XPENG Presents Next-Gen Technology Architecture – SEPA2.0

April 17, 2023

Scalable Smart EV Architecture Increases R&D Efficiency with Significant Cost Saving

SHANGHAI--(BUSINESS WIRE)--Apr. 16, 2023-- XPeng Inc. (“XPENG” or the “Company,” NYSE: XPEV and HKEX: 9868), a leading Chinese smart electric vehicle (“Smart EV”) company, today unveiled its next-generation end-to-end integrated technology architecture SEPA2.0, which sets the foundation for future production models.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20230416005077/en/

XPENG SEPA2.0 (Photo: Business Wire)

SEPA2.0 (Smart Electric Platform Architecture) brings a series of more advanced architectural solutions, from XPENG’s in-house development autonomous driving software to vehicle engineering. It will shorten future models’ R&D cycle by 20%, significantly optimizing R&D efficiency. 80% of architectural components will be compatible with new models, enabling XPENG to meet diverse customer needs at optimized costs.

SEPA2.0 is adaptable and flexible with multiple vehicle platforms for wheelbases between 1,800mm and 3,200mm and scalable to support a variety of vehicle types, including sedan, coupe, hatchback, wagon, SUV, MPV and pickup truck. On April 18, the first new production model built on SEPA2.0, XPENG G6 Ultra Smart Coupe SUV, will debut at Auto Shanghai 2023.

“We envision that this evolutionary intelligent architecture will lead smart EV technology development for the next three years. It will make rapid advancements in technology available for our customers as standard, with faster software upgrades, stunning cost savings and elevated product experience,” said He Xiaopeng, Chairman and CEO of XPENG. “Ultimately, SEPA2.0 will architecturally empower us in our ongoing quest to redefine mobility experience with compelling value, superb comfort and rich infotainment.”

English replay of XPENG SEPA2.0 Press Briefing: https://www.youtube.com/watch?v=ed99lGrtxn0
XPENG SEPA2.0 visual library: https://drive.google.com/drive/folders/1q1ZKsHv2V2vVoEUIXXWQ5pGrBbRBIlNA
XPENG SEPA2.0 smart manufacturing video: https://drive.google.com/drive/folders/1dF5sH5UdcP-ggyR-sVWFdwtFZTpDafhO

Intelligent Architecture to Accelerate Smart Technology Inclusion

- **XNGP Advanced Driver Assistance System (ADAS):** XPENG’s in-house full-scenario ADAS solution is the ultimate form of driver assistance and will come as standard on all future XPENG models for the Chinese market. With SEPA2.0 architecture, XNGP’s overall R&D efficiency will increase by 30%, while ADAS software model adaptation costs will reduce by 70%. Backed by China’s largest and only operational autonomous driving supercomputing center, closed-loop data feedback and self-evolving AI system, XNGP will consistently evolve and upgrade its driving assistance skills. It targets takeover frequency less than once per 1000 km in highway scenarios in 2023 and takeover frequency less than once per 100 km in urban scenarios by 2025.
- **Xmart OS In-car Operating System:** Xmart OS leverages a multi-sensor software and hardware platform to augment and transform control and driver-vehicle interaction. Powered by AI, supercomputers and foundation models, Xmart OS can make intelligent decisions to optimize control of cabin functions. The SEPA2.0-based R&D platform lowers Xmart OS software adaptation costs by 85%, shortens voice software R&D cycle by 50% and reduces cost of voice assistant service by 50%, making the industry’s top smart cabin services available to every XPENG owner, while revolutionizing cockpit instrumentation and road perception.
- **X-EEA Electrical and Electronic Architecture**: Consisting of a data technology platform, a whole-car software platform and a hardware architecture platform, X-EEA underpins XPENG’s technology foundation with high performance, superior safety and cloud application integration. It optimizes overall vehicle R&D costs by 50%, shortens software iteration cycles

by 30% and increases OTA update speed by 300%.

