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SAMSUNG GALAXY S21

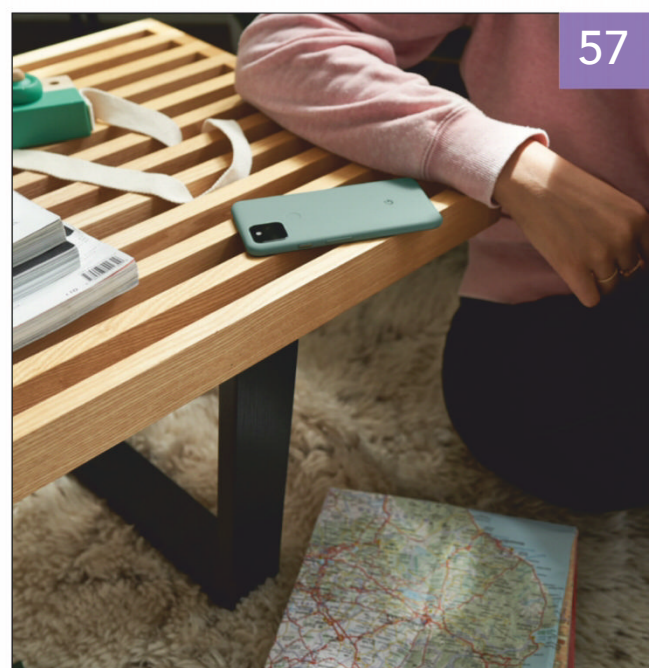
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Samsung's new Galaxy S21 line-up chooses refinement over reinvention

Slightly improved but a lot cheaper. **MICHAEL SIMON** reports

Last year's Galaxy S20 line-up was such a massive change that Samsung introduced a new naming scheme to hammer home how consequential the upgrade was. This year, the Galaxy S21 series refines that vision at much lower prices.

Samsung has launched three Galaxy S21 models in very similar sizes. The S21 and S21+ have 6.2- and 6.7in screens like their S20 predecessors, while the S21 Ultra is slightly smaller, 6.8 inches versus the S20 Ultra's 6.9in screen. The top and bottom bezels are a bit slimmer as well

to create a near-all-screen look, but all three models are essentially the same size as last year's.

Galaxy S21

S21: 151.7x71.2x7.9mm

S21+: 161.5x75.6x7.8mm

S21 Ultra: 165.1x75.6x8.9mm

Galaxy S20

S20: 151.7x69.1x7.9mm

S20+: 161.9x73.7x7.8mm

S20 Ultra: 166.9x76x8.8mm

They also weigh quite a bit more than last year's models, even the S21, which is made of a 'specially reinforced polycarbonate material' (plastic) versus the Gorilla Glass Victus glass covering the S21+ and S21 Ultra.

Galaxy S21

S21: 171g

S21+: 202g

S21 Ultra: 229g

Galaxy S20

S20: 163g

S20+: 186g

S20 Ultra: 222g

The extra weight is likely due to the camera module, which is unlike anything you've seen on a smartphone.

Rather than a floating rectangular or square array in the top left corner, like the iPhone or previous Galaxy phones, the camera module on the S21 is less of a bump and more of a bulge, seamlessly extending from the metal side frame. It even has a name: Contour Cut Camera housing.

Inside the array, you'll find the biggest upgrade for the S21. While you'll still find a triple-camera in the S21 and S21+ and a quad-camera in the S21 Ultra, the whole system has gotten an upgrade:

Galaxy S21/Galaxy S21+

Camera 1: Ultra Wide (120-deg) 12Mp, f/2.2

Camera 2: Wide 12Mp, F/1.8, OIS

Camera 3: Telephoto (Hybrid Optic 3X) 64MPp f/2.0 OIS, 30X Space Zoom

S21 Ultra

Camera 1: Ultra Wide (120-deg) 12Mp, f/2. Camera 2:

Camera 2: Wide 108Mp, F/1.8, OIS

Camera 3: Telephoto (Optical 3X) 10Mp, f/2.4, OIS

Camera 4: Telephoto (Optical 10X) 10MP, f/4.9, 100X Space Zoom

That's not a misprint. The S21 Ultra is Samsung's first dual-telephoto lens, which should provide a massive boost

over the S20 Ultra's somewhat janky zoom capabilities. Like its predecessor, the S21 Ultra can zoom up to 100X thanks to Samsung's Space Zoom tech, but the addition of a 10X optical zoom lens should make a huge difference.

Night shots should also see a significant boost. While all three phones have 'enhanced processing' when shooting in low light, the S21 Ultra also brings improved noise reduction and 12Mp nona-binning technology to deliver what Samsung says is its "biggest leap yet in low-light photography".

A slew of other enhancements cut across all of the S21 models: 8K Snap, which lets you pull out still images from your 8K videos; Director's View, which allows you to see and switch among each of the cameras while shooting

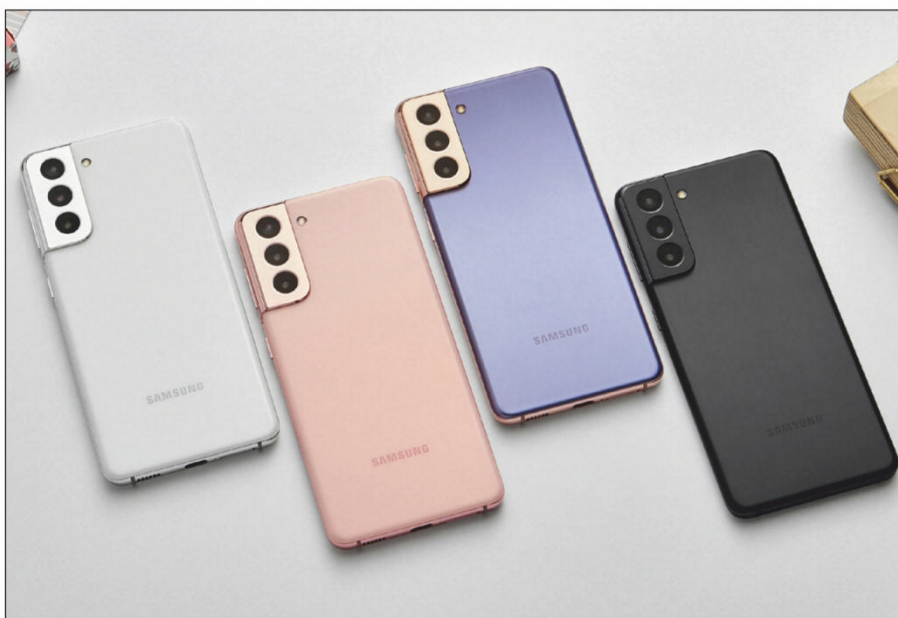
video; 60fps Super Steady, multi-mic recording, enhanced portrait mode; and more Single Take options, including slow-motion videos.

THE USUAL UPGRADES

The S21 line-up will be using the Qualcomm Snapdragon 888 processor, debunking speculation that Samsung would be using its new Exynos 2100 chip instead. It should be plenty fast, but Samsung's vague description defined it as "the latest and most advanced smartphone chipset yet in a Galaxy for greater speed, energy efficiency, and advanced computing capabilities to support 5G connectivity and on-device AI".

While the three screen sizes on the S21 are largely the same as those on

the S20, Samsung has tweaked things a bit. Most notably, S21 and S21+ have 'flat' Full HD+ (1080p) displays, leaving the S21 Ultra as the sole model with a curved 'Edge' screen with QuadHD+ (1440p) resolution. The S21 Ultra also offers a higher max brightness (1,500 nits) than the S20, along with a 50-percent



The S21's colour palette is somewhat muted this year.



The Galaxy S21 has a plastic back but still looks very luxurious.

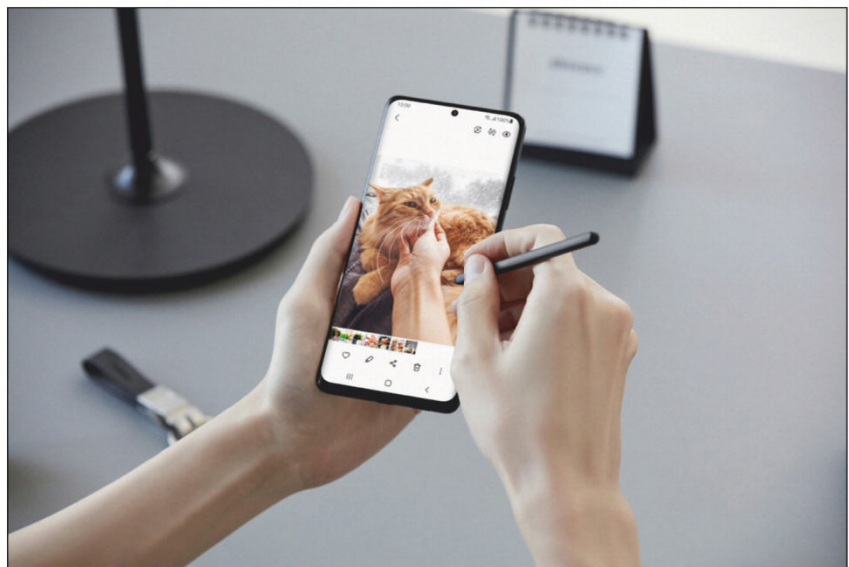
improved contrast ratio and a new Eye Comfort Shield feature that, according to Samsung, “automatically adjusts the blue light based on the time of day, content you’re viewing, and your bedtime”.

As has been rumoured, Samsung is bringing the S Pen to the Galaxy S line for the first time. It’s not quite the Note experience, though: only the S21 Ultra supports the stylus, and you’ll need to bring your own because Samsung isn’t including one in the box (though it will offer several cases that include S Pen slots, and you can already hear the third-party case makers scrambling to

make more). It also doesn’t support any of the Bluetooth-enabled ‘Air’ gestures on the Note 20 – the Galaxy S21 Ultra’s S Pen is strictly for taking notes.

Like last year, all models have 120Hz displays, but this year they have adaptive refresh rates so the impact on battery life should be diminished.

On the S21 Ultra, you’ll be able to use the 120Hz display with Quad HD+ resolution along with a wider 10Hz to 120Hz adaptive refresh range than the S21 and S21+ (48Hz to 120Hz) to eke out a little extra juice from the battery.



You can finally use an S Pen on the Galaxy S21 Ultra.

Speaking of the battery, the S21 and S21 Ultra have the same capacities as their S20 counterparts – 4,000mAh and 5,000mAh, respectively – while the S21+ gets a boost to 4,800mAh from the S20's 4,500mAh battery. You're also getting less RAM (8GB vs 12GB) with the S21 and S21+ versus the S20, while the S21 Ultra still starts at 12GB of RAM with a max of 16GB on the 512GB model. Sadly, however, Samsung has dumped the expandable memory slot, so what you get inside your phone is it.

You get Wi-Fi 6E with the S21 Ultra (and regular Wi-Fi 6 on the S21 and S21+) and Ultra Wide Band support with the S21+ and S21 Ultra for pinpoint location tracking that augment the new £30 SmartTags Bluetooth trackers. All three models get the full complement of 5G, along with Android 11 in the form of One UI 3.

Inside the box, you'll find the phone and a cable, and that's it. Following Apple's somewhat controversial move to dump the charger with the iPhone 12, Samsung is following suit, removing both the earbuds and the charger from the S21's box.

But the S21 line is a bit cheaper than the S20. The S21 will set you back £769 while the S21+ costs £949. The S21 Ultra has a starting price of £1,149. The Galaxy S21 is available for order now in violet,

pink, grey and black, the S21+ in violet, silver and black, and the S21 Ultra in black and silver.



8 quirks to know about the Samsung Galaxy S21 before you order

It's not just the price that's been cut. **MICHAEL SIMON** reports

Samsung's Galaxy S21 is easily its best flagship bargain in years, with the latest flagship Snapdragon processor, a powerful triple-camera array, and a premium look and feel. But

if you're thinking it's just an updated version of the S20 or even a smaller version of the new Galaxy S21+, there are a few things you need to know before you plunk down £769 to order.

1. THE SCREEN RESOLUTION IS FULL HD+ 1080P

Galaxy S buyers are used to getting the very best screens around. The Galaxy S20 brought a 6.2in Quad HD+ 3,200x1,440 Infinity-O Edge display with a pixel density of 563ppi and a 120Hz refresh rate. While the size is the same, you're not getting all that with the new Galaxy S21. Rather, you're getting a flat Full HD+ 2,400x1,080 Infinity-O display with a 421ppi pixel density and an adaptive 120Hz refresh rate. That's still an excellent display, of course, but it's definitely a step down from what Galaxy S buyers are accustomed to getting.

2. THE BACK IS MADE OF PLASTIC

Ever since the Galaxy S6, Samsung Galaxy S phones have been made

entirely out of glass, and if you're buying a Galaxy S21+ or S21 Ultra, that's what you're getting. But with the S21, you're getting plastic – er, make that a 'specially reinforced polycarbonate material'. That's not necessarily a bad thing – plastic is less prone to shattering when dropped – but keep in mind that the S21 is just a little less premium this year.

3. THERE'S NO ULTRA-WIDE BAND CHIP

After first bringing it to the Note 20 Ultra for quick file sharing, Samsung is going all in on ultra-wide band. Alongside the Galaxy S21, Samsung launch a new line of SmartTags that work with the UWB chip to precisely locate lost objects. But if you get the S21, you won't be able to take advantage of it – only the S21+ or S21 Ultra have the UWB chip.



The Galaxy S21 has a plastic back that only looks like glass.

4. IT HAS LESS RAM THAN ITS PREDECESSOR

When Samsung launched the Galaxy S20 line, it was a performance beast, with a whopping 12GB of RAM standard across all three phones. Granted you might not have needed all that memory,

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but if there's anything we've learned from Samsung phones it's that they tend to get bogged down over time, so the extra RAM will definitely help keep things running smoothly. But on the Galaxy S21, you're only getting 8GB with no option for 12GB.



The S21 has 128GB or 256GB of storage and that's it.

5. IT DOESN'T SUPPORT WI-FI 6E

It might seem like only yesterday when Wi-Fi 6 arrived, but the next generation is already here. Wi-Fi 6E offers faster speeds and higher capacity to reduce latency and bottlenecks, and the Galaxy S21 phones are among the first to feature what is soon to be ubiquitous. But like UWB, it's only available on the S21 Ultra. The S21 sticks to basic Wi-Fi 6.

6. IT DOESN'T HAVE A MICROSD STORAGE SLOT

Samsung Galaxy S users have never really had to worry about how much storage is inside their phone thanks to the addition of a microSD memory card slot in the SIM tray. It's been a staple of the Galaxy S since the first phone landed in 2010, but the Galaxy S21 doesn't have one. So if you're buying one, you might want to upgrade to the 256GB model.

7. IT'S KIND OF HEAVY

The Galaxy S21 is the same size as the S20 it replaces and dumps the glass back for a plastic one, so you'd expect it to be as light as the Pixel 4a. That's not the case. The Galaxy S21 weighs in at 171g, which is heavier than the S20 (163g), iPhone 12 (164g), and Pixel 5 (151g). We're not sure where the extra weight is coming from.

8. NO S PEN SUPPORT

The Samsung S Pen has always been the thing that separates the Galaxy Note from the Galaxy S, so it's a big deal that the S21 line-up supports Samsung's stylus, even if it's just for drawing and writing. But don't expect to break out your S Pen on the vanilla Galaxy S21. Samsung has limited stylus support to the S21 Ultra, so you'll be tapping away with your finger like usual.



With the Galaxy S21, Samsung has figured out the iPhone's secret: Value

Samsung thinks different and it pays off. **MICHAEL SIMON** reports

Apple isn't exactly known for its low prices. The iPhone X was the first handset to cost more than a thousand pounds, the wheels for the Mac Pro cost £400, and just last

December it launched a £549 pair of AirPods. Heck, it sells a charger that isn't even very good for £129.

But when it comes to its phones, Apple consistently gets it right. It's

true that the most expensive iPhone 12 tops out at £1,399, but for the most part, the iPhone 12 is very attainable, even with 5G and OLED displays across the board. When compared to the top flagship phones of 2020, in fact, the iPhone 12 slides in well under the average premium Android handset.

But with the launch of the Galaxy S21, it seems as though Samsung has finally caught on. After years of piling on features and specs in an effort to distance its flagship handsets from the iPhone, Samsung has fully embraced Apple's strategy with the iPhone, not just cutting the price to match the iPhone 12's price tag but also distilling the S21 down to its most essential parts in a sort of reboot of the lower end of the line.

LOWERING THE PRICE AND THE PARTS

Last year's entry-level Galaxy S20 started at £799 and brought a bevy of ultra-high-end features you couldn't get in the iPhone 11: 12GB of LPDDR5 RAM,



At £769, the iPhone 12 isn't cheap, but compared to a £1,179 phone like the Galaxy Note20 it seems like a bargain.

120Hz Quad HD+ screen, triple cameras, microSD storage, and so on.

It's not so much that the Galaxy S21 isn't a high-end Android phone, but like the iPhone 12, it makes certain spec-sheet compromises that add value without degrading the experience. There's a reason why Apple doesn't list specs for RAM, battery capacity, or clock speed in the iPhone spec sheet – they're unnecessary. Apple doesn't need to wow its users with specs. Rather, it strives to deliver the best possible iPhone experience with the bare-minimum parts.

And the S21 does something similar. Take a look at the specs compared to its predecessor, the S20:

Galaxy S21

Display: 6.2in Flat FHD+ Infinity-O

Display (2,400x1,080), 421ppi, 120Hz

Processor: Snapdragon 888

RAM: 8GB

Storage: 128GB

Battery: 4,000mAh

Galaxy S20

Display: 6.2in Edge Quad HD+ Infinity-O

Display (3,200x1,440), 563 ppi, 120Hz

Processor: Snapdragon 865

RAM: 12GB

Storage: 128GB

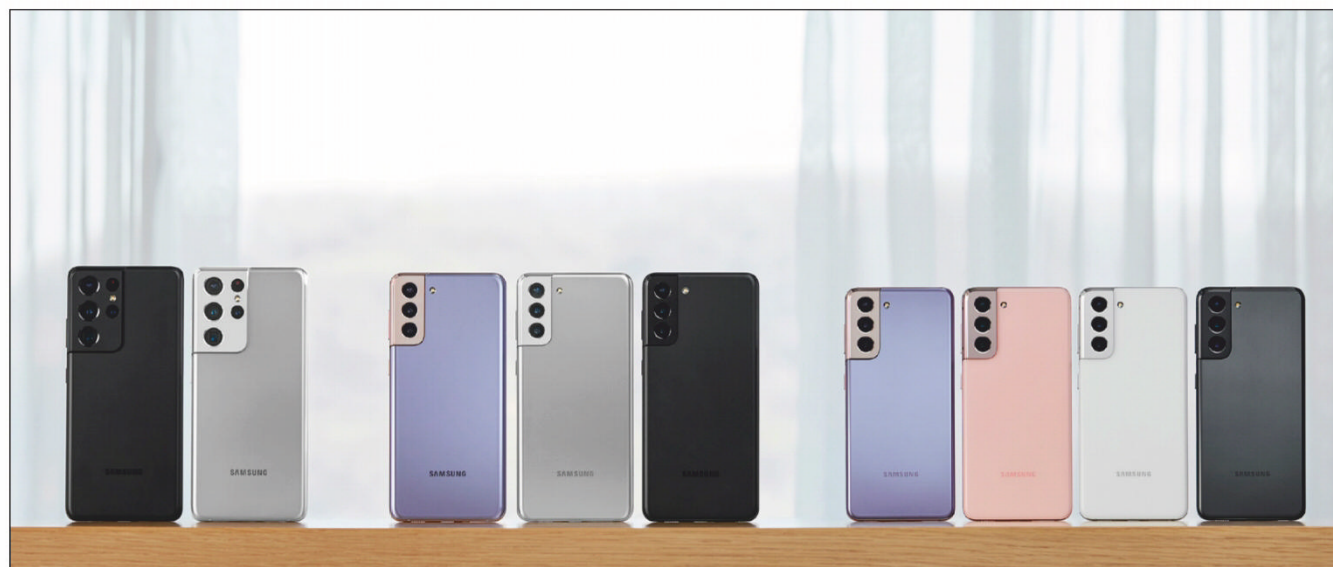
Battery: 4,000mAh

Aside from the storage and the battery, the S21 is a seeming downgrade from the S20, with less RAM and lower resolution. It's also made of plastic, versus the S20's all-glass design.

