ENERGY EFFICIENCY – MOVING TOWARDS A SUSTAINABLE OFFICE

HIGHLIGHTS

- Attempting to adopt new, more sustainable habits in people is difficult and time-consuming. But with annually-growing electricity costs, we need to find ways to create a more energy-efficient office environment.

- Building Management System (BMS) can control the power supply of all office devices according to how and when employees use them during their working hours and over the weekends. Still, it needs a network connectivity device to support heavy data traffic and ensure continuous network supply.

- Four RUTX10 routers were incorporated into the solution to provide outstanding network speeds, Wi-Fi functionality, and a Wi-Fi Mesh advantage – which is incredibly useful for situations where one of the routers unexpectedly shuts down or fails to maintain connectivity.
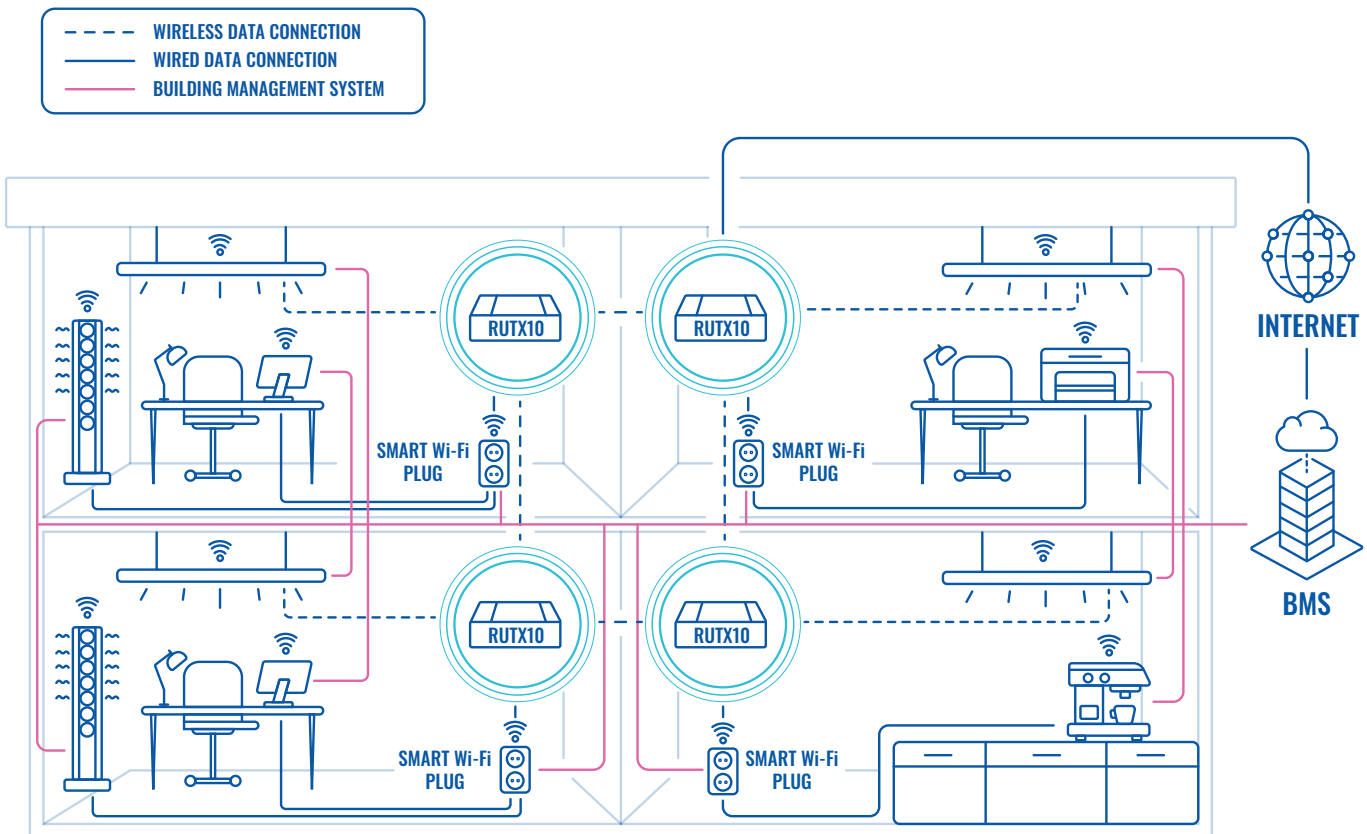
THE CHALLENGE – THE STRUGGLE OF CHANGING HABITS

It's expected that by 2050, global energy consumption will increase by almost 50%, with non-renewable energy sources still in the lead. We currently tend to leave indoor lighting on and use a myriad of electronic devices without even thinking of ever turning them off. We even hear the humming of computers far more often than the humming of bees, which on reflection, means that these increasing rates are a much more pressing issue we have to start dealing with now.

Changing our habits and becoming more sustainable might be challenging, as doing so can take hours of time and patience. And we're not about that patience-nurturing anymore. So, another option to accelerate energy efficiency would be to automate the energy consumption of the devices we use daily. And what's a better place to start than the office? After all, the workplace is the #2 place we spend the most time.

Today's offices are filled with lighting, heating, and air conditioning systems, devices like computers, monitors, printers, and of course – coffee machines – all of which are continuously plugged in, using significant amounts of electricity. A solution adapting their power consumption according to when employees actually use them sounds innovative and promising. However, it also sounds like it deals with tons of heavy data that must be updated frequently and are dependent on robust network connectivity.

TOPOLOGY

THE SOLUTION – FUTUREPROOFING ENERGY CONSUMPTION

Making the office more sustainable with device power regulations requires BMS capable of controlling electricity distribution and supply over the entire office. A strong and reliable network connection is also necessary for data collection and transmission processes. Four of our RUTX10 routers were brought to tie these requirements together and unite this system to improve energy efficiency in the office.

With four Gigabit Ethernet ports and Wi-Fi 5 802.11ac, RUTX10 provides you with two ways to equip your solution with great network speeds – which is crucial for heavy data scenarios like this one! This router supports Wi-Fi Mesh functionality, allowing you to configure only one router according to your needs and automatically apply the settings to the rest without additional hassles. Importantly, the solution is easily scalable due to the Wi-Fi Mesh's simple configuration process.

Another great detail about Wi-Fi Mesh involves your network's route. If, for example, one of the four routers disconnects or fails to support connectivity, Wi-Fi Mesh automatically changes your network's route using the other three routers and sustains network connectivity for the entire solution while the disconnected router attempts to renew its connection.

Thanks to RUTX10, BMS can uninterruptedly do its job: gather large amounts of data about employees' power consumption habits and schedules, analyze it, and control the power supply accordingly. This solution reduces electricity consumption and improves the comfort of employees without making them change their habits.