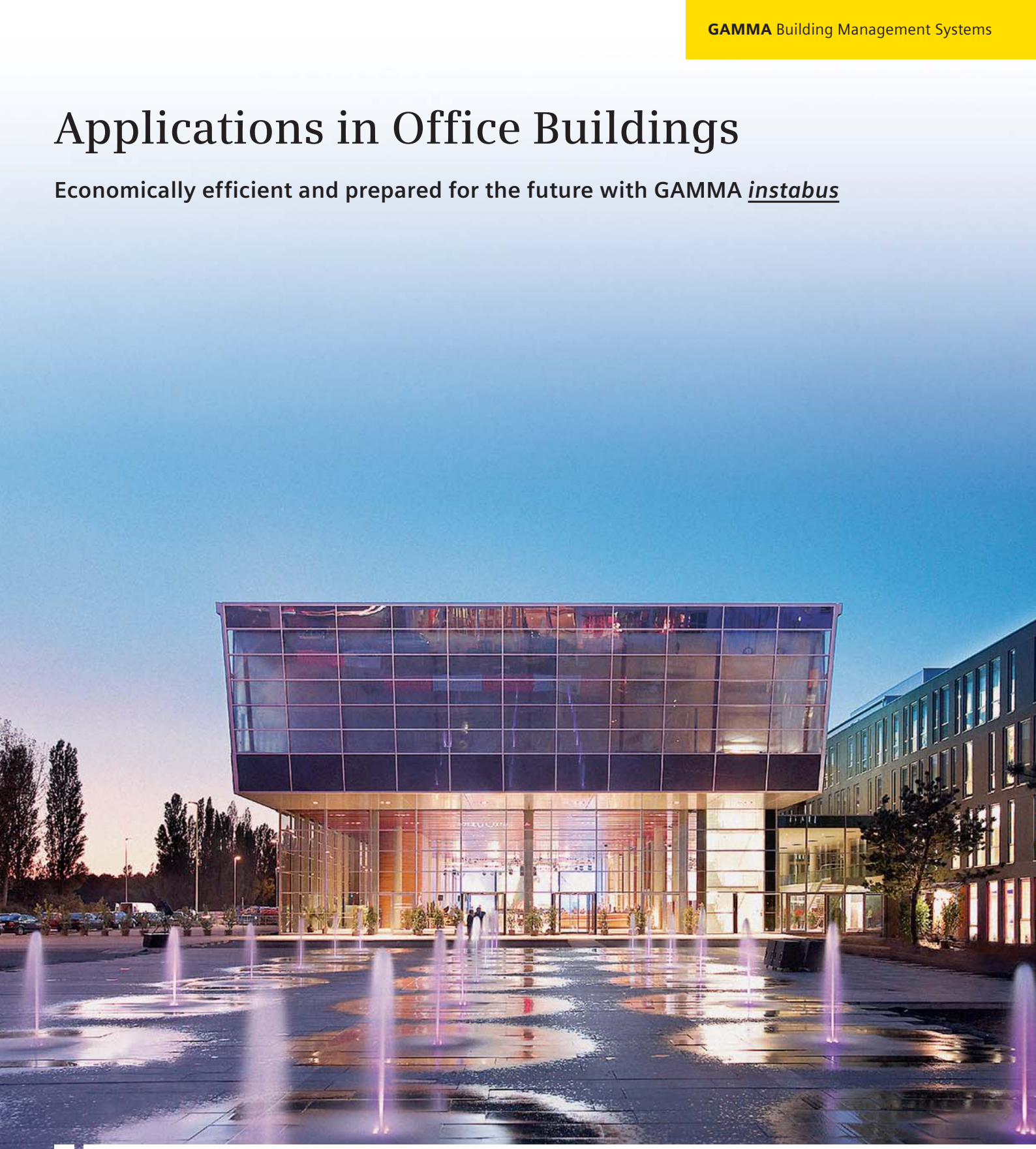
# Applications in Office Buildings

**Economically efficient and prepared for the future with GAMMA *instabus***



GAMMA

Answers for infrastructure.

SIEMENS

The façade presents the essential first impression of a building. Whether lit from inside or outside, with tinted lights and lighting effects controls, with or without the use of blinds – GAMMA *instabus* offers simply everything.

Modern glass fronts are a challenge for the solution of shading. GAMMA *instabus* solves this seamlessly by networking all components.

