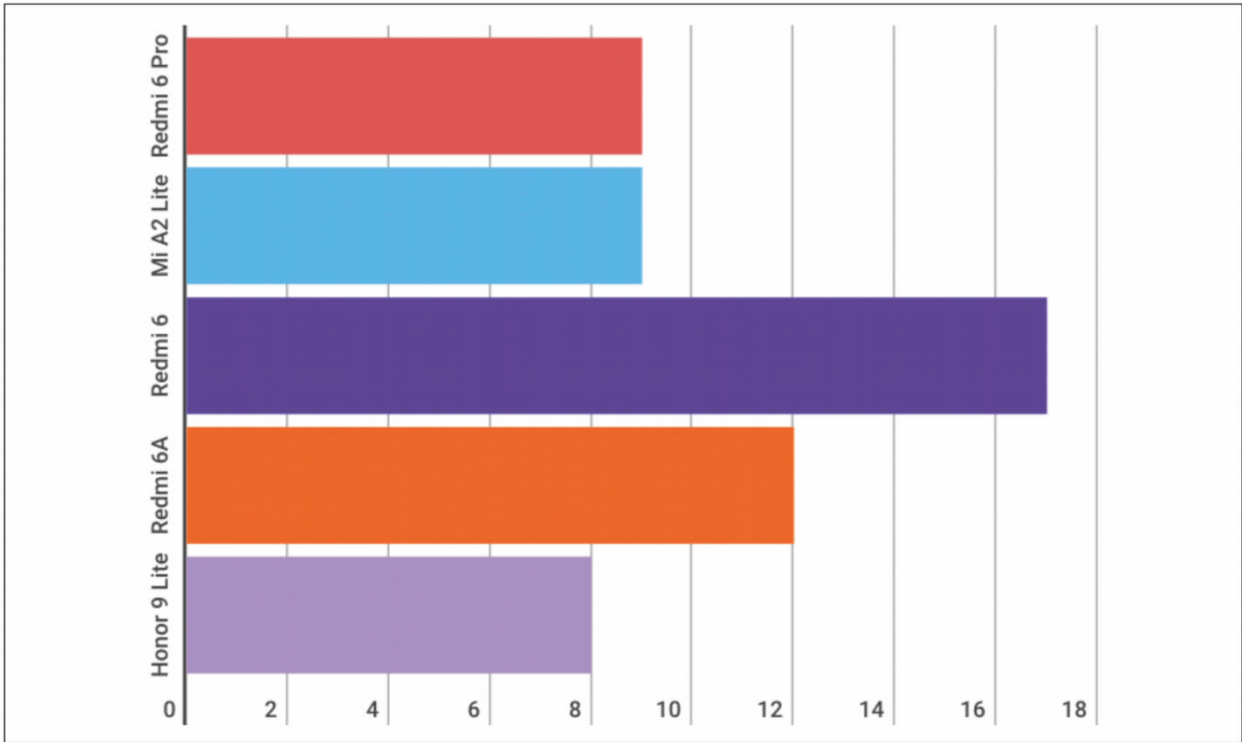
We've already touched on the increased battery capacity, but numbers on a spec sheet don't mean much when you also consider the fact this phone has a larger, higher-resolution screen and a faster Qualcomm processor than the 6 and 6A, which are both fitted with MediaTek chips.

We ran Geekbench 4's battery test, in which it bested the Redmi 6 by a full two hours with a result

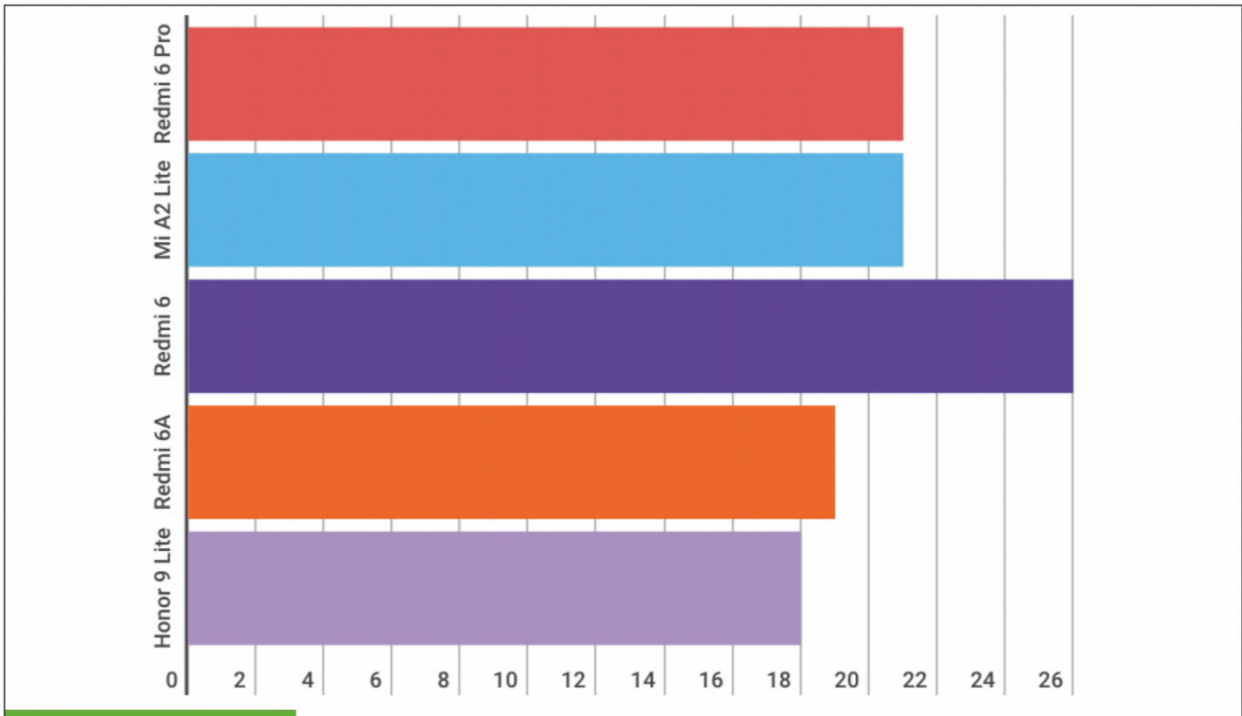


Geekbench 4

ROUND-UP



GFXBench Manhattan



GFXBench T-Rex

of 10 hours, 36 minutes. That's a very good score in this test, and in the real world it's not going to stumble getting you through dusk till dawn. Xiaomi claims this is a two-day battery, but in reality that's going to depend on how much you use your phone.

None of the Redmi 6 models support wireless charging, but the Mi A2 Lite is supplied with a fast (not Quick Charge-fast) 10-watt adaptor in the box while the Mi A2 has Quick Charge support.

