

The devices to 'see' beyond the real world

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Several consumer-oriented AR/VR gadgets have been introduced in China, targeting millions of users and moving closer to the metaverse, while bringing new experiences into the virtual realm and opening up revenue opportunities for the industry.

The gadgets include glasses for online video and virtual meetings, a drone with virtual flight experience and simulated ambient sounds. They use virtual reality (VR) and augmented reality (AR) technologies, which are widely regarded as underlying and essential technologies for the metaverse.

"The metaverse and its underlying technologies (in China) have the potential to break bottlenecks for the next era of innovation by enabling new user experiences and use cases across industries, and by providing new revenue opportunities," according to research firm Gartner.

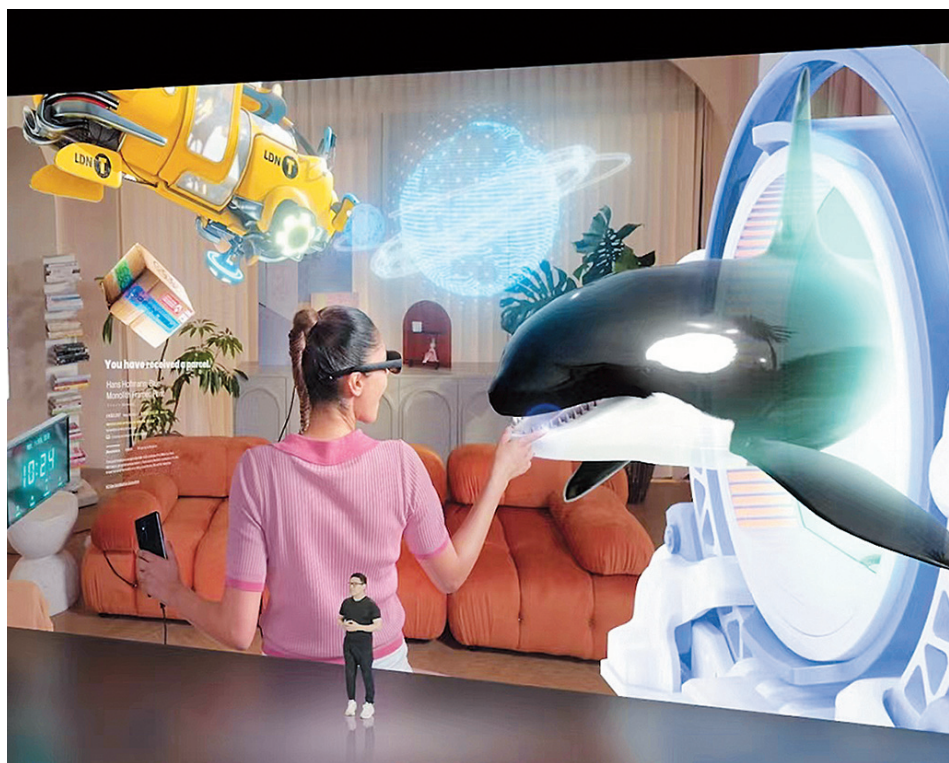
Unlike startups with limited resources and experiences, Chinese vendors such as Nreal, DJI, and Huawei have extensive consumer market experience and global brand awareness, which may entice consumers and allow the market to accept metaverse-underlying gadgets.

Nreal began selling two AR glasses, Nreal X and Nreal Air, as the company's first domestic product on August 27, with a starting price of 2,299 yuan (US\$333). The glasses' normal size and lightweight design enable users to experience real spatial integration, physical interaction and full-scene AR applications from any location.

Since its inception in 2017, Nreal has primarily focused on international markets such as the United States, Europe and Japan. The company's glasses were previously displayed at a consumer electronics show in Shanghai with its partner KDDI.

The next-generation computing platform's mission is to transition from "mobile Internet to spatial Internet," integrating digital information with the real world. According to Xu Chi, chief executive and founder of Nreal, the devices for the upgrade are AR glasses.

The current Internet evolution is being characterized as "growth without groundbreaking development," while the metaverse of underlying



Nreal made its China debut with AR glasses at this year's WAIC in Shanghai. — Photos/Ti Gong

technologies has the potential to break the bottleneck, according to Gartner.

In China, Nreal collaborated with video streaming website iQiyi, China Mobile subsidiary Migu and new energy car brand Nio to create applications and an "AR ecosystem." The new glasses will also be on display at the 2022 World Artificial Intelligence Conference.

AR and online video are both visual arts. According to Gong Yu, CEO of iQiyi, augmented reality will provide a "magic leap" in immersive and interactive entertainment experiences.

Last week, DJI released the DJI Avata, a first-person view (FPV) drone with a fully immersive flight experience that is described as an "almost out-of-body experience." Its simple controls make FPV flying accessible to even novice pilots, who are frequently prevented from long-term training due to complicated controls and the risks and losses associated with drone crashes. The new Avatar drone can automatically avoid danger.

With a 4K imaging system and 20 GB of internal storage, the new drone provides users with a wider field of view for flying and immersive aerial photography. DJI provides users with the Goggle 2 video headset for more immersive and clearer imaging. The

Analysts predict that China and Asia Pacific will be the fastest-growing regions for the metaverse and underlying tech markets, thanks to tech-savvy consumers and strong electronics manufacturing capacities.

The metaverse is still in its early stages, but it will contribute US\$3.01 trillion in GDP globally by 2031, with Asia Pacific accounting for one-third, according to an Analysis Group survey, which was sponsored by Meta.

AR is a fundamental technology for the metaverse, according to Meta, formerly known as Facebook. The company, which invests heavily in the metaverse, is one of the Western market leaders in new technologies.

Chinese cities such as Shanghai and Beijing have targeted the metaverse as a long-term objective. In Shanghai, it plans to increase the value of the city's metaverse to 350 billion yuan by 2025. At this year's WAIC, more metaverse and augmented reality apps were shown off for the first time.

Huawei Technologies has established its largest audio technology research center in Shanghai, with several professional labs spread over 2,000 square meters. The tech giant is researching how to improve sound quality, reduce environmental noise and create spatial sound effects in the local center.

These technologies are now primarily used in high-end headsets and in-car speakers.

Huawei says that in the future, audio technology will be widely used, including more VR/AR devices for immersive experiences, especially spatial sound technologies.

"Wherever there are speakers or microphones, Huawei's audio technology can be used," said Liu Dongfang, president of Huawei's audio technology and device product line.

Meta, Google and Apple are leading the charge in the West to seek business opportunities for the metaverse and its underlying technologies.

Apple is expected to release new AR devices in addition to iPhones at its upcoming autumn event in September. According to media reports, Apple has registered trademarks for "Reality One," "Reality Pro" and "Reality Processor" globally, signaling the consumer electronics giant's intention to expand into AR devices.



DJI drone package offers normal consumers a real flight-view experience.

AR perspective provided by Goggle 2 and controllers provides an extra sense of orientation to help the pilot locate the immediate environment in seconds.

The drone has three models for pilots of various skill levels, from beginners to professionals — normal, manual and sport.

In China, the Avatar drone's prices start at 6,998 yuan (US\$ 1013.9).

According to Strategy Analytics, the global consumer AR device market tripled from 2020 to 2021 and will reach just under 60 million shipments by 2027.