# GAMMA *instabus* – here's something you can build on


**It seems like every day something changes in our working lives – and the pace of change keeps speeding up. Maximum flexibility is demanded from employees, their working procedures and not least the office buildings themselves.**

While maintaining **maximum efficiency** and **lowest possible operating costs**, the building

- **has to offer optimal working conditions**
- **has to be flexible in cases of changes in organization or use**
- **has to ensure safety at all times**
- **has to offer modern comfort**
- **has to protect people and minimize damages in emergencies**

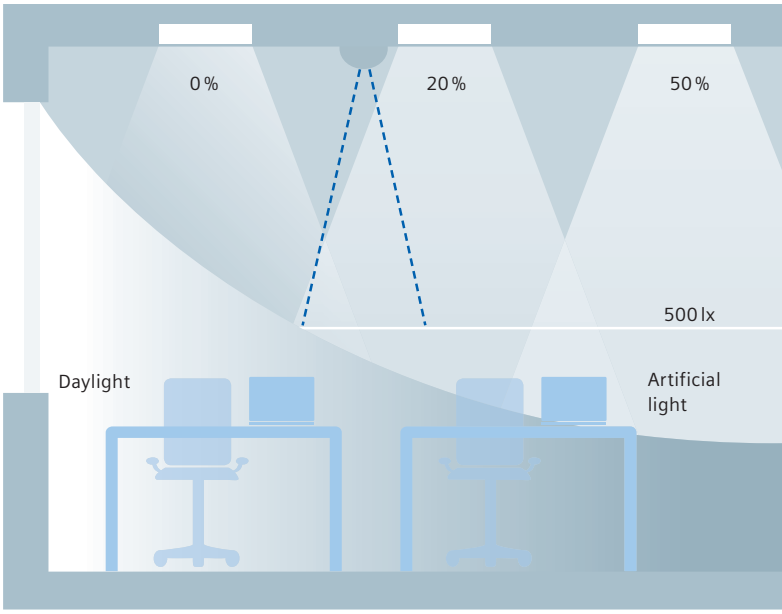
Requirements that can hardly become a reality with the use of conventional technology.

## Installation solutions completely from a single source

As all-round provider in all matters to do with any office installations, we offer anything from energy feeds down to the outlets in the individual office rooms – we're here to provide a comprehensive solution, tailored to the requirements of your office building.

Building functions and media controls integrated in one operating concept – the high technical versatility of conference rooms is easily handled, at the touch of one button.

A constant light regulator that incorporates daylight only supplements in as much artificial light as is necessary – less light closer to the window, more light closer to the wall.




# Count on economic efficiency

Complex requirements demand unusually intelligent solutions. This is why Siemens offers a comprehensive system, specially designed for office buildings, that fulfills all these requirements: the GAMMA *instabus*.

## Light and shade as it's needed

- Light and shade are controlled in such a way that optimum use can be made of **existing daylight while preventing glare**. Having the light switched on and the blinds closed is a situation that we avoid as much as possible. Electricity is saved, and the air-conditioning system doesn't need to struggle against sunlight and the heat created by artificial lighting. To make this happen, the blinds automatically adjust according to the position of the sun.
- Highly modern **blinds with daylight steering** can be integrated into these controls.
- A **constant light regulation** only permits the amount of artificial light actually needed in the room. Of course you can always manually adjust the light to suit your needs.
- If the **office is not in use**, the **light is switched off** altogether. The lighting can be controlled by presence sensors, by being connected to an entrance control or a timer, or manually.
- Outside the core usage times, the **lighting in the corridors** can be turned off depending on **whether anyone is present.** Within the core usage times, a variable minimum brightness is maintained when nobody is present. Thus optimum energy savings can be attained, while increasing lamp durability.

## Room temperature according to use

- Heating and cooling costs are a major factor in a building's operating costs. GAMMA *instabus* reduces these costs significantly, by only **fully heating, cooling or ventilating** a room **when** it is actually **needed**. The room temperature can be controlled by motion sensors, core usage times, by room-based utilization plans or manually.
- **As long as windows are open,** the **heating is automatically lowered** to frost protection level, and cooling and ventilation reduced or deactivated altogether.
- **At night, a "central off" setting can reduce heating, cooling and ventilation** to protection mode.

All the essential information about the building, up to date and at a glance – the foundation for efficient building management.

A suitable user interface for every purpose, from a simple push-button to a multi-functional touch panel.


## Flexibility in times of change

- The economic efficiency of GAMMA *instabus* becomes clear when we look at what happens when **usage conditions change.** Whether a tenant changes or a department is reorganized, whether room sizes or room equipment are altered – an extensive, expensive **rewiring won't be necessary.** Changing the parameters is all that's required in most cases, and functions and connections are simply reassigned. Costly vacancy times caused by extensive modifications are thus reduced significantly.
- Should an **expansion of functions** become necessary down the line, this is **possible without a hitch** thanks to the decentralized concept of GAMMA *instabus*. An additional push-button control, for example, only requires a bus lead for it to be able to operate any room function you require.
- And should you want to **expand without installing new leads**, the remote system GAMMA wave is available as a unique additional component to GAMMA *instabus*.