Xiaomi has fitted the Redmi 6 with a MediaTek Helio P22, and the Redmi 6 with a MediaTek A22. This Mi A2 Lite or 6 Pro comes with a mid-range Qualcomm Snapdragon 625, clocked at 2GHz and integrated with 650MHz Adreno 506 graphics. There's 4GB of RAM, too, but 3GB of memory in the 6 and just 2GB in the 6A. (In fact, the Redmi 6A's core hardware really isn't anything to get excited about with a meagre 16GB of storage. This phone's 64GB looks colossal by comparison.)

So we probably don't need to tell you that it outclasses the 6 and 6A in our benchmarks. The others got a lot closer in GFXBench, with the Redmi 6 actually taking the lead by a few frames, but that's only because the Mi A2 Lite has a higher-resolution screen and therefore more pixels to push. We'd much rather play games and watch movies on its larger, Full-HD+ screen.

The benchmarks also reveal higher performance scores than those achieved by the Honor 9 Lite, which is really the main competition. Whereas the Honor scored 3,668 points in Geekbench 4, for example, the Xiaomi phone stomped all over that with 4,294.

ROUND-UP



Standard shot



HDR shot

Both those scores point to phones that may not keep up with the flagships, but offer decent, usable performance for daily tasks.

Cameras

If photography is a priority for you then we'd advise looking closer at the Mi A2, which features a 20Mp + 12Mp dual-camera at the rear and a 20Mp selfie camera at the front. This phone is pretty well specified for a budget phone camera, however – and, again, better specified than either the Redmi 6 or 6A.

Xiaomi has fitted the Mi A2 Lite with a 12Mp + 5Mp dual-camera with 1.25µm pixels, PDAF and a single LED flash at the rear, and a 5Mp selfie camera at the front. It supports some intelligent AI features, such as smart selection of preset filters and settings, and

a bokeh-effect (blurred background) portrait mode. It can also shoot 1080p video at 30fps, or 720p slow-mo at 120fps.

Our tests shots revealed a camera that offers decent quality at this price. Viewed at full-size noise is noticeable, and there's not as much detail as we'd like, but colours and exposure are good.

In low light the Xiaomi did a reasonable job,



and we were impressed with how it picked out the different shades of black and how well it reproduced text. The overall result is not as pin-sharp as we'd like, but we can hardly complain at this price.

Software

If you opt for the Mi A2 Lite rather than the Redmi 6 Pro your device will be running Android One without the MIUI customization. This is a pure version of Android Oreo 8.1 that will always be first to receive OS and security updates from Google.

The Mi A2 Lite runs all Google's apps and nothing else out of the box. You'll also notice it includes an app tray, whereas the Redmi 6 Pro with MIUI does not.

Some of the apps missing from the Mi A2 Lite with Android One rather than MIUI include Dual Apps (which lets you run two instances of individual apps)



If you opt for the Mi A2 Lite rather than the Redmi 6 Pro your device will be running Android One without the MIUI customization

and Second Space (which lets you create a separate environment on your phone and is handy if someone else is using it).

Verdict

Xiaomi phones can be off-putting for users in the UK because of their MIUI interface and lack of support for Google Play, but that is not the case with this Mi A2 Lite. It's running Android One, with full Google services preinstalled, and you don't need to import it from China. It offers excellent value for money and easily surpasses other budget phones at this price point, with a good all round spec that includes a premium design, decent cameras and great performance. **Marie Black**

Specifications

- 5.84in (2,280x1,080; 432ppi) IPS LCD capacitive touchscreen
- Android 8.1 (Oreo), upgradable to Android 9.0 (Pie); MIUI 10; Android One
- Qualcomm MSM8953 Snapdragon 625 processor
- Octa-core 2GHz Cortex-A53 CPU
- Adreno 506 GPU
- 4GB RAM
- 64GB storage, microSD support up to 256GB
- Dual rear-facing cameras: 12Mp, f/2.2, 1.25µm, PDAF; 5Mp, f/2.2, 1.12µm, depth sensor
- Front-facing camera: 5Mp, f/2.0
- Dual-band 802.11a/b/g/n Wi-Fi
- Bluetooth 4.2
- A-GPS, GLONASS, BDS
- Fingerprint scanner (rear mounted)

- Micro-USB 2.0
- Non-removable 4,000mAh lithium-polymer battery
- 149.3x71.7x8.8mm
- 178g

3. Honor 10 Lite

Price: £169 from [fave.co/2xeTk8s](https://www.fave.co/2xeTk8s)

Smartphones can be expensive. Thankfully they can also be cheap and, as it happens, pretty good. Better than pretty good. The Honor 10 Lite is one of those very good budget smartphones that has us wondering why you have to pay five times more for the 'best' phones out there.

It has a large, bright display, excellent performance, decent dual cameras and solid battery life. For the price, you can't ask for much more.

Design

The Honor 10 Lite is a cheaper appropriation of the excellent Honor 10 that costs twice as much (itself a good deal at £399). It shows that you can cut a few more corners on materials and internal specs while maintaining the same basic smartphone experience.

Our 10 Lite review unit was in the by now familiar Honor deep blue hue, but the headline new colour available is called Sky Blue, which fades from blue to silver. Honor is Huawei's sub-brand, so it's no surprise to see it ape the flashy changing colours of its parent company's flagship phones.

There's a black one too, but you'll probably opt for a bit of flash as otherwise this is a fairly uniform plastic

The Honor 10 Lite is a cheaper appropriation of the excellent Honor 10



backed phone. Ours picked up a chip after a relatively short fall onto the ground but it's not glass so it didn't smash, an advantage with cheaper handsets.

The front houses a generous 6.21in LCD display with a little dewdrop notch at the top to house the 24Mp front-facing camera. That's pretty good for a £200 phone that also packs in dual rear cameras though it's worth noting the Honor 9 Lite had two front facing cameras, too. The notch on the 10 Lite means there's just the one.

Cameras

The 13- and 2Mp rear cameras mean you can zoom with better clarity and take pretty good portrait shots with the blurred background effect. It even has a pretty good night mode that gives you better colour balance and sharpness in low light. We found this

ROUND-UP



Without AI



With AI

ROUND-UP



Low light shot



Portrait shot



Landscape shot

worked okay, but not very well particularly on close up shots in dingy settings.

The cameras are not near the quality of phones like the Google Pixel 3 or Huawei's Mate 20 Pro but again, for the price, it's all rather impressive.

As is clumsily emblazoned on the back of the phone, the 10 Lite has Honor's 'AI camera', which really means it has a mode that saturates colours to make your snaps a bit more social media ready. Results are decent enough without, but it's an inoffensive enough feature that you might appreciate.

Less fun is the extreme beauty modes applied to the front facing camera. Turn it off though, and it's a perfectly good selfie camera that can even muster a portrait effect.

Despite the tall 19.5:9 aspect ratio of the screen it's still very pocketable, measuring 154.8x73.6x8mm. This makes it only a touch larger than the excellent Honor 9 Lite, but adds an extra half inch to the 2,340x1,080 display. It's a good upgrade.

Performance

Within that plastic frame there's also a headphone jack, a desirable feature you only see on cheaper phones nowadays, a rear-mounted fingerprint sensor that works very well and a Micro-USB port that hints at the fact this is a budget smartphone. We hoped to see the better USB-C here but you can't have everything. There's even the lesser spotted FM radio, provided you plug in wired headphones to act as an antenna.

