Make your
building more efficient & safer

Intelligent systems, solutions and products at a glance.
www.siemens.co.uk/safe-secure-sustainable
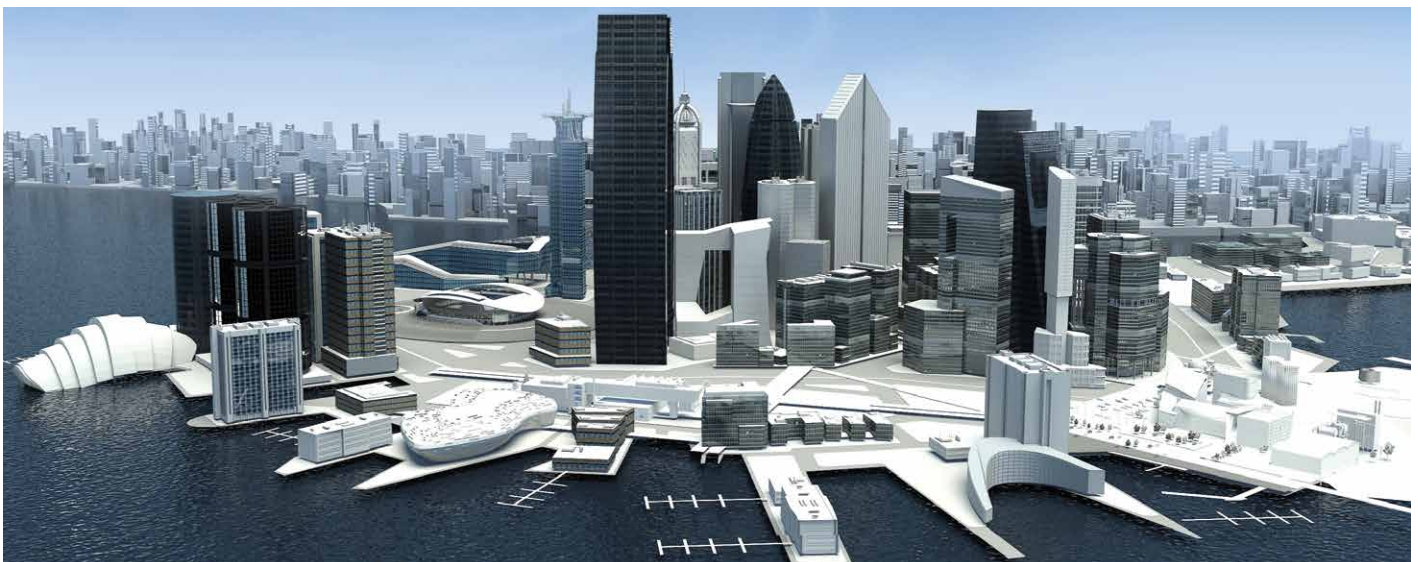
SIEMENS

Advanced building management system

A building management system centrally monitors and visualizes both single and multiple disciplines. It bundles all relevant information and presents it to the operator in a simple and clear manner. A management system or the control level in the area of building automation is always actively in motion and represents the actual operating station of the system. On the other hand, a security level is static: if an alarm occurs, it must be dealt with immediately, since life or valuable assets are endangered.

The objectives of a building management platform are:

- To visualize the states of the different systems in a building
- Unifies the different operating philosophies and operating possibilities of the individual sub-plants
- Simple and intuitive presentation
- Low learning effort with changing operators
- Reduces errors in the event of an alarm by means of defined sequences and guided alarm treatment
- Operating the control and regulating functions of the systems (HVAC or access)

- Building monitoring (e.g. with video images)
- Logging the states (Status and Reporting)
- Trending and Energy Management (e.g. optimization of energy consumption)
- Alarms and escalation of alarms
- Intelligent alarm scenarios
- Scalable from small buildings or individual systems to campus solutions for many or large buildings and various disciplines

What makes a building management platform such as Desigo so unique? By combining building automation (HVAC, room automation, energy efficiency), building security (fire, intrusion, access control, video surveillance, etc.) and also the energy distribution on an integral, continuous platform, overlapping interactions can be realized. For example, in the event of a fire, in addition to the actual alarm, air flows, escape routes, lighting, image updates and power interruptions can be intelligently combined, controlled and monitored from a central, continuous platform. This includes classical functions such as extensive reporting, alarms, guided alarm handling, etc.

Desigo CC can be used for all types of buildings - right up to cross-building control and administration.

