BUSINESS

Flexible display firms eye foldable bonanza

Domestic demand set to surge as more users shift to portable, bigger devices

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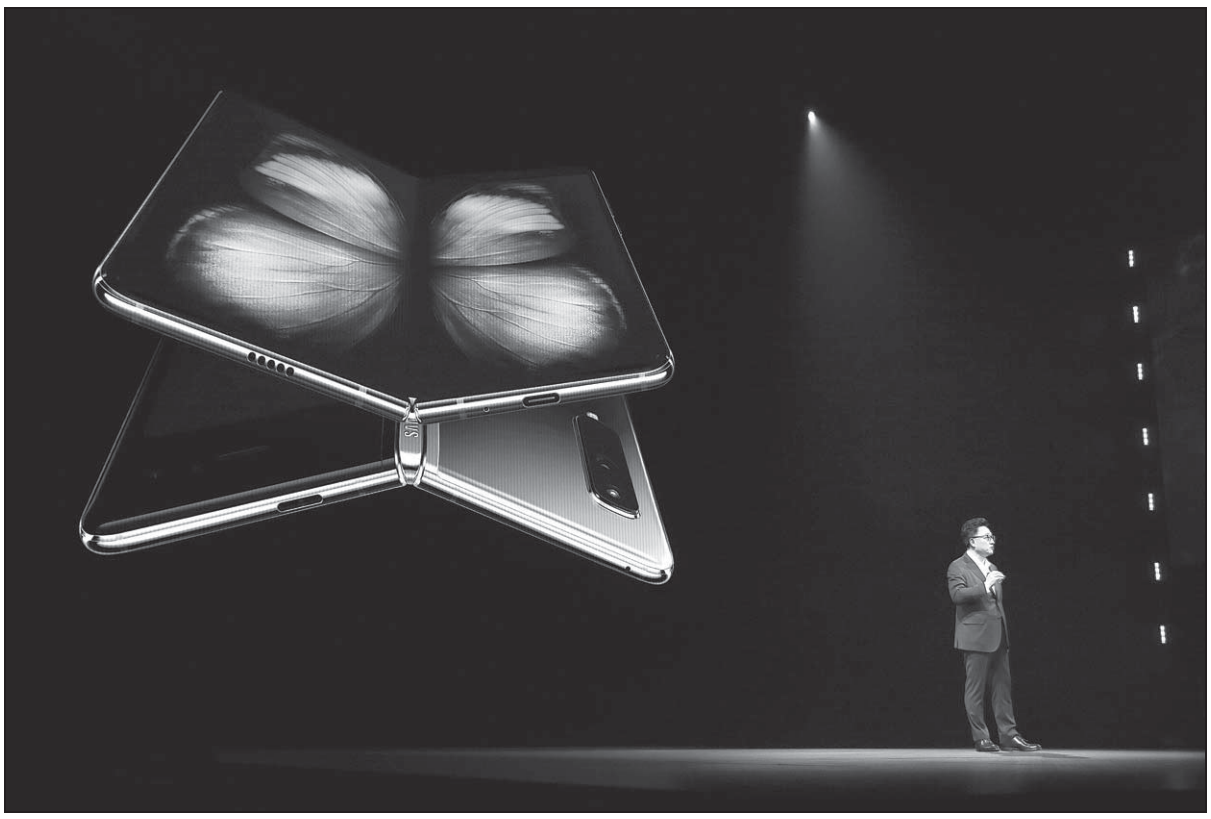

DJ Koh, president and CEO of the IT and Mobile Communications division at Samsung Electronics, unveils the new Samsung Galaxy Fold smartphone in San Francisco, the United States, on Wednesday. AP

Domestic flexible display panel makers are set to witness explosive growth in the next few years as leading smartphone vendors ramp up efforts to roll out new products like foldable phones to bolster sagging fortunes.

Buoyed by the prospects, companies are already scaling up capacities in segments like flexible screens used for mobile devices and smart wearables, according to industry sources. These include active matrix/organic light-emitting diodes or AMOLEDs and organic light-emitting diodes used for displays.

BOE Technology Group Co Ltd, a Beijing-based supplier of display products and solutions, said in December that it is planning to build a new sixth-generation flexible AMOLED production line in Fuzhou, Fujian province, with a total investment of 46.5 billion yuan ($6.9 billion).

"The flexible AMOLED display brings more possibilities to a phone's appearance," said Zhang Yu, senior vice-president of BOE.

AMOLEDs are more flexible with faster responses, high contrast and wide visual angles, compared to traditional liquid crystal display, or LCD, panels. But they are in short supply and hence have huge market potential, due to the absence of competition.

