Intesis® BY HMS NETWORKS

Case study:

HVAC control for retail and offices

Solution:	Multibrand Modbus Air Conditioning Gateways
Country:	Belgium
Company:	nanoGrid
Summary:	nanoGrid uses Intesis Modbus gateways for the integration of Air Conditioning systems in their retail and Energy Management projects.

Benefits

- Provides up to 45% energy savings.
- Avoids unnecessary consumption during closing hours.
- Remote control of Air Conditioning's key variables such as ON/OFF or set point.

"We choose Intesis products because they are very user-friendly, almost plug-and-play, and they provide a solution for integrating a wide range of air conditioning brands"

Timour Matthys, CTO at nanoGrid.

A global Energy Management Platform for multi-location companies

nanoGrid specializes in climate-friendly facilities management, offering a global energy management platform for detailed monitoring and optimal control of its client's operations and locations. Thanks to this, energy consumption and people's comfort are managed and maintained securely, in line with international directives for sustainability.

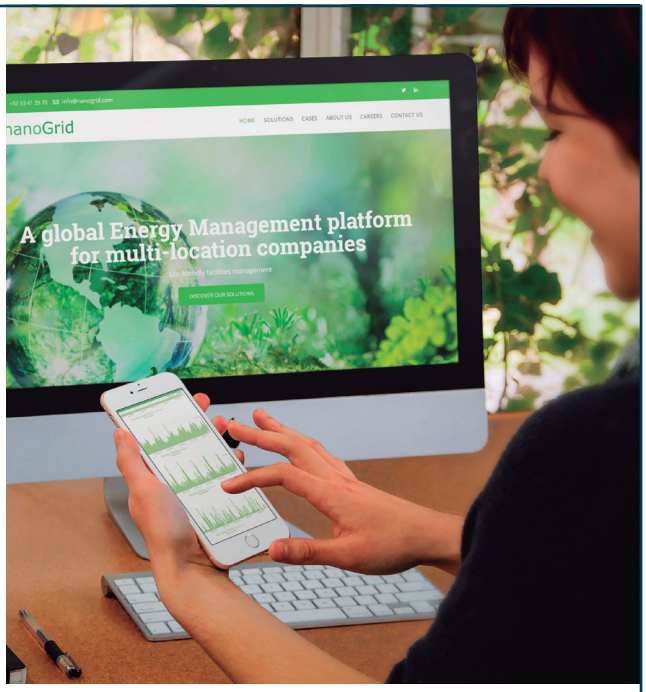
nanoGrid combines different specializations in terms of energy management, including installation, monitoring, hardware and software development, engineering, as well as providing advice and reporting. The company makes it possible for customers to continuously optimize the energy consumption at their premises and thus improve their energy profiles. As a part of their services, nanoGrid company controls the HVAC-utilities at the different locations of their clients. From their offices in Erembodegem (Belgium) nanoGrid remotely controls heating, ventilation and air conditioning in clients' installations.

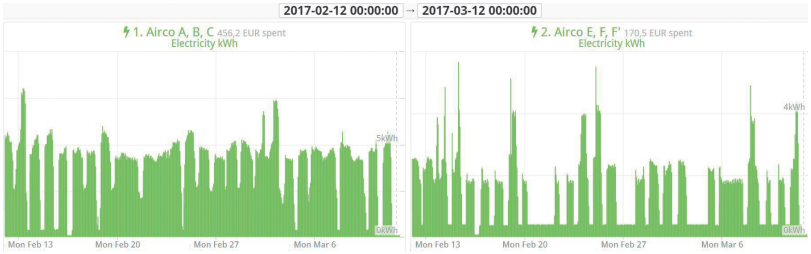
By remotely controlling the temperature setpoint of the AC, unnecessary energy consumption is avoided after business hours. The nanoGrid solution for retailers and office buildings makes it possible to switch off the AC units at night and during closing times (like weekends or holidays). By doing so, energy waste is avoided and savings are generated for their clients.

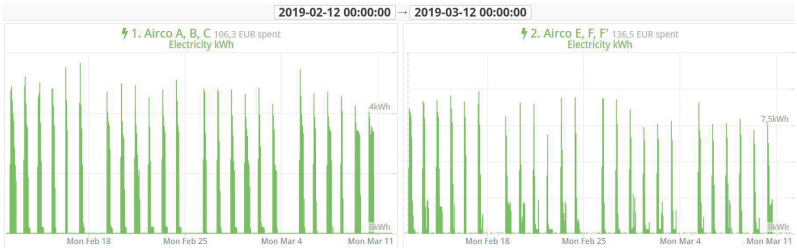
Why was Intesis solution chosen?

When looking for a solution to remotely control different brands of air conditioners, nanoGrid came across Intesis, which provides an easy to use and affordable solution to connect different AC brands to their nanoGrid box via modbus protocol. nanoGrid uses Intesis to connect to Fujitsu, Toshiba, Mitsubishi, Daikin, Hitachi and Midea AC units.

Intesis offers a very user-friendly solution, almost plug-and-play, to connect to the AC controller. By connecting via modbus, nanoGrid can connect it to its data logger and controller. The installation of the Intesis gateways at their client's premises is done by their normal electricians, who have received training on how to install the nanoGrid solution and common accessories.
Intesis gateways have been mostly used in Belgium, the Netherlands and Luxemburg, e.g. in the shops and locations of some of nanoGrids retail clients such as ZEB, Bel&Bo, Euroshoe, Deschacht, JBC, Fashion for Stars, Krëfel and some bank offices of Belfius.







Results:

Specific commands programmed in the cloud-based nanoGrid software allows orders to be sent to the Intesis gateway, which translates it to the AC controller. Typical commands are changeing the setpoint temperature and switching the AC unit ON or OFF. By switching the AC units OFF when there are no employees/clients in the shop, unnecessary electricity consumption is minized.
Remote control of the HVAC units can provide up to 45% of energy and cost savings. The graphs show the consumption profile of Daikin units one month before, and after, the remote control application operation. The two graphs show the same periods during two subsequent 12 month.

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