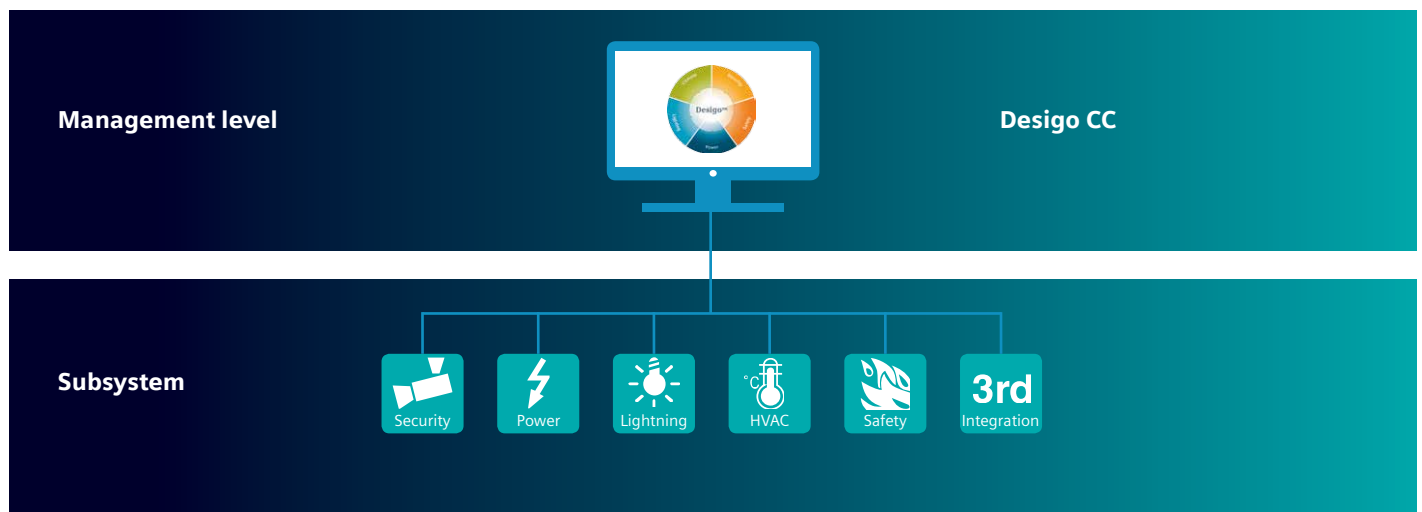# Desigo CC
The integrated building management platform

Improved energy efficiency, wellbeing and productivity

The open building management platform Desigo™ CC is designed to create comfortable, safe, secure and efficient facilities. The development of this software is based on our state-of-the-art technology, 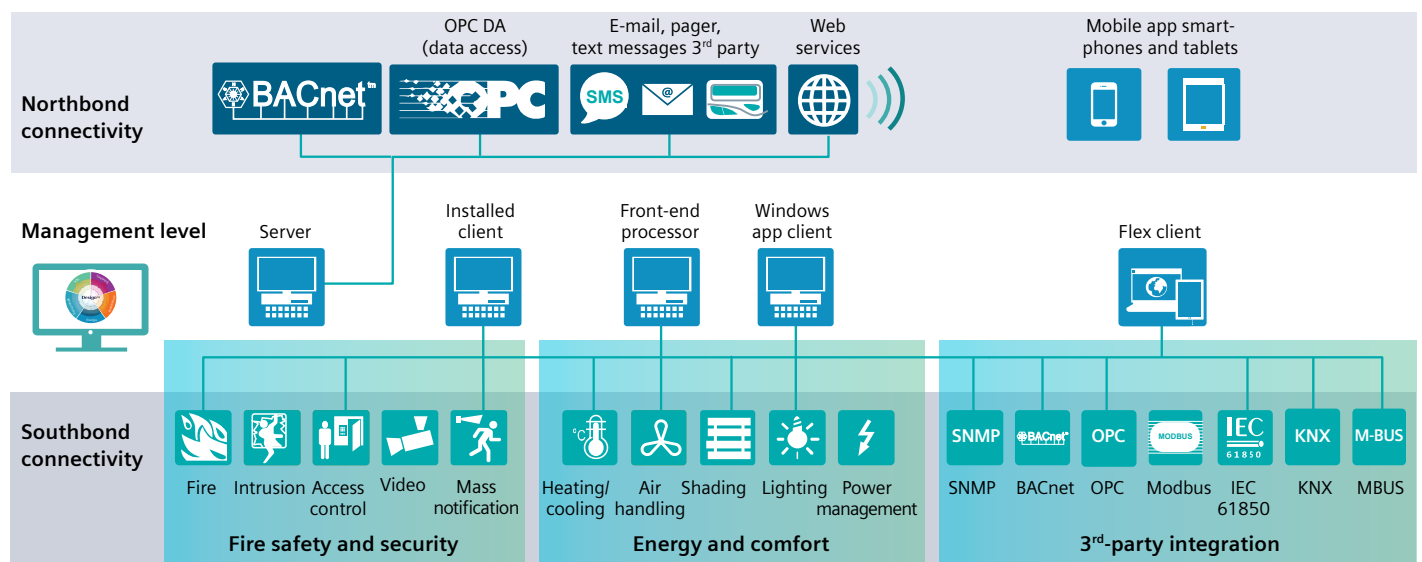extensive international expertise and more than 30 years of experience in building technology. Desigo CC covers the complete scope from simple single-discipline systems to fully integrated buildings. By making it easy to operate, monitor, optimize, and manage your facility, Desigo CC sets the standard for the future while maintaining compatibility with legacy systems. With its future-oriented and discipline-independent approach, Desigo CC makes your place a perfect place for today and in the future.