Performance is also great for the price. There's a Kirin 710 processor paired with 3GB RAM in our review

Performance is
great for the price



unit. Add to that 64GB expandable storage up to 512GB and it's a pretty versatile device. You can even use the microSD slot for a second SIM if you'd prefer.

The phone stuttered occasionally with graphical overlays like with Facebook Messenger's floating chat heads and when switching quickly between apps. But it never fully crashed on us as we used the 10 Lite as our main phone for several days over a busy Christmas holiday. Just don't expect to play high-level games on it.

There are hints of judder when opening data heavy apps like Instagram or a zesty WhatsApp group chat but it's all to be expected on a phone of this price and specs. We found the same on the Honor 9 Lite, Moto G6 and several budget Xiaomi phones. You won't find a £200 handset without these issues, but they are not a problem on the 10 Lite unless you are very picky. If you are, you'll spend more.

We tried running our standard benchmarking apps Geekbench 4 and GFXBench to test the processor and graphics respectively but neither would install. This is likely down to the UK pre-release review unit we had but in real world use, we can find no major flaw in the 10 Lite's performance given its status as a cheap phone.

Software

An excellent feather in the Honor 10 Lite's cap is that it runs Android 9 Pie, the latest version of Android at the time of the phone's release. This means it beats Huawei's flagship P20 Pro to the Pie game as well as the premium Samsung Galaxy S9. That's good going.

It runs Huawei and Honor's EMUI 9.0.1 over the top of Android and you may know by now that EMUI changes an awful lot of the look and feel of stock



The Honor 10 Lite runs Android 9 Pie

Android, making it a little like Apple's iOS. But you know what? It doesn't really matter. Sure, there are changes, but using it as our main phone we soon got used to its quirks.

We really can't complain when a £200 phone has the latest version of Android at launch ahead of phones that cost three or four times as much. Honor isn't the greatest at updating software though, so bear this in mind if you want your new phone to get Android Q or timely security updates.

Battery life

An advantage of many budget phones is good battery life and the Honor 10 Lite is no exception. Its generous 3,400mAh battery paired with its low-end specs mean this is a phone that with light use lasted us two whole days. Heavier users will still comfortably end one day on around 30 percent.

Although there's a faster charger in the box, the phone doesn't actually fast charge. Hey ho, it fills up quick enough. As you'd expect here there's also no wireless charging.

Verdict

The Honor 10 Lite is one of the best cheap phones you can buy, with a large screen, great battery life and versatile if not excellent cameras. **Henry Burrell**

Specifications

- 6.21in (2,340x1,080; 415ppi) IPS LCD capacitive touchscreen
- Android 9.0 (Pie); EMUI 9

- Hisilicon Kirin 710 (12nm) processor
- Octa-core (4x 2.2GHz Cortex-A73, 4x 1.7GHz Cortex-A53) CPU
- Mali-G51 MP4 GPU
- 3GB/4GB RAM
- 64GB/128GB storage, microSD support up to 1TB
- Dual rear-facing cameras: 13Mp, f/1.8, 26mm (wide), PDAF; 2Mp, f/2.4, depth sensor
- Front-facing camera: 24Mp, f/2.0, 26mm (wide), 0.9µm
- Dual-band 802.11a/b/g/n Wi-Fi
- Bluetooth 4.2
- A-GPS, GLONASS, BDS
- NFC
- Fingerprint scanner (rear mounted)
- Micro-USB 2.0, USB On-The-Go
- Non-removable 3,400mAh lithium-polymer battery
- 154.8x73.6x8mm
- 162g

4. **Moto G7 Power**

Price: £179 from [fave.co/2RBrexa](https://www.fave.co/2RBrexa)

For some reason, Motorola thought it would be a brilliant idea to launch four models of the G7. And maybe, if you're the sort of person who carefully researches your purchases before you buy – the kind who reads these reviews – then it's probably not a big deal. For everyone else, it's just too confusing.

Here we're looking at the G7 Power, the model with the 5,000mAh battery. Motorola says it lasts for 60 hours, better known as 2.5 days. And it really does.



Design

First off, the G7 Power is a chunky phone. The 6.2in 720p screen feels large even by 2019 standards and front to back our calipers measured 9.3mm, which becomes 11mm with the TPU case attached. That's the price you pay for the huge battery. Yet it manages to stay under 200g, so it doesn't seem outrageously heavy in the hand.

There are three colours: black, Marine Blue (much darker than you'd expect) and iced Violet Gradient.

In case you're wondering how the G7 Power can cost so much less than the G7, the price isn't a typo. Motorola has made several savings, so you don't get quite as many features. Here are the main ones:

- 720p screen rather than 1080p
- Single 12Mp rear camera (no depth-sensing camera)

- No water-repellent coating
- Plastic back instead of glass

Depending on your priorities, these differences might not be important to you, especially if you're specifically after a long-lasting phone.

A few other specs to note are that there's a standard 3.5mm headphone jack, a built-in FM radio, USB-C port for charging/file transfer (at USB 2.0 speeds) and space for a microSD card up to 512GB in the SIM tray. On dual-SIM models you have to choose between a second SIM and a microSD card.

The fingerprint reader is 'hidden' by virtue of the M logo on it. It was fast and reliable in our tests.

Display

Some will be put off by the 720p screen, but don't be. The 6.2in 19:9 display has a density of 403ppi, which is more than enough for the pixels not to be noticeable at normal distances.

It uses the same panel technology as the G7 and we found it both bright and colourful even when using it outdoors. It isn't the last word in quality or colour accuracy, but it's more than acceptable at this price.

You can choose between Natural, Boosted and Saturated colours, though we couldn't really see much difference between the latter two modes.

A blue-light reduction feature can be scheduled at certain times, or to switch on and off at sunset and sunrise.