But to judge the S21 on its specs is to miss the point. Samsung has finally realized that the spec battle is a losing one. They built a phone that delivers on value rather than numbers. Some people will grouse about losing out on the best features but most people won't even realize their phone has fewer pixels or less RAM.

Quite frankly, they might not even notice that it's made of plastic. What they will notice is that it's cheaper than last year, the first time prices have decreased in years. They'll also notice that it looks the same as the S21+ and S21 Ultra, shares the same processor and software, and takes fantastic pictures.

That's another way Samsung has followed Apple's lead: the camera. Rather than increase megapixels or add lenses for the sake of it, Samsung has



Samsung still makes a family of phones, but the S21 is likely to be the most popular.

kept the same triple-camera hardware on the S21 as it had on the S20, instead working behind the scenes to deliver improvements in the most important areas: portraits and low-light photos.

ANDROID iPhone 12 IS HERE

For £769, the Galaxy S21 is truly Android's answer to the iPhone 12. More than the Pixel 5, OnePlus 8T, or even the Galaxy S20 FE, the S21 delivers a purely distilled premium Galaxy experience in a surprisingly affordable package, trimming corners rather than cutting them, and sacrificing very little of what people need.

And like the iPhone 12 Pro Max, if you want the best of the best, the Galaxy S21 Ultra still exists, with a Quad HD+ 6.8in display, 12GB or 16GB of RAM, and S Pen support. But for the masses, the S21 will more than suffice, especially when the price inevitably drops to £700 or less.

Previous Samsung Galaxy S phones were always among the best phones of the year, but they haven't seemed like a good value in years. The S21 changes that, hopefully for good. But mimicking what Apple does best with the iPhone 12, Samsung has created one of the best Android values in years, delivering premium looks and performance in an affordable package.

It's no secret that Samsung has been trying to replicate Apple's success for years, throwing all sorts of things at the wall to see what sticks. After 11 years, it might have finally found something that works.



Samsung Galaxy M31

Price: £245 (inc VAT) from fave.co/2XvUuJC



Despite the profound impact of the coronavirus pandemic, the deluge of Samsung phones shows no sign of abating. At £245, the Galaxy M31 is one of the most affordable devices in the company's current line-up, aiming to provide a great smartphone experience at a fraction of a cost of the S and Note lines.

With a mammoth 6,000mAh battery and competitive specs across the board, on paper it looks like Samsung is onto a

winner. But how well does that translate to real-world usage? Read on to find out.

DESIGN

Samsung has clearly cut some corners with the Galaxy M31's design. The most notable is the plastic back and frame of the device, meaning any illusion of this being a premium device is quickly lost. I was initially fooled by the Galaxy A51's so-called 'glasstic' design, but there's no mistaking that Samsung has opted for

the cheaper material here. It frustratingly remains a fingerprint magnet, but on the black model I tested the smudges aren't too noticeable. The phone's also available in blue and red, if you'd prefer.

Choosing plastic over glass usually leads to a more lightweight device, but that's not the case here. The M31 comes in at 191g, significantly heavier than the regular S20 and only slightly lighter than the stylus-wielding Note 20.

While these things would be significant drawbacks for some people, I found they quickly faded into the background once I started using the device as my main phone.

That's due in part to the screen, a gorgeous 6.4 Full HD (2,340x1,040) OLED panel, which offers rich, vibrant colours and an excellent level of detail. I often wonder just how much of a tangible benefit displays of 1440p and above actually provide, so this was a wise compromise for Samsung to make.

It's only 60Hz, but with the latest iPhones still not supporting a higher refresh rate, it would be wrong for me to complain about its absence here.



The Galaxy M31 has a gorgeous 6.4 Full HD OLED display.

That is something you'll find on the £179.99 Realme 7, though.

Where I will complain is the teardrop notch, which protrudes into the top of the display and houses a 32Mp selfie camera. It feels completely unnecessary, particularly when the bezels aren't the smallest and there's a sizeable chin.

It does at least support a face unlock, offering a mostly reliable alternative to the physical fingerprint sensor on the back of the device. The latter is a bit higher up the phone than feels natural, but was impressively resistant to dust and moisture in my testing.

Next to it is a rather imposing camera module, housing 64Mp main, 8Mp ultra-wide, 5Mp macro and 5Mp depth



It's at the bottom where you'll find the most notable inclusion: a 3.5mm headphone jack.

sensors. It doesn't quite sit flush with the back of the device, but it's sufficient that there's not too much rocking when flat down on a table.

There's not much to write home about the sides of the device, which thankfully means there's no Bixby button in sight. Power button and volume rocker on one side, dual SIM card tray on the other, simple as that.

It's at the bottom where you'll find the most notable inclusion: a 3.5mm headphone jack. The M31 is something of an outlier in a world where most phones, including many Samsung handsets, have ditched the port. The phone supports Bluetooth 5.0, but it's still nice to have the option to connect wired headphones.

PERFORMANCE

The Galaxy M31 comes running the Exynos 9611 chipset, which combines with 6GB of RAM and 64GB of storage on the model I tested. Samsung's own processors have typically struggled when compared to Qualcomm's Snapdragon line, although there are signs it's fighting back. Performance on the

Exynos 9611 is thought to be similar to the Snapdragon 712, with both found primarily on mid-range phones.

Unfortunately, in my testing time it fell short of what I expect from a smartphone, even one that's priced so affordably. The main problem I encountered were app freezes, with Chrome one of the big offenders. It would often lag on a website for quite a few seconds, although that may be due in part to the number of open Chrome tabs I had.

The other notable area of slowdown was in opening and switching between apps. I found it taking a comparatively long time to launch everything from Facebook Messenger to Spotify, while the aforementioned double tap of the

power button to launch the camera was far from instant.

These issues don't make the phone unusable by any means, although they are frustrations you're likely to experience on a regular basis. It'll still work fine if you're willing to be patient, but the M31's shortcomings are more glaring when you consider the strong performance in so many other budget handsets. The performance gap is illustrated in the below benchmarks, where the M31 pales in comparison to some of the best cheap phones around.

Geekbench 5 (multi-core)

Samsung Galaxy M31: 1,317

Poco X3: 1,764

Realme 7 5G: 1,777

Realme 7 Pro: 1,783

Moto G8 Power: 1,225

Oppo A9 2020: 1,384

GFX Manhattan 3.1

Samsung Galaxy M31: 14fps

Poco X3: 27fps

Realme 7 5G: 30fps

Realme 7 Pro: 25fps

Moto G8 Power: 12fps

Oppo A9 2020: 25fps

GFX T-Rex

Samsung Galaxy M31: 33fps

Poco X3: 60fps

Realme 7 5G: 58fps

Realme 7 Pro: 60fps

Moto G8 Power: 32fps

Oppo A9 2020: 50fps

Another area of performance that's worth noting is the speakers – and it's a much more positive story here. A single downward-firing speaker combines with the earpiece to provide clear, rich audio. I still wouldn't recommend listening to music or watching a film on it, but for the occasional YouTube video and social media it's more than acceptable.

SOFTWARE

The Galaxy M31 comes running One Ui 2.5 over Android 10, and there's no word on when it'll get the upgrade to Android 11. If you haven't used it before, Samsung's skin is quite a departure from the so-called 'stock' version you'll find on Pixel phones, although it's come a long way from the clunky TouchWiz days.

The big appeal of One UI with regards to this phone is its optimization for big-screen devices. Samsung divides the display into two sections, with all the controls you'll need within easier reach at the bottom of the device. It won't quite turn the 6.4in M31 into a one-handed phone, but does make a big difference to day-to-day usage.

Of course, this won't extend to all third-party apps, but makes a big difference when you're moving through Settings, taking a photo or making a call (yes, smartphones still do that).

I'm a big fan of the quick settings menu, which allows you to make modifications directly from the notification shade, instead of taking you into the main app. Talking of settings, you can also customize the power key to open any app of your choice with a double press. I found the default quick launch of the camera to be particularly useful, but if you'd rather head straight to Instagram the option's there.

Bixby's appearances are also fleeting these days, with even the Google Discover-style cards to the right of the home screen ditched on recent One UI versions. It seems like Samsung has finally admitted its virtual assistant isn't up to scratch, particularly when Google Assistant is available via a long press of the home button.

You can swap out that and the other two on-screen buttons for gestures, but I found the latter to be a bit laggy and generally not enjoyable to use on the M31.

PHOTOGRAPHY

Cameras are often an area where corners are cut on budget phones,

but they remain a crucial ingredient of the smartphone pie. The M31 has four rear lenses, with the main 64Mp sensor joined by 8Mp ultra-wide, 5Mp macro and 5Mp depth lenses. In general, I was impressed with the quality of stills from the M31. They offer a good level of detail and accurate colours, choosing to saturate images slightly less than Samsung phones have done in the past. Dynamic range is also solid, although it can struggle with exposure at times.

The camera app has a built-in scene optimizer, and seemed to do a good job of adjusting the settings automatically depending on what you're taking a photo of. This includes switching to night mode, although that didn't make a huge difference to the quality of low-light shots I was able to take. The depth sensor enables portrait-style shots, although it tended to struggle quite a lot with edge detection. Like many other phones, the macro lens added almost nothing to the experience, as it wasn't particularly impressive for close up shots.

A 32Mp front-facing camera yields higher quality selfies than I've seen on many phones, and it also offers the option to zoom out slightly and get more people into the shot.

The M31 is also capable of 4K video at 30fps on both the front and



Here's a photo taken using the default settings...



...and here's the same scene shot with the wide-angle lens.

Here's a
portrait
shot...



...and
here's a
selfie.





Our final test shot is a low-light image.

rear cameras, although the electronic image stabilization (EIS) makes it a more pleasing experience on the latter.

BATTERY LIFE

Battery life is an area where the M31 excels on paper, with a huge 6,000mAh cell. That's larger than you'll find on most phones, although it's matched by the current budget champ in the Poco X3.

The two phones posted near-identical scores in PCMark's battery test (14 hours, 22 minutes for the M31 versus 14 hours, 24 minutes for the Poco X3), which is impressive considering the M31 has a more power-hungry OLED screen.

When you do finally run the battery down, the included 15-watt adapter gets you back up to around 23 per cent back in 30 minutes. This is marketed as fast charging, although many other devices can be juiced up much faster.

There's no wireless charging, but that's not a surprise or dealbreaker at this price point.

PCMark Battery

Samsung Galaxy M31: 14 hours, 22 minutes

Poco X3: 14 hours, 24 minutes

Realme 7 5G: 13 hours, 11 minutes

Realme 7 Pro: 12 hours, 5 minutes

Charge in 30 minutes

Samsung Galaxy M31: 23%

Poco X3: 59%

Realme 7 5G: 62%

Realme 7 Pro: 92%

Moto G8 Power: 30%

Oppo A9 2020: 23%

VERDICT

The Galaxy M31 hasn't been marketed nearly as heavily as Samsung's flagships or even the mid-range A-Series, so you might not realize the company makes such a solid budget phone.

For £245, you get a gorgeous OLED display, excellent battery life and a highly polished software experience. There's even a 3.5mm headphone jack, although the impressive speakers and Bluetooth 5.0 mean that might not be necessary.

It's definitely not all good news though – performance is more than a little unconvincing at times and the sizeable notch and chin will be unsightly for some.

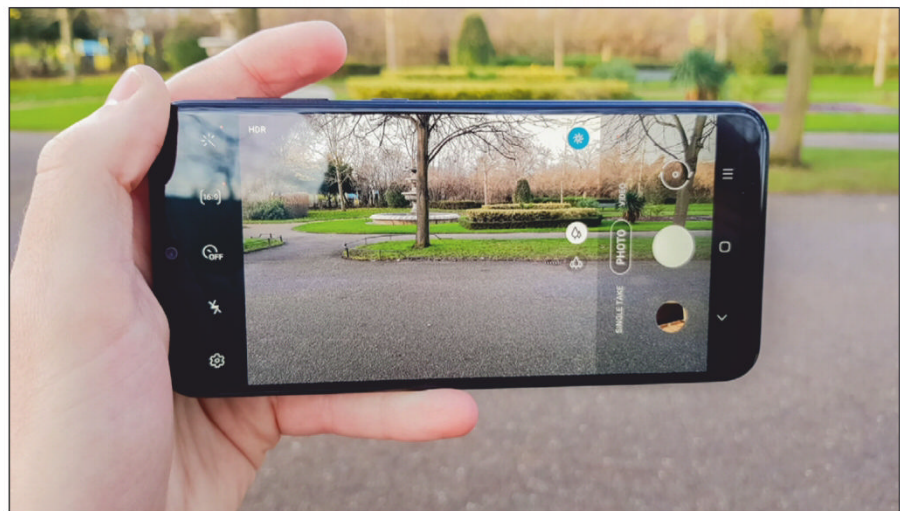
As a result, it's unlikely to tempt people away from some other great Android handsets around this price point. But if you're looking for the core Samsung experience

at a more affordable price, this is definitely an option worth considering.

Anyron Copeman

SPECIFICATIONS

- 6.4in (2,340x1,080; 403ppi) Super AMOLED display
- Android 10, One UI 2.5
- Exynos 9611 (10nm) processor
- Octa-core (4x 2.3GHz Cortex-A73, 4x 1.7GHz Cortex-A53) CPU
- Mali-G72 MP3 GPU
- 6GB/8GB RAM
- 64GB/128GB storage
- Four rear-facing cameras: 64Mp, f/1.8, 26mm (wide), 1/1.72in, 0.8µm, PDAF; 8MP, f/2.2, 123-degree (ultra-wide), 1/4.0in, 1.12µm; 5Mp, f/2.4, (macro); 5Mp, f/2.2, (depth)
- Selfie camera: 32Mp, f/2.0, 26mm (wide), 1/2.8in, 0.8µm



If you're looking for the core Samsung experience at a more affordable price, this is well worth considering.

- Wi-Fi 802.11 a/b/g/n/ac, dual-band, Wi-Fi Direct, hotspot
- Bluetooth 5.0, A2DP, LE
- GPS with dual-band A-GPS, GLONASS, GALILEO, BDS
- NFC
- USB Type-C 2.0
- Fingerprint scanner (rear-mounted)
- Non-removable 6,000mAh lithium-polymer battery
- Fast charging 15 watts
- 159.2x75.1x8.9mm
- 191g



Realme 7 5G

Price: £279 (inc VAT) from fave.co/3nC1T4O



The Realme 7 line has pushed the envelope in terms of what you can expect from an affordable phone; with the standard 7 serving as a brilliant budget option, while the higher pricing of the 7 Pro edges it into the mid-range tier, equipped with some notable tricks to grab your attention.

While these devices staked their claim as noteworthy budget offerings back in October 2020, Realme actually had

a third member waiting in the wings, in the Realme 7 5G.

While COVID and its effects on the company's supply chain meant that the 7 5G wasn't ready to launch alongside its siblings, it's no less potent a mix of impressive hardware at a low price – Realme's bread and butter.

Despite the name, the Realme 7 5G isn't just the base Realme 7 with a snappier modem, albeit with

understandable similarities. It required a wholly different chipset in order to support such speeds and is one of the first phones through our reviews gauntlet toting MediaTek's Dimensity 800U chip.

So the question now is whether this remixed Realme is as much of a steal as its brethren.

DESIGN

There's no mistaking the Realme 7 DNA within this phone's design. It's almost identical – in terms of dimensions and weight – to the standard model, meaning it's a fairly sizeable and hefty handset, at almost 200g. The domino-like camera module, however, looks just like the one found on the back of the Realme 7 Pro.

The plastic back is comfortable to hold, proves pretty scratch-resistant (although Realme also throws a free case in the box for good measure) and has the same split reflective design as the other two members of the 7 series; with a more understated overall finish than some of Realme's other

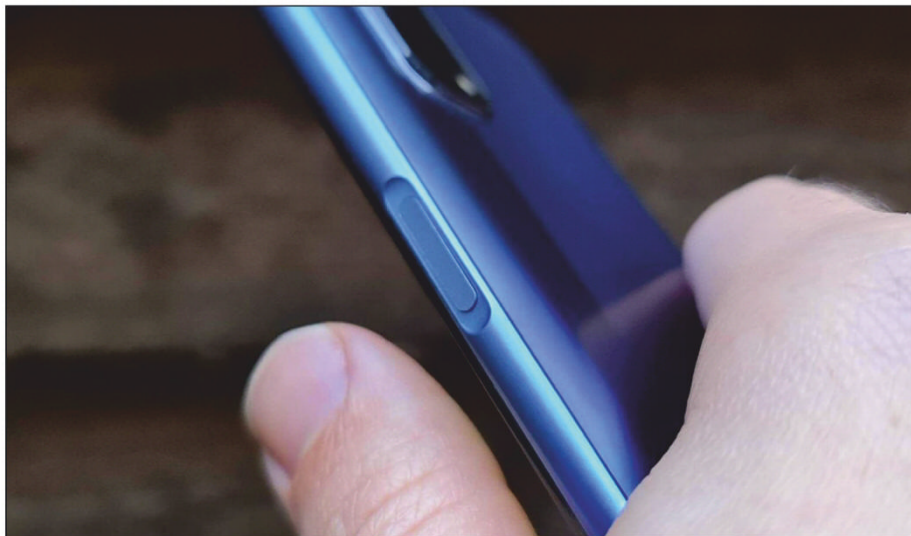
recent offerings (like the Realme X50 5G). The single Baltic Blue colourway that the phone is offered in, with its satin reflective finish, adds an extra level of sophistication to the design, while also repelling smudges and fingerprints well.

Realme favours thin side-mounted fingerprint sensors, which in this case also doubles as a power button. It's well placed on the phone's right side and proves consistently responsive, with the option of an insanely speedy (albeit simple RGB-only) face unlock alternative, if you prefer.

For the price, it's no surprise that there's no official IP certification or anything of that nature but there is at least a layer of Gorilla Glass 3 offering some shatter and scratch resistance over the phone's display, bolstered



There's no mistaking the Realme 7 DNA within this phone's design.



Realme favours thin side-mounted fingerprint sensors, which in this case also doubles as a power button.

by a pre-fitted plastic screen protector. Bezels are a little thick on all sides of the display, especially when it comes to the chin along the bottom, but it's not so thick that when viewed face-on the phone could be considered 'ugly' or disproportionate.

DISPLAY

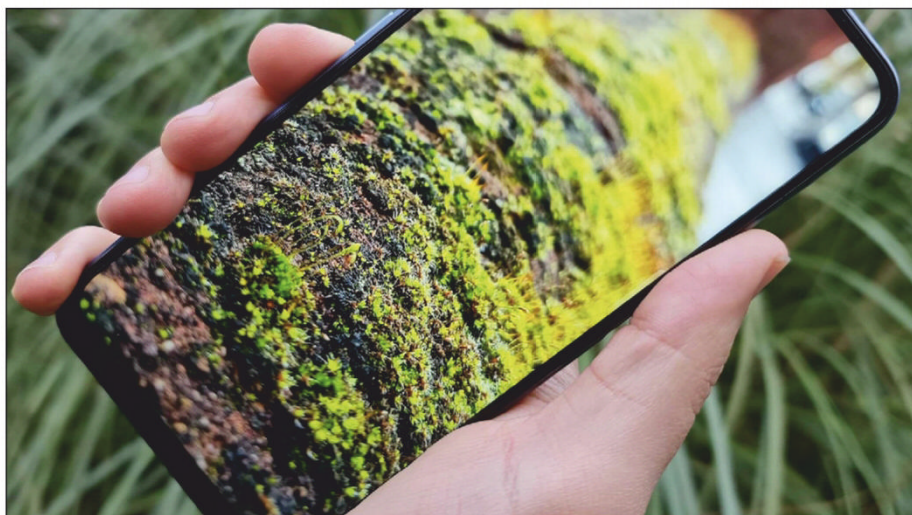
The 6.5in IPS LCD on the phone's front is pleasingly sizeable and sharp, making it great for enjoying media. While you shouldn't expect the same vibrant colours and greater contrast of the 7 Pro's OLED display, the 7 5G's screen still grants

you a great viewing experience all the same.

