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FOLDABLES HAVE MILES TO GO

WHEN THE NOVELTY WEARS OFF, TECH GIANTS COULD BE STRUGGLING TO JUSTIFY THE UTILITY AND ASTRONOMICAL PRICING OF FOLDING PHONES.

HUAWEI MATE X

SAMSUNG GALAXY FOLD

Huawei P30 Pro reviewed
CONTENTS

Cover Story

4 Foldables Have Miles to Go
When the novelty wears off, tech giants could be struggling to justify the utility and astronomical pricing of folding phones.

6 Tuning up
Local and global players are wooing Indian consumers with music streaming services. Differentiation will decide who wins and who loses.

8 Reviews
Redmi Go
Amazon Echo Show
Huawei P30 Pro
Asus ROG phone
SAMSUNG HAS launched its Android Go smartphone called Samsung Galaxy A2 Core to take on Xiaomi’s Redmi Go. The Galaxy A2 Core runs on Android Pie (Go Edition) and is the successor to Samsung Galaxy J2 Core, which was codenamed as SM-J260. The Galaxy A2 Core is priced higher than the Xiaomi Redmi Go at ₹5,290. Xiaomi’s Redmi Go is priced at ₹4,499.

“We are going to ship out Galaxy A2 core this week at ₹5,290. This is going to be a tremendous boost to people who want to switch from feature phones to smartphones. This is going to be huge in terms of volume,” Ranjivjit Singh, Chief Marketing Officer and Senior Vice President, Samsung India said.

As far as specifications are concerned, Galaxy A2 Core has a 5-inch LCD with a qHD (960x540 pixels) display. The smartphone is powered by the octa-core Exynos 7870 SoC paired with just 1GB of RAM and 16GB of internal storage. The dimensions are 141.6x71x9.1mm and it weighs 142 grams. The phone draws power from a 2,600mAh battery, which is slightly smaller than the one in Redmi Go (3000 mAh).

Since the device runs Android Pie (Go Edition), it will come pre-installed with a host of Android Go-optimised apps. The Android Pie (Go Edition) is a trimmed down version of the power-hungry OS, which is designed to work flawlessly with limited memory and processing power.

Meanwhile, as per the leaked user manual, the Samsung Galaxy A2 Core will come with both single-SIM and dual-SIM variants, but it is not clear which version has made it to the Indian market. Going by the usage pattern of Indian consumers, the dual-SIM variant will surely make its way into the country.

Lastly, the optics of Samsung Galaxy A2 Core will be at best satisfactory. The smartphone comes equipped with a single 5-MP rear camera as well as a 5-MP front camera. In comparison, Redmi Go houses an 8-MP camera with flash and HDR. The camera application is neat with photo, video, square and manual mode. The front camera of Redmi Go also has the AI Beautify feature.
Vivo has launched its mid-range notch smartphone Vivo S1 with a pop-up selfie camera in China to take on the likes of Realme and Xiaomi. The pop-up camera design was first introduced by Vivo in its Vivo V15 and Vivo V15 Pro smartphones.

Vivo S1 is company’s first smartphone under the S series lineup and packs 6GB RAM memory and 128GB of internal storage which can be expanded up to 256GB via microSD card. The S1 boasts of a 6.53-inch full-HD+ IPS display with screen resolution of 1080x2340 pixels, 19.5:9 aspect ratio and 90.95 per cent screen-to-body ratio. On the hardware front, the Vivo S1 is powered by like octa-core MediaTek Helio P70 SoC with Mali-G72 GPU.

As far as the optics are concerned, Vivo S1 includes a triple camera arrangement at the back that includes a primary sensor of 12-MP with an f/1.78 lens, a secondary 8-MP sensor with an f/2.2 wide-angle lens and third 5-MP sensor with an f/2.4 lens. On the front, the Vivo S1 includes a 25-MP pop-up selfie shooter with f/2.0 lens.

Vivo S1 comes with dual-SIM support. On the software front, the phone runs Funtouch OS 9 which is based on Android 9 Pie.

The phone is powered by a 3,940mAh battery and comes with a rear-mounted fingerprint sensor just below the triple camera module.

Vivo S1w has a dedicated button for AI voice assistant. However, as the phone is currently available in China, the AI of choice is Vivo’s own Jovi voice assistant. Focussing on the connectivity, Vivo S1 has Wi-Fi, Bluetooth, USB-OTG, GPS, GLONASS, and BeiDou. Vivo S1 measures 161.97x75.93x8.54mm and weighs 189.5 grams.