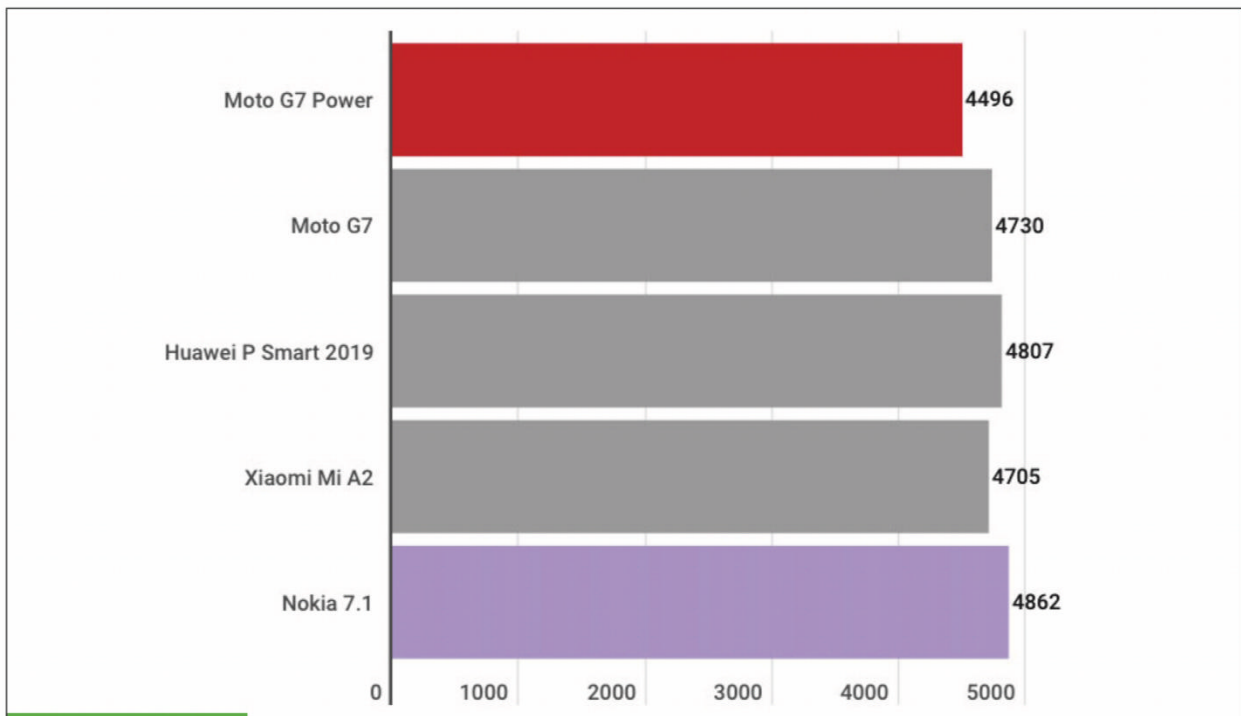
The notch is wider than the teardrop notch in the G7 because it houses the speaker and ambient light

sensor as well as the selfie camera. The bezels are a little wider all round, too.

Performance

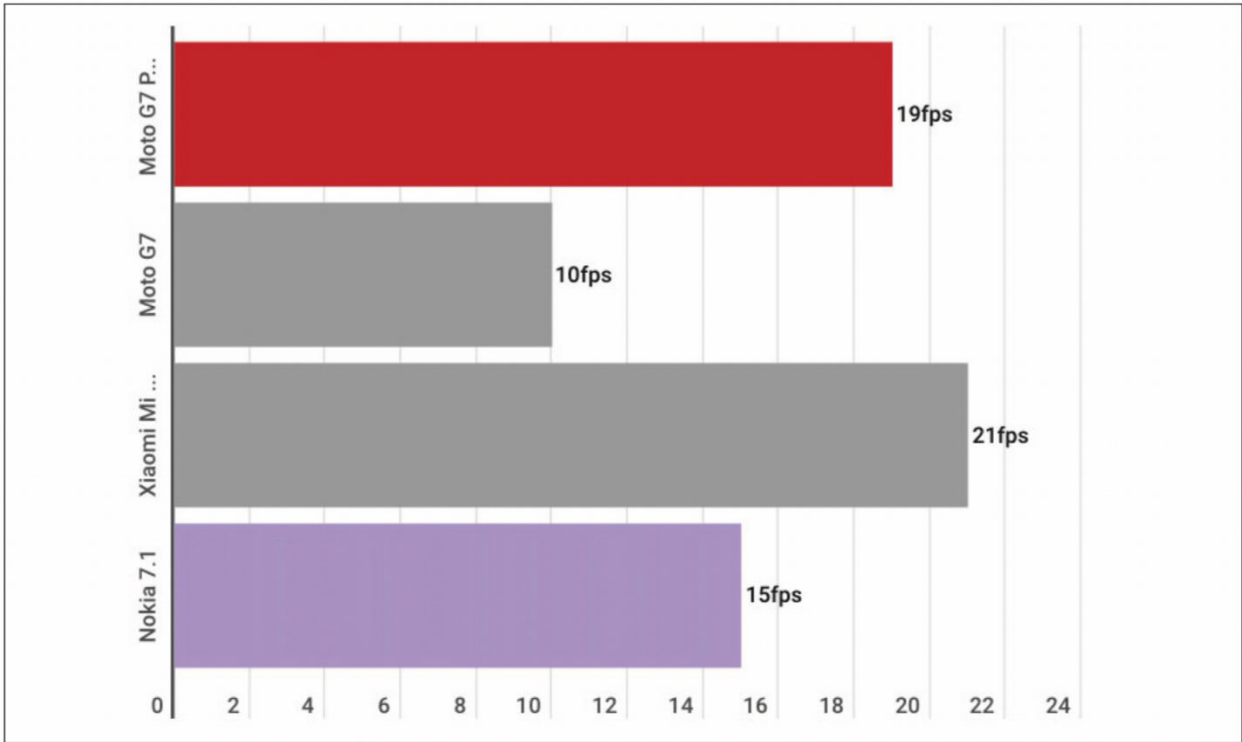
Like the G7, the Power has a Snapdragon 632 processor and 4GB of RAM. Performance in our CPU benchmarks, then, was almost identical. It also means that Android 9 Pie runs impressively smoothly – you wouldn't suspect that this phone didn't have a flagship processor in it for most of the time. Apps launch without a noticeable delay and casual games run fluidly.

Naturally, you lose some detail and graphical quality compared to the fastest phones, but here the lower resolution screen works as an advantage: with fewer pixels to render, you can expect higher frame rates than on the G7.