It trumps both other members of the 7 series with regards to its super-smooth 120Hz high refresh rate, paired with an equally respectable 180Hz high touch response rate, making it ideal for gaming.

If you do struggle with the sheer size of the 7 5G's screen at

all, there is the option of a one-handed mode, that shrinks down the UI within the phone's settings; along with a number of display customization options, including colour temperature control and refresh rate control (letting you lock it at 60Hz, 120Hz or have it set to automatic – the adaptive default setting).



The 6.5in IPS LCD is pleasingly sizeable and sharp.



Along the bottom you'll find a 3.5mm headphone jack, a USB-C port and a single down-firing speaker grille.

The bottom edge of the phone plays host to its audio gubbins, with a standard 3.5mm headphone jack to the left of its USB-C port and a single down-firing speaker grille on the right. Loudspeaker quality is surprisingly good, with a

pleasing level of clarity and range that means watching video content without headphones is wholly viable.

There's also Dolby Atmos support, which offers a range of audio profiles to switch between, focusing on videos, gaming

and music, respectively (there's also an automatic mode too).

SOFTWARE

Realme UI – the company's custom user experience, in this instance, running atop



The Realme UI is far more polished than you might expect.

Android 10 – may technically only be in its first incarnation, but its foundations in Oppo’s ColorOS make for a far more polished product than you might expect if you’re new to Realme as a brand.

It makes some notable pulls away from Google’s stock take on Android, but should still feel intuitive to those who’ve used a smartphone in recent years. Whether it works for you or not is more a case of personal preference, with regards to the aesthetic and interaction decisions it employs.

A host of supplementary experiences are what help give Realme UI its unique flavour. The Smart Sidebar is an ever-present quick-access menu for your preferred apps, as well as useful features like screen recording, while Game Space is both a place to house all your downloaded games and also a means of optimizing device performance and controlling notifications when gaming.

PERFORMANCE

Going in, we were wholly curious as to how MediaTek’s Dimensity 800U SoC would handle – being a relatively unknown quantity – with the Realme 7 5G and Oppo’s Reno 4 Z 5G being the first devices in Europe to leverage this particular silicon.

In the case of the 7 5G, it’s paired with 6GB of RAM and 128GB of storage

space, but perhaps most interestingly, the 800U makes this one of the first phones to boast 5G+5G DSDS (dual SIM, dual standby). This means you can enjoy both high-quality VoNR (Voice over New Radio) – the 5G equivalent of VoLTE – and 5G data connectivity across two compatible SIMs and plans. Great for those who roam or want more choice in which 5G services they leverage from which carriers.

As for raw performance, the Dimensity 800U inside the Realme 7 5G proves to be a formidable chip in the lower mid-range space, going toe-to-toe with the Snapdragon 690 in the OnePlus Nord N10 5G, as well as supposedly more powerful phones like Google’s Pixel 4a 5G, with its Snapdragon 765G – both pricier handsets outpaced by this more affordable device.

The 800U’s apparent penchant for gaming performance at this price point – as alluded to in our benchmarking results – is also reinforced by its real-world gaming prowess, which allows for solid 60fps gameplay at high graphics settings in games like Call of Duty Mobile, supported by that rapid 180Hz touch response rate.

Geekbench 5 (multi-core)

Realme 7 5G: 1,777

Realme 7: 1,622

Realme 7 Pro: 1,783
Nord N10 5G: 1,852
Poco X3: 1,764
Google Pixel 4A 5G: 1,631

GFX Manhattan 3.1

Realme 7 5G: 30fps
Realme 7: 26fps
Realme 7 Pro: 25fps
Nord N10 5G: 23fps
Poco X3: 27fps
Google Pixel 4A 5G: 20fps

BATTERY LIFE

Like the standard Realme 7, you'll find a capacious 5,000mAh cell inside the 7 5G and also like the base 7, the 7 5G promises up to two days of use per charge.

While this might seem like an obvious expectation, even with such



The 7 5G promises up to two days of use per charge.

a big cell, the inclusion of a more powerful processor, a higher refresh rate display and 5G should all contribute to greater power drain. Instead – no doubt partly thanks to Realme UI's stern power management and the Dimensity 800U's smaller 7nm process – the Realme 7 5G matches, or in some instances, outperforms the 4G model's power profile.

The phone doles out an impressive nine hours of screen-on time, which aligns well with those two days of use per charge cycle. There's also the inclusion of 30-watt fast charging under Realme's 'Dart Charge' branding.

In our tests, the included charger took that sizeable 5,000mAh power pack from empty to 62 per cent charge in 30 minutes – 4 per cent more than the standard Realme 7 charged up in the

same time frame. A full charge takes, on average, a sliver over an hour, which is also very respectable.

If, for whatever reason, you want to get more life out of a single charge of the Realme 7 5G's battery, there are a number of methods on offer. Realme UI

features both a power-saving and Super Power Saving mode, you can control app activity on a case-by-case basis and you have the option of dropping down the refresh rate manually, as mentioned earlier.

PCMark Battery

Realme 7 5G: 13 hours, 11 minutes

Realme 7: 9 hours, 2 minutes

Realme 7 Pro: 12 hours, 5 minutes

Nord N10 5G: 11 hours, 37 minutes

Poco X3: 14 hours, 24 minutes

Google Pixel 4A 5G: 12 hours, 35 minutes

Charge in 30 minutes

Realme 7 5G: 62%

Realme 7: 58%

Realme 7 Pro: 92%



You'll find a 48Mp primary sensor on the back, accompanied by an 8Mp ultra-wide and a pair of 2Mp sensors.

Nord N10 5G: 64%

Poco X3: 59%

Google Pixel 4A 5G: 34%

PHOTOGRAPHY

Considering the surprising amount of differences that set the Realme 7 5G apart from the standard 4G model, one area that remains unchanged is the camera set-up and as such, it carries the same strengths and weaknesses.

You'll find a 48Mp primary Samsung S5KGM1ST lens on the back, accompanied by an 8Mp ultra-wide and a pair of 2Mp sensors – dedicated to macro and depth (for portrait shooting), respectively. There's a hole-punch front-facer that clocks in at 16Mp too.

Generally, so long as you've got plenty of light, you'll capture decent

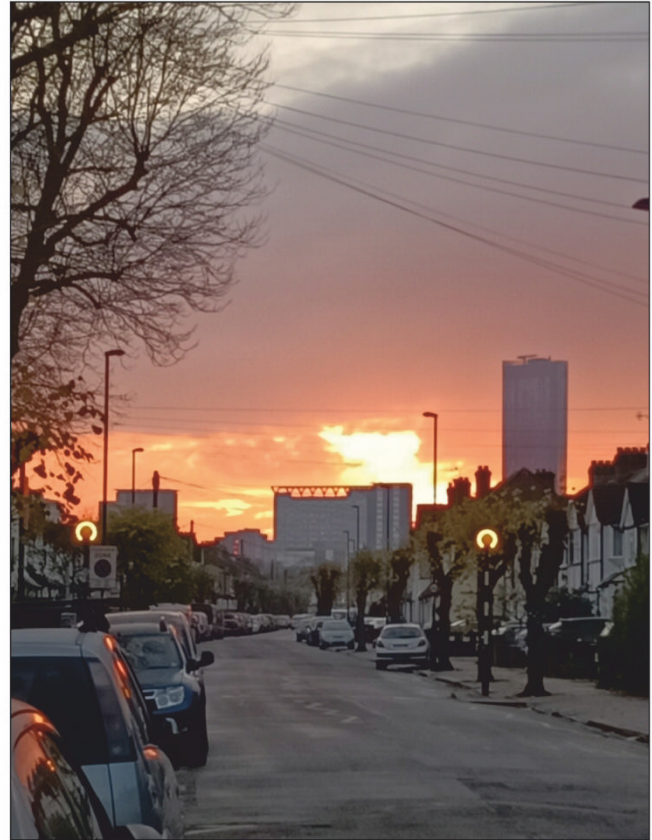
shots sporting detail and colour good enough to grace Instagram, without fear of ridicule. Realme's camera app makes it easy to add filters, toggle HDR shooting (best left on) and allows for AI enhancements (again, best



So long as you have good light, the Realme takes decent shots.



Here's a macro shot of the same subject.



On the left is an example of a portrait photo and on the right is a low light shot.

left on, if you like a little more punch in your shots).

There's also a decent amount of colour and contrast consistency when switching to the ultra-wide snapper; typically less of a sure-fire thing as you move towards the more affordable end of the spectrum.

As for selfies, you should find that shots here that are crisp and offer good contrast, although colour saturation takes a noticeable hit by comparison.

The caveat when shooting across practically any of the 7 5G's cameras is how they deal with available light.

In bright shooting conditions, you'll get the best the results but if your shot features a high contrast subject matter, it doesn't take a lot to reveal the limits of this phone's dynamic range; with the brightest parts either blowing out or the darkest areas losing detail and shifting to flat black.

VERDICT

While the camera is the weakest aspect of the Realme 7 5G, no part of this phone is inherently bad, especially considering what else is on offer at this price point. Realme as a brand has been

keen to make 5G accessible to as many consumers as possible and the Realme 7 5G is the perfect embodiment of this effort. It could have easily just found a modem/chip combination that allows for 5G connectivity and left the rest of the hardware untouched from the 4G model, while still charging £100 more – as was Samsung’s strategy with the Galaxy S20, for example.

Instead, the 7 5G brings superior performance, faster charging, greater longevity and a higher refresh rate display to the table to better justify the price jump from the standard 7.

When picking a new phone, going for the cheapest option is seldom the right course of action, however, when it comes to picking the cheapest 5G phone, thanks to the Realme 7 5G, it’s perhaps the best option. Alex Walker-Todd

SPECIFICATIONS

- 6.5in (2,400x1,080; 405ppi) IPS LCD, 120Hz, 480 nits display
- Android 10, Realme UI 1.0
- MediaTek Dimensity 800U 5G (7nm) processor
- Octa-core (2x 2.4GHz Cortex-A76, 6x 2GHz Cortex-A55) CPU
- Mali-G57 MC3 GPU
- 6GB/8GB RAM
- 128GB storage
- Four rear-facing cameras: 48Mp, f/1.8,

26mm (wide), 1/2.0in, 0.8µm, PDAF; 8Mp, f/2.3, 119-degree (ultra-wide), 1/4.0in, 1.12µm; 2Mp, f/2.4, (macro); 2MP, f/2.4, (depth)

- Selfie camera: 16Mp, f/2.1, 26mm (wide), 1/3.06in, 1.0µm
- Wi-Fi 802.11 a/b/g/n/ac, dual-band, Wi-Fi Direct, hotspot
- Bluetooth 5.1, A2DP, LE
- GPS with dual-band A-GPS, GLONASS, GALILEO, BDS
- NFC
- USB Type-C 2.0, USB On-The-Go
- Fingerprint scanner (side-mounted)
- Non-removable 5,000mAh lithium-polymer battery
- Fast charging 30 watts
- 162.2x75.1x9.1mm
- 195g



Oppo Reno 4 Pro 5G

Price: £649 (inc VAT) from fave.co/2K7feo4



The Reno series has always placed a focus on aspects like design and camera performance, with the best of the current bunch – the Oppo Reno 4 Pro 5G – being no exception.

Oppo has hit what could roughly be considered a biannual release schedule with its Reno line, meaning the differences from the likes of the Reno 3 to Reno 4 (and indeed the forthcoming Reno 5) Series' will feel

incremental to those wondering whether they should upgrade from one generation to the next.

In the case of the Reno 4 Pro 5G specifically (notably a different device to the LTE-only Reno 4 Pro), Oppo has essentially blended some of the best bits from its Find X2 and Find X2 Neo smartphones to make a device that splits the difference, while showcasing some flashier aesthetics in the process.

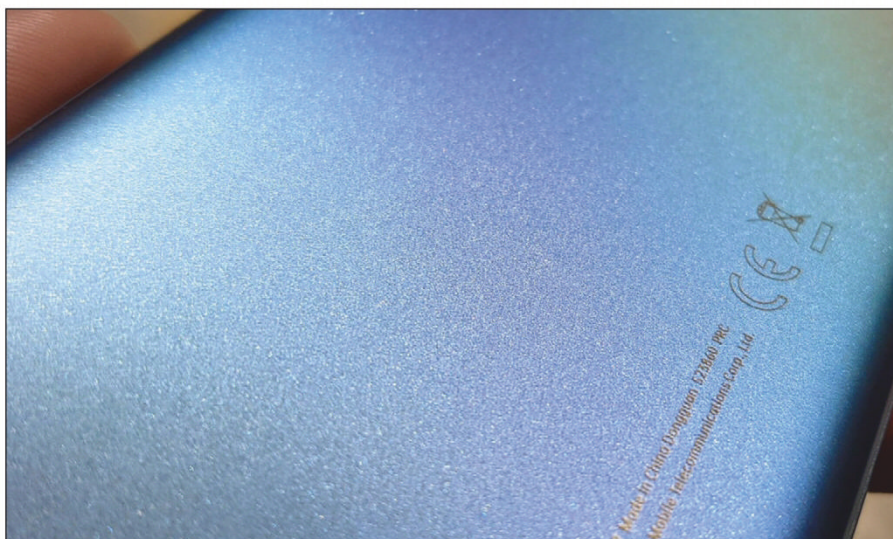
DESIGN

'Reno Glow' – two words that represent the culmination of seven dedicated patent applications and six months of research and development – Oppo wants people to know about the surface finish that debuts on the Reno 4 (styled as 'Reno4' by the way) line in a big way.

While the ins and outs of its surface finish might be a little too much a macro detail for the average consumer to care about, there's no escaping the fact that the Reno 4 Pro 5G is a pretty phone.

Although absent from the Space Black model (we'll get to why that is in a moment) both the poster child colourway – Galactic Blue (pictured) – and the Pantone special edition Glitter Green model, feature this unique finish.

Aesthetically, the back of the Reno 4 Pro 5G unquestionably stands out in its Galactic Blue guise. There's a reflected silver-to-dark-blue gradient running diagonally across the phone's back that has an almost pearlescent quality paired with a (pulling from Oppo's official press release) "crystal drilling technique (that) forms millions of micron-level prisma [sic] crystal pits".



The Reno Glow finish repels fingerprints but also grip.

Long-story-short, this Reno Glow finish is eye-catching, unique and Oppo's pride in its creation seems valid (to a degree). The company also claims it's "fingerprint-proof", which is confidence indeed. Sure enough, oily fingers generally leave the back of the Reno 4 Pro 5G unmarked, which is wholly impressive, again validating their confidence in the extra effort at work here.

The Space Black model takes the phone's aesthetics in a different direction, with a more conventional polished glass surface finish that, unfortunately, does hold onto prints. To make up for this drawback though, you get a reflective rainbow surface treatment that catches the light and a subtle repeating 'OP' pattern, which feels reminiscent of Louis Vuitton's

signature Monogram canvas print, granting the phone an extra touch of luxury.

There are no boring colour options with the Reno 4 Pro 5G, really just the choice between fingerprints or no fingerprints.

Unless, of course, you slap on the included flexible transparent

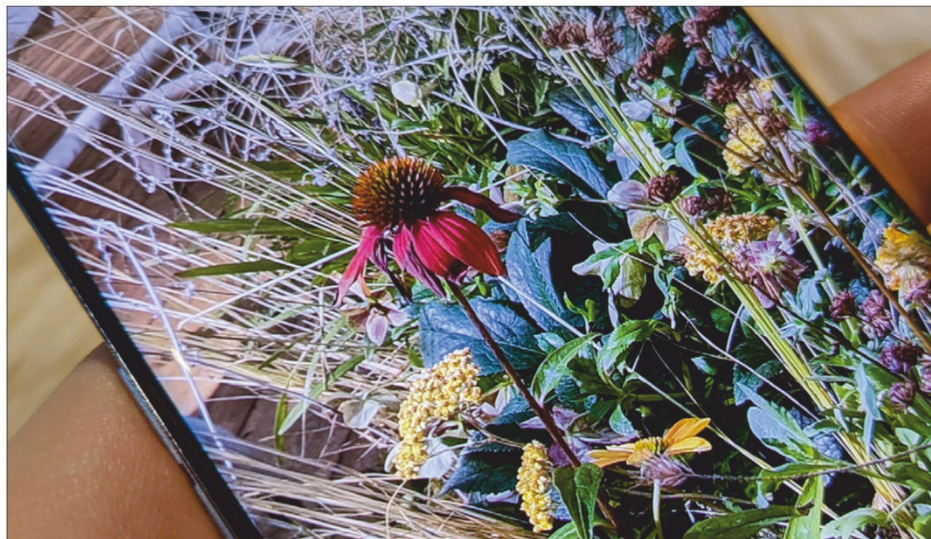
case, which renders this decision moot – so long as you're then okay with the extra thickness the case adds.

Beyond its finish, the 4 Pro 5G offers an impressively thin profile (just 7.6mm), helped along by the curved Gorilla Glass on its front and back, not to mention a pleasantly lightweight hand feel (at 172g), considering the size of the phone's display.

The only real omissions are any form of IP-certified water resistance and a headphone jack, along with the fact that the distinct three-sensor camera bump on its back sticks out quite far – even past the included case.

DISPLAY

The phone's 6.55in extended 20:9 aspect ratio screen is a joy to look at when it comes to consuming media.



The phone's 6.55in display is a joy to look at.

The AMOLED tech used (and support for HDR10) grants you great viewing angles, brightness, dynamic range, vibrant colours and defined contrast with true blacks.

A 90Hz refresh rate is the little secret sauce that helps the Reno 4 Pro 5G feel particularly current; with super-smooth visuals when swiping around the phone's user interface, assisted by the software's snappy animations and a more sensitive (than most 60Hz refresh rate phones) 180Hz touch response rate – which has the potential to give players an edge when gaming in quick-reaction titles like CoD: Mobile.

Speaking of gaming, one aspect of the display that will divide potential Reno 4 Pro 5G owners is Oppo's decision to give the phone's cover glass slightly curved edges.

On the one hand, it provides a more premium, cutting-edge look and can feel nice under-finger when swiping, however, it also gives your digits less room to simply hold the phone, increasing the risk of accidental touches and missteps – particularly frustrating when gaming.

The viewing experience can be augmented by way of the phone's Eye Comfort mode, which is designed to reduce eye strain and blue light emissions, as well as fine-grain control over general colour temperature and colour representation. You can choose from 'Vivid' viewing, which is enabled by default (representing 100 per cent of the DCI-P3 colour space) or 'Gentle', for more subdued viewing within the sRGB colour range.



In the pursuit of a clean design and with those thin metal edges, there is a fingerprint sensor.

In the pursuit of a clean design and with those thin metal edges, there is a fingerprint sensor, it just isn't immediately apparent, until you press your thumb into the lower portion of the display, that is.

The under-display biometrics work well enough to keep your phone secure, with a bright white light illuminating your thumbprint each time you want to unlock the phone. It's not the quickest sensor out there, but if you're willing to sacrifice on the level of security, RGB face unlock is also an option, using the phone's front camera to jump from sleep to your home screen in an instant.

As for audio, we've already made mention of the headphone jack's absence, however, Oppo does include some white USB-C earbuds in-box,

complete with an inline remote and microphone. The set actually pushes out acceptable sound for in-box buds too.

There's also the matter of the 4 Pro 5G's loudspeaker set-up, which trumps the standard Reno 4 5G's mono



Oppo includes some white USB-C earbuds in the box.

output with stereo speakers that deliver a surprisingly full sound, considering how thin this phone is.

