

Four Domains In One, Leapmotor Releases 'Four-Leaf Clover' Central Integrated Electronic And Electrical Architecture

SHANGHAI, CHINA, August 2, 2023 /EINPresswire.com/ -- On July 31, Leapmotor unveiled its latest innovative achievement – 'Four-Leaf Clover' Central Integrated Electronic and Electrical Architecture (hereinafter referred to as 'Four-Leaf Clover' architecture). The 'Four-Leaf Clover' architecture is a fully self-developed technology that combines a single System-on-Chip (SOC) and a single Microcontroller Unit (MCU) to create a central supercomputing unit. It integrates the cockpit system, intelligent driving system, power domain and body domain, utilizing high computing power, fast communication, and low latency to enable efficient collaboration among the key components of EVs.

During the press conference, Mr. Zhu Jiangming, the Founder, Chairman and CEO of Leapmotor, emphasized that it is through years of comprehensive self-development that Leapmotor has gained the capability to deeply explore core technologies. The launched 'Four-Leaf Clover' architecture efficiently harnesses the full potential of two chips, meeting the diverse requirements of future products and delivering exceptional value for customers. This groundbreaking achievement showcases



Leapmotor's Founder, Chairman, and CEO, Zhu Jiangming, attended the press conference.



Leapmotor opens four commercial cooperation modes based on the 'Four-Leaf Clover' architecture for technology output.

Leapmotor's commitment to providing cutting-edge, high-performance products at the pinnacle of cost-effectiveness for its esteemed users.

The 'Four-Leaf Clover' architecture achieves a generalization rate of over 90% and offers three configuration options: Standard, Mid-range, and High-end, catering to the 100,000 to 300,000 RMB price range vehicles. The Standard configuration combines a Qualcomm Snapdragon 8155 SOC and a NXP S32G MCU, the Mid-range configuration adopts a Qualcomm Snapdragon 8295 SOC and a NXP S32G MCU, while the High-end configuration features a Qualcomm Snapdragon 8295 SOC and a NXP S32G MCU in addition to the advanced Orin-X chipset. Furthermore, the system supports L2++ level advanced intelligent driving assistance functions.

It was reported that the 'Four-leaf Clover' architecture takes the lead in realizing cabin fusion by applying one SOC+ one MCU, which maximizes the performance of the two chips. It systematically integrates the cockpit system, intelligent driving system, power domain, and body domain, concentrating computing power and enabling centralized information decision-making through the central controller. Analogous to the human brain's left and right hemispheres, the SOC is responsible for data processing, while the MCU handles logical calculations, achieving the convergence of the four domains. Furthermore, the architecture applies regional control technology to restructure the allocation of vehicle sensors and actuators, establishing standard interface communication. As a result, the entire length of vehicle wiring harness is shortened to an impressive 1.5 km, reaching a top-tier level in the industry.

During this press conference, three representatives from world-class core supply chain partners of Leapmotor were present as honored guests. They included Mr. Xian Lei, Senior Vice President of Sales and Business Development at Qualcomm, Ms. Liu Fang, Global Vice President and General Manager of Greater China Automotive Electronics Division at NXP Semiconductors, and Mr. Chen Xi, Deputy General Manager of NVIDIA China's Automotive Division.

Mr. Xian Lei, Senior Vice President of Sales and Business Development at Qualcomm, stated, "All Leapmotor C-series vehicles are equipped with the Qualcomm Snapdragon 8155 chipset. Soon to be unveiled, Leapmotor's new model will also be among the first to feature the Qualcomm Snapdragon 8295 chipset. We are looking forward to utilizing the latest solutions from the Snapdragon Digital Chassis to provide users with a top-notch immersive driving experience."

If the Qualcomm 8295 chip is compared to the left brain of a central integrated electronic and electrical architecture, the right brain is the NXP S32G chip. Ms. Liu Fang, Global Vice President and General Manager of Greater China Automotive Electronics Division at NXP Semiconductors, expressed, "Leapmotor has been an early adopter of NXP's S32K solution, and has grown together with the S32K series MCU. With the use of NXP's S32G series, Leapmotor has independently developed integration of multiple controllers such as VCU, BCM, and GW. We hope that the collaboration between both parties will lead to exploring the next generation of electronic architecture and unlock more potential for intelligent automobiles."

The Leapmotor 'Four-Leaf Clover' architecture adopts a central supercomputing platform and enables future vehicle Over-The-Air (OTA) updates, allowing for entire vehicle-level evolution by upgrading just central supercomputing software. As a result, the 'Four-Leaf Clover' architecture becomes the industry's first platform to achieve seamless OTA upgrades for the entire vehicle without causing disruption.

Website : <https://en.leapmotor.com/>

Tammy Hu

Leapmotor

+ +86 15068893526

[email us here](#)

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