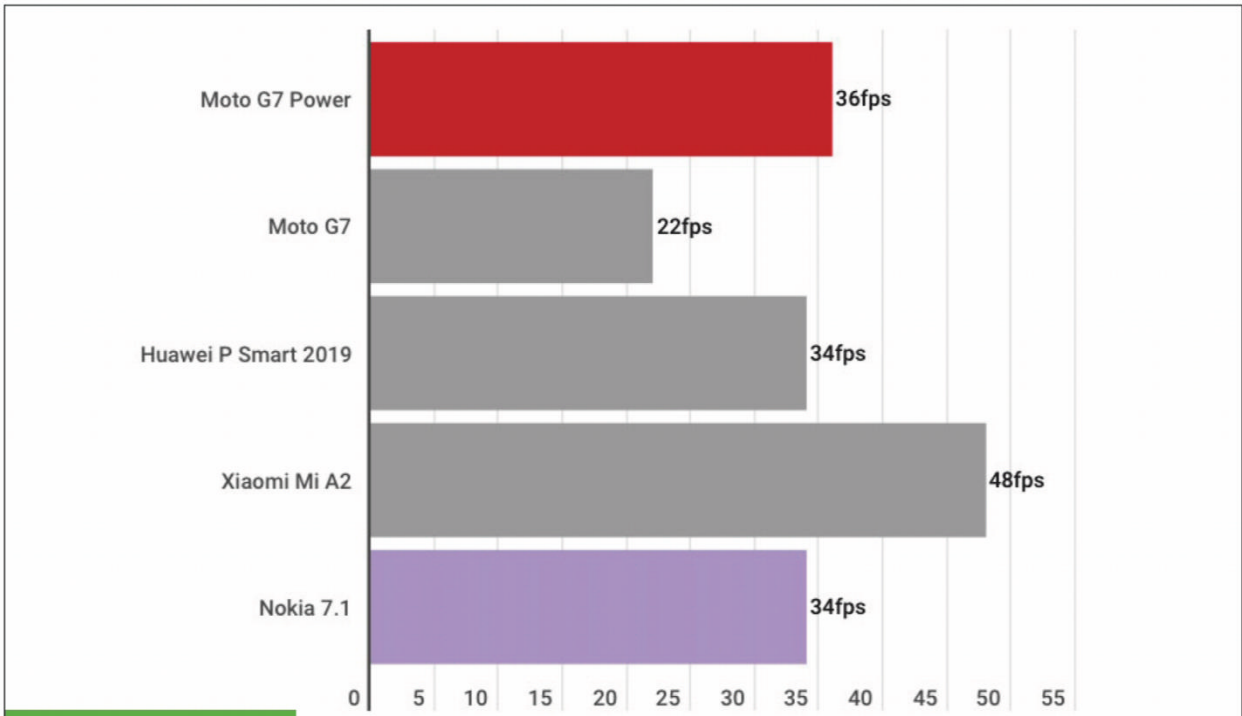


Geekbench 4

ROUND-UP



GFXBench Manhattan



GFXBench T-Rex

Battery life

Fewer pixels is again an advantage from a power perspective. With normal use, the G7 Power lived up to Motorola's claim of 60 hours. You'd need to charge it halfway through that second day, of course, but with light use and the battery saver mode, we found this could be stretched to three whole days without making ridiculous compromises.

In the Geekbench 4 battery test, it lasted an amazing 14 hours, two minutes which is almost 2.5 hours longer than the Huawei Mate 20 Pro – previously the longest-lasting phone we've ever tested. Naturally, heavy use will drain the battery a lot faster. Playing Pokémon Go, for example, empties the 5,000mAh cell at a rate of roughly 12 percent per hour. But this should still equate to a whole day of gaming without having to carry a power bank, and that's quite an achievement.

Motorola bundles an 18-watt TurboPower charger, which it says gives nine hours of use from a 15-minute charge when empty. We found that it charged up to 40 percent in half an hour and took well over two hours for a full charge. And you'll want to carry the bundled cable and charger as the G7 Power is very finicky about which chargers and cables it likes. We tried various USB-C cables with it, and it flat out refused to charge with some of them, and some wobbled around in the socket as if it were too big.

Likewise, it would only trickle charge in some USB wall sockets – the type that are built into the faceplate – and wouldn't fast charge even from 15-watt sockets. It really needs those extra three watts.

Cameras

If there's one area where the G7 Power does reflect its price, it's in the camera department. As with the G7, there's a 12Mp rear camera and an 8Mp selfie camera with a group-shot mode.

It lacks the 5Mp depth-sensing camera, so has to use software and its ISP to figure out what's subject and what's background. And the results aren't as good as Google manages with the Pixel 3, nor are photos of the same quality. But all this is to be expected given that the G7 Power costs around a quarter of the price.

Even in good light, photos show evidence of noise reduction (and a lack of sharp detail) and there's visible noise in photos taken at night or low light.

However, that's only noticeable when examining pictures close up. A less critical observer would deem the images fine to share with friends on Facebook and we'd have to say that colours are realistic and exposures generally very good. The PDAF system isn't the best, though. It occasionally fails completely and produces out-of-focus photos and we ended up with too many blurry photos of children and pets which wouldn't stay still for a photo. We also spotted random blurry areas in otherwise sharp pictures (including the photo of St Pancras opposite) and can only attribute it to an imperfect HDR blending system.

Video is much the same as you get from the Moto G7. It goes up to 4K, but above 1080p 30fps there's no stabilization. You can record at 1080p60, but most people will stick with the out-of-box 1080p30 setting. There's not an immense amount of detail, but it's what we'd call "usable" footage.



Low light shot



Macro shot



HDR shot

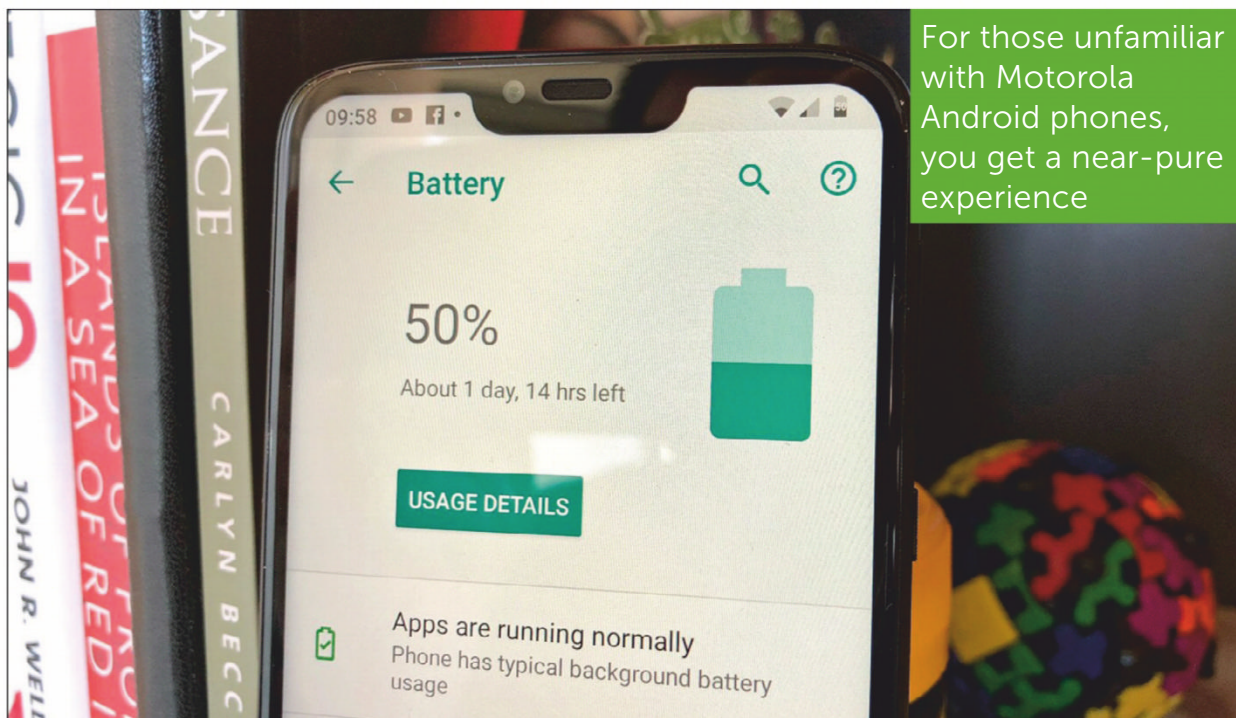
These shortfalls are somewhat made up for by some creative modes including Cinemagraph which freezes everything except the area where you want motion to be kept and creates an animated GIF, spot colour, which retains colour only where you select, time-lapse, slo-mo and Google Lens.