The stereo split mirrors a lot of modern dual speaker smartphone arrangements, with bass bias from the down-firing speaker and treble channelled more directly out of the earpiece loudspeaker. That said, the balance feels far closer together here than it does on other devices that offer the feature currently on the market.

SOFTWARE

The Reno 4 Pro 5G comes with Android 10 but dressed in Oppo's own skinned overlay, dubbed Color OS (version 7.2). As modified Android goes, Color OS

has improved dramatically in recent years, partly in its appeal to a more global audience (with regards to styling and interaction), but also in its ease of use.

There are still some stylistic options and perhaps a few too many choices concerning

the granularity of user experience customization but ColorOS also augments stock Android in some meaningful ways as well.

You'll find the inclusion of one-handed mode and the icon pull-down gesture invaluable for more readily zipping around the UI on that 6.55in panel one-handed, plus power users will no doubt enjoy features like the Smart Sidebar for quick access to favourite apps, tools and split-screen multitasking.

There are a few preloaded Oppo apps that have to work a little harder to justify their place on your phone's storage though. Game Space helps direct resources and divert notifications when gaming on the Reno, while Oppo



The Reno 4 Pro 5G comes with Android 10 but dressed in Oppo's own skinned overlay, dubbed Color OS (version 7.2)

Relax is the company's own mindfulness app; complete with lights, sounds and breathing exercises to escape and bring calm to your day – if you're into that sort of thing.

PERFORMANCE

Qualcomm's Snapdragon 765G is arguably one of the most interesting mobile processors of 2020 – not to mention one of the most versatile out there right now.

It's not the company's most powerful piece of mobile silicon, that title remains with the Snapdragon 865+ – at least until we start seeing phones with the

newly-unveiled Snapdragon 888 hitting the scene – but the 765G has been found in an eclectic mix of smartphones from flagship handsets (Google Pixel 5, LG Wing), right down to the border between mid-range and budget (with devices like the Realme X50 5G), and it always delivers.

It's more than capable of ensuring the Reno 4 Pro 5G feels as engaged as any £1000+ flagship Android phone, helped by a heap of memory – in 12GB of RAM (as tested) – and unlike 865/865+ powered phones, has an integrated 5G modem for greater power efficiency too.

In artificial benchmarks, it behaves with a reassuring consistency against other 765G powered devices, like Oppo's own Find X2 Neo and Lite, along with the likes of the OnePlus Nord. It doesn't quite offer the same CPU grunt as the more affordable Reno 4Z 5G's MediaTek chip does but instead brings the heat when it comes to graphical oomph.

The variances shown on paper by such devices don't really translate into real-world discrepancies all that much, with the Snapdragon chip and the generous amounts of RAM it's paired with guaranteeing consistent and long-lasting performance for those looking for a device that will last.

Geekbench 5 (multi-core)

Reno 4 Pro 5G: 1,801

Reno 4Z 5G: 2,148

Find X2: 3,309

Find X2 Neo: 1,761

Find X2 Lite: 1,845

OnePlus Nord: 1,963

GFX Manhattan 3.1

Reno 4 Pro 5G: 33fps

Reno 4Z 5G: 29fps

Find X2: 45fps

Find X2 Neo: 31fps

Find X2 Lite: 33fps

OnePlus Nord: 34fps

BATTERY LIFE

While there's a comforting balance across the Reno 4 Pro 5G's feature set, one particular highlight is its fast-charging capabilities; with Oppo's own SuperVOOC 2.0 tech onboard delivering an astounding 65-watt fast charging rate.

Despite our battery tests having found the phone sometimes lingering on 99 per cent for a while past the 30-minute mark, for all intents and purposes, you can refill the Reno 4 Pro 5G's cell in half an hour from flat and it'll already have reached two-thirds full after just 15 minutes of charging.

In testing, total longevity of 11 hours and 50 minutes is also commendable, although real-world screen-on time clocked in at a more modest five hours. That's still enough to get you through a day with a decent amount of use under your belt though, and if you do feel battery anxiety creeping in, we've already proved that it takes just minutes to rectify the notion of 'low power', thanks to that blisteringly-fast SuperVOOC charging.

PCMark Battery

Reno 4 Pro 5G: 11 hours, 50 minutes

Reno 4Z 5G: 12 hours, 43 minutes

Find X2 Neo: 10 hours, 13 minutes

OnePlus Nord: 11 hours, 26 minutes



Oppo's own SuperVOOC 2.0 tech onboard delivering an astounding 65-watt fast charging rate.

Charge in 30 minutes

Reno 4 Pro 5G: 99%

Reno 4Z 5G: 38%

Find X2: 96%

Find X2 Neo: 71%

Find X2 Lite: 68%

OnePlus Nord: 68%

PHOTOGRAPHY

The triple camera set-up on the phone's back is fronted by the long-established Sony IMX586 sensor – a 48Mp snapper that captures pixel-binned 12Mp stills by default and on the Reno 4 Pro 5G comes complete with OIS (optical image stabilization), along with a laser autofocus array. There's also a 12Mp (IMX708)

ultra-wide whose loyalties actually lie in video capture, thanks to an unusual native 16:9 aspect ratio. The rear array is then rounded out by a 13Mp telephoto snapper that offers 2x optical zoom but also supports 5x 'hybrid' zoom (and a maximum 20x lossy all-digital zoom).

If it's stills you're looking to shoot, Oppo's done a great job getting a lot out of the now-ageing IMX586; with plenty of detail, pleasingly-rich colours and surprisingly good dynamic range in standard shots.

Detail is the first thing to go in low light but even then, results aren't unusable as they might be on



The Oppo has a triple lens set-up on the rear.

Here's a high-contrast image.



This is the same subject shot using the 2x zoom...





...5x
zoom...



...and
finally 20x
zoom

The top image is a low-light photo and the one below was taken using night mode.





Our final photo was taken using portrait mode.

similarly-equipped phones, while Oppo's Night mode does wonders to bring some fidelity back to such shots.

There's a notable discrepancy in the colour science at work between the main and the ultra-wide though, leading to the need to colour correct in-post if you're looking to incorporate shots from both sensors in a single album.

Where video is concerned, you can expect clean footage with the ability to smooth out shake to an impressive degree, thanks to the near-Go-Pro-like Ultra Steady mode. OIS on this sensor (which is included on the Oppo Find X2) would have elevated things that

little bit more – instead it's achieved using EIS (electronic image stabilization) only – but that's where some of the extra money that the X2 asks of you must go.

The sensor's other party piece is Ultra Night Mode, which like shooting Night mode stills, makes scenarios that most phones would through in the towel on, still able to be captured, worked with and shared to social media. Only the far pricier iPhone 12 Pro line takes such an interest in this sub-section of mobile videography, making the Reno a stand-out alternative, at least in this specific regard.

The phone's aforementioned face unlock is facilitated by a 32Mp front-facing camera that's set into the corner of the display itself. It works well enough for selfies and doesn't trip up all that often concerning edge detection. There's a notable downtick in colour depth when shooting video with this front snapper though, which sticks out on the Reno 4 Pro 5G more so than on rival devices as a result of the rear set-up's video prowess.

VERDICT

Without context, you'd be forgiven for thinking the Oppo Reno 4 Pro 5G is as much of a flagship as any £1000+ handset. It's nice to look at, nice to use, powerful, has a capable trio of cameras and the latest features in a high refresh rate display, 5G and super-fast 65-watt charging.

While the £649 price tag seems just about competitive, unless you're sure you need this exact recipe of design and performance, you don't have to sacrifice much to make a significant saving.

The Find X2 Neo sports an only-slightly-less-capable camera set-up and more modest 30-watt fast-charging but preserves pretty much every other selling point of the Reno 4 Pro 5G for notably less. If you don't need the Reno's video capture prowess, then the

aforementioned OnePlus Nord doesn't skimp on performance and offers what is arguably a superior user experience in the form of Oxygen OS, for closer to half the price.

There's also the fact that the Reno 5 series, which we touched on at the beginning, is already breathing down the Reno 4 line's neck, with an imminent release due (in China, at least).

So while the Oppo Reno 4 Pro 5G is a stellar smartphone in every regard, it's nestled among a number of other similarly stellar smartphones that offer the same or better value in subtly different ways. **Alex Walker-Todd**

SPECIFICATIONS

- 6.55in (2,400x1,080; 402ppi) AMOLED, 90Hz, HDR10+, 500 nits display
- Android 10, ColorOS 7.2
- Qualcomm SM7250 Snapdragon 765G (7nm) processor
- Octa-core (1x 2.4GHz Kryo 475 Prime, 1x 2.2GHz Kryo 475 Gold, 6x 1.8GHz Kryo 475 Silver) CPU
- Adreno 620 GPU
- 8GB/12GB RAM
- 128GB/256GB storage
- Three rear-facing cameras: 48Mp, f/1.7, 26mm (wide), 1/2.0in, 0.8µm, PDAF, Laser AF, OIS; 13Mp, f/2.4, 52mm (telephoto), 1/3.4in, 1.0µm, PDAF, 2x optical zoom; 12Mp, f/2.2, 120-degree

- (ultra-wide), 1/2.43in, 1.4 μ m, AF
- Selfie camera: 32Mp, f/2.4, 26mm (wide), 1/2.8in, 0.8 μ m
 - Wi-Fi 802.11 a/b/g/n/ac, dual-band, Wi-Fi Direct, hotspot
 - Bluetooth 5.1, A2DP, LE, aptX HD
 - GPS with dual-band A-GPS, GLONASS, BDS, GALILEO, QZSS
 - NFC
 - USB Type-C 3.1, USB On-The-Go
 - Fingerprint scanner (under display)
 - Non-removable 4,000mAh lithium-polymer battery
 - Fast charging 65 watts
 - 159.6x72.5x7.6mm
 - 172g



Nokia 3.4

Price: £129 (inc VAT) from fave.co/2MVvt8P ★★★★★

Nokia is a name synonymous with the mobile phone, but not so much with the smartphone. The past decade hasn't been kind to the company, but things could be turning around thanks to a continually evolving line-up of new devices, including the Nokia 3.4.

It has some interesting features, but perhaps the most important is the low price. So, let's see if you get what you pay for or whether this is a true bargain.

DESIGN

You don't get the impression this is a 'cheap' phone when you first take the Nokia 3.4 out of the box. Yes, the body has a back that's made of plastic, but it comes with a textured finish that actually makes it comfortable to hold, as opposed the non-friction glass backs on expensive phones that make me nervous every time I hold one, as I just imagine them slipping straight through my fingers.

The chassis itself is metal, as shown by the band that goes around the rim, and there's a certain amount of heft to the device. Volume and power buttons adorn the right flank, while a dedicated Google Assistant button is on the left. The rest of the accoutrements include a USB-C

charging port, 3.5mm headphone jack, SIM tray that also holds a microSD card, and the single speaker.

A 6.39in LCD display fills the front panel, with only slim bezels running outside its edge. The 19:5:9 ratio means that it's tall, so there's no chance of reaching the top edge using one hand, but the chassis' overall dimensions of 160.97x75.99x8.7mm and 180g weight make it not the smallest or lightest of devices, but certainly not excessive.

The reason for the mainly bezel-free display is that Nokia has saved space by going down the punch-hole route for the front-facing camera, avoiding notches or teardrop shapes along the top of the screen. Flipping the device over reveals three more cameras, which is quite impressive for a device at this price, plus



The rear has a textured finish that makes it comfortable to hold.

the fingerprint sensor that allows you to unlock the phone

Of course, there are some features missing that you would find on more expensive smartphones, such as waterproofing, wireless charging or even fast charging, but there are limits to what Nokia could squeeze into its budget, so none of them are present on the 3.4.

PERFORMANCE

You also won't find any top tier processors in a model costing as little as this, but Nokia has selected the 8-core 1.8Ghz Qualcomm Snapdragon 460, which is now appearing on similarly priced devices like the Motorola E7 Plus and Oppo A53.

This is paired with 3GB of RAM and 32GB of storage, although you can opt

for differently configured versions of the 3.4 that come with 3GB/64GB or 4GB/64GB if you prefer. You might want to do so as the performance on this model was patchy throughout the test period.

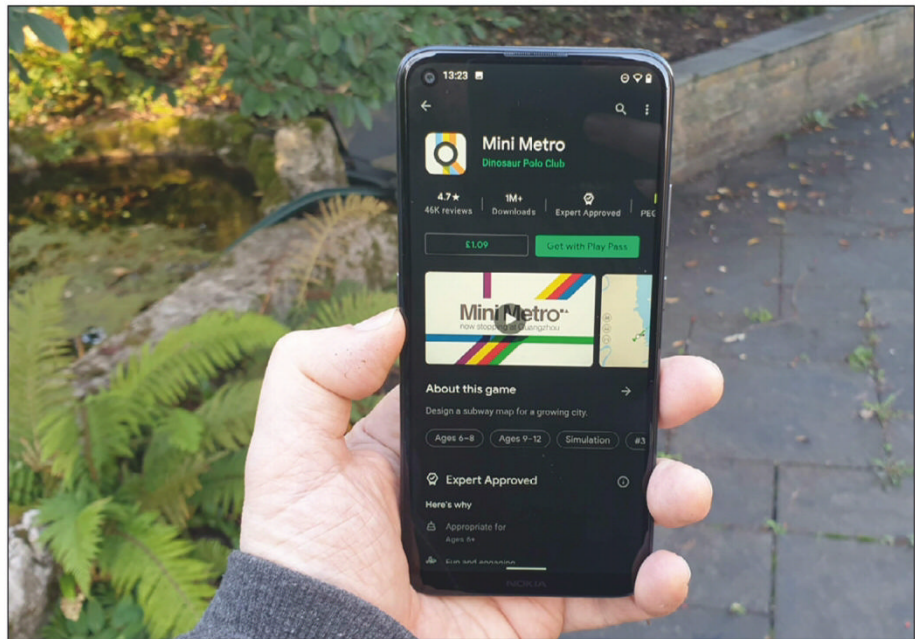
Stuttering within more demanding apps was commonplace, and the camera became unresponsive on several occasions, with the shutter button not responding, focus not realigning, and in one case the whole app just crashing out.

Even waking the device could take that extra second or so longer than you'd expect, with often a delay between tapping the power button and the screen coming to life. It's not the end of the world to have to wait for a second, but when you consider how often you wake your phone each day, this hesitation soon becomes a real annoyance.

Here's how the Nokia 3.4 compares to some other budget models:

Geekbench 5 (multi-core)

- Nokia 3.4: 1,175
- Redmi 9: 1,294



A 6.39in LCD display fills the front panel, with only slim bezels running outside its edge.

- Realme 7: 1,622
- Poco X3: 1,764
- Sony Xperia L4: 869
- Vivo Y20s: 1,155

GFX Manhattan 3.1)

- Nokia 3.4: 19fps
- Redmi 9: 10fps
- Realme 7: 26fps
- Poco X3: 27fps
- Sony Xperia L4: 11fps
- Vivo Y20s: 19fps

GFX T-Rex

- Nokia 3.4: 36fps
- Redmi 9: 28fps
- Realme 7: 45fps
- Poco X3: 60fps

Sony Xperia L4: 27fps

Vivo Y20s: 37fps

STORAGE

As you may have already noticed, the storage capacity on the Nokia 3.4 is about as low as you can possibly get away with these days at 32GB. While this is disappointing, you do have the option to use a microSD card to bolster this by quite a margin, as the maximum card capacity is 512GB.

Admittedly, most quality cards with that capacity will cost you a fair chunk of the actual phone's price tag, but opting for 64GB instantly turns the paltry storage on the 3.4 into something that can hold a large music library as well as your photos and other data.

DISPLAY

The 6.39in LCD display is a decent effort, although the 1,560x720-pixel resolution does make it a little soft on small text, depending on the colour of the background. Colours are bright, streaming Netflix and YouTube gives pleasing results, and the 400 nits maximum brightness means you can still use it outside in the harsh winter sun, even if it's half what we'd expect from a flagship.

I did encounter several occasions when the palm cancelling didn't register

that well though, making the phone close apps or navigate backwards, mainly due to the tiny bezels along the sides. It's possible that a case could solve some of these issues, and I'd recommend using one with any phone.

PHOTOGRAPHY

Having a triple camera combination on a device at this price is really quite impressive. Even more so when you see the kind of images that can be captured. In truth, it's really two cameras, as the main 13Mp shooter works in combination with 2Mp depth sensor to enable the Portrait mode that blurs the background, while the 5Mp ultra-wide makes it easier to capture landscapes.

Using the Portrait mode, I was very pleased with some of the images the Nokia 3.4 could produce. As you can see from the image on the next page, in the right light the camera can capture quite stunning photos, with a nice bokeh effect keeping the foreground in focus but softening the rest.

In harsher conditions, the sensor did have a tendency to blow out the highlights, giving you results with very bright areas of the frame. But, that isn't unusual on more expensive models, so I won't mark down the Nokia too much.

The main camera interface has an area that shows a single tree or several,



As you can see, the Nokia 3.4 takes stunning photos.

this quickly switches you between the standard focus length and the ultra-wide. In use, I found this helpful, particularly in those moments when you can't move back any further but want to capture more in the frame.

There's also a Night Mode which works okay, although you won't be getting into Google Pixel territory, but it's a real bonus that Nokia managed to include it at all.

Video quality tops out at 1080p at 60fps, which is completely acceptable. Again, in good light you're going to be pleasantly surprised by the footage, with focus managing to track moving subjects with a decent amount of success. When



We were impressed with the Nokia's portrait mode.

things get darker, then the quality dips, but again, this isn't uncommon.

Switching to the front/selfie camera sees things take a dip. Focus is soft, light measuring tends to over-expose, and generally it doesn't really compare to the higher-quality options found on the back.

BATTERY LIFE

The box claims a two-day battery life, and that's about right. If you use your phone for checking social media, listening to content, taking some photos, and perusing the shops, then you should make it to the evening of the second day. Spend more time in the camera app or gaming and that will decrease.

As part of the test I ran the PCMark benchmark app, which keeps the display on and runs various video and animation tests. After 13 hours the Nokia 3.4 still had juice in the tank, so I think that speaks to the impressive optimization of the included 4,000mAh battery.

PCMark Battery

Nokia 3.4: 13 hours, 31 minutes

Redmi 9: 8 hours, 13 minutes

Realme 7: 9 hours, 2 minutes

Poco X3: 14 hours, 24 minutes

Geekbench 5 (multi-core)

Nokia 3.4: 19%

Redmi 9: 20%

Realme 7: 58%

Poco X3: 59%

Sony Xperia L4: 22%

SOFTWARE

Most Nokia phones are now on the Android One platform, which gives a stock version of Android without any of the overlays that many manufacturers feel the need to use. It's a clean, nicely designed interface that comes with all the normal Google apps.

At the time of writing, it comes preinstalled with Android 10 and one of the best things about Android One is that Google guarantees two years of upgrades for all devices, so you can be confident that the Nokia 3.4 won't be left behind any time soon.

VERDICT

Nokia has the right motives with the 3.4, in that those looking for a budget smartphone shouldn't have to settle for poor specs. The cameras on this handset are capable of some truly excellent results, the display is a decent panel at this price, and the Android One platform makes it a nice user experience all round.

It's such a shame then that the performance is so inconsistent. Regular hesitations when doing even the most basic task (such as waking the phone

up) are compounded by long delays and unresponsive behaviour when using more challenging apps like the camera. In its current state, I find it hard to recommend this device even to those who are finding the current financial climate difficult. **Martyn Casserly**

- 161x76x8.7mm
- 180g

SPECIFICATIONS

- 6.39in (1,560x720; 269ppi) IPS LCD, 400 nits display
- Android 10, planned upgrade to Android 11
- Qualcomm SM4250 Snapdragon 460 (11nm) processor
- Octa-core (4x 1.8GHz Cortex-A73, 4x 1.8GHz Cortex-A53) CPU
- Adreno 610 GPU
- 3GB/4GB RAM
- 32GB/64GB storage
- Three rear-facing cameras: 13Mp, (wide), PDAF; 5Mp, (ultra-wide); 2Mp, (depth)
- Selfie camera: 8Mp, (wide)
- Wi-Fi 802.11 b/g/n, hotspot
- Bluetooth 4.2, A2DP, aptX
- GPS with dual-band A-GPS, GLONASS, GALILEO, BDS
- NFC
- USB Type-C 2.0
- Fingerprint scanner (rear-mounted)
- Non-removable 4,000mAh lithium-polymer battery
- Charging 10 watts



Best small smartphones

Phones keep getting bigger, but there is still a raft of decent small-screened handsets on the market. **ALEX WALKER-TODD** reports

As with so many things, bigger isn't always better with regards to smartphones and this list best represents the top picks for worthwhile small phones on the market in 2021.