Vivo S1 is available for about CNY 2,298 (which means approximately ₹24,500) for the sole 6GB and 128GB storage model. The phone is offered in blue and peach pink colours.

Vivo hasn’t said anything about Vivo S1’s India launch plans however could launch it soon to take on the mid-range smartphones.
WHEN THE NOVELTY WEARS OFF, TECH GIANTS COULD BE STRUGGLING TO JUSTIFY THE UTILITY AND ASTRONOMICAL PRICING OF FOLDING PHONES.

By Nidhi Singal

SMARTPHONES have become exciting again. At least the folding ones, ever since Samsung and Huawei unveiled their latest creations, giving rise to speculation that a folding iPhone is bound to happen by 2020. Motorola is gearing up to launch its device and Xiaomi has posted a futuristic, double-folding prototype on a social media site. A new patent that has surfaced online suggests Google may come out with a phone similar to Motorola Razr 2019.

We are not yet sure what specific purpose these ‘luxury’ phones are going to serve (Galaxy Fold starts at $1,980 for the 4G version while Huawei Mate X will cost $2,600, undoubtedly premium pricing), but one can understand why the buzz around foldable phones is not going to fizzle out. Here is a path-breaking innovation, a never-before change in form factor, which could redefine the hardware, software and user experience (UX) much like Apple did in 2007 when the first iPhone hit the market. We have seen plenty of incremental changes over the past decade – big screens, transparent panels, multiple-camera set-ups, reverse wireless charging and in-display fingerprint sensors. But none of these turned out to be the next big thing in the smartphone space.

Will Form Factors Fascinate?

The first iPhone featured a 3.5-inch display and we are now quite familiar with 6-inch plus screens. Foldable phones are yet another step towards a much bigger screen estate – a convenient combo of phone, tablet and camera – in a compact form. The aim is to enhance UX by facilitating better content consumption and creation across e-mail, web browser, e-books, video streaming, gaming and more.

Consider this: iPhone XS Max packs a 6.5-inch display in a body measuring 157.5x77.4x7.7 mm and weighing 208g. In contrast, Huawei Mate X has a 6.6-inch front panel (when folded)
that can be unfolded to a seamless 8-inch panel. At 161.3x78.3x11 mm, the folded Mate X is slightly bigger than the XS Max but the device weighs around 300g. The front panel can be used just like a regular smartphone, and the 8-inch panel, when unfolded, can be used as a great multitasking device. But, will the hinges function as smoothly as manufacturers claim? Second, how smooth will be a split-screen usage for multitasking?

“To start with, foldable phones will not replace normal smartphones. People will continue using smartphones as they have done before. But when foldable phones become mainstream, people will have new options to learn and think about. UX will be a differentiating factor here,” says Wally Yang, Senior Product Marketing Director at Huawei Consumer Business Group.

A lot depends on the design. Mate X has an out-fold design while Galaxy Fold has opted for an in-fold version. The outer part of Galaxy Fold features a 4.6-inch display and there is a separate 7.3-inch display inside. “This year, the industry will see different form factors and design is going to be crucial for foldable phones,” adds Yang.

Best of Tech on the Cards?
Manufacturers today are not only talking about great designs but are also packing in the latest technology. Both Huawei Mate X and Samsung Fold will be 5G compatible. Google, too, has recently released its first beta of Android Q, the upcoming software update for Google’s mobile OS, which will be optimised with foldable-focused features and experiences. But the most contentious point at the time is the polymer (plastic) displays used by first-generation foldable smartphones. The material might be flexible enough to withstand thousands of folds, but it is highly reflective and not scratch-resistant.

“During the Mobile World Congress this year, we saw a couple of foldable devices and the plastic on those phones does not look good. It is easy to prototype but it has a crazy high reflection. So, in the longer term, I think people want a glass solution. That way, the best technology solutions will be converged eventually. It is going to be a huge value opportunity,” says John Bayne, Senior Vice President and General Manager at Corning Gorilla Glass. The US-based Corning is the industry leader in glass protection for smartphones and should be ready with its bendable glass solution by the end of this year or the next.

The Bottom Line
In spite of the hype, foldable phones are still taking baby steps and the ecosystem around them must evolve to meet consumer expectations. Other than design challenges, application optimisation will be a big issue as apps must be optimised for each design. Plus, the most significant pain point remains in the form of pricing – it will not go down any time soon.