Architecture-based Solutions to Boost Charging Efficiency

- **800 Volt High Voltage Silicon Carbide (SiC) Platform**: XPENG's industry leading superfast charging solution enables 800V high voltage charging, increasing battery charging speed by 50% over the previous generation. With a standard 3C cell configuration, the battery can add 130 kilometers of range with a five-minute charge, and can charge even faster at XPENG's S4 480kW superfast charging facilities, adding 200 km of range with a five-minute charge. When charging via third-party charging piles, it can generate up to 180kW of charging power.
- **XPower 800 Volt High Voltage Oil-cooled Flat-wire SiC Integrated Electric Drive System:** Full-stack and in-house developed, XPower increases the maximum electric drive efficiency to 97.5% and the overall electric drive efficiency to 92%. Each 1% increase in overall electric drive system efficiency, with other conditions unchanged, translates into an estimated 2% increase in EV range. Powerful system integrations deliver industry-leading power-to-weight ratio of 2.5 kW/kg, ensuring less whole-car weight while creating a more spacious and quieter cabin.
- **X-HP Smart Thermal Management System:** X-HP offers an intelligent, systematic energy-efficient solution for temperatures from -30℃ to 55℃, ensuring range and charging capacity under all weather conditions. In cold conditions, it increases range by 15%; it improves battery cooling performance by 100%, leading to a 90% increase in charging power.
- **Powerful Fast-Charging Network**: Consisting of 7kW and 11kW home charging piles, 20kW DC fast-charging piles, S2 180kW DC supercharging piles and S4 480kW DC superfast charging piles across China, XPENG's charging network continues to expand. In 2023, approximately 500 new S4-enabled XPENG superfast charging stations will become operational.

Advanced Manufacturing Capabilities

- **Front and Rear Integrated Aluminum Die Casting Technology:** One of its kind in mass production models in China, enables more uniform fabrication of the car body, bringing more stable control and a better driving performance. It also improves torsional rigidity by 83% compared to a traditional car body, enhancing body safety, while at the same time reducing body weight by 17% versus traditional bodies, further boosting EV range.
- **CIB (Cell Integrated Body) Technology:** Battery pack integrated in the car body optimizes cabin design with added vertical space, increases battery safety and enhances overall driving performance by improving center of gravity. With an 80-ton side collision resistance design and a IP68 waterproof & dustproof design, the CIB battery pack meets the highest safety standards in three main markets: China, North America and Europe.
- **Chassis Platform:** Compatible with multiple types of suspension systems, providing superior mechanical quality and excellent handling performance.
- **Smart Manufacturing System:** This system will be built out by 2025, including the Zhaoqing Plant, Guangzhou Base and several future projects. All manufacturing facilities will integrate SEPA2.0 through technology upgrades.

About XPENG

XPENG is a leading Chinese Smart EV company that designs, develops, manufactures, and markets Smart EVs that appeal to the large and growing base of technology-savvy middle-class consumers. Its mission is to drive Smart EV transformation with technology, shaping the mobility experience of the future. In order to optimize its customers' mobility experience, XPENG develops in-house its full-stack advanced driver-assistance system technology and in-car intelligent operating system, as well as core vehicle systems including the powertrain and the electrical/electronic architecture. XPENG is headquartered in Guangzhou, China, with main offices in Beijing, Shanghai, Silicon Valley, San Diego and Amsterdam. The Company's Smart EVs are mainly manufactured at its plants in Zhaoqing and Guangzhou, Guangdong province. For more information, please visit https://heyXPENG.com.

Safe Harbor Statement

This announcement contains forward-looking statements. These statements are made under the "safe harbor" provisions of the United States Private Securities Litigation Reform Act of 1995. These forward-looking statements can be identified by terminology such as "will," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates" and similar statements. Statements that are not historical facts, including statements about XPENG's beliefs and expectations, are forward-looking statements. Forward-looking statements involve inherent risks and uncertainties. A number of factors could cause actual results to differ materially from those contained in any forward-looking statement, including but not limited to the following: XPENG's goals and strategies; XPENG's expansion plans; XPENG's future business development, financial condition and results of operations; the trends in, and size of, China's EV market; XPENG's expectations regarding demand for, and market acceptance of, its products and services; XPENG's expectations regarding its relationships with customers, contract manufacturers, suppliers, third-party service providers, strategic partners and other stakeholders; general economic and business conditions; and assumptions underlying or related to any of the foregoing. Further information regarding these and other risks is included in XPENG's filings with the SEC. All information provided in this press release is as of the date of this press release, and XPENG does not undertake any obligation to update any forward-looking statement, except as required under applicable law.

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