WHY GET A SMALL PHONE?

When the 4.7in iPhone 6 was released back in 2014, many were outraged at the size increase. Nowadays, such

a screen size is considered comically small. Simply put, phones have become too big. Bezels on phones have shrunk significantly in the past few years, but that doesn't mean people are suddenly willing to wield a 6.9in monster, like the Samsung Galaxy Note 20 Ultra.

People with smaller hands are going to find a permanently two-handed phone an inconvenience, not just when

in-hand but when it's constantly poking out the top of their jeans pockets too. Handsets of a smaller size can be used one-handed, fit in a pocket or bag far more easily, and can do everything a bigger phone can do in a more compact package.

There's also the matter of foldables to now consider, with devices like the revived Motorola RAZR and the Samsung Galaxy Z Flip (see page 89), embracing the clamshell designs of old but combining them with new foldable display technology, giving you the best of both – a larger-screened device in a compact package.

1. GOOGLE PIXEL 5

Price: £599 from fave.co/2SYhfnC

Hot on the heels of the Pixel 4a, Google has expanded its 2020 mobile portfolio yet further to now include the Pixel 4a 5G and the long-rumoured Pixel 5.

On the surface, the Pixel 5 serves to right the wrongs made by last year's erroneous Pixel 4; namely by dropping the experimental Motion Sense gesture tech, trading its secondary telephoto camera in for an ultra-wide sensor and almost doubling battery capacity

so that the phone actually lasts beyond a few hours at a time. While these changes may seem obvious, the Pixel 5 – and where it sits in the wider smartphone landscape – is indicative of a shift in Google's smartphone strategy and points to a very different future to the one that older Pixel phones were designed for.

Design

The most striking thing about the Pixel 5 isn't its camera tech or how well the Google Assistant is integrated into its software experience, it is its design and that's thanks to two main factors: its size and its finish.

It's fair to say that there just haven't really been any good small Android phones in recent years, with a few exceptions that barely scrape by. Most manufacturers have pushed for bigger



The Pixel 5 serves to right the wrongs made by last year's erroneous Pixel 4.



The Pixel 5 sees the welcome return of a centrally-positioned rear fingerprint sensor.

displays in order to show off their multimedia capabilities but in most cases, that's been at the expense of portability, weight, ease-of-use and comfort in the hand.

The Pixel 5, with its 6in display, definitely cements its place on our Best Small Phones list because of its diminutive footprint, paired with a comfortable hand feel that's wholly unique to this device.

It has a beautifully balanced design, being the only phone with what appears to be equally-sized bezels along all four edges of the screen (most usually have a thicker bottom bezel).

The move away for the Motion Sense radar array of last year's Pixels, plus the use of an in-display hole-punch front camera (a trend Google first adopted with the Pixel 4a), is why the bezels of

the Pixel 5 are so much thinner; and then there's the rounding.

It's a small detail, but both the body and the display of the Pixel have rounded corners that share proportionally complimentary radii; something you might overlook on paper, but in reality taps into that part of your (are at least my) subconscious that's appeased by the visually congruent.

It brings a pleasing balance to the look of the Pixel 5 that's also supported by its relatively thin 8mm waistline, rounded sides and impressively low weight (just 151g).

There's also the finish, you won't readily find metal-bodied smartphones nowadays, with glass or plastic being the preferred material of choice, especially when it comes a phone's back panel.

The Pixel 5 is an enigma in this regard, as, along with signal performance, wireless charging is one key reason you don't want to use a metal back and yet the Google has clad the 5's internals in recycled aluminium, while also retaining support for wireless charging. How has it achieved this feat? Simple, it cut a hole in it.

It's very hard to perceive, but in the right light you can actually see the shield-shaped cut-out Google has

sliced out of the phone's aluminium frame to allow the wireless charging coil to function. The Pixel 5 is covered in what it describes as a "bio-resin" which gives the impression of a continuous unibody and the overall effect is wholly convincing; with the Pixel 5 presenting itself as a clean, well-built device.

There's a light surface texture that offers a touch less grip than a glossy back would and picks up small abrasions disappointingly easily but it is, at least, brilliant at repelling fingerprints and feels nice in the hand.

This time, potential buyers only have two colour options to choose between: Just Black or Sorta Sage – a muted pale green that serves as a notable contrast to 2019's Clearly White and Oh So Orange colourways. Google says this choice of just two finishes comes as a direct result of supply chain limitations in the face of the global pandemic.

The colour-accented power button has also been replaced with a chromed button (along with a chromed 'G' logo on the lower half of the phone's back) which Google says helps differentiate the more premium Pixel 5 from the Pixel 4a (5G) that it was announced alongside (which features a white power key).

The finishing touches that round out the Pixel 5's design are its pleasingly small camera bump, the return of a

centrally-positioned rear fingerprint sensor – which is undoubtedly more responsive and convenient than the Pixel 4's face unlock or in-display fingerprint sensors (both optical and ultrasonic) – and IP68 dust and water resistance.

Display

A taller, slimmer 19.5:9 aspect ratio means the Pixel 5 offers a larger 6in display compared to last year's Pixel 4, without becoming that much wider in-hand. Google hasn't pushed the boat out with the panel on this year's Pixel, but it's still a pleasingly crisp and clear HDR10+-compliant, 90Hz, Full HD+, OLED offering.

That adaptive higher refresh rate is enabled by default and although technically consumes more battery life than locking the phone down to 60Hz, gives you a far more responsive and premium-feeling user experience as a result, so it's best left on

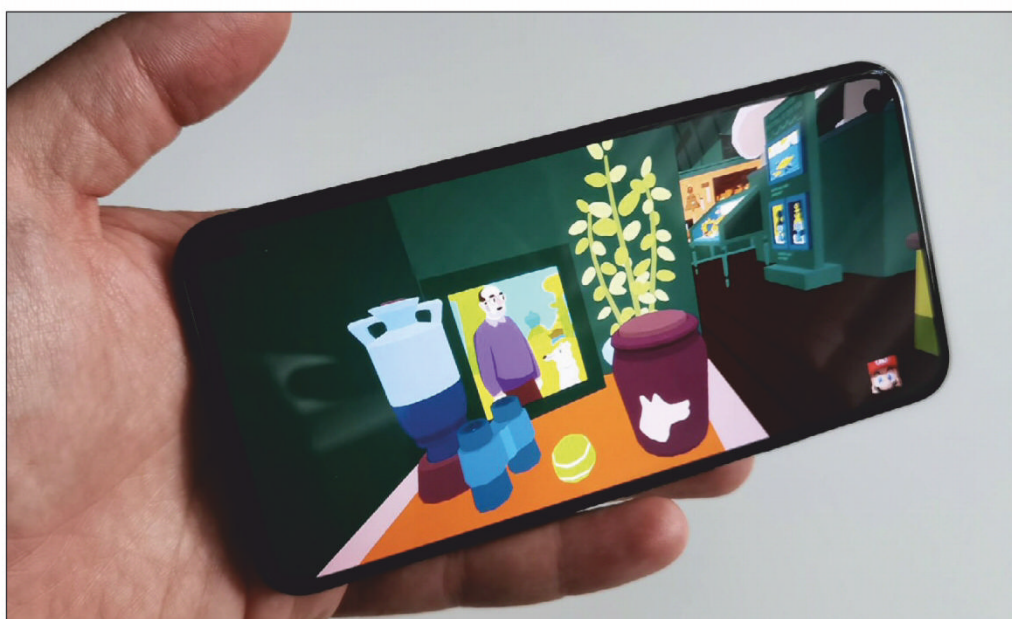
Maximum brightness could be a touch higher, but generally-speaking there's little that detracts from the visual experience; with pleasing colours, contrast and viewing angles at play.

You have the option to change between Natural and Boosted colour profiles or opt for Adaptive mode, which is enabled by default (I never felt the need to change it), while Night Light will

warm up the screen colour temperature in the evenings to help reduce eye strain.

As for the Pixel 5's audio chops, a headphone jack doesn't feature and there's no in-box 3.5mm adapter or USB headphones, so you're left either forking out extra for Bluetooth headphones or sourcing your own USB-C to 3.5mm adapter (Google, no doubt, hopes that you choose to pick up a pair of its latest Pixel Buds [£179] or its own-brand adapter [£12]). If that is an important consideration for you, the Pixel 4a (5G) does feature a headphone jack.

With no visible earpiece, it was assumed that the Pixel 5 would host an under-display speaker, and sure enough, it works well in calls but doesn't bring much to the table



There's little that detracts from the visual experience on the Pixel 5.

when serving as a loud-speaker. It handles the higher frequencies while a downward-facing secondary speaker does most of the heavy lifting regarding the mids and bass tones.

That said, despite the promise of stereo sound and the frequency split across both speakers, the overall sound profile lacks punch or clarity, especially the louder you push it.

Software

There was never any doubt about the software experience that the Pixel 5 would be running out-the-box. Android 11 is the latest and greatest of Google's mobile OS's and as ever, this newest Pixel serves to show it off at its best.

This mainly takes the form of iterative improvements across a number of

established features, with apps like Google Duo and Google's Recorder getting some additional functionality (the latter now lets you edit audio recordings and auto-transcriptions by

highlighting each one to affect the other – it’s pretty impressive in practice).

Hold For Me – the Google Duplex-powered automated call holding feature – sounds promisingly helpful on paper but isn’t available at launch and if you’re outside the US, won’t be coming to your Pixel phone for the foreseeable, which is a real shame.

It’s really the small tweaks that elevate the software experience on the Pixel 5; the ability to both screenshot or grab on-screen information in a context-aware format with a simple swipe up, support for Live Captions (introduced in 2019) and the improved wallpaper and home screen customization tools.

None of this is groundbreaking stuff but Google has managed to both add and improve features without leaving the resultant software experience feeling

bloated. That’s before you fold in the promise of three years of both security and OS updates, as well as a handful of camera and battery-related additions that we’ll come to in a moment.

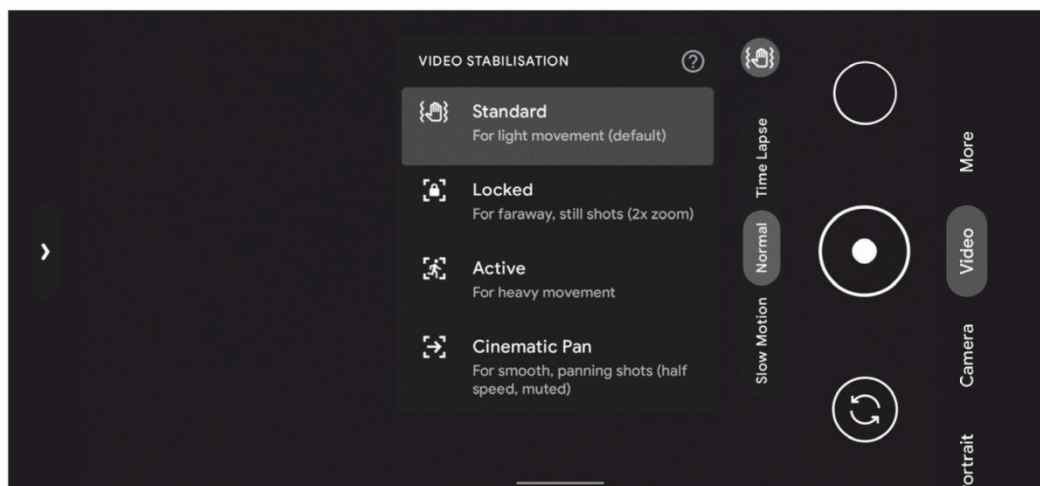
Photography

The Pixel line has grown to represent the power of computational photography on smartphones and as the years have gone on, that fact has only solidified further.

The Pixel 5’s primary 12.2Mp (Sony IMX363) sensor is the same unit used by the Pixel 4 series and even the Pixel 3 series before that; it’s a decidedly ageing component that’s remained in high regard, only because of what Google’s engineers have been able to achieve on the software and image processing side. This time, it’s

Google has replaced the Pixel 4’s telephoto for a new ultra-wide lens.





The Pixel 5's video stabilization options.

accompanied by a 16Mp ultra-wide sensor, which sports a 107-degree field-of-view; not as wide as its competitors (the iPhone 12's ultra-wide sensor sports a 120-degree FoV, for example) but still a great way to gain a new perspective on a subject or fit more in-frame without having to move position.

The biggest upgrade isn't so much the decision to swap out the Pixel 4's telephoto for this new ultra-wide (despite that being one of the biggest criticisms of the camera set-up on last year's Pixels) but that Google has expanded standout features like Night Sight to work across all of the Pixel 5's various sensors, automatically.

There's also the addition of virtual portrait lighting, a multitude of new specialized video stabilization options and the ability to top out at 4K 60fps recording (up from 4K 30fps on the Pixel 4). And all this while Google

has seemingly dropped the use of a dedicated chip, like its predecessors' Pixel Visual Core and Pixel Neural Core.

In side-by-side testing, the Pixel 5 was able to capture and process Portrait shots as quickly as, or faster than last year's Pixel 4, so it looks as though Google's confidence in this move seems valid.

As for picture quality, you're getting a very similar result to last year's Pixels. Crop in and you'll see some variation in sharpness, dynamic range and colour science – with the Pixel 5's images being sharper, dynamically wider and a fraction cooler in those three regards – but the different decisions the camera is making over last year's Pixel are both subtle and more a matter of personal preference, rather than an empirical improvement.

Video quality does seem improved, namely thanks to the option of that

Here's a shot of a rainbow taken using the defaults settings.



This is the same subject, but taken with the ultra-wide lens.



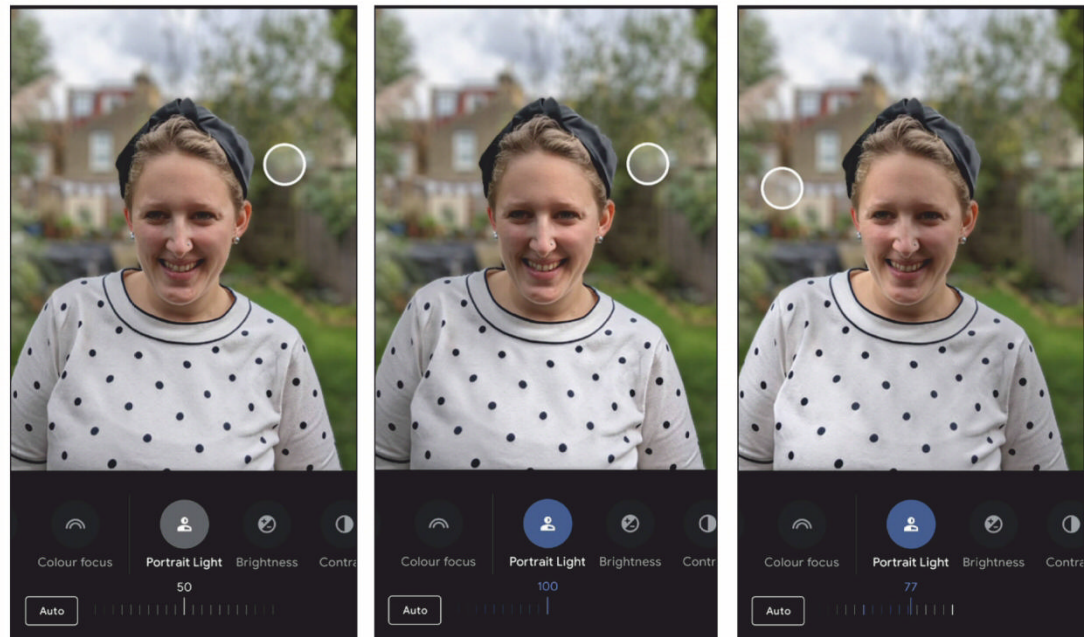


This photo was taken when the light was extremely low.



Here's the same scene, but shot using the Pixel 5's Night Sight mode.

Virtual portrait lighting is well implemented on the Pixel 5.



higher frame rate, as well as different stabilization for different use cases. It's definitely worth familiarizing yourself with these modes ahead of time though, as they all treat footage differently and most importantly, crop in on the frame to a different degree; depending on what type of content the phone thinks you're going to capture.

Standard stabilization is on by default and seems wholly capable if you're simply walking down the street or panning around from a fixed spot. Locked is great for a zoomed, tripod-style fixed position shot, while handheld, although the crop is quite heavy (starting at 2x).

Active is the Pixel's attempt at GoPro-style stabilization and while useful, still lets in noticeable judder depending

on the motion the phone is trying to counteract. Cinematic Pan is the most creative but also the most specialized – trimming out audio and slowing footage down to half speed while helping you capture a super-smooth horizontal pan while shooting handheld.

You can also disable image stabilization (although there's no real need) although it's clear that this only really kills the EIS (electronic image stabilization), while the main camera's OIS (optical image stabilization) remains on.

HDR processing has also been improved and the feature-set expanded upon, along with a richer post-capture editing suite, but the other stand-out feature is virtual portrait lighting, which lets you add a virtual light against your

subject's face that you can drag around on-screen, change intensity or have the phone automatically place and adjust.

While the feature isn't new to smartphones in general, the Pixel 5 has one of the most impressively reliable and easy-to-use implementations of such functionality.

Performance

The Pixel line has always been about a software and user experience that outshine – and aren't explicitly limited by – the hardware that supports them. This is most evident in the phone line's camera technology, but with the Pixel 5 it's also true of the processor running the show.

Google has always stuck Qualcomm's flagship chip into its mainline Pixel phones, but near the end of said chip's time in the spotlight. This was originally because a successor was always scheduled to be announced by Qualcomm only a month or so later, or in more recent years, because Qualcomm started to push out superior mid-life cycle revisions, such as in the case of the Snapdragon 855+ and 865+.

This year, Google is taking a different tack altogether, dropping from Qualcomm's flagship-tier Snapdragon 800 series down to its 700 series chips instead.

Geekbench 5 (multi-core)

Pixel 5: 1,625

Pixel 4a 5G: 1,631

Pixel 4a: 1,640

Pixel 4: 2,270

OnePlus Nord: 1,963

OnePlus 8T: 3,133

GFX Manhattan 3.1

Pixel 5: 20fps

Pixel 4a 5G: 20fps

Pixel 4a: 27fps

Pixel 4: 48fps

OnePlus Nord: 34fps

OnePlus 8T: 61fps

Admittedly, the Snapdragon 765G that powers the Pixel 5 is the best that the 700 series has to offer and holds an advantage over the current 800 series when it comes to one of the phone's key selling points – 5G. The 765G has an integrated 5G modem, while the 865 still relies on a standalone unit. This means greater power efficiency, but the 765G has also proven to be a superb processor in its own right, regardless of its standing in Qualcomm's portfolio. It's the same chip found in top-notch phones like the Nokia 8.3 5G, Vivo X50 Pro and OnePlus Nord.

In real-world use, the Pixel 5 handles as you'd expect any flagship phone to and paired with the lightweight Android

11 software and 8GB of RAM (the most of any Pixel so far), makes for one of the cleanest and most responsive user experiences on the market, right now.