Software

For those unfamiliar with Motorola Android phones, you get a near-pure experience. But you also get Moto's neat touches which – for the most part – are genuinely useful additions.

There's the double karate chop to switch on the torch, double twist to activate the camera, flip to silence and also raise-to-wake and raise-to-unlock.

We're also fans of Motorola's take on gesture navigation in Android Pie. The One Button Nav puts an



iPhone X-style button at the bottom of the screen. You tap it to go home, drag it left to go back and swipe up on it to switch between apps.

You can run apps in split-screen mode, play a video in a floating window and enable 'Attentive display' which ensures the screen doesn't turn off or dim while you're looking at it – all useful features.

Verdict

The G7 Power is built to a price, but what you get for your money is impressive for the most part. Obviously, the stand-out feature is battery life but while you trade off screen resolution, it's not a bad display at all and you get all the same software features that you get with the G7.

In fact, you're getting most of the G7's features for a decent chunk less, so if you like the idea of not having to charge your phone every night and you don't want to spend the extra on the G7, this is a fine choice indeed. **Jim Martin**

Specifications

- 6.2in (1,570x720; 279ppi) LTPS IPS LCD capacitive touchscreen
- Android 9.0 (Pie)
- Qualcomm SDM632 Snapdragon 632 (14nm) processor
- Octa-core (4x 1.8GHz Kryo 250 Gold, 4x 1.8GHz Kryo 250 Silver) CPU
- Adreno 506 GPU
- 4GB RAM
- 64GB storage, microSD support up to 1TB
- Rear-facing camera: 12Mp, f2.0, 1.25µm, PDAF

- Front-facing camera: 8Mp, f/2.2, 1.12µm
- Dual-band 802.11a/b/g/n Wi-Fi
- Bluetooth 4.2
- A-GPS, GLONASS
- NFC
- Fingerprint scanner (rear mounted)
- USB 2.0, Type-C 1.0 reversible connector, USB On-The-Go
- Non-removable 5,000mAh lithium-polymer battery
- 159.4x76x9.3mm
- 193g

5. **Moto G7 Play**

Price: £149 from fave.co/2xeTk8s

The Moto G series has always been a fan-favourite, offering true value for money in a world where smartphones can now easily cost over £1,000. Motorola has taken that to the next level with the Moto G7 Play, an affordable smartphone that's £30 cheaper than last year's budget-friendly G6 Play without compromising on the core smartphone experience. It's not perfect, but there's a lot to love about the Moto G7 Play and it's certainly one of the best budget smartphones on the market right now.

Design

The Moto G7 Play looks more like a mid-range smartphone than something that costs less than £150, and although it uses cheap materials, it manages to make it look sleek. Take the rear for example; it's primarily made of plastic, but features a textured finish

The Moto G7 Play looks like a mid-range phone



that provides a satisfying sensation when running your fingers over it. That, and other fine details on the rear make the G7 Play look and feel more expensive than it actually is.

The use of plastic also means that the phone is impressively lightweight when compared to other smartphones available in 2019, weighing in at a feather-light 149g. This makes it barely noticeable in the pocket, especially when coupled with a thickness of only 8mm.

Despite the fact that the smartphone houses a 5.7in display, the 19:9 aspect ratio and curved rear of the smartphone mean that it's not uncomfortable to hold in the hand over long periods – a blessing for those of us with smaller hands in a large-screen world.

You'll also find a headphone jack on top, a USB-C charger on the bottom and a fingerprint scanner

embedded below the camera on the rear, complete with Moto branding to finish it off. All that is pretty standard in 2019, but it's good to see that it's all present on such a cheap smartphone.

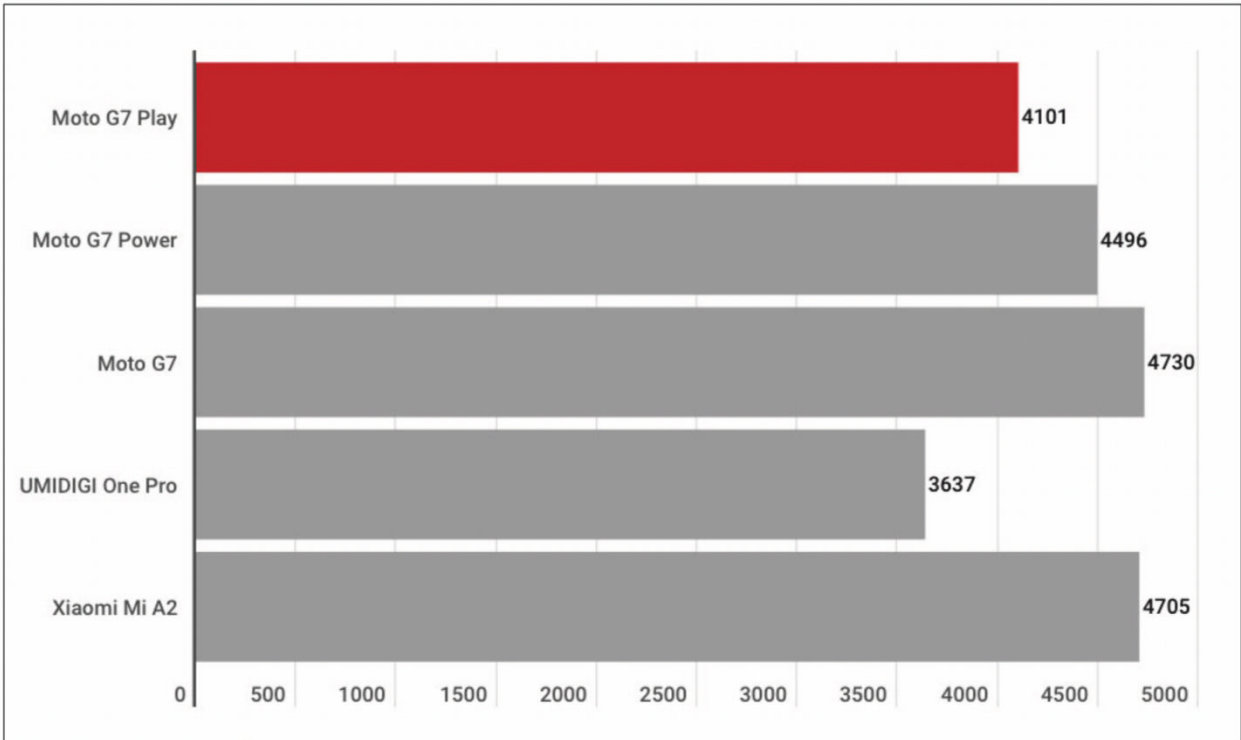
Performance

Admittedly, Qualcomm's octa-core Snapdragon 632 isn't the fastest chipset you'll find in a smartphone in 2019, but it's more than enough to provide a decent budget mobile experience. The Snapdragon 632 is backed up by 2GB of RAM, and features 32GB of built-in storage for games, photos and apps. This is expandable by 512GB via a microSD card slot for hardcore mobile users that take a lot of snaps and download a lot of apps.

