Integrated Building Automation Solutions for Architects
First-class design inspires first-class functionality – with Beckhoff Building Automation.

Every architect is familiar with this situation: The design is ready, the planning commences, and very quickly, design and functionality are on a collision course. The creative designs are subjected to functional adjustments, with the associated loss of aesthetic appeal. At the same time, the architect must implement the wishes of the building owner, fulfill requirements in terms of energy efficiency, meet responsibilities in relation to design, and ensure the proper execution of the individual building systems. In brief, a range of uncertainties must be dealt with on the way to finalising the design. This is precisely where Beckhoff comes into the equation: Architectural designs can be converted reliably and invisibly with flawless functionality due to the flexibility of PC-based building automation.

Transferring hardware functions to software – Building Automation from Beckhoff.

Building Automation from Beckhoff does things differently, in that it replaces expensive hardware with flexible software functions. Regardless of how complex your design is, and how many different building systems must be centrally controlled and synchronised, Building Automation from Beckhoff represents an integrated, software-based control system that can be implemented cost-effectively, offering the highest degree of planning freedom at the same time. This enables a fast and flexible response to changing requirements or changes in usage within the given cost framework.

Greater creative freedom for your ideas. More functional efficiency for your building.
One control platform for all building systems – absolute planning freedom.

The PC-based control platform allows integrated automation of all building systems in functional buildings and infrastructures – from single-room control to window control to shading, lighting, HVAC MCI, smoke and heat removal systems, access control, energy monitoring and process visualisation. This constitutes the basis for new and innovative building concepts.

Ready for the architecture of the future – keyword “Green Building”.

With Building Automation from Beckhoff, your building will fulfil at minimum, the requirements of energy efficiency class A. The reason: Building control processes are continually optimised with holistic automation solutions which encompass all trades and efficiently utilise synergy effects. Maximum reduction in energy consumption and increased comfort must by no means be contradictory, rather it is eminently achievable on the basis of an intelligent control system with access to all information about all building systems at all times. Whether usage-dependent lighting, façade control that tracks the sun’s position, or demand-driven climate control, all building systems are coordinated and finely adjusted. Ultimately for architects, sustainable green building concepts are already a reality.

Building Automation from Beckhoff at a glance:
- PC-based control of all building systems
- Adding functionality in software while reducing hardware ensures flexibility
- High functionality and process reliability
- Freedom of creative design
- Implementation of innovative building and room concepts
- Support for highest energy efficiency classes
- Implementation of green building concepts
We reserve the right to make technical changes.

Centre for Virtual Engineering (ZVE),
Fraunhofer IAO, Stuttgart, Germany

The open architecture of the ZVE is based on an innovative usage concept where office, meeting and laboratory workplaces are spatially interlocked – rather than rigidly separated as convention dictates – to encourage more flexible workspaces. The cornerstone of this concept is the PC- and BACnet-based office automation solution that encompasses all relevant building control systems. Through the flexibility and openness of the building automation solution, changes during planning and implementation phases of different work areas can be handled effortlessly. This also applies to later changes during operation. The open system architecture of PC-based control means that 3rd party products and partner company subsystems can be easily integrated, with interfaces to all building automation protocols and bus systems.

Microsoft Technology Centre,
Cologne, Germany

Microsoft has designed its vision of the "office of the future" at their Cologne site. The aim is more efficient and intuitive communication and collaboration. Building automation in modern conference rooms and workspaces plays an important role: in addition to conventional systems, the latest IT and media technologies are also integrated.

Ultimately what counts is the property: Beckhoff references.
Campus of Zayed University, Abu Dhabi, UAE

Measuring 80 hectares in total, the site encompasses 38 buildings including the central administration and library building, as well as separate facilities for male and female students. An innovative, motion and daylight-dependent lighting control system was implemented that enables significant energy savings.

Ferry Porsche Congress Centre, Zell am See, Austria

The multifunctional building impresses with its ultra-modern energy management and flexible room layout. The prerequisite enabling this functionality is the system-spanning building automation solution, which extends from HVAC management, to complex lighting control, through to integration of multimedia and stage technology.

The global solution: Building Automation from Beckhoff

Office and residential buildings, hotels and museums, shopping centres and industrial building complexes, rail stations, and theatres all around the globe employ holistic and scalable Building Automation solutions from Beckhoff:

- Tower 185, Frankfurt a. M., Germany
- KölnTriangle, Cologne, Germany
- EZB (European Central Bank), Frankfurt a. M., Germany
- Philip Morris International, Switzerland
- WesBank, First National Bank, South Africa
- Park Hotel Vitznau, Switzerland
- Dolder Grand Hotel, Zurich, Switzerland
- Dresden City Museum, Germany
- Staatliches Museum für Archäologie, Chemnitz, Germany
- Schauspielhaus Nuremberg, Germany
Combining high-end architecture with high-end technology.

Technical functional integrity is one side of the coin – architectural creative freedom the other. That’s why Building Automation from Beckhoff is deliberately designed to enable highly aesthetic solutions that smoothly integrate all functionalities into the overall design concept while ensuring utmost ease of operation.

1. Contemporary multimedia integration is ensured discreetly and at all times using backstage technology.

2. The full range of lighting technology can be automated with Beckhoff and elegantly integrated into the overall control system.

3. Focus on “room comfort”: all parameters such as heating, ventilation, air conditioning and shading can be easily integrated with Beckhoff while the control devices remain invisible to the naked eye.

Designed for the highest standards – Multi-touch panels from Beckhoff.

Be it a conference room or open-plan office, staff restaurant or showroom, foyer, boardroom, or wherever the design of a building also takes on a "Function follows form" – The control architecture for your building architecture.
representative role, operating concepts for building automation must also satisfy the strictest design standards. Beckhoff rises to this challenge with its broad-ranging portfolio of multi-touch panels. The panel display sizes of built-in devices start with the elegant 7-inch model which blends perfectly into the individual room concept in landscape or portrait format. The exclusive material quality, appearance and surface feel are key features of the multi-touch operator panels from Beckhoff. With housings machined from a single piece of aluminium, as well as surrounding protective metal on the display front, these multi-touch panels – flush-mounted in the wall – also enhance the most sophisticated room concepts. Added to this is optimum user comfort – the especially high touchpoint concentration ensures flawless functionality.

High processing capacity – Elegantly packaged in the control cabinet.

Beckhoff Industrial PCs embody an especially successful example of elegantly packaged PC-based control technology. Designed for flexible use, the control cabinet IPC series in aluminium housings provides processors of the highest performance class.

Beckhoff at a glance:
As a specialist for PC-based control systems, Beckhoff is renowned for universal automation solutions that are used in industrial, energy management and building automation applications worldwide, and help users maximise savings potentials, even exceeding the highest energy efficiency standards.

Facts and figures:
- Owner-managed, medium-sized company
- Corporate headquarters: Verl, Germany
- Innovation leader in PC-based control
- Sales 2014: 510 Mio. Euro
- More than 2,900 employees worldwide
- 34 subsidiary companies
- Represented in more than 75 countries worldwide
Building Automation for Architects:
See all information at
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