Oddly, it benchmarks relatively poorly to comparable devices, so poorly in fact something seems amiss. The numbers produced by our performance-focused benchmarks don't reflect the real-world performance that the phone clearly delivers and tests from other Android 11-based phones also show notably lower scores than Android 10-toting devices powered by similar hardware. As such, we've concluded that either the benchmarking apps or Android 11 require better optimization. The original point still stands, however, the Pixel 5 delivers superb real-world performance

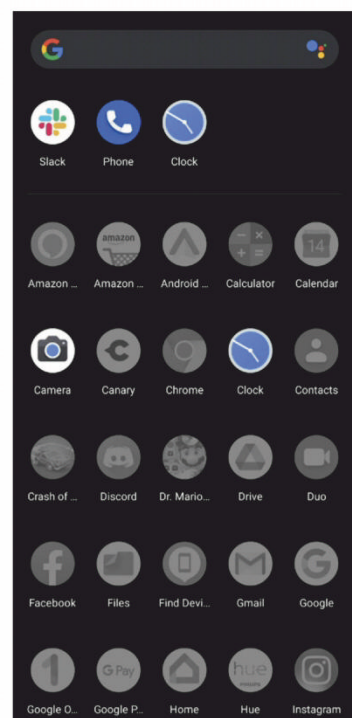
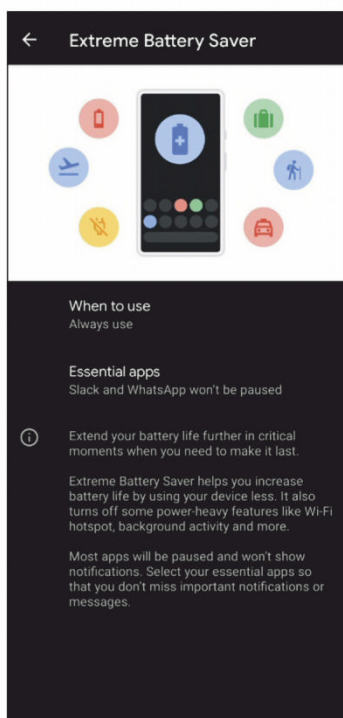
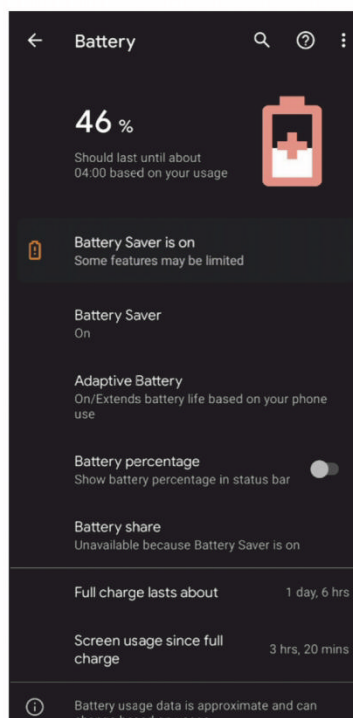
and is as well-suited to gaming as it is multi-tasking or photography.

Battery

The Pixel 4 was a promising Android phone undone by some of the worst battery life in recent memory. It was an issue fundamentally caused by the small 2,800mAh cell that the phone used and it was at the top of our wish list of improvements that the Pixel 5 needed to make.

Thankfully, Google looks to have listened and while the bump in battery capacity isn't transformative, it turns the Pixel 5 into a phone that you'd be happy to live with, rather than one that you'd be scared to use for fear of it dying the moment the screen lights up.

Extreme Battery Saver is useful in a pinch.



Despite its small proportions and relatively thin frame, the Pixel 5 features a far larger 4,080mAh cell, compared to its predecessor. Like before, it supports fast charging (still 18-watt PD charging) and up to 12-watt wireless charging. Reverse wireless charging is now part of the Pixel recipe too.

In battery benchmark tests, the Pixel 5 delivers promising numbers, lasting 12.5 hours under artificial conditions. In real-world use, the phone proves to be far more pedestrian, with a somewhat unexciting 4.5 to 5 hours of screen-on time per charge. However, this works out to a day's use without worry and with the bar as low as it was, that's all Google really needed to hit. It's no battery champ, though.

Android 11 on the Pixel 5 does also introduce the Extreme Battery Saver feature (coming to older Pixel devices in future), which if enabled locks down app access to the phone's base functions, save for any apps you white list.

Google proudly promises up to 48 hours of use using this mode, but that's

something other phones are capable of during normal use, so wouldn't be the first thing we shout about when recommending the Pixel 5.

Battery test

Pixel 5: 12 hours 34 minutes

OnePlus Nord: 11 hours 26 minutes

OnePlus 8T: 9 hours 17 minutes

Fast charge in 30 minutes

Pixel 5: 45%

Pixel 4a: 51%

Pixel 4: 48%

OnePlus Nord: 68%

Verdict

The Google Pixel 5 sheds some of the series' more experimental features to



The Pixel 5 is the most balanced Android phone you can get.

deliver a more focused smartphone experience that exemplifies some of the best qualities of Android as a platform.

The hardware isn't competitive to the same degree as offerings from the likes of Oppo, OnePlus or Realme, but that doesn't stop the Pixel 5 from being greater than the sum of its parts.

This device is a reliable all-rounder, a great long-term purchase – both in terms of software support and based on the fact that 5G infrastructure continues to improve – a superb small Android phone and an outstanding camera phone to boot. Google has finally realized that the Pixel can't compete with the everything-but-the-kitchen-sink approach of some top-tier smartphones, but also that it doesn't have to. The Pixel 5 is perhaps the most balanced Android smartphone on the market and if you related to any of the use cases I just mentioned, then this is definitely worth considering, even if rivals offer more for less. Alex Walker-Todd

Specifications

- 6in (2,340x1,080; 432ppi) OLED, 90Hz, HDR10+ touchscreen
- Android 11
- Qualcomm SDM765 Snapdragon 765G (7nm) processor
- Octa-core (1x 2.4GHz Kryo 475 Prime, 1x 2.2GHz Kryo 475 Gold, 6x 1.8GHz Kryo 475 Silver) CPU
- Adreno 620 GPU
- 8GB RAM
- 128GB storage
- Two rear-facing cameras: 12.2Mp, f/1.7, 27mm (wide), 1/2.55in, 1.4µm, dual pixel PDAF, OIS; 16Mp, f/2.2, 107-degree (ultra-wide), 1.0µm
- Single selfie camera: 8Mp, f/2.0, 24mm (wide), 1/4.0in, 1.12µm
- Wi-Fi 802.11 a/b/g/n/ac, dual-band, Wi-Fi Direct, hotspot
- Bluetooth 5.0, A2DP, LE, aptX HD
- GPS with A-GPS, GLONASS, GALILEO, QZSS, BDS
- NFC
- USB Type-C 3.1
- Fingerprint scanner (rear mounted)
- Non-removable 4,080mAh lithium-polymer battery
- Fast charge 18 watts
- 144.7x70.4x8mm
- 151g

2. SAMSUNG GALAXY S20 FE

Price: £599 from fave.co/31c9KOa

Unlike Apple's iPhone SE branding, Samsung had no qualms in explaining the logic behind the FE branding. The Fan Edition of the flagship Samsung Galaxy S20 looks to offer the favourite high-end features at a more palatable price tag, and with a Snapdragon 865 included as standard, it could be the only

Samsung smartphone in its roster that UK fans are truly interested in.

Design

The Samsung Galaxy S20 FE has the same design ideology as the rest of the S20 range – complete with rear-facing rectangular camera block and centrally-placed hole-punch front-facing camera – but there are plenty of small differences in design that make the S20 FE stand out on its own.

The most noticeable is that unlike its siblings, the Galaxy S20 FE doesn't have a curved display. It's completely flat, and that does mean it's not quite as comfortable in the hand as curved alternatives, but Samsung has tried to make up for it by offering more of

a curved rear than the standard S20. I admittedly had no complaints about comfort when using the S20 FE, even one-handed, but it'll very much be a personal thing.

Another noticeable change is the shift from glass to 'Glasstic', Samsung's proprietary plastic that's designed to look and feel like glass, on the rear. Whatever Samsung might promise, it certainly doesn't feel like a high-end glass rear, although the matte finish does mean it's less of a fingerprint magnet than its siblings.

You might be surprised that Samsung opted for a plastic rear on a premium smartphone, but you shouldn't be – it's also present on the Samsung Galaxy Note S20 Ultra, a phone that

costs a whopping £1,199, so Samsung certainly doesn't see an issue with its plastic replacement. Regardless of how Samsung feels, it makes cheaper alternatives with a glass rear – like the Nokia 8.3 5G – feel nicer in the hand than the S20 FE.

The only upside is that the rear will



The Galaxy S20 FE's chassis is made from 'Glasstic', Samsung's proprietary plastic that's designed to look and feel like glass.

probably be more durable than glass – it certainly won't shatter when dropped – and when combined with IP68 water resistance, the S20 FE is robust.

Smartphone colours have taken an interesting turn in recent years, with manufacturers leaning to the colourful look, and that is certainly true of the Galaxy S20 FE. In fact, with Cloud Lavender, Cloud Orange, Cloud Red, Cloud Mint, Cloud White and Cloud Navy options available, there are more colour options to choose from than any other in the S20 family. It certainly makes for a more eye-catching device, that's for sure.

Elsewhere, there's a volume rocker and power button on the right and a USB-C port at the bottom, but there isn't a headphone jack. That's not a total surprise considering it isn't present on the rest of the Galaxy S20 range, but Samsung's cheaper smartphones do still ship with a 3.5mm headphone jack, so it would've been nice to see. It is the Fan Edition, after all, and plenty of fans still use wired headphones.



The Samsung's OLED panel is gorgeous, detailed and bright enough to be used on even the sunniest of days.

Display

The Samsung Galaxy S20 FE sports a 6.5in display, placing it between the 6.2in S20 and 6.7in S20 Plus in Samsung's collection. That's the best of both worlds to me, with the 20:9 aspect ratio providing a tall display that's easy to use one-handed. The display is flat, which may be disappointing to some, but it's something I prefer not only for gaming but general use – until palm rejection tech is improved, anyway.

The main highlight of the Galaxy S20 display was the 120Hz refresh rate, and being the Fan Edition, it was only right for the S20 FE to feature the same high refresh rate. In fact, the buttery smooth display of the S20 FE

is improved in some areas, with a 240Hz touch sampling rate to improve touch response time when gaming – a feature not even present on the recent flagship Galaxy Note20.

It is lower resolution than the main S20 range, capping out at FHD+ rather than

WQHD+, but as you couldn't opt for a high refresh rate and high resolution on the flagship, it doesn't seem like much of a downgrade. It's more than likely that most S20 owners took the hit to resolution to enable the high refresh rate, providing a more immediately noticeable effect than a pixel-packed display, so the high resolution likely won't be missed by most.

Like the rest of the collection, the Galaxy S20 FE sports an OLED display, complete with a small hole-punch camera at the top. Crucially, that OLED panel is gorgeous, detailed and bright enough to be used on even the sunniest of days.

You'll also find an in-display fingerprint scanner that works in a slightly different way to the usual in-display



The optical fingerprint scanner requires light to work properly.

scanners that Samsung uses. It's optical and not ultrasonic, requiring light to work properly, which essentially means you'll see a bright light around your finger when you unlock your phone. It's not a big deal to most as it's used by many Android competitors, and it's still lightning fast and accurate, but it may be something that existing Samsung owners have to get used to.

Performance

One of the biggest complaints when it came to the flagship Samsung Galaxy S20, in the UK at least, was the inclusion of Samsung's Exynos 990 over Qualcomm's Snapdragon 865. There are complaints from S20 owners that the Exynos version is slower than the Snapdragon variant, and there's

a knock-on effect on overall battery life too, so it's great to see Samsung finally offering a Snapdragon-enabled variant of the Galaxy S20 FE with 5G connectivity in the UK.

It is worth noting, however, that the 4G version of the Galaxy S20 FE features the Snapdragon Exynos 990, so there is still a chance you'll end up with an arguably inferior model if you aren't paying extra for 5G connectivity.

Regardless of the processor you get, the Galaxy S20 FE is paired 6GB of RAM and 128GB of storage, expandable via the built-in microSD card slot.

As you'd expect from a Snapdragon 865-powered smartphone, the Galaxy S20 FE offers flagship performance regardless of what you're up to – be it playing Call of Duty Mobile with the highest graphical settings or scrolling through media-heavy apps like Twitter and Instagram. It's helped by the high refresh rate, of course, making everything feel smoother and more responsive than competing 60Hz smartphones, and there's not a hint of stutter or lag either.

That's backed up by our benchmark results, putting the Samsung Galaxy S20 FE on a par with the standard Galaxy S20 and OnePlus 8T. It's worth noting that I've been looking at the Snapdragon 865 variant of the S20 FE, so performance may vary with the Exynos model.

Geekbench 5 (multi-core)

Samsung Galaxy S20 FE: 2,934

Samsung Galaxy S20: 2,299

OnePlus 8T: 3,133

Huawei P40: 3,140

Xiaomi Mi 10T Pro: 3,388

GFX Manhattan 3.1

Samsung Galaxy S20 FE: 59fps

Samsung Galaxy S20: 50fps

OnePlus 8T: 61fps

Huawei P40: 58fps

Xiaomi Mi 10T Pro: 50fps

That impressive performance extends to battery life, with the 4,500mAh battery performing noticeably better than its Exynos-enabled counterparts in our benchmark tests – likely down to the improved power efficiency of the Qualcomm chipset.

The Galaxy S20 FE lasted a whopping 12 hours and 35 minutes during our Geekbench 4 battery test, and that mirrors real-world use; it's enough to get me through a day packed full of texting, tweeting and gaming, but there's not enough power in the tank to last a full second day. 5G connectivity and the 120Hz refresh rate do take their toll eventually, after all.

That said, the Galaxy S20 FE does offer support for 25-watt fast charging, although it only ships with a 15-watt

charging brick, so you'll have to splash out to take full advantage of the fast charge capabilities on offer. Still, with the bundled charger, the S20 FE regained 38 per cent of charge in 30 minutes and full charge in little under 90 minutes in tests, which should minimise the amount of time you spend tethered to the wall.

There's also 15-watt wireless charging, and like the rest of Samsung's flagship range, there's 4.5-watt reverse wireless charging on offer too.

Photography

You'll find three cameras embedded within the rectangular camera block on the rear of the Samsung Galaxy S20 FE. It's comprised of a main 12Mp f/1.8 sensor along with 12Mp f/2.2 ultra-wide and 8Mp f/2.4 telephoto snappers. That might seem a little underwhelming

compared to the rest of the S20 at a glance, particularly in the telephoto department, but generally speaking, the trio of cameras perform well.

Of course, it's the main sensor that gets the most TLC in most smartphones, so let's start there.

The main 12Mp sensor is larger than that of the other S20 FE cameras, so it captures more light with more accurate colours, and that's evident in the quality of images taken. In ideal conditions, the S20 FE captured bright, detailed, colourful snaps enhanced further by Samsung's AI scene optimization, a feature that adjusts images depending on what it thinks you're taking a photo of.

It's quick to capture images, although like most smartphone cameras, there's a slight chance it'll come out blurry if you

move mid-take. But, if the S20 FE notices this, it'll give you a little heads-up within the Camera app – a very handy feature not present on most Android smartphone.

The idea of the 12Mp ultra-



You'll find three cameras on the rear of the Samsung Galaxy S20 FE.

An image taken using the main lens.



Here's the same scene, but shot using the ultra-wide lens.





Here are a couple of examples of photos taken using the telephoto lens.



wide is to squeeze as much of a scene in as possible, with Samsung's option offering the ability to capture double the amount of the scene compared to the main lens with a 0.5x zoom. That's on a par with the iPhone 11, and it's an improvement on the 0.6x zoom on many competing Androids with an ultra-wide lens, allowing you to squeeze in a little more of a vista or more friends in a group shot.

Importantly, unlike some competitors, there's no noticeable drop in quality or real shift in colour temperature between the ultra-wide and wide lenses. Images are just as vibrant and detailed as those from the main sensor, although it's not quite as capable in low-light situations.

Lastly, there's the 3x telephoto lens, allowing you to get closer to your subject without physically moving. The good news is that images captured by the telephoto lens are decent in terms of detail, but unlike the ultra-wide, there's a shift in colour temperature compared to the main lens. It might not be noticeable in everyday use, but putting photos side-by-side, you'll be able to tell.

The telephoto lens also offers up to 30x digital zoom, but images taken at that level are barely usable – taking a photo of the moon on a clear night looked closer to a headlight than a celestial body.

Along with the different lenses, there are a variety of shooting modes available including Samsung's popular One Take mode, allowing you to take a 10- to 15-second video and generate a variety of photos, video clips and edits based on what the phone thinks is important, along with Night Mode, Pro mode and more.

On the front, you'll find a 32Mp snapper that performs much like the selfie camera of the iPhone 11: it's a single camera offering both an ultra-wide and wide shooting mode. That's done simply by cropping in the full-frame image to give you a tighter look, and although it's not as good as having a true dual-camera set-up on the front, images are more than enough for the likes of Instagram and Snapchat.

In terms of video, you can record at up to 4K at 60fps on both the front- and rear-facing cameras. However, features like moving autofocus only work when shooting at 1080 at 30fps, and it's a similar case when shooting in aspect ratios other than 16:9, so there are limitations to the video offerings of the S20 FE.

Software

Like the rest of the Galaxy S20 range, the S20 FE comes with Android 10 out of the box, upgradeable to Android 11. What's

better is that prior to the announcement of the S20 FE, Samsung committed to three years of Android upgrades, potentially providing access to Android 12 and 13 on the 20 FE.

You'll get access to key new features in Android 10 including a system-wide dark mode, Digital Wellbeing tools and even Facebook Messenger-esque Chat bubbles from the likes of WhatsApp and other chat apps – if you want them.

Like the rest of the Samsung portfolio, the S20 FE features Samsung's OneUI baked on top of stock Android. As with most custom UIs, there are visual changes on offer, and OneUI provides deep customization in terms of widgets, themes and fonts to radically change the look of the interface if you desire.

OneUI can take a bit of getting used to initially, but once you've powered through the short learning curve, the Galaxy S20 FE is a joy to interact with.

Verdict

Being the Fan Edition, The S20 FE had a lot of expectations to live up to, and for the most part, Samsung has achieved what it set out to do – provide the core



The Galaxy S20 FE is a joy to interact with.

Galaxy S20 experience in a cheaper package. You've got the same super-smooth 120Hz AMOLED display, albeit with a lower resolution, and it still has a high-end look despite switching out the rear glass for Samsung's 'Glasstic' glass-effect plastic.

The biggest plus for UK fans is the inclusion of the Snapdragon 865 over the Exynos 990, with Qualcomm's option offering improved performance and power efficiency compared to Samsung's own chipset.

There's a trio of surprisingly capable rear-facing cameras that work well, capturing bright, detailed images, although photos taken on the telephoto lens do look a little more washed out than the vibrant colourful shots taken by the main wide and ultra-wide lenses.

Battery life is decent too, with no issues getting through an average

day with 5G and the 120Hz refresh rate enabled, and there's 25-watt fast charging supported to keep you untethered – although it ships with a less powerful 15-watt charging brick.

Essentially, Samsung has distilled the essence of what made the Samsung Galaxy S20 such a popular option and put it on sale at a discounted price. The Glasstic rear is a little disappointing, but it's something most people will get over eventually. Lewis Painter

Specifications

- 6.5in (2,400x1,080; 407ppi) Super AMOLED, 120Hz, HDR10+ touchscreen
- Android 10, One UI 2.5
- Exynos 990 (7nm+) processor
- Octa-core (2x 2.73GHz Mongoose M5, 2x 2.5GHz Cortex-A76, 4x 2GHz Cortex-A55) CPU
- Mali-G77 MP11 GPU
- 6GB/8GB RAM
- 128GB/256GB storage
- Three rear-facing cameras: 12Mp, f/1.8, 26mm (wide), 1/1.76in, 1.8µm, Dual Pixel PDAF, OIS; 8Mp, f/2.4, 76mm (telephoto), 1/4.5in, 1.0µm, PDAF, OIS, 3x optical zoom; 12Mp, f/2.2, 123-degree, 13mm (ultra-wide), 1/3.0in, 1.12µm
- Single selfie camera: 32Mp, f/2.2, 26mm (wide), 1/2.74in, 0.8µm
- Wi-Fi 802.11 a/b/g/n/ac/6, dual-band,

Wi-Fi Direct, hotspot

- Bluetooth 5.0, A2DP, LE
- GPS with A-GPS, GLONASS, BDS, GALILEO
- NFC
- USB Type-C 3.2, USB On-The-Go
- Fingerprint scanner (under display, optical)
- Non-removable 4,500mAh lithium-polymer battery
- 159.8x74.5x8.4mm
- 190g

3. GOOGLE PIXEL 4A

Price: £349 from fave.co/2CdDOzA

It may have felt as though Google's new mid-range phone would never arrive, but the Pixel 4a is finally here.