“Foldable technology is at early stages of the development cycle. We believe the first- or second-generation foldable smartphones will be initial imprints of future technology. Typically, smartphone specs are designed for single-handed use; so, the foldable design is likely to face ergonomic challenges initially. Also, they are likely to be bulkier. It remains to be seen if consumers will perceive value in such devices at the expense of cost and convenience. Apart from usability, cost and convenience, foldable smartphones have no standard aspect ratio for now,” says Hanish Bhatia, Senior Analyst, Devices and Ecosystem, at Counterpoint Research, a Hong Kong-headquartered market research organisation.

Unless the value gets clearly defined, the bendy phones may end with a whimper just like the modular smartphones did after the initial hoopla.
LOCAL AND GLOBAL PLAYERS ARE WOOING INDIAN CONSUMERS WITH MUSIC STREAMING SERVICES. DIFFERENTIATION WILL DECIDE WHO WINS AND WHO LOSES.

By Nidhi Singal
Illustration By Nilanjan Das

MUSIC LOVERS in India never had it so good. Now there is no need to visit a music store or purchase it online or download it clandestinely (yes, we call it piracy) as nearly a dozen music streaming services, both homegrown and global, are operating in the country. YouTube Music is the latest to join the league that has global leader Spotify, Apple Music, Amazon Prime Music (part of the Prime offering in India) and a bunch of heavily funded Indian players such as JioSaavn, Gaana and Wynk in the fray. All of them offer millions of songs across genres, provide curated playlists and feature Internet radio shows. Add to that the growing number of smartphone users, cheaper data and improved bandwidths...
(3G and 4G coverage), and one can easily understand why online music streaming and downloads are growing.

According to a recent report by the Indian Music Industry (IMI)-Deloitte on the audio OTT (over-the-top) economy, the number of smartphone users is expected to grow to 829 million in 2022 from 404 million in 2017, leading to a digital revolution where an increasing number of people will shift to digital platforms for music consumption. By the end of December 2018, the number of people using music streaming services across the country reached nearly 150 million, but it is only 60 per cent of the online video audience compared to the previous year,” says Amarjit Batra, India Managing Director of Sweden-based Spotify.

WHAT WORKS FOR INDIA
A growing user base is no doubt good news, but converting users to paid subscribers in a price-conscious market is no easy task. International price tags are not likely to work here and key players have tuned in with a host of affordable options. For instance, Spotify offers ad-supported free subscription across devices while Spotify Premium is an ad-free service priced at ₹119 per month (₹59 for students) that provides high-quality streaming (320 kbps) and download option for offline consumption. You also get a free trial for the first month. Besides the monthly plan, there are choices galore as you can subscribe for a day (₹13), a week (₹39), a quarter (₹389), six months (₹719) and a year (₹1,189). It also features city-specific playlists in addition to Bollywood Blast, Desi Hits and Editor’s Picks such as Punjabi 101 and Jashn-e-Qawwali to build instant rapport with multilingual audiences.

YouTube Music from Google’s stable also offers ad-supported free music and an ad-free paid service called YouTube Premium. The latter charges ₹99 per month for a single user and ₹129 a month for family sharing. You also get a free trial for three months – the offer is valid until March 31, 2020. One can use the app to watch music videos as well or turn them off using a toggle at the top. Recommendations are based on your YouTube history and Google’s best-in-class algorithm ensures excellent user experience.

Apple Music, with more than 50 million songs, is an ad-free music and video-streaming service that allows downloads for offline listening. There is a three-month trial period, and you need to pay ₹99 per month for individual use and ₹149 a month for family access. Ad-free streaming on Amazon Music (bundled with Prime membership at ₹129 a month or an annual charge of ₹999) enables offline listening, supports hands-free voice commands and can be accessed via the Echo range of smart speakers. In the hands-free mode, users can interact with Alexa and ask it to play the songs that they heard a week, a month or almost a year ago.

Airtel-backed Wynk follows a similar model. Ad-supported Wynk is free while unlimited downloads without ads cost ₹119 a month. Airtel subscribers get free and unlimited downloads, though. Reliance-owned JioSaavn offers ad-supported free streaming, and so does Gaana, which is backed by Times Internet and Tencent. But both have slashed annual fees for premium services in the face of stiff competition. JioSaavn Pro is now down to ₹299 a year from ₹999 while Gaana Plus charges ₹298 annually instead of ₹1,098. The student’s subscription plan is priced at ₹149 a year.

“The latest IFPI report says India’s music industry grew by 24.5 per cent in 2018, and this trajectory indicates that India will be in the top 10 music markets by 2022,” says Batra of Spotify.