Suitable for single or multiple systems

| Management level | Desigo CC |

Subsystem

Security | Power | Lightning | HVAC | Safety | 3rd Integration

Desigo CC integrates and allows to be integrated

Northbond connectivity

OPC DA (data access) | E-mail, pager, text messages 3rd party | Web services | Mobile app smart-phones and tablets

BACnet™ | OPC | SMS @ | 🌐

Management level

Server | Installed client | Front-end processor | Windows app client | Flex client

Southbond connectivity

Fire | Intrusion | Access control | Video | Mass notification | Heating/cooling | Air handling | Shading | Lighting | Power management | SNMP | BACnet | OPC | Modbus | IEC 61850 | KNX | MBUS

Fire safety and security | **Energy and comfort** | **3rd-party integration**

Desigo CC
Open Platform

Open platform

Desigo CC is based on common communications standards such as BACnet, OPC, Modbus, IEC61850, SNMP and ONVIF, allowing external applications to read and write real-time data using a REST (Representational State Transfer) Web service interface. Through Desigo CC driver SDKs, 3rd-party devices using proprietary protocols can also be integrated.

Modular design for your individual requirements

Thanks to its modular concept, Desigo CC integrates one or more disciplines to grow along with your building management requirements. You can flexibly tailor the system to new conditions at any time and gradually integrate new systems. Desigo CC is scalable to suit buildings of all sizes and can also be used for distributed building complexes and campus infrastructures.

Maximizing operational efficiency

Innovative engineering concepts make the Desigo CC building management platform efficient. Its powerful, flexible library concept, online engineering, tests and simulation minimize project commissioning time and system downtimes.

Easy and user-friendly

In Desigo CC's unique user interface design, consistent user-based workflows focus the operator's attention on the task at hand, allowing them to take a closer look guided by the system to the most relevant information. With the same look and feel all disciplines can be controlled from a single location using the multiple screen approach, backed by advanced vector graphics, offering to zoom in from an entire floor to the smallest detail.

A platform growing with your needs

Desigo CC was designed to help you manage and adapt to the changing requirements of your facility and organization. Desigo CC also grows with your business needs, in project size and functionality as well as number of disciplines.

A platform for all building types

Different building types and sizes have different requirements – Desigo CC answers them all (e.g. for schools, airports, industrial production sites, etc.), as well as special market requirements (e.g. pharmaceuticals and fire regulations).
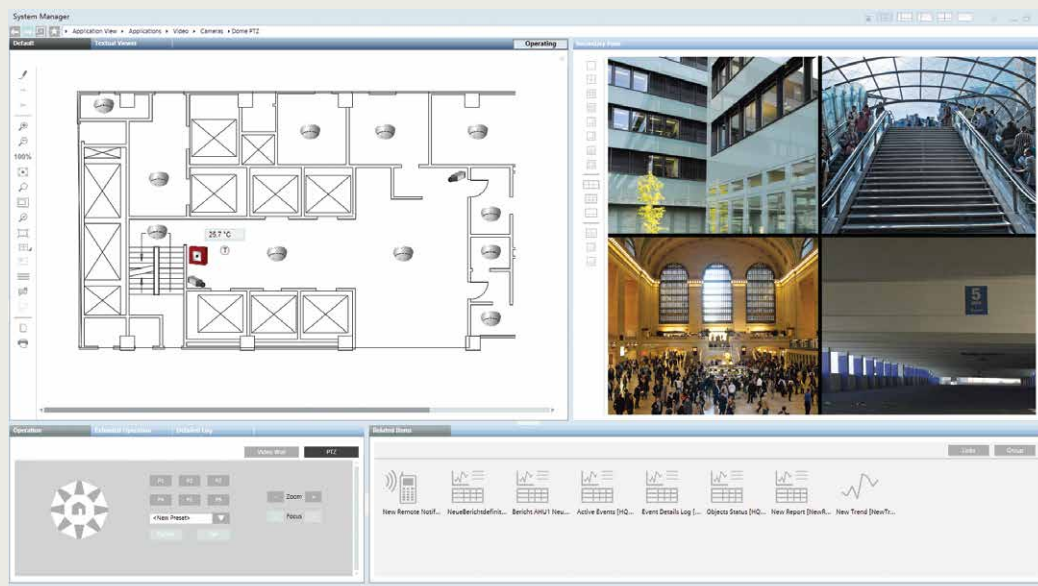
Desigo CC optimizes cost efficiency

Desigo CC meets the highest energy efficiency standards, thanks to centralized HVAC control, and comprehensive analysis of energy consumption against building operations. You can monitor and control all assets and data remotely anytime and anywhere.

Keep your people and facilities safe

Desigo CC has the capability to integrate building management with fire safety and security systems – for example, video surveillance intrusion detection or access control. Thanks to this, Desigo CC can play a critical role in maintaining the safety of your people and your buildings.

Desigo CC's unique user interface design

Desigo CC
Family

Desigo CC routes you to the right decision

Desigo CC's assisted event treatment procedures guide the operator step by step safely through critical tasks and can be configured to be mandatory or optional, depending on the user.