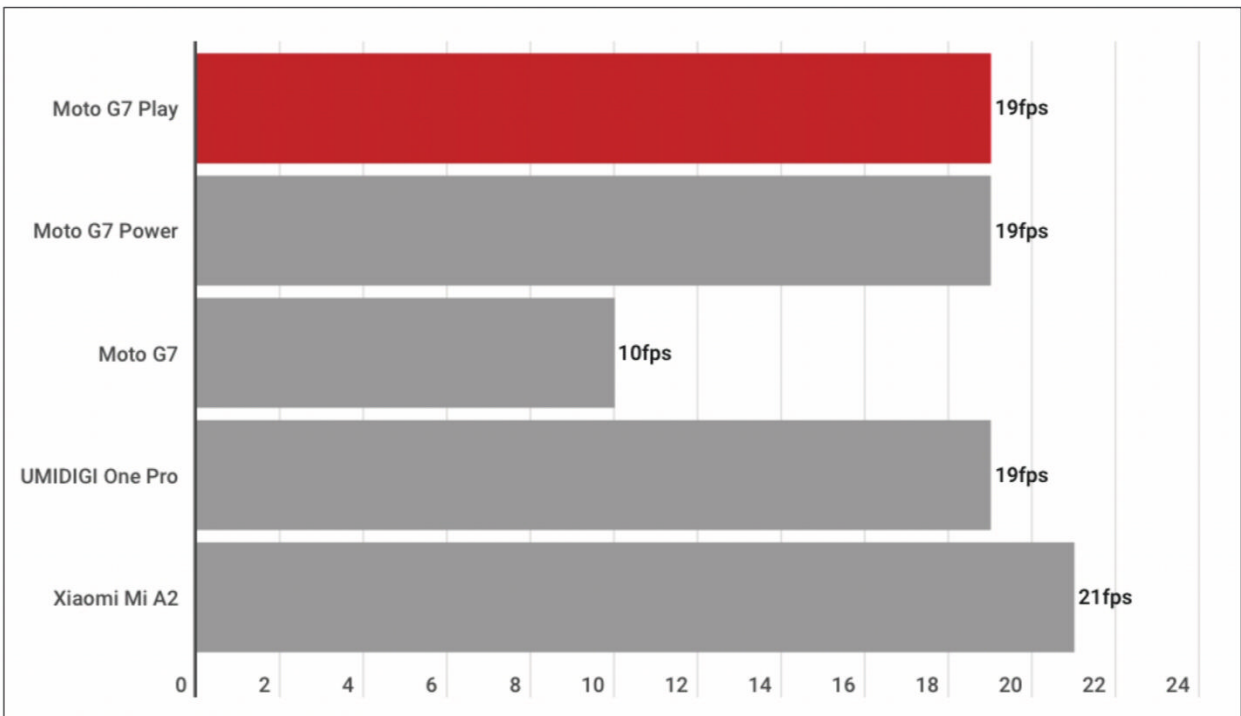
That setup helps to power the surprisingly bright and crisp display. Despite the budget price-tag, the G7 Play boasts a Full HD+ (1,512x720) 19:9 5.7in IPS LCD display, and while it isn't quite as bezel-less as other 2019 smartphones with both a notch and thick side bezels, it still boasts an impressive 77.3 percent screen-to-body ratio. The curved edges of the display give it a very 2019 feel while also looking aesthetically pleasing, especially for a smartphone as cheap as the G7 Play.

But how does it perform when gaming, browsing and snapping? Despite not having the top-of-the-range specs, the G7 Play can handle 3D games like PUBG Mobile – with high-quality textures selected – without any hint of lag or frame rate drops. It's a similar story with Hitman Sniper and a handful of other 3D games that we've played on the smartphone

ROUND-UP

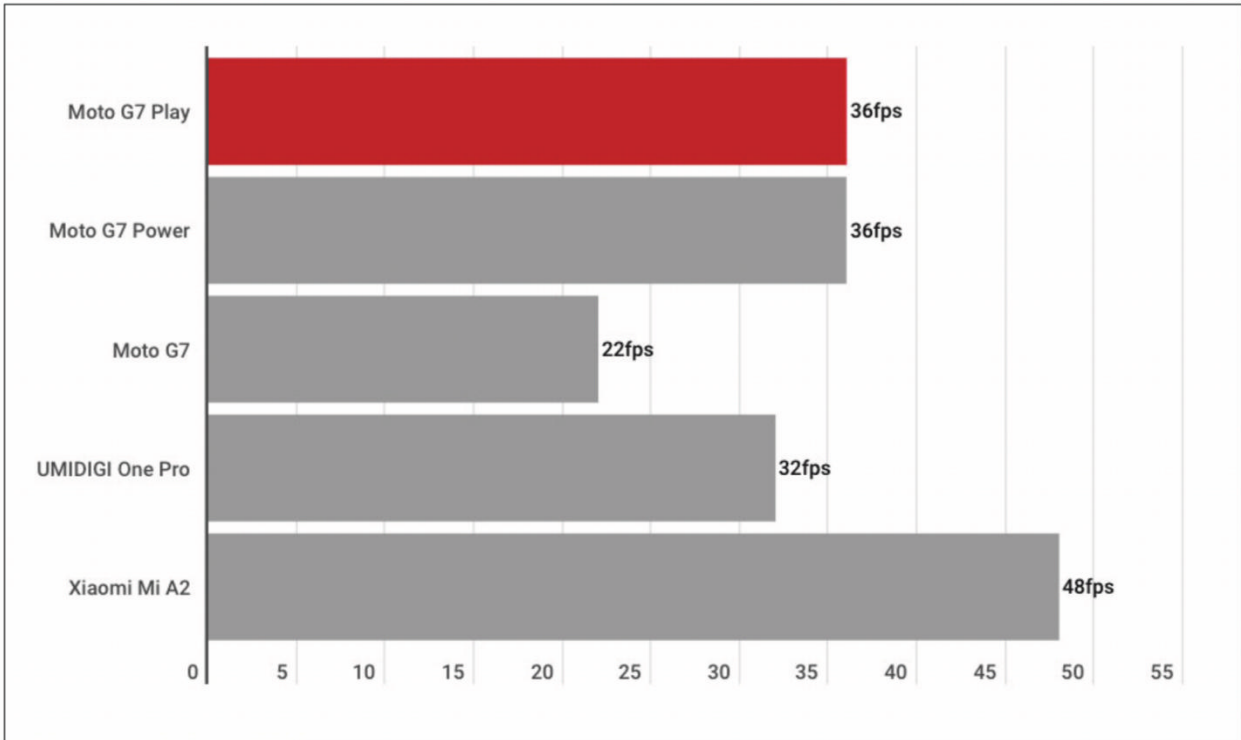


Geekbench 4



GFXBench Manhattan

ROUND-UP



GFXBench T-Rex

during our testing. That’s pretty impressive, and that performance extends to all areas of the phone, from scrolling through menus to browsing Facebook – it’s fast, responsive and essentially doesn’t feel like a budget phone in terms of performance, and Motorola should wear that badge with pride.

