ADVANTECH

Enabling an Intelligent Planet

Application Story

OPIT Application: Active Energy Management Solution

Market: Power & Energy
Location: Switzerland
Technology Partner: Opit Solutions

Project Introduction

Energy demands are increasing and the environment is under constant pressure. As nations look for alternative energy sources, the implementation of energy-saving strategies has become more important than ever. Notably, almost 40% of total energy production is used for buildings. Of this energy, over one-third is consumed for space and water heating and the remainder is used for ventilation, air conditioning and artificial lighting.

A customer in Europe aiming to analyze and optimize their energy consumption and efficiency across several buildings wanted to build an energy management system that was capable of gathering energy data from different suppliers. With these targets in mind, they contacted OPIT Solutions to help them develop their system and provide them with the means to save energy.

OPIT SOLUTIONS

System Requirements

The goal was to create an active energy management system to monitor and improve power distribution management across a large number of buildings to guarantee efficient energy usage. The solution needed the ability to monitor power consumption and the behavior of the controlling devices at each building in real-time, adjust power consumption according to each device's needs, and improve efficiency. In addition, the customer required a benchmark system to compare the specific energy consumption for similar buildings.

Hans Burkard from OPIT Solutions said, "Due to the variety of technologies in the building, we needed to collect data from different suppliers, therefore we chose an Advantech UNO-series hardware platform which offers a variety of interfaces like RS-232/485, USB and TCP/IP, to collect data to a central database."

"We considered several products during our evaluation phase, and our R&D department tested them all down to the board level. We saw the real quality behind Advantech products, and with this kind of support it was really a simple choice."

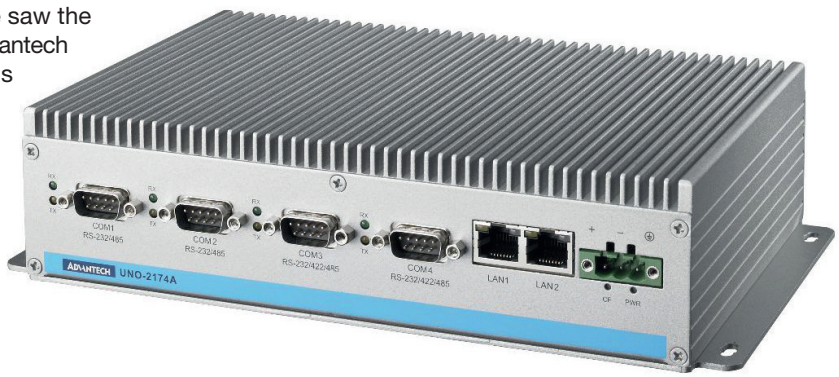
Hans Burkard, OPIT Solutions

System Description

An UNO-2174A embedded automation computer from Advantech was chosen for its multiple communication ports and its fanless rugged low maintenance design with IP40 anti-dust ingress protection and wide operating temperature range. The UNO-2174 also supports 1 x PC/104+ and 1 x PCI-104 plug-in cards for further expansion.

The system's Intel® Atom® N450 processor delivers significant power savings itself, as well as performance improvements over previous generation processors. It includes Enhanced Intel® Deeper Sleep for reduced power consumption and Intel® Hyper-Threading Technology for high performance-per-watt efficiency and increased system reponsiveness.

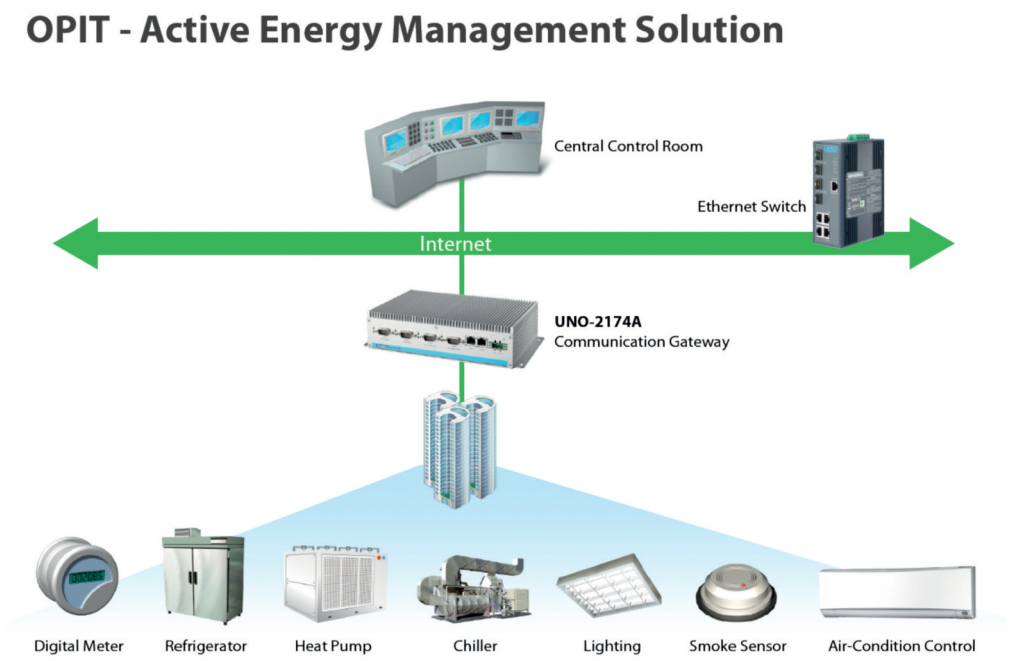
According to Hans, "During the migration phase we had one or two issues to solve and it was good to know that there was always somebody on the other end of the phone with technical or sales knowledge. We considered several products during our evaluation phase, and our R&D department tested them all down to the board level. We saw the real quality behind Advantech products, and with this kind of support it was really a simple choice."



intel Intelligent Systems Alliance Premier

Project Implementation

Product	Description
UNO-2174A	Intel® Atom™ N450 Processor-based Automation Computer with 6 x USB, 8 x COM ports, and 2 x Mini PCIe



For more information about the Advantech products and service solutions, or to read more success stories, please visit the Advantech website at www.advantech.com.

Conclusion

Reliability is always a priority with Advantech products, and our platform for this case is no exception. Regarding the UNO-2174A, its versatile expansion capabilities with high efficiency, stability and performance makes it an excellent choice for satisfying the customer's requirements.