Advanced reporting

Besides standard monitoring and reporting for your facility, you can also benefit from an advanced reporting tool enabling you to take fast action.

Energy and power reports

Desigo CC offers easy-to-use templates for energy and power reports, including load profiles and maximum power report.

Remote access

With Desigo CC you can easily be notified regarding issues, remotely at any time, from any location thanks to remote desktop client, Web clients and mobile app.

Desigo CC Family

Desigo CC
Integrated building management

Cerberus DMS | Desigo CC Compact for danger management | Desigo CC Compact for building automation | Desigo CC Compact for electrical applications | Desigo CC Connect for integration to 3rd party

Desigo CC Compact

Desigo CC Compact is oriented to small and medium sized projects to create the perfect places for its users. Although the name is compact, it includes the unique breakthrough features of Desigo CC and three different software versions to meet customer needs.

Standing on the Desigo CC platform, Desigo CC Compact is adaptable and can expand when it is needed and proves that building management can be at the same time simple and affordable.

The result is, now smaller buildings can enjoy the same building management benefits that large buildings have enjoyed for years.

Optimized

- All needed and satisfactory features are packed in one piece of software
- Capable to run also embedded PC to have less IT and construction cost

Simple

- Simplified user interface makes the operator jobs easier
- With included mobile app feature, building operators can access their site, optimize settings and monitor performance quickly and easily

Flexible

- Desigo CC Compact supports most common protocols for an easy and fast integration of 3rd-party suppliers
- Desigo CC Compact can be extended to Desigo CC to increase the functionality and interactions of the various discipline

Desigo
Control Point

The embedded building management station

Desigo Control Point is a concept designed to simplify operation and monitoring of heating, ventilation, air conditioning, lighting, and shading in small or medium-sized buildings. It facilitates building management by allowing you to access your plants via touch panels, any PC, or any mobile device – wherever you are. Whether it is for maximizing room comfort, monitoring and operating your primary plant or displaying your building data, Desigo Control Point is the right and complete building management station.

Designed to satisfy different user needs

Desigo Control Point is designed to meet the requirements of different users in a building.
Building operation and monitoring are enabled through intuitive touch panels on the control panel or via computer in the office. Through smart devices, users can also access related information anytime from any location.

Simplify your building management tasks

Desigo Control Point has a user-friendly interface, designed to simplify tasks such as alarm management, scheduling, trending, report creation and consumption visualization. The use of native BACnet ensures that third party devices can be integrated and operated in the same intuitive way.

Access your building whenever you want

With Desigo Control Point, you can remotely connect with your building from multiple devices. HTML 5.0 technology allows operation independent of mobile device type, size or orientation.

Operate and monitor your plant easily

Desigo Control Point makes your local plant operation easy. The high resolution capacitive displays provide the ultimate user experience and intuitive operation. Alarming, scheduling and trending, as well as navigation via graphics, are all at your fingertips.
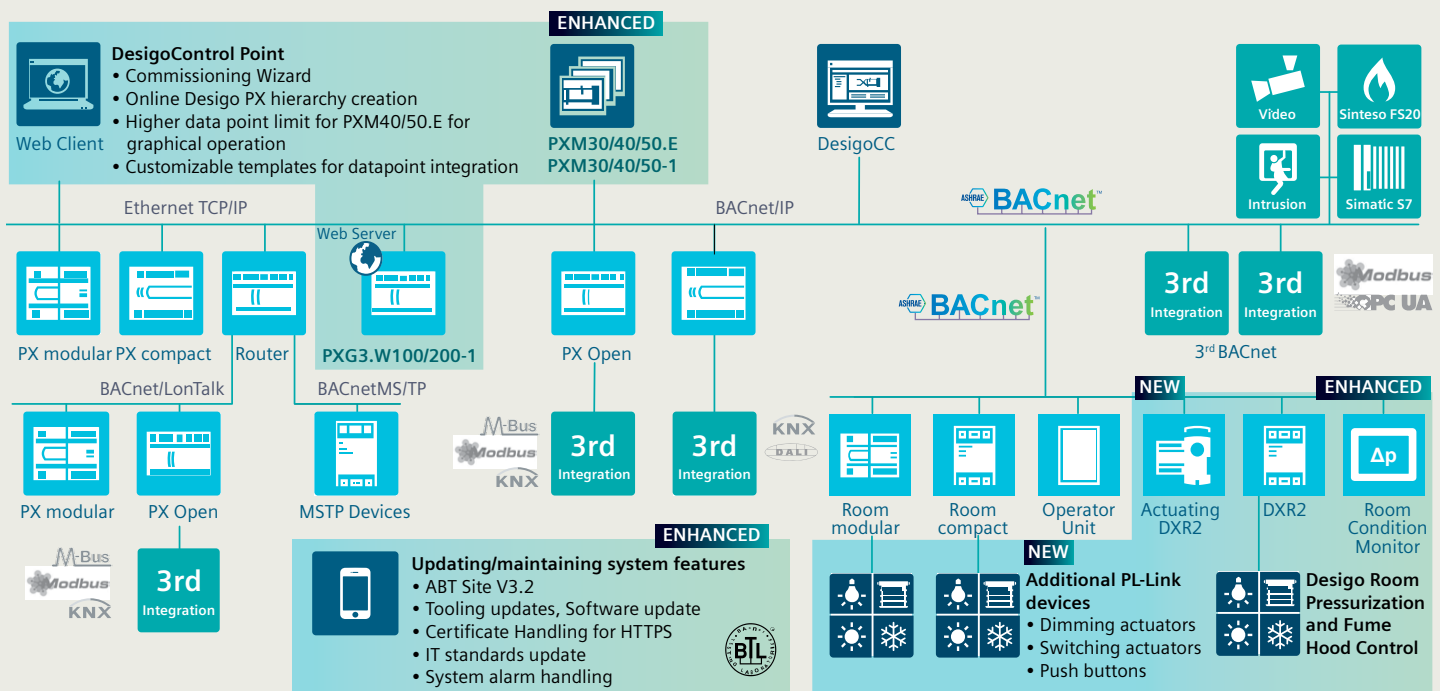
Desigo
Automation Level

