



*Improving Test Efficiency with **JRC PRIVATE 5G SYSTEM***

A Case Study at NISB



Contact Us:

www.jrclte.com 
contact@jrclte.com 

JRC has constructed a Sub-6 GHz private 5G system at the Asahi Test Course in Chiba, Japan - the technical development field of Nisshinbo Brake Inc. This private 5G system enables real-time data transmission, remote monitoring, and control, significantly improving test efficiency. By facilitating seamless communication between the test course and the technical development center in Tatebayashi, Gunma, it accelerates decision-making and shortens the R&D cycle.

Challenge

Nisshinbo Brake conducts research on friction materials and other components at the Asahi Test Course in Asahi, Chiba. The combinations of materials are numerous, and multiple test runs are required before a product can be developed.

Under the traditional method, after completing a test drive, data collected from the test vehicle had to be recorded onto a USB drive, transferred to an office computer, and then analyzed. This process hindered the speed of development.



Asahi Test Course

Solution

With the introduction of JRC's Private 5G System, data collected from test vehicles is now transmitted in real time to the office, enabling on-the-spot analysis. This system also allows for the transmission of high-definition camera footage of road conditions and real-time voice communication between test drivers and engineers, facilitating immediate adjustments to the test process.



Vehicle-mounted antennas

Private 5G Network



- High-volume data
- High-definition video
- Low-latency voice transmission



Office

Furthermore, test results can be shared instantly with engineers at Nisshinbo Brake's Tatebayashi facility, speeding up development and improving collaboration across locations.

Value Proposition

JRC developed a high-gain antenna with sharp directional characteristics, ideal for narrow, linear communication areas like the Asahi Test Course. This antenna enables efficient coverage of the course, which spans approximately 1.4 km, using just one base station.



Directional antennas installed on the test course

Additionally, JRC's proprietary Doppler correction technology ensures stable, low-latency communication even during high-speed testing (up to 120 km/h), meeting Nisshinbo Brake's stringent requirements for real-time data transfer.

About Nisshinbo Brake Inc.

Tokyo-based Nisshinbo Brake Inc. is a global leader in brake friction materials and has earned a reputation for its high-quality products. The company's products are used by major automakers around the world, and the company won the world's top market share in disc pads and brake linings.

(Source: Nisshinbo Brake Inc. Official Website)



Japan Radio Co., Ltd.

Japan Radio Co., Ltd.
1-12, Fukuoka 2-chome,
Fujimino-shi, Saitama
356-8580, Japan

Web / E-mail
www.jrclte.com
contact@jrclte.com