On the whole, Google has done another fantastic job of getting the key things right here and at a cheaper price than the Pixel 3a. However, tech nerds are likely to be tempted by some rivals due to a couple of missing features.

Design

It's a case of the same but different when it comes to the Pixel 4a's design. While it still looks like Google's handiwork, there are a few changes that make the 4a a bit better than its predecessor (the 3a), but also a little worse.

Starting at the back, the 4a still uses a polycarbonate unibody instead of the

glass used on the flagship models. While it might not feel quite as premium, it won't smash if dropped and is lighter.

The phone is still 8.2mm thick, but is a tad lighter at 143g – the Pixel 3a weighs 147g. It's also a little shorter at 69.4mm compared to 70.1mm, despite the larger screen. It's one of the most compact handsets on the market.

I was excited about the OnePlus Nord, hoping it would be a smaller version of the OnePlus 8 closer to the OnePlus X design, but it's still huge at 158.3x73.3x8.2mm. There's a lack of smaller phones out there, so it's great to see the Pixel 4a fill this gap.

I like the soft matte finish, but it's a shame that the distinctive glossy section at the top has gone. The fingerprint



The fingerprint sensor on the rear of the Pixel 4a isn't as obvious as on other Google phones.

scanner is still at the back and is more subtle than on other Pixel phones.

The camera module in the corner might be square to match the Pixel 4, but there's only one lens there.

As you can see, I've been testing the Just Black colour and never has a name been more appropriate. The Pixel 4a is currently only available in this colour due to the supply chain issues.

There's a 3.5mm headphone jack, but fans of the Active Edge feature will be disappointed. The sensors Google previously put in the sides so you can squeeze the phone to launch the Assistant are missing on the Pixel 4a.

I assume this is partly to achieve a lower price point and focus on other features. To that end, it's no surprise that there is no waterproofing here either.

Display

Bezels are barriers and as such, slimming them down significantly on the Pixel 4a means the display is halfway to the Pixel 3a XL, despite the chassis getting smaller.

This is the first Pixel phone with a 'transmissive hole', aka a punch-hole where the screen completely surrounds the front-facing camera.



Unlike other Google phones there's a punch-hole camera on the front.

It makes the 4a look contemporary and is a big improvement on the bezels of previous Pixels as well as the notoriously disliked notch of the 3 XL. Speaking of XL models, there is no Pixel 4a XL so this is your only choice this year.

If you're new to the punch-hole notch, then it can feel a little strange at first, but it doesn't take long to get used to. Google includes a set of wallpapers that use it as a focal point, which also sort of hides it at the same time.

I find this 5.8in screen to be a nice sweet spot between usability and having enough real estate to enjoy content. It's so rare to find

a compact phone with a sub-6in screen these days that it's a big reason to get the Pixel 4a if larger handsets don't suit you.

Despite rumours of dropping the tech, the Pixel 4a has an OLED panel and still uses a Full HD+ resolution. At 443ppi, that's plenty of pixels for a sharp image without unnecessarily draining the battery.

Colours are vibrant, contrast is solid and there's HDR support, too. You also get always-on functionality complete with Google's Now Playing feature which tells you what music is playing nearby



As you can see, the screen displays vibrant colours.

if it can recognize it. It's one of the best screens you can get for this price. The only thing missing is a high refresh rate, but I don't think the 4a is aimed at users who will care about this.

If you are looking for 90- or even 120Hz, then you'll need to look elsewhere, probably to the OnePlus Nord (see page 54) or Realme X50 5G.

Performance

5G is another thing you don't get on the Pixel 4a and this is because Google has gone for a Qualcomm Snapdragon 730G processor, where many rivals have the more powerful 765G. As per the display refresh rate, if 5G is something high up your priority list, then the Pixel 4a doesn't cut the mustard. However, Google will be launching a Pixel 4a (5G) later this year if you must have the latest tech.

If not, then the Snapdragon 730G provides perfectly smooth operation day-to-day and Google has bumped the memory to 6GB of RAM and 128GB of storage space. A nice upgrade on the 3a despite the price drop. There's still no microSD card slot, though.

You can see our benchmark results below compared to the main competition. Note that we haven't tested the Realme X50 5G yet, so the Realme 6 Pro is another option, although with a Snapdragon 720G and no 5G support.

Geekbench 5 (multi-core)

Google Pixel 4a: 1,640

Moto G 5G Plus: 1,864

OnePlus Nord: 1,963

Realme 6 Pro: 1,681

GFX Aztec Open Normal

Google Pixel 4a: 17fps

Moto G 5G Plus: 18fps

OnePlus Nord: 22fps

Realme 6 Pro: 16fps

GFX Aztec Open High

Google Pixel 4a: 11fps

Moto G 5G Plus: 11fps

OnePlus Nord: 11fps

Realme 6 Pro: 10fps

GFX Aztec Vulkan Normal

Google Pixel 4a: 14fps

Moto G 5G Plus: 18fps

OnePlus Nord: 21fps

Realme 6 Pro: 16fps

GFX Aztec Vulkan High

Google Pixel 4a: 10fps

Moto G 5G Plus: 11fps

OnePlus Nord: 13fps

Realme 6 Pro: 10fps

Photography

There's something of a false economy going on with smartphone cameras, with many manufacturers adding as many

lenses as possible – often for the sake of promoting an impressive number when you won't even use all of them.

Google does nothing of the sort here, but don't be fooled by the Pixel 4a's apparent lack of photography specs. As previously, the idea here is that you get the same main camera found on the flagship Pixel 4 inside a cheaper phone and Google's incredible software.

So the Pixel 4a has 12Mp rear camera with an f/1.7 aperture, although not the telephoto lens as a secondary option. It's got dual-pixel phase detection autofocus and optical image stabilization.

At the front, there's an 8Mp camera with an f/2 aperture. The main difference here is the positioning in the corner of the screen.

Having lots of cameras might sound appealing, but if you don't know what aperture means and you really just want a phone that can take great photos by

doing all the hard work for you, then the Pixel 4a fits the bill.

Where rivals have overly complicated camera apps, Google lays things out in an intuitive way, making it simple to access the features you'll use all the time. That's namely the regular camera mode along with Portrait and Night Sight.

As we've found with the previous Pixel phones, the level of photography on offer here is excellent and in an essentially point-and-click method. The app offers useful pointers, such as moving slightly back to improve focus and letting you know when you're holding the phone perfectly level.

Live HDR+ means you're looking at the final result before hitting the shutter button and you can adjust things like the brightness and shadows in the same way, too.

You can see the test photos below with low-light shots looking like regular

photos and a night-time shot appearing to have some lighting rigged up. Night Sight can also handle astrophotography, although this isn't made clear in the app.

I haven't been able to test this due to weather conditions, but point the phone at the sky and it



The Pixel 4a has 12Mp rear camera with an f/1.7 aperture.



Here's a landscape shot.



This image was taken using the default settings.

This is a regular night-time shot.



Here, I used the Night Sight feature.



can take long exposures of the night sky. You'll just need a tripod or somewhere to rest the phone because holding it will cause too much movement.

You're likely to shoot video more often than use the astrophotography feature. While the Pixel 4a can shoot up to 4K resolution, note that it's capped at 30fps. You can shoot 1080p at up to 120fps and results are pretty solid, especially with some smooth stabilization. Still, the primary feature here is photography.

The front camera takes excellent selfies and an exclusive Pixel feature called 'Portrait Blur' meaning you can add the bokeh effect of portrait mode

on an image taken with the regular camera mode.

Battery life

Google has bumped the size of the battery a litter here from 3,000- to 3,140mAh. Not enough to make a huge difference but, oddly, Google quotes a battery life of 24 hours for the Pixel 4a when the 3a is touted at 30 on the official store. Still, I've found battery life to be very good, with the 4a lasting me a day and a half on average without using any dark modes and with the always on-screen feature switched on. Things should get better over time as the Adaptive Battery feature works its magic



Here's a standard selfie photo...



... and here's one using Portrait Blur.

– namely reducing power to apps you rarely use, according to Google.

Fast charging hasn't got any faster and there's no wireless charging of course (not without a glass rear cover). However, when the supplied 18-watt charger gets the Pixel 4a from dead to 51 per cent in 30 minutes, that's a pretty decent result.

Pixel 4a battery charge in 30 minutes

Google Pixel 4a: 51%

Moto G 5G Plus: 42%

OnePlus Nord: 68%

Realme 6 Pro: 65%

Software

The Pixel 4a comes with Android 10, upgradeable to Android 11. What you get when purchasing a Pixel device is Android in its purest form.

This means everything is clean and simple, without a bunch of tweaks in an effort to make it unique and add value. It also means no bloatware in the form of pre-installed apps.

Even though third-party Android makers have gradually made their Android skins closer to stock, it's still refreshing to use a Pixel in comparison.

One thing that might be new to you is the gesture control, which is similar to using an iPhone. You need to swipe up from the bottom of the screen to go home or pause that same swipe to bring up recent apps.

It's easy to get used to and you can quickly swap between open apps by swiping left and right along the bottom, too. The main issue is the lack of a back button so you have to swipe in from either side of the display.

In a way it's a clever solution, but it's easy for it to go wrong, especially if the keyboard is on-screen, so it typically gets registered as typing a word. Or it's easy to do when you don't want to, such as swiping through your camera roll.

If it gets too much, then you can, fortunately, switch back to the older style navigation buttons.



What you get when purchasing a Pixel device is Android in its purest form.

I don't think it's talked about enough, but a further advantage is that Google guarantees at least three years of Android updates. And those future versions of Android will arrive on Pixel phones before others. This gives the Pixel 4a a sort of hidden value that you might not have thought about.

Verdict

Even though the Pixel 4a has tough competition this year, I still think it has a lot going for it. Even though it might not tick boxes that rivals do, such as support for 5G and a high refresh rate display, there's plenty of charm and benefits here that will woo many buyers.

It will appeal to less techy users who don't care about going beyond 60Hz and who would rather have the compact design of the Pixel 4a along with easy-to-use stock Android 10 and the promise of at least three years of OS updates.

This isn't about playing smartphone Top Trumps, it's about providing a smooth and accessible experience, which I think Google has done very well. If you do want to play Top Trumps, then various rivals outpace the 4a. **Chris Martin**

Specifications

- 5.81in (2,340x1,080; 443ppi) OLED capacitive touchscreen
- Android 10

- Qualcomm SDM730 Snapdragon 730G (8nm) processor
- Octa-core (2x 2.2GHz Kryo 470 Gold, 6x 1.8GHz Kryo 470 Silver) CPU
- Adreno 618 GPU
- 6GB RAM
- 128GB storage
- Single rear-facing camera: 12.2Mp, f/1.7, 27mm (wide), 1/2.55in, 1.4µm, dual pixel PDAF, OIS
- Selfie camera: 8Mp, f/2.0, 24mm (wide), 1.12µm
- 802.11a/b/g/n/ac Wi-Fi dual-band
- Bluetooth 5.1, A2DP, LE
- GPS with A-GPS, GLONASS, GALILEO, QZSS
- NFC
- USB 3.1, Type-C 1.0 reversible connector
- Fingerprint sensor (rear mounted)
- Non-removable 3,140mAh lithium-polymer battery
- 144x69.4x8.2mm
- 143g

4. SAMSUNG GALAXY Z FLIP

Price: £1,399 from fave.co/3skfFwo

The first foldables were big ol' things, with tablet-size screens collapsing into regular phones. Samsung's Galaxy Z Flip is a little different: a normal phone that folds down into half the size, just like the best 1990s flip phones. Which form factor you prefer will be a matter of taste,

but for my money the Z Flip's compact design would win any day. And while this foldable still has flaws, its strengths are more than enough to rise above them.

I'll be blunt: I love the Galaxy Z Flip, and as far as I'm concerned it's proof that foldables aren't just the phones of the future – this is one of the best phones out there right now.

Design

Much like the rebooted Motorola Razr, the Z Flip takes its inspiration from the flip phones popular in the 1990s. Its 6.7in display folds horizontally, closing into a clamshell form that's almost square.

The phone is 167mm tall when unfolded, but when closed it's just 87x73mm – small enough to

comfortably hold in one hand or even fit into a shirt pocket. Of course it's a little thick when shut – 17.3mm, when most phones are just below 10 – but not enough to be burdensome, and the trade-off is well worth it when you factor in the fact that it will no longer jut out the top of your jeans.

It helps that flipping a phone still feels ineffably cool. The hinge is a little too sturdy to comfortably open with one hand, but can easily be closed that way – and if you open it a little you can still get it the rest of the way with an ostentatious flip.

It feels tough too. I've not been too gentle with the hinge, and have even dropped the phone a few times, but there's no sign of dents, damage,

or wear-and-tear to the mechanism or screen – though it's worth noting that there's no IP rating for waterproofing. And let's not forget the fact that being able to close the phone while carrying it massively reduces the chances of scratching the screen itself.

Having used plastic on the Galaxy Fold,



The Samsung Galaxy Z Flip takes its inspiration from the flip phones popular in the 1990s.

Samsung has upgraded to what it calls 'ultra-thin glass' for the Z Flip – though in reality it's still mostly plastic, with a small amount of glass in the top layer. It will be a bit vulnerable to scratching then, but otherwise feels tough enough.

Folding horizontally does have one unintended side effect: while scrolling through apps you will feel the bump in the screen at the hinge. It's subtle, and not particularly bothersome, but it is there, and even after two weeks of daily use I still notice it every time. I honestly don't think this is a dealbreaker, but you should go in aware that the hinge is there, and you won't forget it any time soon.

That's not the only screen, though. One of the Z Flip's best features is a 1.1in display built into the outside of the phone. When closed this will display the time, date, and battery level, along with basic notification icons and even simple music player controls. The touch controls are a little insensitive – swiping can be awkward and sometimes it takes a few too many taps to wake the display up – but it gets the job done.

You might expect it to be monochromatic, but in fact it's a full



One of the Z Flip's best features is a 1.1in display built into the outside of the phone.

colour AMOLED panel. That's partly so that it can colour the notification icons – green for WhatsApp, blue for Twitter, and so on – but also because you have the option of using the little screen as a photo preview for the camera, either for taking selfies with the outer lens, or so that anyone you're photographing can see how the shot looks – well, if they squint a bit, it's still pretty small.

Samsung has made other smart design touches. Here's a subtle one: the volume rocker controls swap round when you close the phone, so that it's always the top button that makes volume go up, and the bottom that makes it go down, even though which is top or bottom actually swaps as you open the device.

Next to the volume rocker you'll find a side-mounted fingerprint sensor built into the power button, though sadly this

is less of a coup. I found this the least reliable physical sensor I've used in years, and I'm not really sure what went wrong. It just doesn't recognize my finger half the time – a rare irritation from a phone I've otherwise enjoyed using.

It's worth mentioning the colours here too. Depending on where you are you'll be able to get the Z Flip in black, gold, or the purple pictured here. With its pink tinge and reflective finish, I'm pretty happy saying that this is one of my favourite phone finishes this year – though fair warning, it attracts fingerprints like nobody's business.

Performance

From a specs perspective, the Galaxy Z Flip makes a couple of interesting choices. For one, the main chipset is the Qualcomm Snapdragon 855+. That was the flagship chip for late 2019, but has since been superseded by the Snapdragon 865 – Samsung's choice of the slightly older version is partly an effort to keep costs down, and partly due to the extra space required internally for the 865's 5G modem.

One immediate consequence is that the Z Flip is 4G-only, though since 5G is still in its early stages that isn't really an issue. It also means that performance lags a little behind what we've seen from other 2020 phones from the likes

of OnePlus or Oppo, but don't let that bother you too much: this is still an incredibly fast and powerful phone, and should run smoothly for two or three years easily.

Geekbench 5 (multi-core)

Samsung Galaxy Z Flip: 2,242

Samsung Galaxy S20: 2,299

Samsung Galaxy Fold: 2,478

OnePlus 8 Pro: 3,316

Huawei P40 Pro: 2,995

Oppo Find X2 Pro: 3,295

GFX Manhattan 3.1

Samsung Galaxy Z Flip: 38fps

Samsung Galaxy S20: 50fps

Samsung Galaxy Fold: 50fps

OnePlus 8 Pro: 43fps

Huawei P40 Pro: 52fps

Oppo Find X2 Pro: 43fps

PCMark Battery

Samsung Galaxy Z Flip: 9 hours, 30 minutes

Samsung Galaxy S20: 5 hours, 36 minutes

Huawei P40 Pro: 12 hours, 12 minutes

Oppo Find X2 Pro: 8 hours, 44 minutes

Charge in 30 minutes

Samsung Galaxy Z Flip: 45%

Samsung Galaxy S20: 56%

OnePlus 8 Pro: 63%



The Z Flip's AMOLED display looks pretty good.

Huawei P40 Pro: 78%

Oppo Find X2 Pro: 97%

Samsung includes 8GB of RAM and 256GB of storage. That's plenty on both counts, but note that there's no microSD support, so you can't expand that 256GB any further.

The AMOLED display looks pretty good, despite the plasticky sheen, though with 60Hz refresh rate and a colour range that's solid but never stunning. It certainly can't match the quality of the best screens on other phones like the OnePlus 8 Pro, or even Samsung's own Galaxy S20 line. For now that's just one of the compromises you'll have to accept with a foldable.

As for battery life, I've been impressed by how far the 3,300mAh

battery has stretched. I've never run out of battery before the end of the day, and it's usually around 20 per cent when I go to bed. That will worsen over time, but it's a solid start – though there are definitely phones out there that'll last longer.

The 15-watt fast charging is decent

too, though again you'll find much faster elsewhere. Going from empty I topped the Z Flip up by 45 per cent in half an hour, which isn't too shabby. There's wireless charging support, though as always it's a little slower.

Photography

Then there's the camera. Samsung's flagship S and Note phones are usually bullish about their camera specs – witness the OTT 100x Space Zoom branding on the S20 Ultra – but the company has been relatively restrained with the Z Flip.

Don't take that as a criticism though – this is a solid set-up. The main camera is a 12Mp, f/1.8 lens with dual pixel autofocus and optical image stabilization. On paper that might not sound like

Here are a couple of photos shot with the Z Flip's default settings.





This is an example of portrait mode.

much, but it's essentially the same as the main shooter on the Galaxy S10, minus the variable aperture.

Photos are bright, crisp and detailed, with none of the autofocus problems that have plagued some of the S20 phones. Colours are punchy – a trademark of Samsung's camera tuning – but it does a decent job in challenging lighting and handles skin tones well.

What you lack is versatility. That main lens is joined by a 12Mp f/2.2 wide-angle, but other than a 10Mp selfie camera on the inside, that's it. There's no telephoto, no depth sensor and no time-of-flight.

You do at least get more software options though, with portrait, night mode, and even the Single Take mode seen on the S20 phones that captures a variety of photos and short clips from a stretch of video. Speaking of video, there's no 8K support, but you can shoot 4K video at 60fps.

Ultimately the essentials are here, and handled well. If your focus is just taking photos out and about this will match most other flagships for quality in good lighting, but if you're really fussy about your photography you can get more options and better results elsewhere.