The most flexible and scalable plant automation

Desigo offers outstanding scalability and consistent system openness with a wide range of freely programmable automation stations for primary plants. The modular concept makes Desigo automation stations the perfect match for projects of any size. With comprehensive management and system tasks, optimized application libraries and energy-saving functions, Desigo satisfies all your building automation and control needs, both today and in the future.

DesigoControl Point
- Commissioning Wizard
- Online Desigo PX hierarchy creation
- Higher data point limit for PXM40/50.E for graphical operation
- Customizable templates for datapoint integration

Web Client

ENHANCED

PXM30/40/50.E
PXM30/40/50-1

DesigoCC

Video · Sinteso FS20

Intrusion · Simatic S7

Ethernet TCP/IP

Web Server

BACnet/IP

ASHRAE BACnet™

PX modular · PX compact · Router · PXG3.W100/200-1 · PX Open

3rd Integration · 3rd Integration

Modbus · OPC UA

3rd BACnet

BACnet/LonTalk

BACnetMS/TP

ASHRAE BACnet™

PX modular · PX Open

MSTP Devices

M-Bus Modbus KNX

3rd Integration · 3rd Integration

KNX DALI

Room modular · Room compact · Operator Unit

NEW · **ENHANCED**

Actuating DXR2 · DXR2 · Δp Room Condition Monitor

M-Bus Modbus KNX

3rd Integration

ENHANCED

Updating/maintaining system features
- ABT Site V3.2
- Tooling updates, Software update
- Certificate Handling for HTTPS
- IT standards update
- System alarm handling

NEW

Additional PL-Link devices
- Dimming actuators
- Switching actuators
- Push buttons

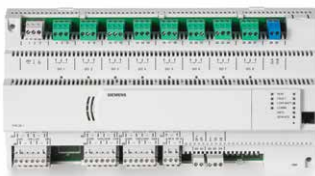**Desigo Room Pressurization and Fume Hood Control**

BTL

Easy integration and flexible extensions

The flexible, scalable and open controllers satisfy all building and application needs. They can be easily adapted to future changes and offer the highest reliability, thus ensuring maximum value.

Application solution libraries for improved efficiency and comfort

Extensive and proven libraries containing tested applications that help significantly reduce engineering and commissioning effort, improve quality of projects, lower operating costs during the entire lifecycle of the building and significantly cut energy consumption. The libraries reflect decades of Siemens experience in the production, distribution and consumption of energy and enhanced efficiency applications.

Desigo PX compact controllers

Freely programmable compact controllers for HVAC and building services are the perfect match for small to medium size plants.

Desigo PX modular controllers

High performance, freely programmable modular automation controllers provide maximum scalability and ensure reliable operation.

Desigo TX-I/O modules

TX-I/O modules for signaling, measuring, metering, switching and positioning can be seamlessly connected to controllers for ultimate flexibility.
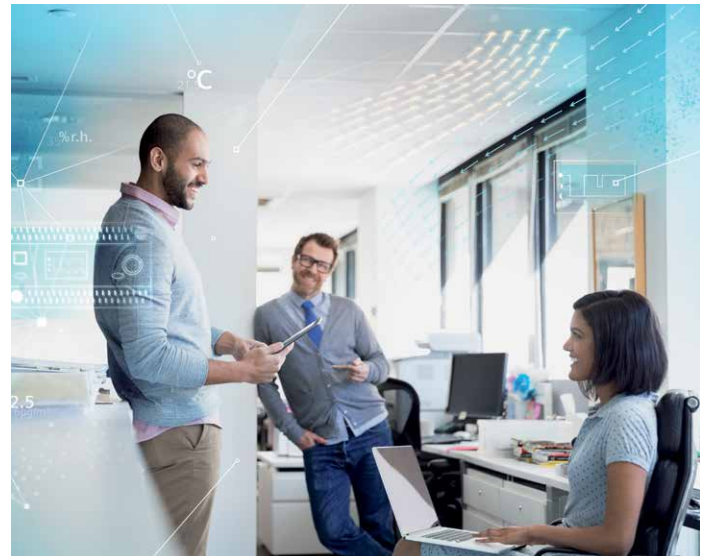
Desigo
Room Automation

