

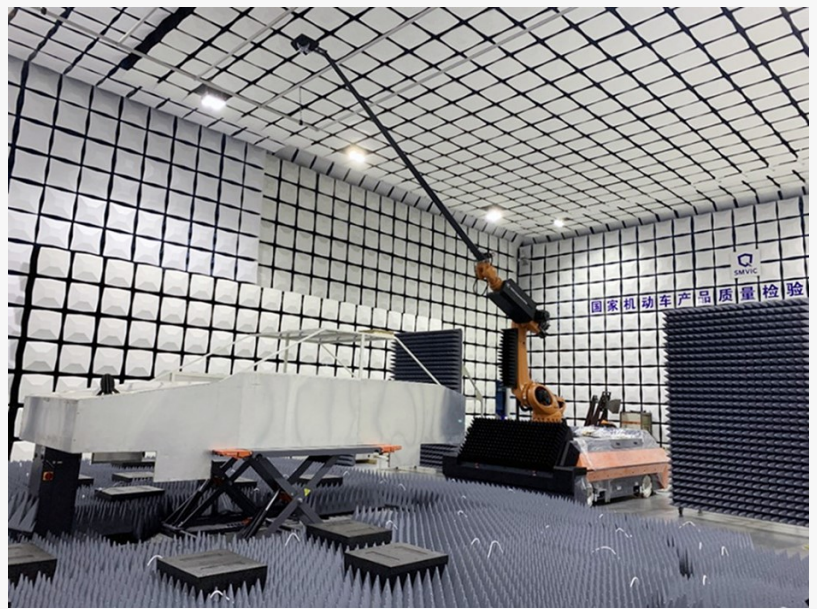
TOYO Delivers Wireless Communication Performance Evaluation System to Test Center

Hybrid Test Facility Capable of Testing EMC Performance and Wireless Communication Quality

FREMONT, CALIFORNIA, UNITED STATES, October 5, 2022

/EINPresswire.com/ -- TOYO

Corporation announces that its Chinese subsidiary, TOYO China, completed the installation of a “Wireless Communication Performance Evaluation System for Connected Vehicle” and received approval from the Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd. (SMVIC) in August 2022.



Anechoic Chamber at SMVIC

Autonomous driving cars and connected cars cannot exist without high-quality wireless communication. As wireless communication performance is directly linked to vehicle safety, ensuring high performance is even more important for these types of vehicles compared to conventional ones.

SMVIC provides automakers with testing and certification services that permit them to sell their vehicles in the Chinese market. The organization has been approved to be the first test center for connected vehicles. SMVIC will advance its research on the test method for connected vehicles with the system we recently delivered.

The “Wireless Communication Performance Evaluation System for Connected Vehicles” is designed and developed by General Test Systems (GTS), a leading company in the field of mobile terminals, antennas, and [OTA](#) testing. The system is capable of measuring 3-dimensional antenna radiation patterns for insights into the characteristics of on-vehicle antennas and for evaluating the communication quality of 2G-5G SISO, V2X, GPS, and BeiDou. When use with certain test equipment, the system can be extended to utilize a patented Radiated Two-Stage (RTS) method approved by the Third Generation Partnership Project ([3GPP](#)) for vehicles and originally used as a test method for LTE mobile terminals and base stations. This will enable the



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TOYO Corporation

performance evaluation test for MIMO communication, a core technology for connected cars.

The system is unique. It converts an existing anechoic chamber into a hybrid test facility for EMC testing and wireless communication performance testing, both of which are essential for connected cars. The entire system was re-designed to accommodate a newly added robot arm on a mobile vehicle. The test starts automatically after the robot arm is guided to the designated position by the 2D code on the floor. The arm retracts when the test is completed.

We help our customers cut costs and improve utilization by proposing the optimal way to re-purpose existing anechoic chambers through a solution like this system or through technical consultation. Leveraging its broad EMC business experiences, TOYO Corporation continues to expand its business footprint not only to China but also to the United States and other overseas markets.

Key Features

- Hybrid test facility – one large anechoic chamber serves for two essential tests for connected cars – EMC and wireless communication performance test
- A robot arm on a mobile vehicle can set an antenna at a designated position automatically
- Supports multiple testing needs, such as radiation performance, reception sensitivity, electromagnetic interference, multi-antenna performance evaluation, and evaluation of vehicle communication performance in natural environments
- Extendable to a system with a 3GPP approved Radiated Two Stage Method

About SMVIC

Founded in 2003, the Shanghai Motor Vehicle Testing and Certification Technology Research Center Co., Ltd. (SMVIC) is a national automobile test center accredited by the Certification and Accreditation Administration of the People's Republic of China (CNCA) and performs the quality inspection of conventional vehicles and vehicles using new energy. SMVIC is also accredited by China National Accreditation Service for Conformity Assessment (CNAS), which checks and confirms that test labs satisfy the requirements defined by ISO/IEC.

Having been approved to be the first national test center for connected vehicles, SMVIC satisfies the test and research needs of connected vehicles' communication performance, function verification, scene simulation, demonstration operation and provides technical support in future technology research and application development. SMVIC is also to establish an information security lab in cooperation with the State Network Information Office to build a system to test and evaluate the information security on vehicles.

<https://www.smvic.com.cn/english/pages/index.html>

About TOYO China

Established in 2010. Based in Shanghai and Beijing, we provide our customers with in-house developed EMC, fuel cells, batteries, liquid crystals, and information and communication systems utilizing our long-accumulated knowledge and technical capabilities.

<https://www.toyochina.com.cn/>

About TOYO Corporation

TOYO Corporation (TSE: 8151) is a Japanese technology company headquartered in Tokyo, Japan, with subsidiaries in the United States and China. Since its founding in 1953, TOYO has become the leading distributor of advanced measurement instruments and systems in Japan. TOYO also engages in original product designs and develops advanced solutions for many of the markets that it serves, including automotive, sustainable energy, and cybersecurity industries. TOYO's innovative products are used by many leading companies in Japan, the United States, and APAC countries, helping TOYO's customers accelerate development, reduce time-to-market, and improve product quality. For more information, please visit the company's website at

<https://www.toyo.co.jp/english>.

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