

CANGO Auto View: China's Burgeoning Autonomous Driving Market

SHANGHAI, Sept. 3, 2021 /PRNewswire/ -- With the evolving landscape of the global automotive industry, Cango Inc. (NYSE: CANG) ("Cango" or the "Company") is issuing a bi-monthly industry insight called "CANGO Auto View" to bring readers, drivers and passengers up to speed with what's on offer in the automobile market, what trends are emerging, and what holes need to be plugged.

Below is an article from the Company's 4th edition for June 2021.

Autonomous driving is the future, and when it comes to autonomous driving solutions, Baidu Apollo has always attracted much attention. With Baidu's support, Apollo has accumulated L4 autonomous driving test mileage of 10 million kilometers.

Prior to this, Baidu Apollo unveiled Apollo Lite, its closed-loop solution for pure visual self-driving on urban roads. According to the company, this is the only L4 pure visual perception solution for urban roads in China.

According to Wang Liang, chairman of Apollo Technical Committee, Apollo Lite can support parallel processing of 10-channel cameras and data amount of 200 frames/second. The maximum frame loss rate of single visual link can be controlled below 5‰, realizing 360-degree real-time environmental perception. The visual detection range for front obstacles is stabilized at 240 meters.

In 2020, Baidu launched ANP (Apollo Navigation Pilot), based on the L4 assisted driving on complex urban roads powered by Apollo Lite, high-precision maps and the vehicle-to-everything (V2X) platform. Through dimensionality reduction of L4 technologies, high-precision maps, V2X and the mass production solution for the pure visual system, ANP provides users with assisted driving capability with zero intervention from start to finish. ANP enables vehicles to seamlessly switch from AVP to urban roads, pass ramps, ring roads, highways, high-speed JCT, ETC, and return to urban roads, completing point-to-point autonomous assisted driving.

Baidu Apollo has opened the Apollo database, that is, Apollo Scape large-scale autonomous driving dataset to provide solutions for industry users. It is expected to achieve pre-installation mass production in 1 million vehicles in 5 years.

Didi Chuxing has also made remarkable progress in self-driving. During the Shanghai Auto Show this year, Didi introduced Didi Gemini, a new hardware platform, which incorporates critical hardware upgrades including electronic components and vehicle-level experience. Mounted on the Volvo XC90 redundancy model, DiDi Gemini is architected with multi-layered redundancy protections in four aspects, including high-performance sensors, on-board autonomous driving system, remote safety assistance system and high compatibility with the pre-installed car model. Gemini will be a major feature for DiDi's next generation of self-driving fleet.

DiDi Chuxing claims that its Gemini autonomous driving platform has significantly increased the number and variety of sensors, and enhanced the computing power and other functionalities of the system. The new vehicle includes up to 50 high-resolution sensors, achieving 700 trillion operations per second (TOPS) of performance with imaging speed as fast as tens of millions of point clouds per second, while keeping the overall cost unchanged.

Zhang Bo, CTO of Didi Chuxing and CEO of Automatic Driving, said that safety concerns drove Didi to do research on automatic driving. Didi Gemini designs multiple redundancy layers, so that the main and backup systems are both independent and collaborative, providing multiple security guarantees for users. It is also intended to lay a good safety foundation for the unmanned test phase.

In addition to launching a new hardware platform, Didi Autonomous Driving has also recently upgraded its software. In early April this year, Didi released the world's first video of autonomous driving without disengagement for 5 consecutive hours, showing stable performance in complex scenarios including driving in continuous backlighting, overtaking on narrow roads, turning left without protection, and U-turn at a large intersection. In June 2020, Didi Autonomous Driving started manned test service to the public in Shanghai. In March this year, Didi Autonomous Driving announced a collaboration with Huadu District, Guangzhou on an Intelligent Connected Vehicle (ICV) industry project.

Companies including DJI, SenseTime, Sequoia, PonyTron, QCraft, and Desay SV have also borne some fruit in self-driving.

Among them, the DJI D80/D80+ intelligent driving system can cover the 0 to 80 km/h speed range and is suitable for urban expressway scenarios. The DJI intelligent parking system has four types of application scenarios including assisted parking, memory parking, autonomous parking and smart summon.

Desay SV's first autonomous driving domain controller based on Nvidia's Xavier chip has been installed on Xiaopeng P7 for mass production. Currently, the main focus is on L4~L5 autonomous driving and automotive network safety, with extensive research on the architecture and algorithms.

The SenseAuto smart cabin solution by SenseTime consists of Driver Monitoring System (DMS), Occupant Monitoring System (OMS), Keyless Entry, Virtual Companion and multiple in-vehicle infotainment (IVI) functions powered by augmented reality (AR). It has established in-depth cooperation with carmakers such as Great Wall WEY, Chery JETOUR and NETA Auto. SenseTime has cooperated with more than 30 domestic and foreign industry-leading partners since 2018 and covered over 13 million vehicles in mass production.

About Cango Inc.

Cango Inc. (NYSE: CANG) is a leading automotive transaction service platform in China connecting dealers, financial institutions, car buyers, and other industry participants. Founded in 2010 by a group of pioneers in China's automotive finance industry, the Company is headquartered in Shanghai and engages car buyers through a nationwide dealer network. The Company's services primarily consist of automotive financing facilitation, car trading transactions, and after-market services facilitation. By utilizing its competitive advantages in technology, data insights, and cloud-based infrastructure, Cango is able to connect its platform participants while bringing them a premium user experience. Cango's platform model puts it in a unique position to add value for its platform participants and business partners as the automotive and mobility markets in China continue to grow and evolve. For more information, please visit: www.cangoonline.com.

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