Verdict

The Galaxy Z Flip isn't a perfect phone. It's still too expensive, the cameras lack versatility, and the fingerprint sensor sucks. Price aside, these are minor quibbles however, and even while this may not be the best phone I've used this year, it's easily my favourite. With the Z Flip Samsung has nailed the compact foldable form factor, and by comparison every other 2020 flagship feels ungainly and oversized. This phone looks great, offers solid performance and flagship features, and is just plain cool. Most people probably shouldn't spend this much on a phone, but if you can afford to then nothing else right now can match the Z Flip. **Dominic Preston**

Specifications

- 6.7in (2,636x1,080; 425ppi) Foldable Dynamic AMOLED, HDR10+ display; 1.1in (300x112) Super AMOLED cover display
- Android 10, One UI 3.0
- Qualcomm SM8250 Snapdragon 865+ (7nm+) processor
- Octa-core (1x 3.09GHz Kryo 585, 3x 2.4GHz Kryo 585, 4x 1.8GHz Kryo 585) CPU
- Adreno 650 GPU
- 8GB RAM
- 256GB storage
- Two rear-facing cameras: 12Mp,

- f/1.8, 27mm (wide), 1/2.55in, 1.4µm, Dual Pixel PDAF, OIS; 12Mp, f/2.2, 123-degree (ultra-wide), 1.12µm
- Selfie camera: 10Mp, f/2.4, 26mm (wide), 1.22µm
- Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct, hotspot
- Bluetooth 5.0, A2DP, LE
- GPS with A-GPS, GLONASS, GALILEO, BDS
- NFC
- USB 3.1, Type-C 1.0 reversible connector
- Fingerprint sensor (side mounted)
- Non-removable 3,300mAh lithium-polymer battery
- Unfolded: 167.3x73.6x7.2 mm; Folded: 87.4x73.6x17.3mm
- 183g

5. SONY XPERIA 5 II

Price: £799 from fave.co/36kBT02

After almost three years of steady decline, Sony's smartphone sales have finally begun to stabilize. In the three months to the end of September 2020, the company shipped around 600,000 Xperia phones, roughly on par with Q3 2019.

Nonetheless, this still accounts for a tiny fraction of the global smartphone market. It would seem a curious failure for the company behind one of the most in-demand consoles in history, a brand

which is recognized globally for its TVs and audio equipment.

For its latest phones, Sony has taken inspiration from another of its key revenue streams – mirrorless cameras. As such, the successor to last year’s Xperia 5 is known as the Xperia 5 II (or mark 2). It looks like a big upgrade on paper, but how does that translate to real-world usage? Read on to find out.

Design

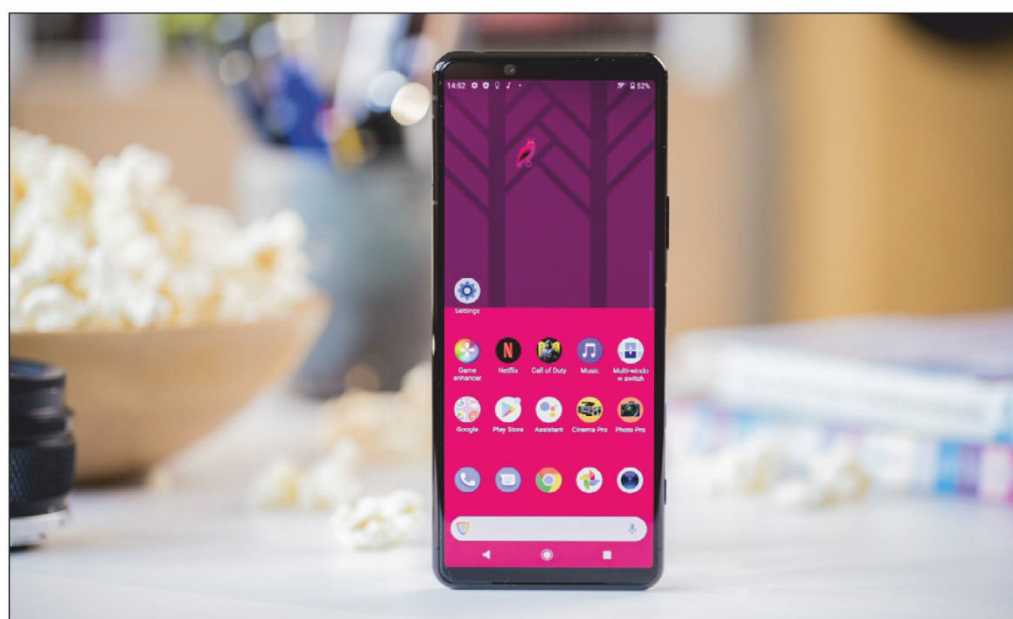
The design of the Xperia 5 II is unlike any phone I’ve tried this year, which is impressive going. It’s something of a fusion of old and new: legacy features such as the 3.5mm headphone jack and notch-less display combine with a gorgeous screen and premium build quality. It works as a complete package

in my opinion, and is satisfying to hold. The phone feels a lot more compact than the 6.1in display might suggest, due in part to the tall and narrow 21:9 aspect ratio. That’s something we also saw on last year’s Xperia 5, but it’s still relatively unusual and so feels like a standout feature. The same things still apply here – it’s almost impossible to reach the top of the phone one-handed, but many films look stunning without letterboxing.

The screen itself is Full HD (2,520x1,080) AMOLED panel, the most noticeable downgrade when compared to the flagship Xperia 1 II’s 4K display. However, you do get a key feature that’s not available on the more expensive phone – a 120Hz refresh rate. I’m fully aware that this isn’t a priority for most people, but I’d argue the same could

be said for 4K on a screen this size. Faced with a choice between the two, I’d go for the 120Hz every time.

It’s hard to explain what benefit this provides if you’re used to 60Hz screens, but everything feels



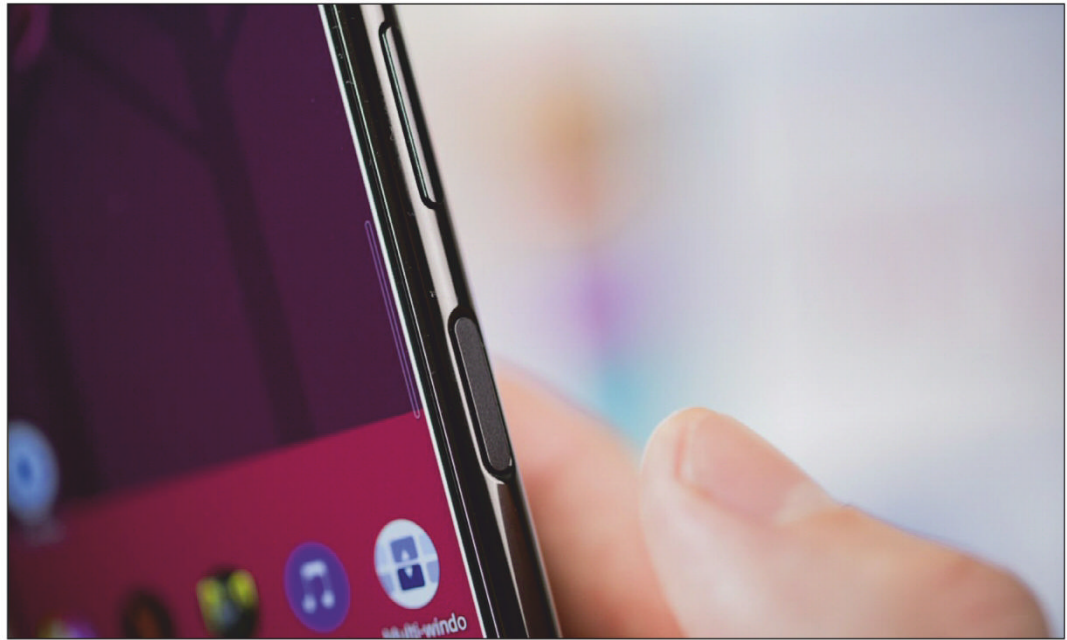
The Sony feels more compact than the 6.1in display might suggest.

that bit slicker and smoother. Casual users might notice this most on endless scrolling social media apps like Twitter, but the key performance boost will be seen in gaming. You might notice

a slight hit to battery life, but I think it's more than worth it.

The glass back of the phone is predictably a fingerprint magnet, although the smudges are less noticeable on the black model I tested. It's also surprisingly durable – both the front and back are equipped with Gorilla Glass 6, and it makes a big difference to how robust the phone feels.

It is relatively slippery though, so I often worried about it sliding off a table or out of a pocket. The protruding camera module also made it nearly impossible to use the device while face-up on a flat surface, so I'd recommend throwing on a case. That vertical module houses three lenses: 12Mp wide, 12Mp ultra-wide, 12Mp telephoto – an



The fingerprint scanner has been incorporated into the power button.

identical set-up to the Xperia 1 II. On the front, you also get the same 8Mp selfie camera, but we'll explore how they perform in detail later.

Sticking with slim bezels means Sony has found room to squeeze in a pair of front-facing speakers, and they make a big difference to the audio experience on the Xperia 5 II. The company has also overcome earlier patent issues to build the side-mounted fingerprint scanner into the power button. It's pretty quick and generally reliable, but more sensitive to moisture than rear-mounted equivalents. My experience with in-display scanners has been underwhelming thus far, so I'm glad Sony stuck with a physical one. Another nice touch is the SIM card tray, which

has a little lever for releasing it without an ejection tool. There's USB-C, as you'd expect, as well as two further physical buttons on the right side of the device. One launches Google Assistant and the other acts as a shutter button for the camera, although neither are re-mappable.

Performance

The Xperia 5 II is powered by a top-of-the-line Snapdragon 865 processor, which combines with an Adreno 650 GPU and 8GB of RAM. Qualcomm's flagship processors are by no means reserved for only the most expensive phones anymore, but it's still good to see it here. Performance is predictably excellent, breezing through web browsing, social media and multitasking without issue.

Sony's confidence in the Xperia 5 II's performance is illustrated by the inclusion of Call of Duty: Mobile out of the box, known to be one of the most graphically demanding games on the Play Store. This is where the 120Hz refresh rate comes into its own, offering ultra-smooth gameplay and no lag.

That's illustrated in the below benchmarks. It's worth noting that some phones max out at 60fps on some of the GFXBench tests, so the Xperia 5 II's performance gain over its predecessor isn't as huge as the results suggest:

Geekbench 5 (multi-core)

Sony Xperia 5 II: 3,347

Sony Xperia 5: 2,749

Sony Xperia 1 II: 3,369

OnePlus 8T: 3,133

Samsung Galaxy S20: 2,299

Oppo Find X2: 3,309

GFX Manhattan 3.1

Sony Xperia 5 II: 69fps

Sony Xperia 5: 44fps

Sony Xperia 1 II: 59fps

OnePlus 8T: 61fps

Samsung Galaxy S20: 50fps

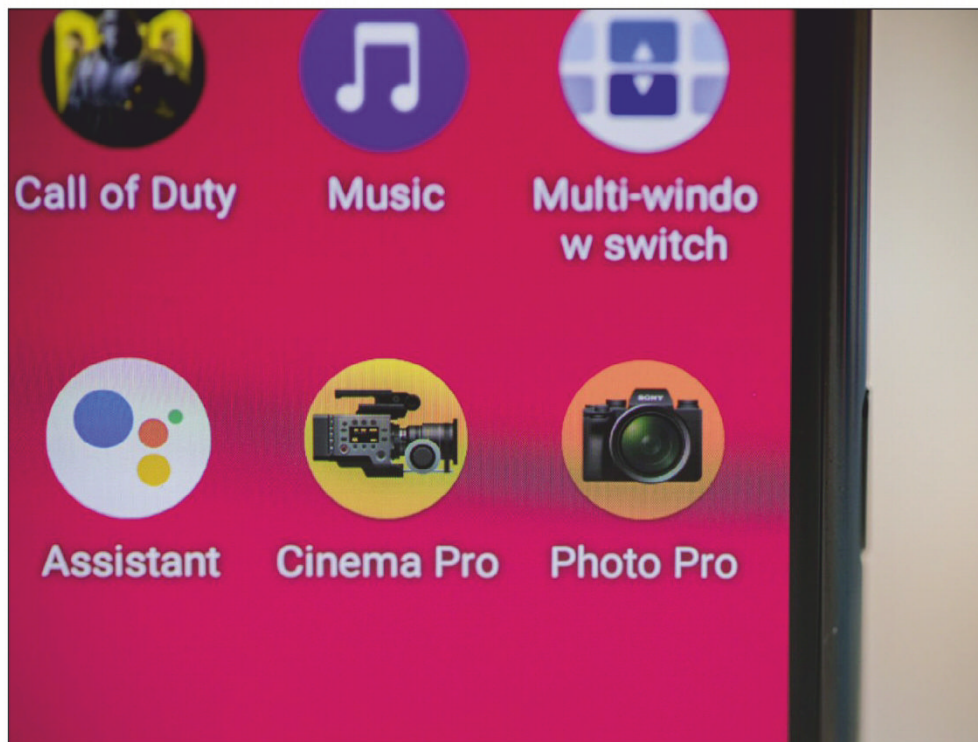
Oppo Find X2: 45fps

Audio quality can be overlooked on modern phones, due in part to the popularity of wireless headphones. Nonetheless, sticking with bezels means the Xperia 5 II has room for dual front-facing stereo speakers that perform extremely well. There's a richness to the sound and impressive level of bass, both things you won't find on many handsets.

The Xperia 5 II also adds 5G to its predecessor, but with the technology still in its infancy, I wasn't able to test out how well it works.

Software

The Xperia 5 II comes running Android 10, although an update to Android 11 is in the works and expected soon. Sony



The Cinema Pro and Photo Pro apps provide granular control over the way you capture photos and videos.

typically keeps its Android skin pretty light, and that's no different here – it's relatively close to the so-called 'stock' version you'll find on Pixel phones.

That being said, there are various smaller software tweaks dotted around the user interface. Chief among these are the 'Cinema Pro' and 'Photo Pro' apps, which provides granular control over the way you capture photos and videos using the Xperia 5 II. The 'Pro' name is justified here: you can't just pick up these apps and start using without at least some expertise, hence why Sony has included them as separate standalone apps. Unfortunately, these aren't the only

apps that can't be uninstalled. The likes of Facebook, Netflix and Call of Duty: Mobile aren't what you'd typically think of as bloatware, and a lot of people buying this phone may get value out of them. I just think Sony could have at least provided the option to remove them from the device. At least you don't have to worry about

it taking up too much of your storage, with the phone supporting expandable storage via microSD card.

There are a number of smaller software tweaks dotted around the user interface. 'Side sense' is on the far-right side of the display and allows you to quickly launch certain apps or start multitasking. It's similar to the Edge panel you'll find on Samsung phones, although doesn't make as much sense on the flat display here. There's also an extreme battery saving mode known as 'Stamina', while in display settings 'Creator mode' gives the display a more rich, cinematic quality.

Photography

The cameras on the Xperia 5 II are largely unchanged from its predecessor. The triple rear set-up is comprised of a 12Mp wide, 12Mp ultra-wide and 12Mp telephoto. I'm glad Sony decided not to include further macro or depth sensors, which sound good on paper but rarely provide any tangible benefit.

The Photo Pro app allows you to customize image settings to your liking, just like you would on a mirrorless camera. It's something I'd recommend if you're serious about taking photos using this phone, as the auto mode in the default camera app was extremely hit-and-miss.

Exposure was the main area it seemed to struggle with, often blowing out the background or losing detail in darker areas of the image. In wide-open spaces it performed better, tending to saturate stills slightly but offering excellent dynamic range.

Despite the lack of macro lens, close-up shots were very impressive, while it was also good at capturing detail on buildings. I did like that the main camera app uses AI to automatically detect which type of scene you're in and adjust the image accordingly, saving you from cycling through menus to find the option you want. That includes night mode, which



We'll start off with three photos of the same scene. This image is taken using the wide-angle setting.

Here's a wide-angle shot.



Finally, this was taken with the 3x zoom.





Despite the lack of macro lens, close-up shots were very impressive.



It was also good at capturing detail on buildings.

Shots from the selfie camera offer a good level of detail.



does a good job of brightening the shot but did sacrifice on some detail.

Shots from the 8Mp selfie camera are impressive overall, offering a good level of detail and accurate colours. Curiously, this lens tends to do much better with exposure.

The Xperia 5 II is also able to capture footage up to 4K at 120fps. In the regular 1080p mode, the inclusion of OIS means the footage is very stable, although it does take a while to focus as you move the camera around.

Battery life

The phone comes with a 4,000mAh battery, identical to the Xperia 1 II and a

big increase over the 3,140mAh cell on last year's Xperia 5.

That's reflected in the benchmarks, as I recorded 12 hours, 15 minutes and 15 hours, 5 minutes in Geekbench 4 and PCMark's battery tests respectively. From using the phone for an extended period, these feel pretty accurate – I was comfortably able to get a couple of days of moderate usage before reaching for the charger, even at 120Hz.

I did notice it struggle slightly for standby time, though – I'd often come back to the phone after a couple of hours and notice that the battery had depleted by quite a few per cent. It supports fast charging at 21 watts, but there was

only an 18-watt adapter included in the box. This still got me 48 per cent in 30 minutes from off, so you're looking at just over an hour for a full charge.

Battery test

Sony Xperia 5 II: 12 hours, 16 minutes (120Hz)

Sony Xperia 5: 9 hours, 5 minutes

Sony Xperia 1 II: 10 hours, 41 minutes

OnePlus 8T: 13 hours, 24 minutes

Samsung Galaxy S20: 5 hours, 36 minutes (120Hz)

Oppo Find X2: 9 hours, 40 minutes

Charge in 30 minutes

Sony Xperia 5 II: 48%

Sony Xperia 5: 53%

Sony Xperia 1 II: 46%

OnePlus 8T: 91%

Samsung Galaxy S20: 56%

Oppo Find X2: 96%

One of the big compromises you're making when compared to the Xperia 1 II is the lack of wireless charging. This wasn't a big deal for me, but I understand the prevalence of wireless chargers these days may make it a deal-breaker for some. Nonetheless,

we shouldn't be talking about this being a missing feature on an £800 phone, particularly when it's available on phones a quarter of the cost.

Verdict

In a world where so many smartphones look similar, I have to admire Sony's desire to be different. Having a notch-less display and 3.5mm headphone jack is practically unheard of in 2020, but after using the Xperia 5 II I wish they were still on more phones.

There are plenty more highlights here, which make it a big upgrade over last year's model. The stunning 21:9 OLED display is now 120Hz a feature you won't find on even the more expensive Xperia 1 II. Performance is superb across the board, while the all-too-rare front-



The Sony's cameras flatter to deceive unless you're willing to play around in the Photo Pro app.

facing stereo speakers are a delight. However, it's not all good news. The cameras flatter to deceive unless you're willing to play around in the Photo Pro app, while a surprising amount of bloatware taints an otherwise excellent software experience. There's also no wireless charging, a major omission at this price point.

There's definitely a market for the Xperia 5 II, but it's unlikely to contribute to a sudden increase in Sony's slice of the smartphone pie. Anyron Copeman

Specifications

- 6.1in (2,520x1080; 449ppi) OLED, 120Hz, HDR BT.2020 touchscreen
- Android 10
- Qualcomm SM8250 Snapdragon 865 (7nm+) processor
- Octa-core (1x 2.84GHz Kryo 585, 3x 2.42GHz Kryo 585, 4x 1.8GHz Kryo 585) CPU
- Adreno 650 GPU
- 8GB RAM
- 128GB/256GB storage
- Three rear-facing cameras: 12Mp, f/1.7, 24mm (wide), 1/1.7in, 1.8 μ m, Dual Pixel PDAF, OIS; 12Mp, f/2.4, 70mm (telephoto), 1/3.4in, 1.0 μ m, PDAF, 3x optical zoom, OIS; 12Mp, f/2.2, 124-degree, 16mm (ultra-wide), 1/2.55in, Dual Pixel PDAF
- Single selfie camera: 8Mp, f/2.0, 24mm

(wide), 1/4in, 1.12 μ m

- Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct, DLNA, hotspot
- Bluetooth 5.1, A2DP, aptX HD, LE
- GPS with A-GPS, GLONASS, BDS, GALILEO, QZSS
- NFC
- USB Type-C 3.1; USB On-The-Go
- Fingerprint scanner (side mounted)
- Non-removable 4,000mAh lithium-ion battery
- Fast charging 21 watts
- 158x68x8mm
- 163g

ANDROID

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