

Integration of IT and automotive industry

Photo by CFP

CES has attracted top carmakers in recent years as the boundaries between IT and automotive industries disappear.

With cars becoming cloud-connected, intelligent and autonomous, carmakers need advanced technology capabilities across multiple domains, analysts said.

Shanghai-based Hesai showcased its AT128, a long-range hybrid solid-state lidar for driver-assistance system (ADAS) applications in mass production passenger and commercial vehicles. AT128 provides the essential perception capabilities that L3+ autonomous vehicles require and could be seamlessly integrated onto the vehicle.

It is one of the few hybrid solid-state lidars on the market that can detect objects at long range, while also achieving a high measurement frequency, the company said.

Sony announced it will found a car-related company to explore the fast growing market, unveiling a new prototype of its Vision-S electric vehicle at CES. It will create a Sony Mobility subsidiary in spring 2022, Sony Chief Executive Kenichiro Yoshida said.

Sony started public road testing in Europe in December, including safety and user experience verification tests for its imaging and sensing technology and human-machine interface (HMI) system.

Volvo, now a subsidiary of Chinese company Geely, made its

autonomous driving tech debut during CES, and its product may be available first to customers in California, according to media reports.

Chip designer Qualcomm is offering tech and autonomous systems to Volvo, powered by its Snapdragon chip platform. Its Snapdragon Ride Vision System is expected to be available for in-vehicle production in 2024, according to the company.

NVIDIA also released its latest-generation driving platform, including surround cameras, ultrasonics and nine radars. It also has safety architecture: if one computer or sensor fails, there is a back up available to ensure getting passengers to a safe place.

Chinese firms like IM Motors, Li Auto, NIO, R Auto and Xpeng have adopted NVIDIA's technology.

In China, tech giants such as Huawei and Xiaomi are establishing smart driving divisions. Xiaomi plans to produce its own cars with total investment up to 100 billion yuan in the next decade.



Hesai's lidar solution for autonomous driving showcased at CES

More powerful and accessible chips

CHIPS, regarded as the "brain" of all devices, make sense in today's digital society, and firms and consumers have learned it only too well due to recent chip supply shortages.

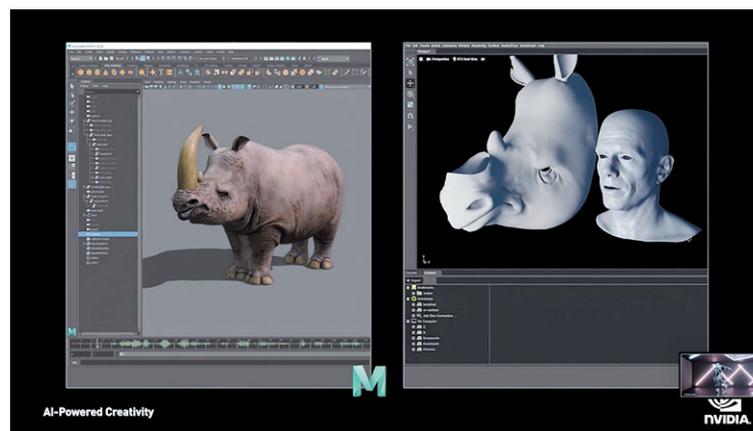
Top chipmakers AMD, Intel and NVIDIA all released new products during CES, mainly graphic chips that are tickets to the AI and metaverse worlds.

NVIDIA, the world's biggest graphic computing firm, unveiled new desktop and laptop GeForce RTX GPUs which will power 160 gaming and studio laptops worldwide. The flagship RTX 3080 Ti laptop GPUs support high-resolution gaming,

3D rendering and other advanced features and will start shipping next month.

"GeForce RTX is transforming gaming and opening up vast digital worlds for gamers and creators," said Jeff Fisher, senior vice president of consumer products at NVIDIA.

The new release includes the entry-level GPU RTX 3050, with latest ray tracing and AI rendering features, priced from 1,899 yuan (US\$249), and is "more accessible than ever before." Comparatively, a mainstream graphic card with rendering costs at least 2,500 yuan. The introduction of more accessible GPUs and official



Accessible chips and free online tools allow users to show imagination and talent in the virtual world. — Ti Gong

release of the free Omniverse will lower the entry threshold for advanced AI and graphics

technologies to more people, including 45 million game and film creators. It will help them

create shops, homes, robots, factories and museums in the 3D virtual world, and change the landscape for digital entertainment, social media and everyday lifestyles.

Intel, the world's biggest CPU chipmaker, announced to release for the first time a graphic chip. Its new Arc graphic chip can collaborate with a CPU chip to let editors export video 40 percent faster than through a discrete GPU. It will help people deal with high-end games and complicated image and video design and creation, even on super mobility laptops, companies said during CES.