



Press Release

February 6, 2024 Nitto Kogyo Corporation Shizen Connect Inc.

Nitto Kogyo and Shizen Connect to conduct DR demonstration using OCPP-compliant EV chargers for VPP construction

Nitto Kogyo Corporation (Nitto Kogyo) and Shizen Connect Inc. (Shizen Connect), a VPP^{*1} platform provider, will conduct a cloud-based remote control demonstration of Nitto Kogyo's AC chargers for EVs, model name "Pit-2G series 4G communication model" in order to further expand the "Equipment Control Demand Response Service" platform that enables VPPs to address supply and demand constraints and reduce electricity procurement costs for electricity retailers.

This service utilizes "Shizen Connect", an aggregate energy management system developed by Shizen Connect, to remotely control the charging and discharging of low-voltage energy devices such as residential storage batteries, thereby building a VPP and generating regulation power, while also contributing to the reduction of electricity procurement costs for electricity retailers.

In this demonstration, Nitto Kogyo's "Pit-2G series 4G communication model" AC charger, which complies with OCPP^{*2} regulations, an international standard communication protocol for remote management and control of EV chargers, will be connected to the "Shizen Connect" energy management system to perform demand response (DR)^{*3} by remotely controlling charging via the cloud to evaluate technical and economic feasibility.

"Shizen Connect" will be used as a platform to connect residential energy resource-related manufacturers and electricity retailers, and by expanding the number of participants on both sides, the economic benefits will increase synergistically. In the future, in addition to the use of residential storage batteries, Shizen Connect aims to add EV chargers and other residential energy resources as control targets and expand the adoption of this service by electricity retailers, aiming for the growth of this service and the resolution of social issues.



■Equipment Control Demand Response Service diagram

Demonstration Overview

Objective	Verification of DR remote control technical feasibility using
	Nitto Kogyo's AC charger
When	May 2024
Role of Nitto Kogyo	Provide demonstration environment including AC chargers,
	EVs, and demonstration site
Role of Shizen Connect	 DR planning and remote control implementation
	Review the results of the demonstration
	Overall coordination of the demonstration project

*1 **Virtual Power Plant** (VPP) is a generic term for digital technology that collectively controls distributed power sources (power generation facilities, storage batteries, EVs, etc.) and demand facilities as if they were a single power plant.

*2 **Open Charge Point Protocol** (OPCC) is an international communication standard for EV charging stations and network software companies. It enables authentication, remote monitoring and control of EV chargers.

*3 **Demand response** (DR) is the process of changing the pattern of electricity demand by allowing consumers to manage their electricity use wisely. This helps to balance the supply and demand of electricity.

■AC charger "Pit-2G series"

The Pit-2G is widely used for EV charging in corporate or industrial settings, where high durability and reliability are required, mainly for public and fleet use. The 4G communication model is known for its good connectivity, and is particularly good in operational scenarios that require certification billing and energy management, and can be connected with various service providers. JARI-certified products are also eligible for subsidies for the introduction of charging infrastructure under the jurisdiction of the Ministry of Economy, Trade and Industry.

EMS Shizen Connect https://www.se-digital.net/ (Japanese website)

Shizen Connect is an aggregation energy management system (EMS). It can provide individual control for storage batteries and EV chargers, control for microgrids connecting multiple buildings with their own private transmission lines, as well as control of VPPs for large scale energy resources. Individual control and VPP control tended to be separate, but Shizen Connect provides a one-stop service allowing energy resources to be used multi-purposefully, which also improves economic efficiency. The system can be adapted with any equipment supplier, allowing energy resources to be chosen freely without relying on a certain manufacturer.

Nitto Kogyo Corporation

Headquarters: 2201 Kanihara, Nagakute-shi, Aichi

Business: The manufacture and sales of electric and mechanical equipment such as high-voltage power receiving equipment, panel boards, home panel boards, EV chargers, optical boxes, metal enclosures, plastic enclosures, system racks, breakers, switches, thermal management products, etc. Power generation and sales business.

URL: https://www.nito.co.jp/

Shizen Connect Inc.

Head Office: 2-4-7 Nihonbashi Honcho, Chuo-ku, Tokyo Business: VPP platform, energy management services, IoT equipment sales, etc. URL: <u>https://se-digital.net</u> (Japanese only)

Contact information

Regarding "Pit-2G series" AC chargers Nitto Kogyo Corporation •For inquiries: ev.contactnet.mark@nito.co.jp •EV charging solution website: <u>https://www.nito.co.jp/quick/evstand/</u> (Japanese)

Regarding EMS Shizen Connect Shizen Connect Inc.

•Contact form: <u>https://www.se-digital.net/contact/</u> (Japanese)

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