EnOcean's new IoT Connector simplifies building automation

EnOcean's new software, the IoT Connector, enables intelligent data transformation from raw sensor data into ready-to-use data for IoT applications.

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EnOcean, a pioneer of energy harvesting and wireless IoT communications, today announced the launch of the EnOcean IoT Connector, an ideal link between maintenance-free IoT data from energy harvesting sensors and IoT applications that makes the integration of EnOcean products easier than ever before. The IoT Connector translates sensor outputs into ready-to-use data for IoT applications and data driven businesses.

Commenting on the launch, Marian Hönsch, Product Manager at EnOcean said: "Data is critical to understanding, measuring and improving facility management processes and procedures. Increasingly, data needs to be analysed to ensure compliance with health and safety requirements, security and COVID-19 regulations. Facility and Corporate Real Estate Managers are gradually becoming more dependent on data analysis to identify utilisation patterns, trim costs and make buildings into better places for work. This new solution from EnOcean paves the way by enabling collection of data from billions of sensors in buildings, using energy harvesting wireless sensors to collect data in a secure and maintenance-free way. The essential requirements of quick onboarding, broad applicability and water-tight security are embodied in a new IoT Connector that translates sensor outputs into ready-to-use data for IoT applications and data driven businesses."

One key feature of the IoT Connector software is that it decodes the IoT data from the EnOcean Protocol and translates it into ready-to-use data in JSON format to be used in the actual application. Algorithms are needed to unravel the data and to make it available for customer

applications in the right form. Customer applications consume IoT data in a "key-value pairs" format, such as JSON. A key-value pair consists of related elements: a key, which is a constant that defines the dataset (temperature, humidity or ventilation), for example, and a value, which is a variable that belongs to the dataset (e.g. 20 °C, 80 %, level 1/2/3). Easy adoption by IoT users is enhanced by implementing JSON data that can be exchanged with an MQTT broker or Microsoft Azure IoT Hub.

In the typical model, the IoT Connector is deployed in an existing connectivity infrastructure: either in edge devices or third-party clouds. Typical use cases are centralised controls such as lighting and building automation. With the new model, the data is processed directly at the final destination like a cloud or server from the customer. For example, this could be Microsoft Azure cloud. Typical use cases are data analytics and IoT applications and the major advantage is that the client has total control over the data flow. With this new model there is no third party or third storage location involved when transferring the data from sensor to cloud. Customers decide what happens with their data, whether visualised, analysed or archived. Here, the IoT Connector is a containerised application and available for deployment at the Docker Hub among others, including all updates. The use of cloud computing relieves the load on the local infrastructure and allows new data-heavy applications to be created, stimulating ideas from customers for new applications.

An easy and cost-effective way to incorporate the EnOcean IoT Connector into IoT applications is by leveraging existing building infrastructures. The infrastructure can easily be upgraded to send EnOcean IoT data, for example with the combination of an EnOcean USB stick and Wi-Fi® access points from Aruba, a Hewlett Packard Enterprise company. Also, data from existing EnOcean buildings can directly be forwarded to the IoT Connector in raw format (ESP3 – EnOcean Serial Protocol 3). The Aruba access points support the EnOcean USB stick without need for additional software. Furthermore, they talk directly to the IoT Connector running as part of the infrastructure or the final data destination, so no additional gateways are needed. With this complete scenario, customers have exclusive control over the data flow.

The EnOcean IoT Connector is a vital solution in helping facility managers to understand, measure and improve their processes and procedures, unlock inefficiencies, improve decision-making and sharpen their operations.

For more detailed information on the IoT Connector please visit iot.enocean.com.

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