

SpringCloud, Leading the Scalability of Autonomous Driving

About the Company

Founded in 2017, SpringCloud is a venture-certified and Innobiz-certified company that has been selected as a K-Global 300 company and a Super Gap Mobility provider. It is composed of a representative who developed Korea's first 360-degree surround-view parking system and 30 autonomous driving developers. The company's products include Opera Kit, Korea's first in-wheel-based autonomous driving platform, an autonomous driving full stack, 100% unmanned robot buses, and Tasio providing autonomous driving services. Most notably, SpringCloud is developing an open-source tool chain needed for testing the performance of autonomous driving, and it is the first company in Korea to commercially service autonomous shuttle buses and obtain a GS certification for its autonomous driving software.

Background

Autonomous driving is being applied to various types of mobility, ranging from cars to robots, ships, and agricultural machinery, and is also used for providing various services include shuttles, shipping, delivery, and robot taxis. Developing autonomous driving software for these purposes is an extensive project that is very costly and time-consuming, not to mention that verifying the stability is essential. To tackle these difficulties, SpringCloud is developing an open autonomous driving solution and is developing the key cognitive technologies for autonomous driving using its own IP. More specifically, SpringCloud is developing a solution to enable 100% unmanned driving at low-speed in designated sections, and the goal is to combine autonomous driving solutions with Tasio to apply it to various mobility applications. The company is also engaged in R&D partnership with numerous global players to seek opportunities in the global market.

About the Product

Opera Kit, the first product of SpringCloud, is open autonomous driving mobility and chassis platform for developing purpose-based vehicles (PBVs) for autonomous driving mobility services. SpringCloud provides the chassis platform as well as other resources for vehicle developers. The product consists of 1) an in-wheel-based chassis platform 2) autonomous driving sensors and systems, and 3) open source-based autonomous driving software. It is currently used for developing and educating mobility vehicle control and autonomous driving technologies at universities and research centers, as well as in autonomous driving competitions. Several mobility companies are taking interest in Opera Kit for their multiverse projects aimed at providing autonomous driving experiences and demonstration. The second product is Opera AD kit, an autonomous driving solution composed of multiple autonomous driving sensors and autonomous driving computers, and includes a full stack of software for autonomous driving. SpringCloud's autonomous driving full stack is based on Autoware, an open-source autonomous driving platform. It incorporates sensor fusion dynamic object future prediction and cognition modules built with SpringCloud's AI technologies and assessment modules and control modules designed by reflecting Korea's roads environment and scenarios. SpringCloud is providing the full stack to various customers looking to extend the performance of autonomous driving by applying it to autonomous trams and driving shuttles. The third product is Tasio, an integrated autonomous driving control platform. It provides driving status information, abnormality monitoring, maps, payments, and various additional services for autonomous mobility. Most notably, Tasio, based on a wide range of functions used for providing autonomous shuttle services and analyzing the data of multiple autonomous vehicles, succeeded in attracting numerous customers in Korea.

Competitive Edge and Business Strategy

SpringCloud's greatest competitiveness lies in its main autonomous driving technologies and the management's expertise, know-how, and lab-to-market capabilities in the field. The company has also been hailed as one of the leaders in autonomous mobility services in Korea (noted for its achievements in Seoul, Sejong, Daegu, Gunsan, Gyeongnam and others). As Korea's only provider of open autonomous driving mobility and solutions, SpringCloud is expanding the market by building developer groups and partnering with other developers. It is creating loyal customers and strong references based on its solid R&D and commercialization strategies, which are essential for commercializing autonomous driving technologies. To that end, SpringCloud is committed to developing autonomous driving software technologies and finding viable markets and customers for product commercialization. SpringCloud aims to gradually expand the education market, develop competitive solutions based on the market, and attract automakers, automotive electronics producers, and parts manufacturers as customers. It is also focused on expanding the market for services such as Robobus and delivery within geofenced sections that can be 100% unmanned at low speeds. Rather than being satisfied with its No. 1 position in the Korean market, SpringCloud is looking to go global by partnering with global players.

Future Plans

- Rainbow. Continued market expansion for open mobility solutions
- Technology leadership as an Autoware premium member
- Successful IPO in the first half of 2025
- Business expansion for rolling out 100% driverless Robobus in 2024
- Partnership (MoU) with domestic and global players

• Korean partners

- 1) XYZ Corp.: <https://www.epnc.co.kr/news/articleView.html?idxno=227607>
 - Collaboration in robot projects (robot coffee machines, ice cream machines, etc.)
- 2) Woojin Industrial Systems Co., Ltd.: <https://kr.aving.net/news/articleView.html?idxno=1689256>
 - Collaboration for the development and supply of low-floor autonomous buses

- 3) Marine Drone Tech: <https://kr.aving.net/news/articleView.html?idxno=1690575>
 - Collaboration for marine cleaning and drone control technology

- 4) Manna Controlled Environment Agriculture: <https://blog.naver.com/kips1214/222882198200>
 - Collaboration for development of smart farming (cultivation) technology

- 5) Daeshin Urban Development: <https://blog.naver.com/kips1214/223032650029>
 - Multiverse Planet (Showcasing content and services of the future to visitors)

• Overseas partners

- 1) Tier IV, Japan: <https://maily.so/jeonggyu/posts/5c0f5162>
- 2) dSpace, Germany: <https://www.itbiznews.com/news/articleView.html?idxno=67822>
- 3) Innoviz Technologies, Israel: <https://www.news2day.co.kr/article/20210806500304>
- 4) Pix Moving, US: <https://blog.naver.com/cyrano74/222777687734>
- 5) EasyMile, France: <https://www.viva100.com/main/view.php?key=20210317010004858>

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