



Tailored device management & IoT application for the Menowatt Meridio Street lighting IoT solution

Presentation of Menowatt ge

Menowatt is an Italian company active in the field of the green economy with products designed for energy efficiency. More than 400 Italian cities have chosen Menowatt solutions to improve their public lighting systems accounting for more than 300 000 lighting points.



Business need

The street light system is a major asset for cities and represent an important source of energy consumption. Their continuous operation is also critical for road security. Therefore, Menowatt was looking for an efficient remote management and control system. Also, they sought a way to modernize their existing systems with modern technologies including CLOUD and LoRa. Those technologies bring a more effective management of city services with high flexibility and integration capability, lower technical constraints, as well as lower costs. For instance, legacy PLC systems have a high latency in the downlink communication and constrains related to electrical wiring for remote control.

Discover the related CommonSense IoT solution

Click here to get to the business solution that Menowatt has created with CommonSense to meet the needs this field.

Solution

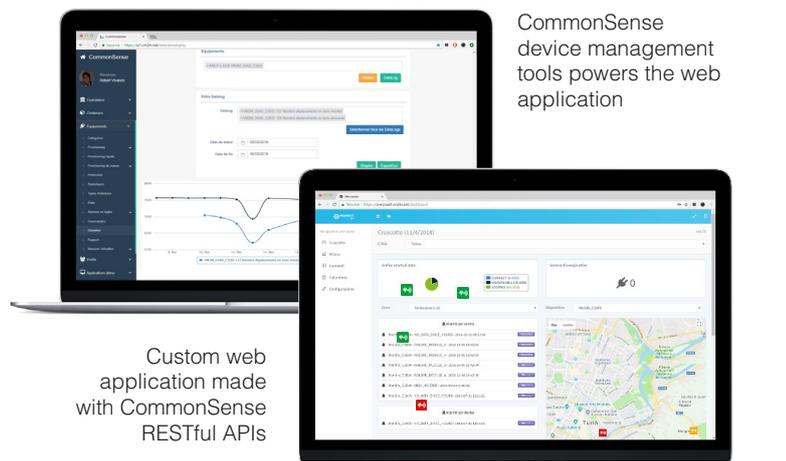
Menowatt partnered with Vertical M2M to build its powerful Meridio Street lighting LoRa Multicast C class solution. CommonSense IoT platform is the core system that enables the remote management of light points, from provisioning, device management up to the web application built with standardized CommonSense RESTful APIs.



Robert Marcucci,
CEO, Menowatt Ge

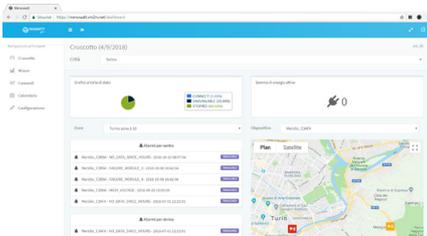
"All the functions offered by CommonSense answer perfectly the needs of the customers who are looking to:
- *Manage the energetic consumption of the lighting system*
- *Test the functionality of the Meridio network, allowing quick ordinary and preventive maintenance*
- *Interface with every light point for maintenance and setting of the operational functions."*

- White label custom application designed with the CommonSense APIs in two weeks
- LoRa multicast C class support
- Real time monitoring and control-command of all the hardware capabilities (LEDs dimming, ON/OFF group commands...)
- Fault detection with the CommonSense business rules engine
- Remote configuration of the fleet:
 - Configuration of multicast parameters: creation of dynamic virtual groups enabling to control lights with high flexibility independently of the electrical wiring constrain
 - Operating cycles calendar ;
 - Sampling period

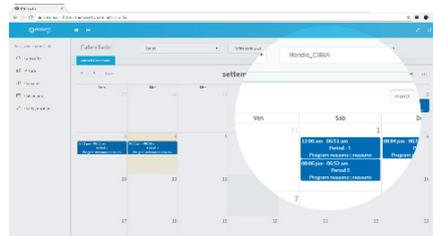


CommonSense device management tools powers the web application

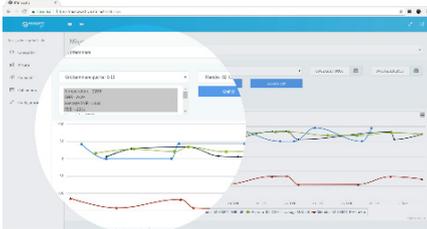
Custom web application made with CommonSense RESTful APIs



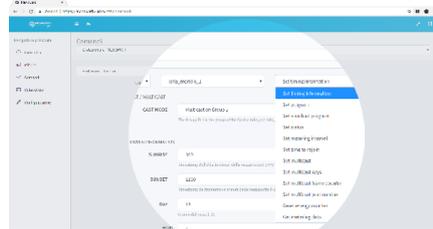
Dashboard view
Get a quick overview of all light point with customizable views.



Calendar
Program fleets of Meridios according to a calendar.



Data
Visualize all data from any fleet.



Commands
Perform individual or virtual groups commands
CommonSense device management tools enables to define all commands of any device.

The choice of the LoRa multicast C class protocol supported by CommonSense IoT platform

- ▶ Multicast is a powerful virtualization mechanisms enabling operation personnel to configure virtual groups of devices and simultaneously control them independently of the electrical wiring constraint enabling great flexibility in the management of fleets and simplicity of the interface.
- ▶ C Class: bidirectional symmetrical communication while always listening, except in transmit mode. It is ideal for applications requiring high downlink transmission.
- ▶ Optimization of network streams: multicast reduces the traffic of unicast packets.

Characteristics:

- 2-5 km of coverage in urban areas;
- Up to 15 km of coverage in rural areas;
- Thousands of dots managed by a unique gateway;
- Very low latency for high responsiveness of commands between the servers and the equipment.



Benefits

Thanks to CommonSense and its set of ready-to-use CLOUD tools, Meridio's remote management system was built in a month.



Device management tools to build effective solutions both for operations and costs

- Out of the box ready-to-use device management tools enabling product managers to build and end-to-end IoT systems deeply integrated with hardware
- LoRa multicast C class brings high flexibility enabling to design IoT solutions that will ease team operations.



Fast time to market

Meridio's remote management system and web application were built in a month thanks to the availability of the device management tools including CommonSense APIs.



Open & evolutive system

- As CommonSense is an open system, additional sensors can be provisioned. The automation tools can enable to build a solution that adapts the lighting points to the environment considering passing cars or pedestrians.
- The CLOUD system with standardized APIs makes of Meridio an interoperable solution making it easy to connect to existing information systems within a smart city logic.



Maintenance efficiency

Remote monitoring with CommonSense alarms engine reduces the required operations and technical staff.