Enhanced comfort and higher productivity with Desigo room automation

Desigo room automation is the unique solution to link all room disciplines. It guarantees ideal settings for heating, ventilation, air conditioning, lighting, and shading, thus optimizing comfort as well as productivity in each individual room. At the same time, Desigo room automation can easily be adapted to satisfy any type of room needs, today and in the future, covering the entire scope from single disciplines to completely integrated buildings. In addition, Desigo room automation employs unique algorithms that help you combine optimal comfort and energy efficiency, plus lowest investment and maintenance costs.

All room disciplines under control with Desigo

Heating, ventilation, air conditioning, lighting, and shading have a vital impact on the building, creating perfect conditions for room users, increasing productivity and lowering energy costs.

We spend about 90 percent of our lives indoors. Our comfort, and even our productivity, depend on the features of the buildings and their ability to control indoor air quality, cooling, heating, and lighting. Despite an ever-increasing focus on energy efficiency, our quality of life and our performance are connected to the comfort by the places that surround us. Desigo room automation allows you to balance energy efficiency and people's productivity in a room. Productivity can be greatly influenced through personalized comfort conditions.

Desigo room automation offers innovative applications to perfectly match the energy efficiency and comfort requirements of the room while increasing the productivity of the room users. You can increase your property's performance and value while lowering operating costs. Learn more about the unique way in which Desigo room automation uses innovative solutions to reduce energy consumption to the required level while meeting individual comfort requirements.

Compact room automation stations DXR2.E...

Modular room automation station PXC3...

Desigo: a flexible system that adapts to your needs

In building operation today, maximum flexibility has become a key argument for investors and tenants. The Desigo building management platform can easily adapt to changing requirements, offering optimized usability and comfort, and improving performance in a perfect place.

BACS efficiency classes – EN 15232

		Thermal energy	Electrical energy
High energy performance BACS and TBM	✔ A	0.70	0.87
Advanced BACS and TBM	B	0.80	0.93
Standard BACS	C	1.00	1.00
Non-energy-efficient BACS	D	1.51	1.10

Efficiency factors

BACS Building Automation and Control System
TBM Technical Building Management System

An intelligent building automation system creates the ideal framework for meeting the requirements for efficiency class A under European Standard EN 15232, and other similar global standards. This allows offices to save up to 30 percent thermal and up to 13 percent electrical energy compared to efficiency class C.

1. Building management – central and convenient

The Desigo CC integrated building management platform allows you to control and operate one or multiple disciplines like HVAC, lighting, shading, fire safety and security from one central location. Its modular, user-friendly software makes operation easy and intuitive. The Desigo Control Point embedded building management station allows easy operation and monitoring, creating perfect building conditions from anywhere.

2. Desigo™ Room Automation – enhanced comfort and productivity

Desigo Room Automation integrates all building disciplines – from heating, ventilation and air conditioning (HVAC) to lighting and shading. This allows you to lower your energy consumption and costs while increasing room comfort.

Lower energy consumption
Thanks to the energy-saving functions and user targeting, the Green Leaf symbol increases energy efficiency through the energy-saving process.

Lighting
The lighting level is automatically adjusted to match the time of day.

Perfect shading
Blinds are optimally adjusted to allow the use of natural light, minimize glare and protect from the heat and the cold.

3. Plant automation – flexibly scalable

The Desigo automation stations and operator units efficiently control and monitor your building plants using a variety of energy-saving functions for energy production and distribution. Data is exchanged with room automation to make sure energy is supplied only when needed to heat, cool or ventilate a room. This allows the air volume flow to be optimized based on demand and the energy-efficient operation of your ventilation and air conditioning to be enforced. At the same time, comfort control ensures that temperature, air quality and humidity limits are not exceeded. If inefficient operation occurs, you will be notified automatically via the Green Leaf symbol on the management platform or room units.

Energy Efficient
Applications

Wide variety of applications for enhanced energy efficiency

Using Desigo™, heating, ventilation and air conditioning plants as well as other building systems, such as lighting and shading, can be controlled and monitored flexibly and based on demand. Intelligent applications – tested under practical conditions – prevent unnecessary energy usage. And since the Green Leaf of the operating unit indicates the plant's current state of efficiency by changing its color, room users can take action and save energy. At the Desigo CC management platform level, the Green Leaf indicator in the plant viewer allows informed decisions on how to operate your building economically and ecologically. This way, the use of innovative applications sustainably cuts building operating costs, preserves energy resources and lowers CO_2 emissions, thus saving money and protecting the environment.

