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INTELLIGENT ENERGY MANAGEMENT FOR BUILDINGS

Fraunhofer IIS/EAS is your partner for the development of new building control concepts in close cooperation with industry. Our know-how ranges from data analysis and the optimization of existing systems to the development of self-learning, integrated building management systems. These systems observe energy consumption holistically and take into account all predictable factors inside and outside a building.

With our approach based on mathematical models, you will have a comprehensive view of energy consumers, producers and storage systems in order to achieve optimal energy consumption and significantly lower costs. Designing building management systems by means of our approach shortens the development and commissioning time while also lowering maintenance costs for technical building services.

**Fraunhofer Institute for
Integrated Circuits IIS
Division Engineering of Adaptive
Systems EAS**

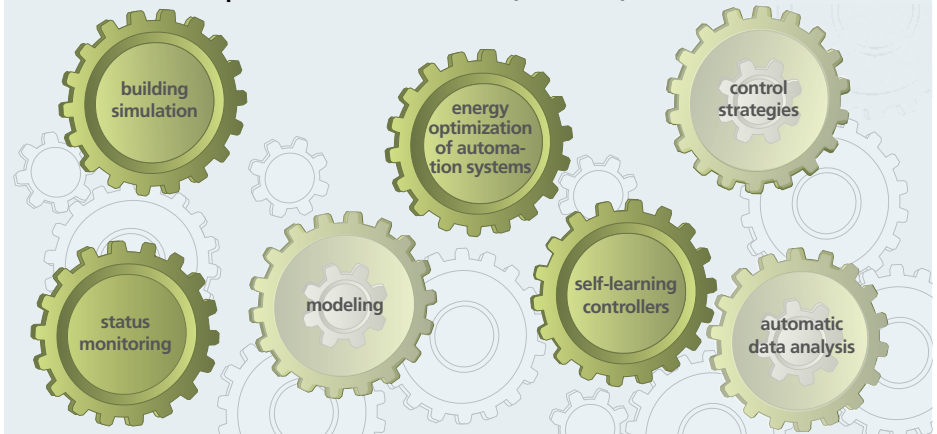
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Our Areas of Expertise for Your Solution (Selection)





1



2

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Our Services for Your USPs

Our offers support:

- Building services planners
- Building services providers and operators
- System integrators
- Hardware and software developers of automation components

State-of-the-art design and control strategies guarantee you and your customers an optimal balance between minimum energy consumption and high user comfort.

Our Know-how – Your Opportunity

Are you a hardware or software developer, system integrator or building operator? Are you intent on higher energy efficiency than EN15232 class A?

We will work for you to develop manufacturer-independent software solutions for a trade-spanning energy optimization in your building automation system.

Self-learning, Adapting Controllers

What is special about self-learning controllers?

- Basis: Simulations and automated optimization of parameters
- Easy integration even into existing controller structures
- Simple optimization

We utilize analytical and empirical processes to develop control strategies based on extremely reliable prediction models. To accomplish this, we take into account not only the various building services specifications but also design criteria, various usage profiles for rooms, the required comfort parameters as well as geographical and meteorological conditions. The necessary program code for the building control is generated on the basis of all these factors. Continuous comparison of the predicted factors with actual measurement values allows automatic optimization and adjustment of the parameters in real-time.

Performance and Status Monitoring

Would you like to achieve further energy and operating optimization?

To optimize energy consumption still further, we work on performance and status monitoring functions integrated into the automation system. These are based on automatic analysis of the comprehensive data in the system.

In addition to an alarm function that gives timely warning when the efficiency of the overall system declines, this also enables process optimization that automatically adapts to the usage profile of the building. The building services can also be continuously monitored to determine wear levels of building services components for the purpose of preventive maintenance.

1,2 Our services optimize energy consumption, especially in commercial and office buildings

Options for Collaboration with Fraunhofer IIS/EAS on the Energy Management of the Future

