

March 9, 2021

**MIRAIT Holdings Corporation****【MIRAIT Corporation】****Socionext Agrees with MIRAIT, MMD and Nuri Telecom on  
Next-generation Long-distance Power Line Communications for  
Verification and Social Implementation****Launching Next-Generation Long-Distance Power Line Communications  
for Smart Connected Systems**

MIRAIT Corporation, MMD inc., NURI Telecom Co.,Ltd and Socionext Inc. have agreed that the four companies will jointly conduct a test verification using a compact PoC system equipped with next-generation long-distance power line communication LSI, currently being developed by Socionext, world's leading fabless SoC suppliers. The companies will proceed with specific studies for social implementation mainly in the energy and ICT fields.

HD-PLC (High Definition Power Line Communication) is a technology that complies with the international standard IEEE 1901-2020 to put communication signals on power lines, unlike ordinary communication networks, wired or wireless. Its greatest feature is that it eliminates the need for dedicated communication networks for individual devices by utilizing the power lines and realizes communication between devices while consolidating the signals into power lines. The next-generation long-distance power line communication LSI that Socionext is developing now complies with the next generation standard of high-speed power line communication, and achieves industry-leading small size, low power consumption, and long-distance communication, by Socionext's proprietary low power solution, high-performance analog, and power supply technologies with using advanced process technology. Establishing communication network is essential for digital transformation (DX), which is to reduce labors through remote and automatic control of various information devices using technologies such as IoT and AI and realize more comfortable lives. The next generation long-distance power line communication LSI under development is expected to play a role in smart connected systems that maximize the advantages of HD-PLC.

The four companies conducted a long-distance test verification using a compact PoC for system verification of the next-generation long-distance power line communication LSI, and obtained communication verification results for a distance of over 1 km. It is expected to enable communication for a total distance of 10 km with the multi-hop function (\*1). MIRAIT's network integration for building communication infrastructure, MMD's solutions for aquariums, museums and other community development projects (Energy Management System, signage and cameras), and NURI Telecom's sensor and energy solutions, are among the focus applications.

The four companies will move into the validating phase for the use of the next-generation long-distance power line communication LSI, and provide new solution for “last one yard” of communication through open innovation, thus contributing to the sustainable society.

\*1 Multi-hop function:

Communication using multi-stage relay technology utilizing multiple HD-PLC communication devices

#### MIRAIT Corporation

Using the technology and knowledge of communication infrastructure construction by telecommunications carriers, MIRAIT will begin designing and constructing a communication network that takes advantage of the next-generation HD-PLC for bidirectional communication for collecting data of equipment such as power receiving facilities, air conditioning and power generation facilities, and various information devices such as meter and sensors, and will promote its implementation in society.

Inquiry

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#### MMD inc.

MMD Provides one-stop support for aquariums and museums from planning to design, construction, and operation, and is one of the few companies in Japan that possesses excellent skills for artificial seawater and water filtration engineering as well as for spatial presentation and design.

MMD will study the introduction of DX solutions using high-speed power lines for monitoring of special equipment in aquariums, light control in museums and commercial facilities, signage, surveillance cameras, energy management, etc., in several aquarium construction and community development projects that are currently underway.

Inquiry

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#### NURI Telecom Co.,Ltd.

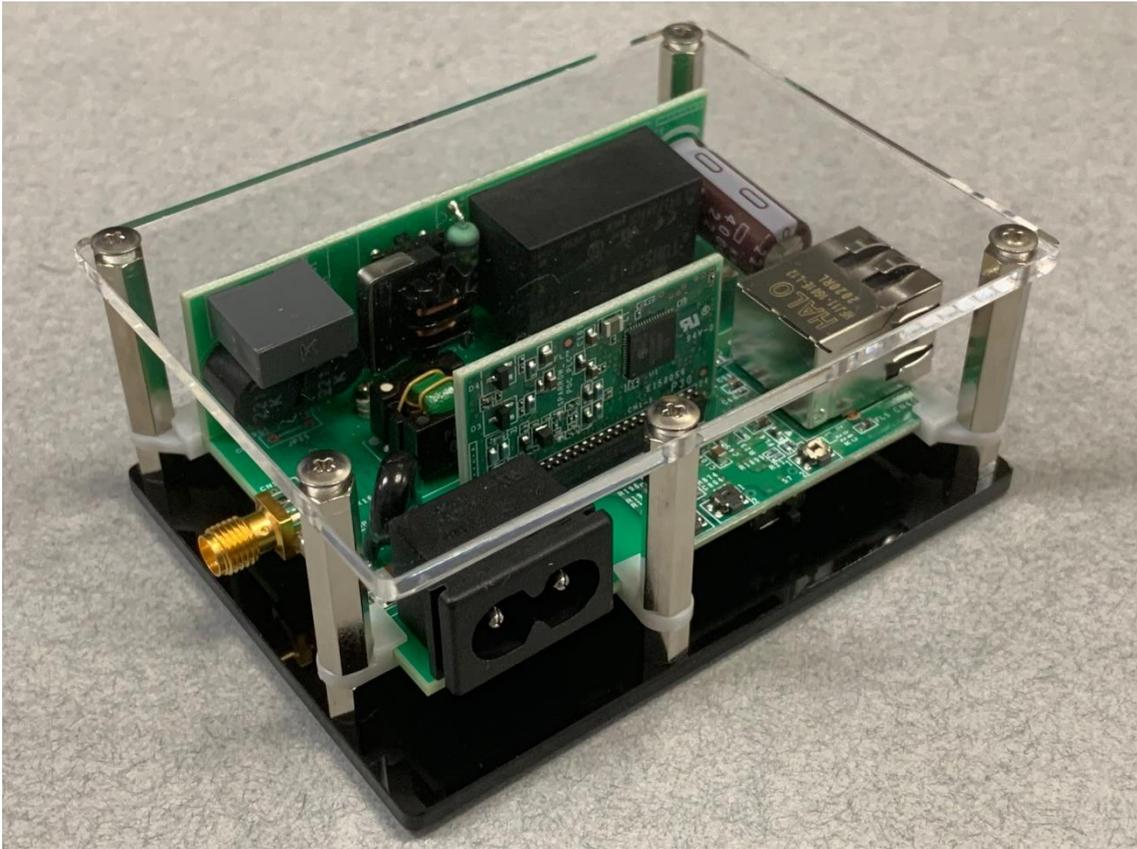
In the field of energy solutions, which provide stable operation and efficient operating environment of ICT infrastructure based on the technology of system operation management products, NURI Telecom will start to study the implementation of next-generation HD-PLC as a technological element for a society where business and living environments are rapidly connected to networks.

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Socionext Inc.



This compact PoC for system verification will be available in April 2021. Mass production of the LSI is scheduled to start during fiscal year 2021 (April 2021 - March 2022).

Inquiry

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