- Added plant value due to the use of energy-saving, modern equipment
- Contribution to meeting the requirements of EN 15232 in the highest efficiency classes
- Room users save actively energy thanks to the Green Leaf
- Leveraging the energy-saving potential and support for economical and ecological building operations thanks to the Green Leaf indicator
- Sustainable reduction of energy and building operating costs

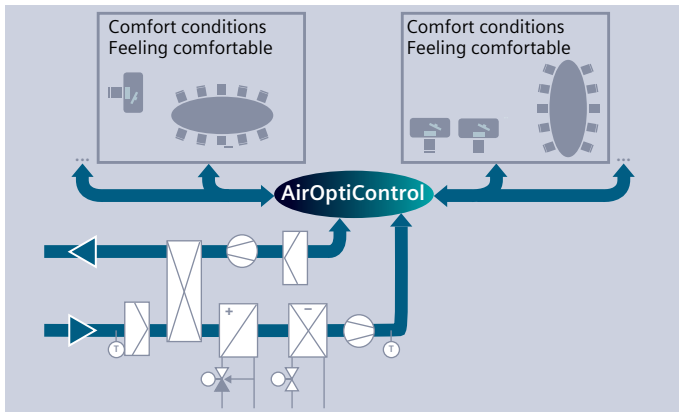## RoomOptiControl: perfect room climate, optimized energy usage

Use: active energy management by room users

With Desigo Room Automation (RA), the room user gets actively involved in building energy management. The RoomOptiControl energy efficiency function identifies unnecessary energy usage and indicates it on the room operating unit. When the Green Leaf's color is green, the system ensures energy-optimized operation. If the color changes to red, there is energy saving potential – for example when blinds are closed and lights are on. By pressing on the symbol, room control returns automatically to energy-optimized operation. This way, the room user is enabled to easily stop the waste of energy – with no need for expert knowledge. Important: The intelligent RoomOptiControl function ensures a comfortable room climate, good air quality, the right room temperature level and optimum lighting, even in energyoptimized operation.

- Room climate for productive, healthy working environment and well-being of room users
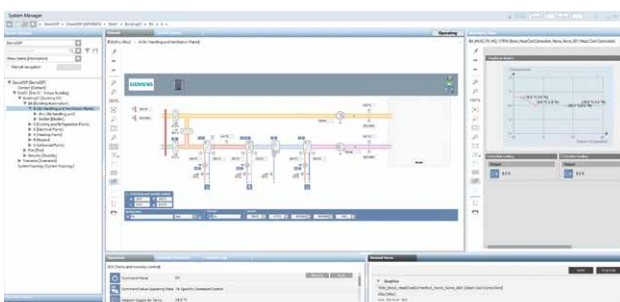- Up to 25 percent energy cost savings and contribution to environmental protection

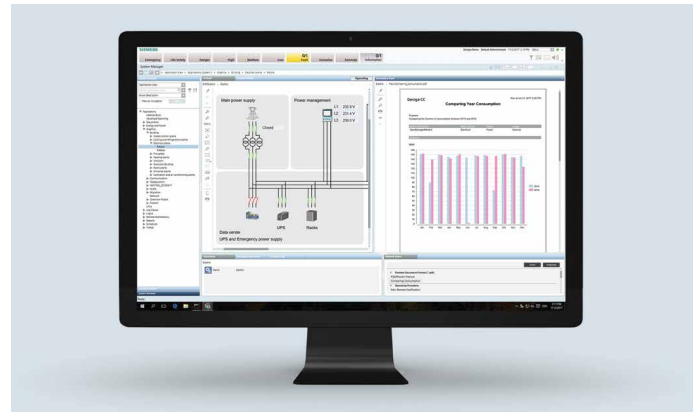# AirOptiControl: optimized volumetric air flow saves costs

Use: ventilation and air conditioning

AirOptiControl optimizes the volumetric air flow, thus providing an excellent basis for energy-efficient operation of ventilation and air conditioning systems. At the same time, comfort control ensures adherence to the boundaries of temperature, indoor air quality and humidity. The innovative, modular designed application offers a number of function variants for the control of air handling plants or for optimum fan operation. Demand control can be varied depending on the design of the VAV (variable air volume) controls installed in the plant. AirOptiControl is suited for individual room systems or several zones and also controls basic load heating.

- Energy costs reduced by up to 50 percent in comparison with constant pressure control systems thanks to unique energy efficiency mode for demand-based air volume control
- Full adherence to the required temperature, indoor air quality and humidity levels
- Existing plants can be upgraded while ensuring short payback times

Specific visualization options for managing and monitoring the energyefficient plant operation with Desigo CC.

Quick and easy presentation of energy-related information

Use: analysis and optimization of building's energy balance

With Desigo CC, energy-related information can be delivered quickly and straightforwardly. Using energy efficiency coefficients, similar types of buildings can be compared with each other. Facility managers are thus enabled to keep a close watch of total energy usage, energy costs and CO_2 emissions. After entering the building and energy data, a detailed analysis of the relevant building can be made while giving consideration to the number of heating degree days, if the meter readings for the same period of time (minimum 36 months) are available.

Based on historical data, the system also delivers a consumption forecast for the next 12 months, which becomes increasingly accurate as data are continually recorded. When the calculation is completed, a report can be printed.