BOE has three sixth-generation flexible AMOLED production lines at present. It started mass production of the panels from its facility in Chengdu, Sichuan province, in October 2017. The panels have already been used by more than 10 smartphone manufacturers including Huawei Technologies Co Ltd, Oppo Electronics Corp, Vivo Mobile Communication Technology Co, Xiaomi Corp, ZTE Corp and Nubia Technology Co Ltd.

The company's second line in Mianyang, Sichuan province, is set to start mass production this year, while work on the third facility commenced in Chongqing last year.

While companies are bullish about market prospects, industry analysts remained guarded on the prospects for foldable products.

According to CITIC Securities, 2019 will be the first year of application for foldable and flexible screens and OLED panel shipments will cross 1 million units. However, companies may still face considerable challenges as steep prices could affect popularity.

IHS Markit, another market research firm, expects BOE to be the world's largest supplier of AMOLED display panels this year, with shipments of foldable panels set to reach 50 million by 2025.

The optimism has already led to a surge in the prices of OLED-related stocks, such as BOE, Visionox Co Ltd, Lingyi iTech, Triumph Science and Technology, with most of the shares hitting the daily price limits.

South Korean tech giant Samsung Electronics Co Ltd currently dominates the global AMOLED sector, with a 90 percent market share.

However, experts say LCD screens would still be the main revenue driver for companies. Although OLED products will see rapid growth, around 60 to 70 percent of the existing mobile phones still use LCD screens. It will still take some time for foldable devices to gain traction, they said.

Wu Shuyuan, an analyst at Beijing-based market research firm Sigmaintell Consulting, said: "Shipments of domestically-made flexible AMOLED screens are still in the initial stages. Companies need to improve their yield rate capacities and reduce production costs."

Wu said sales of foldable devices would be hampered by the supply chain, costs and other factors, thereby restricting them to a niche market.

Visionox, another OLED-focused company, has two sixth-generation flexible AMOLED display screen production lines in Gu'an, Hebei province, and Hefei in Anhui province.

The company, which provides flexible screens for smartphone maker Xiaomi Corp's new foldable phone, was carved out of the OLED research team at Tsinghua University and has been engaged in the sector for more than two decades. Its AMOLED display screen substrates (1,500 mm by 1,850 mm) every month, and meet the high-end, foldable screen demand for 90 million smartphones.

Visionox started building its second production line in Hefei in December. "The new line, with an investment of 44 billion yuan, will have a monthly capacity of 30,000 substrates, similar to our first line in Hebei," said Yang Shujuan, general manager at Visionox's brand center.

Yang said with the development of 5G, the internet of things and artificial intelligence, the flexible AMOLEDs will have wider application, such as in smartphones, computers, smart wearables, vehicles, smart homes, virtual reality and augmented reality.

"Flexible AMOLED screens will be everywhere in the future." Demand for foldable phones is huge as they have large screens and are portable, she said.

"Visionox will focus on independent innovation and team with other companies in the industrial chain to produce flexible products, which include but are not limited to curved surfaces, and folding devices," Yang said.

Samsung unveiled its foldable display phones on Wednesday, four days earlier than its rival Huawei Technologies Co Ltd.

Ha Jiqing, a senior analyst from Beijing-based consultancy All View Cloud, said: "Sales of foldable phones will not be very high this year as companies are just testing the product. We will have to wait and see if consumers adapt to such phones."

Higher power consumption by the large screen will affect the battery life. Moreover, the hinge, a mechanical design that allows the flexible panel to fold and unfold is expensive, said Ha.

Customers check prices of food products on a touch screen at a supermarket in Hangzhou, Zhejiang province. LONG WEI / FOR CHINA DAILY

Big data to reshape economic landscape

By FAN FEIFEI

Core industries in China's big data sector could earn more than 720 billion yuan ($106.3 billion) this year, said a report on the sector's outlook from think tank CCID.

China's big data sector will witness 25 to 30 percent growth in 2019, facilitating the transformation and upgrading of regional economic structures, the report said.

Apart from East China where the sector is flourishing, Southwest China's Sichuan and Guizhou provinces and Chongqing municipality are expected to be front-runners for new growth, according to the report.

As part of the development of the digital economy, China is accelerating the integration of big data and the real economy, said Wei Kai, a researcher with the China Academy of Information and Communication Technology.

Wei said the development of big data in China is still unbalanced, such as unbalanced business types and uneven geographical distribution.

To maximize the use of big data, the country should make efforts to establish all-in-one big data platforms and effective mechanisms for data management, Wei added.

Officials in Guizhou province said they will boost the output value of big data, electronic information and other industries to over 100 billion yuan this year, as well as accelerate the development of intelligent terminal manufacturing and supporting facilities.