But the key question remains: What will differentiate the market leader? With so many players to choose from and little difference in pricing, consumers may bet big on seamless access and flawless user experience across devices and digital infrastructures. A user-friendly interface, intuitive search, well-curated lists, content diversity and original music production are likely to play a vital role in gaining traction.
Talk about entry-level smartphone category, primarily under ₹5,000, and there aren’t many good options to choose from. Even though there is a huge market for these smartphones, the segment mostly has got low-quality hardware that struggles to support the custom Android software. Load applications and content and the device start slowing down. Thankfully, Google has acknowledged the need for having a lighter version of the Android operating system for low-specification devices to run smoothly. And the Redmi Go runs on just that - Android Oreo (Go Edition).

Design: Even though it has been made of plastic, it doesn’t look cheap either. Xiaomi has added a 5inch HD display at the front, which seems to be pretty bright with decent sunlight legibility. The touch response is pretty good and there are three navigation capacitive keys below the display — ‘home’ key, multitasking key and ‘back’ key. But the keys are not backlit. For charging, it continues to have the micro USB port and the charger is bundled in the box. However, a headphone isn’t a part of the box. Lastly, even though fingerprint scanners have become common, we rarely see them in this price category. So, to protect your device, you will have to rely on the PIN, password or pattern lock.

Given the price it comes at, the overall look and feel of the phone is impressive. The plastic used has a soft finish that makes it easy to grip. And at 137 grams, it doesn’t feel heavy either. The phone is available in classic black and blue.

Setup: Setting up the Redmi Go (just like other Android devices) is fairly easy. Just insert your SIM card and follow the instructions. The device will ask you to connect to a
WiFi network if available followed by entering Google account details. If you don’t have these, fret not as you can always skip the steps and start using the device. But to download some apps you will have to enter your Google account details.

**Android Go, apps and performance:** Android Oreo (Go Edition) is a trimmed down version of the power-hungry OS which is designed to work flawlessly with limited memory and processing power. While streaming videos on YouTube Go, it displayed the storage available and gave an option to download the video in basic, standard or high quality (and watch it even with occasional internet connection).

Of the 8GB onboard storage, close to 2.3GB was occupied by the system and 1.3GB by applications. While the phone supports two SIM cards, both cannot be used at the same time. The phone is powered by Qualcomm 425 processor and is paired with 1GB of RAM. And the 3000 mAh battery lasted me a day and a half on average use.

**Camera:** Redmi Go houses an 8-megapixel camera with flash and HDR. The images captured during bright daylight were decent but wasn’t impressive during the night as the shots had a lot of noise. While the camera was quick to capture images, it took a few seconds to click an image with HDR turned on. For selfies, there is a 5MP camera with AI Beautify that captures decent images.

**Verdict:** Redmi Go for ₹4,499 is a great buy for first-time buyers or even those who want to switch to a good Android smartphone under ₹5,000. If you are flexible with your budget, you can consider Redmi 6A for ₹5,999.
display at the front, physical buttons for volume control at the top and a trapezium-shaped rear, housing the speaker and the power cable (the lumpy rear looks like the back of a CRT TV) – the design part of the second-generation Amazon Echo Show may not wow you, especially as it is quite expensive by Indian standards. But it features an Alexa-powered smart speaker with a 10.1-inch HD touch display, eight microphones to pick up commands even when music is playing and comes with a refined software programme, all of which make it bigger and better.

Smart speakers are a great way to communicate and adding a screen further enhances user experience. The Echo Show can be placed anywhere at home or in your office cabin depending on where you need quick access to information and home controls. For the latter, you get the Zigbee smart hub built-in for pairing with devices such as the Philips Hue bulb (without the hub). One can also retrofit it with existing home automation solutions. Moreover, an increasing number of Alexa-compatible devices also support Wi-Fi connectivity, making them easy to operate. Just tell it: Alexa, discover devices, and it starts looking for compatible gadgets and connects with them. If you want to ditch the voice command, swipe down from the top of Echo Show to get one-touch access to all smart appliances paired with Echo Show. But for all this, you will have to enable
The 5 MP camera above the display can be used for video calls on the Alexa ecosystem or Drop In. The latter is a two-way communication with Alexa where the camera and the mics get activated automatically. Those concerned about privacy can disable them by using the mute button at the top.

Alexa is not perfect, though. When I asked for euro-to-INR conversion, it managed to fetch the day’s rate, but could not provide the previous day’s currency rate or the fluctuation chart for the month. Another pain point is its lack of YouTube skill. Although I could watch trailers, movies and videos on Amazon Prime or other skills, I had to use Silk or Mozilla browser to access YouTube, and it was not a seamless experience.