## More efficiency in building management

- With its central **visualization**, GAMMA *instabus* permits an up-to-date picture of the whole building and the operation of all building functions. This promotes an efficient management of the building.
- The connection to existing data networks (LAN and Internet) or a building control system allows the **building management** to spread across several buildings, whether within a building complex, within a city, or arbitrarily spread across international borders. **Distributed real estate properties** can optionally be administrated with ease thanks to real-time status information.
- The **central monitoring** of several buildings or distributed real estate properties reduce staff overheads – without GAMMA *instabus* causing additional installation costs.
- To reduce energy costs, energy consumption data can be gathered for analysis, peak loads capped and **unneeded current consumers** switched off.
- **Error messages** regarding energy distribution, from heating, cooling or ventilation installations are immediately picked up and passed on. Speedy elimination of the fault **prevents costlier measures** becoming necessary down the line.
- **Maintenance** and repair **prioritized according to need** are made possible by the counting of operating hours and switching cycles, as well as failure reports, e. g. from DALI-ECGs.

You don't want to cut corners when it comes to safety. Optimum lighting levels, especially in staircase areas, help prevent accidents.

Emergency lighting and escape route lighting are exceptionally easy to implement with GAMMA *instabus*.

# With Siemens, safety can move right in

Safety plays an important role in building installations – to protect people and possessions, to prevent damages and to limit follow-up costs.

GAMMA *instabus* is in action around the clock.

## Better to prevent damages than to repair them

- Accidents due to inadequate lighting can easily be avoided. If **corridor lighting is switched on when a person is in the corridor**, then the right lighting is always there when it is needed.
- **Lighting of exteriors and walkways** can be made dependent on brightness, movement or time, and so is always activated on time.
- To avoid damages caused by unsupervised **electrical devices**, these are **switched off centrally at night**.
- **Windows, roof hatches or doors left open** over night or weekends do more than just invite unwanted guests – in case of storm, rain or frost, they can also cause significant damage. The indication of "open window" or "open door" makes sure that you can close these in time.

## In case of danger

- In case of danger, everyone in the building is safely guided outside with the **emergency and escape route lighting** based on GAMMA *instabus* and installed according to EN 1838.
- If the **fire alarm system** is **connected to GAMMA *instabus***, electric consumers can be switched off before they become an additional hazard. The complete lighting system can be turned on, thus reducing danger of panic.
- Fast and proper reaction in case of danger is possible with **visualization** that shows where the event is taking place.
- Buildings not occupied at night can be **monitored from a different building** through the network.
- Unwanted guests can be spotted **without special monitoring devices**: each opening of a window or outer door and every light being switched on or off causes an alarm signal in the monitoring mode.

# Thoughtful solutions throughout

Just how economical, efficient and comfortable a solution for an office building really is can be seen by how even in the special usage areas of the building the respective special requirements are fulfilled.

## Conference zones, meeting rooms

Conference rooms are representative rooms with extensive technical equipment. With GAMMA *instabus*, the room and media functions are easy to control and operate.

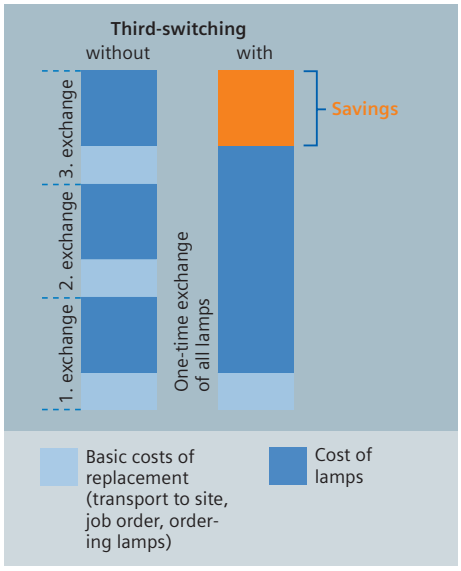
- **With the touch of a button**, the entire conference hall can be **switched to the current mode of use** (controlling the scenario). For example, while giving a presentation, you could lower the blinds, roll out the projection screen, turn off the light in the area surrounding the screen, lower the lights in the rest of the room to 10 % and turn on the beamer/digital projector – by one touch of a button
- GAMMA *instabus* demonstrates its flexibility once again when it comes to **variable partition walls**. When opening partition walls, the control of the conference room adjusts automatically. This is not made apparent to the user. The entire area is now treated as a single room.

## Social rooms, canteens or sanitary areas

- An **extractor fan system** that is activated when people are present contributes to a good room climate and saves energy.
- The **automatic deactivation of outlets** and any devices connected to them outside of defined usage times increases safety and cuts down on costs.
- **Water sensors** recognize and provide early warnings in the case of leaks and flooding.