It will also focus on the development of electronic components and materials, and foster the development of integrated circuits and new display industries.

Since 2015, China International Big Data Industry Expo has been held for four times in Guiyang, capital city of Guizhou province. Last year, the expo attracted over 40,000 participants from nearly 30 countries.

As China's first big data pilot zone, the mountainous province of Guizhou has attracted heavyweight firms, including Apple, Qualcomm, Huawei, Tencent, Alibaba and Foxconn, to establish cloud computing and big data centers as well as regional headquarters.

In addition, Hunan has formulated six measures to boost the big data industry, such as cultivating enterprises engaged in big data industry, as well as promoting research and development and innovative applications of big data technologies and products.

The sales revenue of big data industry in Hunan is expected to surpass 100 billion yuan by 2021, with a compound annual growth rate of over 30 percent in the next three years, according to the local authority.

A booming digital economy is reshaping China's economic landscape as technology such as artificial intelligence, big data and cloud computing revives traditional industries and casts new light on high-quality development.

China's big data sector aims to increase its annual sales to 1 trillion yuan by 2020 from an estimated 280 billion yuan in 2015, said a plan released by the Ministry of Industry and Information Technology.

Xinhua contributed to the story.

Beijing launches $4.4b plan to gain edge in commercialization of 5G tech

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The Beijing municipal government's plan to invest at least 30 billion yuan ($4.44 billion) by 2022 to build 5G networks will help the capital gain a lead in commercializing the superfast technology and expedite pioneering applications such as self-driving vehicles and remote healthcare, experts said.

Xiang Ligang, a telecom expert and CEO of industry website Cctime, said Beijing boasts a sound base in tech enterprises and talents, and coupled with the new favorable policies, they will help drive the city to the forefront of China's advances in the application of next-gen wireless technology.

"It is worth noting that Beijing attaches huge importance to breakthrough in high-end 5G components, which is the primary and essential foundation for a thriving telecom industrial chain," Xiang said.

In Beijing's guideline for 5G development from 2019 to 2022, which was released recently, the municipal government prioritized the task of tackling bottlenecks in the research and development of medium-and-high-frequency radio frequency devices, an essential component in 5G telecom gears.

It will build a 5G medium-and-high-frequency RF device industry innovation center, and set up 5G core device technology development platform to encourage and facilitate product analysis, verification and testing.

As part of Beijing's broader push to leverage 5G to improve urban management and living, it will step up the push to accelerate the application of ultra-high-definition live video, autonomous driving, cloud-based robot management, automated logistics, and drones by building large-scale ultrafast networks.

In the much-expected medical area, 5G technology will realize remote healthcare services through the collaborative application of smart sensors, big data and other technologies in medical equipment and treatment systems. Remote consultation, tele-imaging, remote ultrasound, tele-surgery, and other services will be piloted in areas around the Beijing 2022 Winter Olympics arenas, Beijing subcenter in the city's Tongzhou district and other regions.

Fu Liang, an independent analyst who has been following the telecom industry for more than a decade, said Beijing has a unique edge in self-driving vehicles, as it houses leading companies including Baidu Inc, Didi Chuxing, and JD.

Beijing said it hopes that by 2022, Beijing-based scientific research units and enterprises can be an important contributor to global 5G technical standards, accounting for more than 5 percent of all primary and essential international 5G patents. It also aims to achieve breakthroughs in key technologies and processes for the production of medium-and-high-frequency components above 6 GHz.

"The city's 5G industry will realize an income of about 200 billion yuan by 2022, driving the information service industry and other emerging industries to earn more than 1 trillion yuan," the Beijing municipal government said in a statement.

The move came as China is scrambling to commercialize 5G, a technology that is expected to be at least 10 times faster than 4G and will support superfast movie downloads, the streaming of virtual reality games, and self-driving cars. The country's telecom carriers China Mobile, China Telecom and China Unicom are all conducting 5G tests in a string of cities, enabling large-scale pre-commercial use this year.

China is expected to have 576 million 5G users by 2025, or more than 40 percent of global consumption, according to a report released by global consultancy EY.

Other first — tier cities including Shanghai and Shenzhen are also hammering out ambitious 5G development plans, Even central and western regions are also jumping on the bandwagon. Jiangxi province, for instance, plans to cover its major cities and towns with 5G networks by 2023.

A report by the China Academy of Information and Communication Technology also forecast that 5G will drive 6.3 trillion yuan of economic output in the nation by 2030.

A China Mobile employee in Beijing explains how 5G technologies can be used for long-distance driving. LEI KESI / FOR CHINA DAILY