Compatible skills (apps for the voice assistant). Other than controlling home devices, I was able to fetch news updates, access recipes, play music, answer quiz questions, get information on 2019 Lok Sabha elections and Cricket World Cup and did much more.

The 5 MP camera above the display can be used for video calls on the Alexa ecosystem or Drop In. The latter is a two-way communication with Alexa where the camera and the mics get activated automatically. Those concerned about privacy can disable them by using the mute button at the top.

Finally, Echo Show packs in dual 2-inch neodymium drivers and a passive bass radiator for the audio, but the sound is still muffled. Although I was able to adjust bass, treble and mids, the audio lacked clarity and base. Overall, the latest offering from the Echo stable works well and looks cool. But with so many screens around us, do we need another one with expensive upgrades?
HUAWEI P30 PRO
PRICE ₹71,990
Talk

**of flagship** phones and many would discard Huawei as a serious contender. But the Chinese manufacturer has come out with stunning technology breakthroughs, the latest being the P30 Pro that can compete with the likes of Samsung Galaxy S10 Plus and Google Pixel 3 XL and beat them on the camera front. This one houses a Leica quad camera set-up at the rear and uses the RYYB sensor for the primary lens (instead of the standard RGB sensor), which captures 40 per cent more light and is extremely convenient for low-light photography. The rear camera module comprises a 20 MP ultra-wide angle lens at the top, a 40 MP primary wide angle lens in the middle and an 8 MP ‘SuperZoom’ telephoto lens and a time-of-flight (ToF) camera placed below the flash for accurate depth detection, producing a superb bokeh effect in portrait mode. The best part is the periscope-style ‘SuperZoom’ camera, which is perpendicular to the smartphone's surface and comes with an array of lenses. What we see from the outside is a prism that rotates light towards the lenses inside, enabling 5x optical zoom, 10x hybrid zoom and up to 50x digital zoom.

In the default photo mode, I was able to switch seamlessly between wide angle, 1x, 5x optical and 10x hybrid zoom, and the images did not suffer any clarity loss. Even when zooming in, the AI support quickly identifies elements while balancing light and colour. Better still, the phone captures clear, noise-free pictures even in pitch dark. Taking macro shots was a delight as I captured close-up views from 2.5 cm.

But there is more. It has a curved glass front (6.47-inch FHD+ display) and back, a teardrop notch, and an in-display fingerprint sensor. Running on Android 9.0, it is powered by Kirin 980 octa-core processor and paired with 8 GB of RAM and 256 GB of onboard storage. It performs smoothly and does not overheat even after long sessions of camera usage. The 4,200 mAh battery lasted me a day and a half and was quick to charge. It supports wireless charging and reverse wireless charging (you can charge other devices with this one), but Huawei has also bundled a 40W charger in the box.
TEST BENCH

6” AMOLED DISPLAY WITH 1MS RESPONSE TIME

4000 MAH BATTERY

8MP FRONT CAMERA WITH F2.0 APERTURE AND 84° FIELD OF VIEW

2.96GHZ QUALCOMM 845 PROCESSOR

ASUS ROG PHONE

PRICE ₹69,990

Google, Mobile Manager, Themes, Gallery, Play Store
At 200 grams, the device is heavy. There is a USB Type C port at the bottom along with the headphone jack and another Type C port on the left while charging in the landscape mode and for docking accessory.

For gaming, there are Touch-sensitive AirTriggers that can be used as left and right gamepad buttons. The phone can be used to live stream the game. The speaker and the display complement the gaming experience.

It is power packed – the Qualcomm Snapdragon 845 processor is clocked at 2.96GHz, higher than the standard clock speed of the processor. This has been done to ensure that the device has enough power to handle heavy graphics games. It also has carbon pads, a large vapour cooling chamber, and a copper heat spreader for heat dissipation. This is paired with 8GB of RAM and 128GB of storage. Surprisingly, the storage is non-expandable.

The phone runs on Android 8.1 with Asus Zen UI. Within the Game Center, a user can customise game profiles, fire up X Mode, check temperature and CPU load and do more. We played games like PUBG, Asphalt 9 and Battle Warship and the experience was superb.

The phone is also accompanied by a fan accessory but it looked like a gimmick. The ROG phone was capable enough to handle hours of continuous gaming without slowing down or heating up.

The device has a dual camera setup at the rear, and the 12MP along with an 8MP camera captures some impressive images.

Matching the performance, there is a 4000mAh battery onboard and the 30W charger bundled in the box juices up the 50 per cent of the battery in first 30 minutes and takes another hour for a full charge.