To help quantify performance, we ran a series of benchmarks to test various aspects of the smartphone, from CPU performance to graphical performance. You can take a look at how the Moto G7 Play stands up to competitors in the below interactive chart:

It’s fairly impressive in the battery department too, offering a 3,000mAh battery that we’ve found can comfortably provide all-day use performing tasks like browsing Facebook, playing a mobile game or

two and taking some snaps without a top-up. In our battery benchmark test, the G7 Play managed a total of seven hours 26 minutes, putting it in line with the likes of the Honor View 20 and OnePlus 6T. That's not bad, considering the price tag.

Cameras

While the Moto G7 Play can handle casual mobile gaming and browsing, it won't be winning any awards in the camera department. The G7 Play sports a single 13Mp rear snapper, with f/2.0, 1.12µm pixel size, single LED flash and HDR support. The rear snapper also offers 4K video capture at 30fps, as well as 1080p at both 60- and 30fps.

That's impressive for a budget smartphone, but let's not kid ourselves and pretend that it's able to compete with the likes of the Samsung Galaxy S10, Huawei Mate 20 Pro or iPhone XS.

Photos taken in bright light are detailed on the surface, but zooming in even slightly will reveal a layer of noise cancellation that gives most photos a soft look. The below snap of St. Pancras Renaissance Hotel is a good example of this, as zooming in reveals a lack of detail in the brickwork, pavement and other areas of the photo, too.

The lack of a decent autofocus component is obvious when trying to take photos, as the phone rarely gets the focus right on the first attempt using the built-in PDAF system. You'll find yourself, as we did, constantly tapping the screen until it looked right, and even then, photos look a little soft when viewed on a PC.

ROUND-UP



You'll also find a handful of other shooting modes built into the Camera app, including standard modes including Panorama and Portrait, though the latter isn't exceptional as it's handled by a single sensor.

You've also got a colour picker mode that allows you to display only one colour in the photo, with everything else displayed in black-and-white. We must admit that we had low expectations for this mode, but we were pleasantly surprised; it's not perfect, but it's certainly passable for those that want to take arty shots on the G7 Play.

That performance extends to the single front-facing 8Mp camera with LED flash, which is decent enough for basic Instagram selfies, Snapchat Stories and Skype video calling, but the background is easily blown out in bright sunlight, inhibiting your overall selfie game.

You have to make concessions when buying a sub-£150 smartphone, and in the case of the G7 Play, the Camera department is arguably the weakest area. It's decent enough to capture everyday snaps, just don't expect to capture something worthy of winning a photography competition.

Software

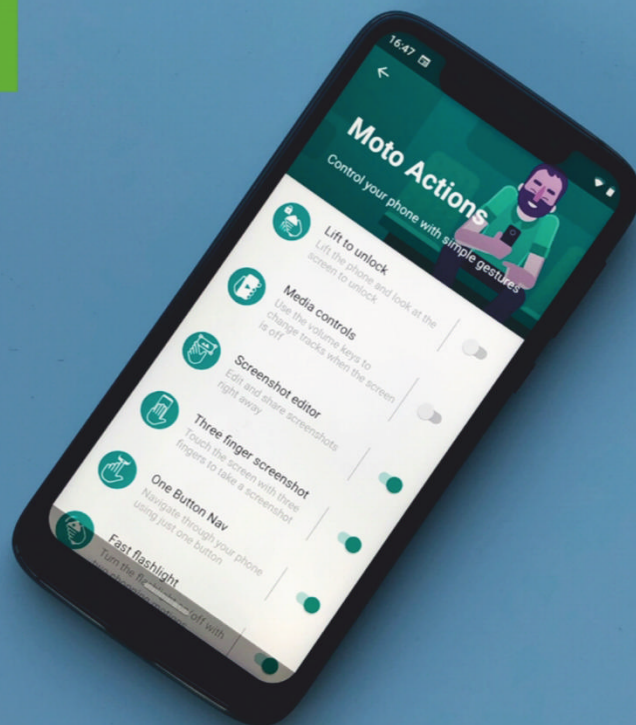
The Moto G7 Play runs Android 9 Pie out of the box, an impressive feat for a budget smartphone when you consider that the majority of 2018 flagships – and even some 2019 smartphones – don't offer the Android Pie experience. What makes this even better on the G7 Play is that it's almost stock Android, providing that clean, slick mobile experience, with

the only Moto-themed software available in the form of Moto Gestures.

Moto Gestures provide a variety of handy shortcuts that can improve your mobile experience. There is a range of features in the Moto app, all of which can be enabled or disabled depending on your preference. Features include the ability to perform actions such as chop with your smartphone to enable the torch, take a screenshot with a three-finger-tap and the ability to enable DND mode when the phone is flipped onto its screen. They're not revolutionary, but they'll certainly make the G7 Play experience a little smoother.

There's also a pill-like alternative to the standard Android control layout that lets you go back, switch apps, go Home and more by swiping on an iOS-esque pill bar at the bottom of the display. It works well,

The Moto G7 Play runs Android 9 Pie



although it is a bit fiddly initially and does take a bit of time to get used to.

It's small software features like this that improve the overall experience and make the G7 Play stand out from the crowd.

Verdict

The Moto G7 Play isn't a flagship killer, but at £150, it wouldn't be. Instead, the G7 Play is a solid smartphone that despite not having high-end internals can provide a smooth, lag-free mobile experience – even when playing the likes of PUBG Mobile, and that's impressive. The build quality is great despite the use of plastic, with fine detailing across the handset giving the G7 Play a more premium look and the lightweight nature of the phone is certainly a plus.

Of course, there have to be concessions made in a sub-£150 smartphone, and in the case of the G7 Play, that's the cameras. While images are generally well-lit, the lack of a decent autofocus system means that most of your pictures will come out looking a little bit soft. Still, the Moto G7 Play is an impressive bit of kit, and you'll struggle to find something better at this price point. **Lewis Painter**

Specifications

- 5.7in (1,570x720; 294ppi) IPS LCD capacitive touchscreen
- Android 9.0 (Pie)
- Qualcomm SDM632 Snapdragon 632 (14nm) processor
- Octa-core (4x 1.8GHz Kryo 250 Gold, 4x 1.8GHz Kryo 250 Silver) CPU

ROUND-UP

- Adreno 506 GPU
- 2GB RAM
- 32GB storage, microSD support up to 1TB
- Rear-facing camera: 13Mp, f/2.0, 1.12µm, PDAF
- Front-facing camera: 8Mp, f/2.2, 1.12µm
- Dual-band 802.11a/b/g/n Wi-Fi
- Bluetooth 4.2
- A-GPS, GLONASS
- Fingerprint scanner (rear mounted)
- USB 2.0, Type-C 1.0 reversible connector, USB On-The-Go
- Non-removable 3,000mAh lithium-ion battery
- 147.3x71.5x8mm
- 149g

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