## Garages/underground parking garages

- In garages or underground parking garages without daylight, **lighting can be controlled dependent on main usage times and presence**. When people are present, lighting is switched to full brightness. When nobody is present, lighting is reduced to minimal brightness or, outside of main usage times, switched off completely. This cuts down on energy costs and increases the lamps' durability.
- With GAMMA *instabus*, a so-called **"third-switching"** can be implemented: A third of the lamps remains switched on for a basic lighting level. This third of the lamps, due to their higher usage, will need to be replaced before the other lamps. GAMMA *instabus* makes it possible to simply use all the lights in such a way that they rotate to cover the basic lighting level. By evenly distributing the load, all lamps can be replaced at the same time, and the exchanges in the meantime will not be necessary.
- By gathering data about operating hours, maintenance based on need is made possible, e. g. exchanging lamps.




## Façade

The façade contributes significantly to the image of a building. GAMMA *instabus* makes it possible to highlight every building:

- **Lighting effects**: for lights or groups of lights, timed sequences of brightness values can be defined and repeated often and in cycles. From running light to brightness and colour sequences, there are virtually no limits to the lighting designs you can create.
- **Controlling coloured lights**, especially in concert with DALI controlgear, offers countless possibilities to present your façade in style even in the dark.

## Gates and barriers

- **Gates and barriers** can be controlled safely, comfortably and from a **control center**.
- **Exit driveways** can be **controlled automatically** via motion sensors, so that only exiting and no unauthorized entering is possible.

## ... and the right control for every task

The best technology is useless if it is difficult to operate. GAMMA *instabus* was conceived and designed to be so user-friendly that an inhibition threshold isn't even allowed to appear in the first place. Despite its impressive range of functions, the **system is very simple and comfortable to use**: from the familiar **switches, remote controls, operating displays, touch panels or via a central visualization PC**.

# The functions at a glance

| Economy | Specially |
|---|---|
| Using daylight without glare | **... in conference zones and meeting rooms** |
| Blinds with daylight steering | Scenario control at the touch of a button |
| Constant light regulation | Variable partition walls |
| Lighting according to presence | **... in social rooms, canteens or sanitary areas** |
| Corridor lighting according to presence and main usage times | Extractor fan system controlled by presence |
| Heating, cooling, ventilation according to need | Automatic deactivation of outlets |
| Reduction of heating in case of open window | Water sensors |
| "Central off" for heating at night | **... in garages and underground parking garages** |
| Usage changes without rewiring | Lighting according to presence and main usage times |
| Expanding functions possible without a problem | Third-switching |
| Expanding function without leads | Maintenance according to operating hours |
| Efficient building management with visualization | **... on façades** |
| Building management of distributed real estate properties | Lighting effects |
| Central monitoring of more than one building | Controlling of coloured lights |
| Switching off unneeded energy consumers/devices | **... with gates and barriers** |
| Damage prevention by early fault signals | Central controlling of gates and barriers |
| Maintenance according to need | Automatic exit driveways |
| **Safety** | **... and the right control for every task** |
| Presence-dependent corridor lighting | Appropriate user interfaces for every requirement |
| Exterior and walkway lighting | |
| Switching off devices centrally at night | |
| Indication of windows, roof hatches or doors left open | |
| Emergency and escape route lighting | |
| Reaction in case of fire alarm | |
| Visualization shows location of danger | |
| External building monitoring | |
| Monitoring without special monitoring systems | |


## Would you like a meeting?

Are the examples we've described of interest for your office building project? Then please turn to your Siemens partner. He will gladly support you and provide you with further information.

With **GAMMA Building Management Systems**, your office building will fulfill every need with regard to **economy, safety and convenience**, now and in future.

For further information,
please contact your local Siemens sales partner.

Siemens AG
Industry Sector
Electrical Installation Technology
P.O. Box 10 09 53
93009 REGENSBURG
DEUTSCHLAND

Subject to change without prior notice
Order No. E20001-A6230-P430-X-7600
Dispo 25604
2100/9891 MK.ET.02.ETGA.52.8.08 PDF
Printed in Germany


**www.siemens.com/gamma**

Environmentally compatible products and production
We are deeply committed to environmentally compatible products and production methods that protect their resources by dispensing with hazardous substances and materials wherever possible. Over the years we have been honored with numerous awards in recognition of our special achievements in the area of environmental protection and nature conservation. Unless unavoidable for technical reasons, we refrain from using harmful substances such as lead, mercury, cadmium, sexavalent chromium compounds, PBB, and PBDE. Our switches and outlets have been cadmium-free for more than a decade. Here, too, Siemens is a true pacesetter.