- Comparison of energy-related data between different types of buildings
- Presenting options for cutting building costs and reducing the impact on the environment

Graphic evaluation of energy-related data on the management platform Desigo CC
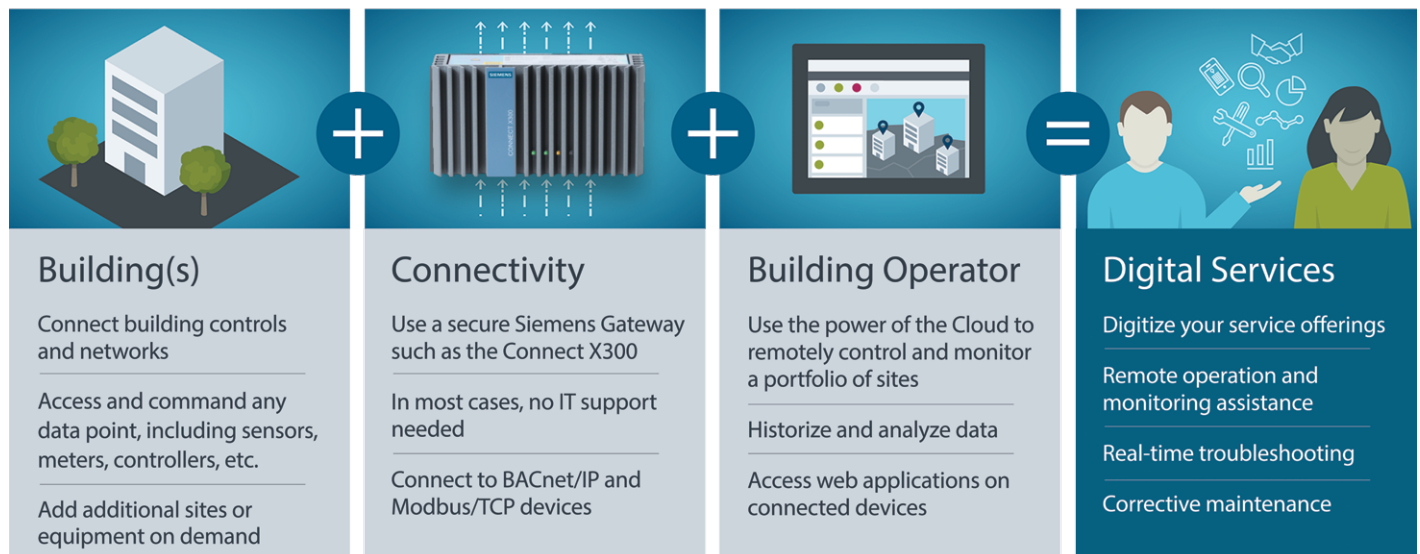
Building Operator

Cloud application for remote monitoring of your buildings

Building Operator is a secure cloud application which provides remote monitoring of any sites and equipment. Resolve your customers' issues before they become aware of them. Building Operator allows service providers to remotely monitor, operate and troubleshoot small to medium-size buildings. Available as a SaaS solution, Building Operator provides real-time building status and operational updates. This makes corrective maintenance decisions possible – even on the go.

Building(s)

Connect building controls and networks

Access and command any data point, including sensors, meters, controllers, etc.

Add additional sites or equipment on demand

Connectivity

Use a secure Siemens Gateway such as the Connect X300

In most cases, no IT support needed

Connect to BACnet/IP and Modbus/TCP devices

Building Operator

Use the power of the Cloud to remotely control and monitor a portfolio of sites

Historize and analyze data

Access web applications on connected devices

Digital Services

Digitize your service offerings

Remote operation and monitoring assistance

Real-time troubleshooting

Corrective maintenance
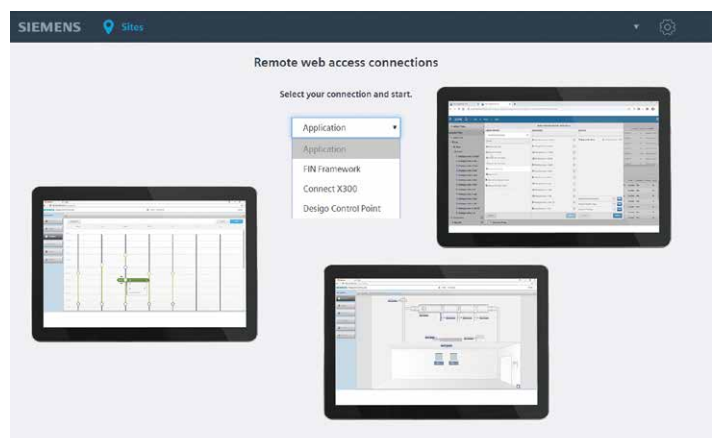
Desigo Control Point

Remote monitoring and commanding
- Access any site and control remotely
- Save time and travel expenses by digitalizing your service offering
- Arrive on site prepared with the relevant information and equipment needed

Simple Operations
- Fast installation and commissioning
- Access with most HTML5-compatible smart devices
- No training needed

Secure connectivity
- Access BACnet/IP and Modbus/TCP equipment
- Remote configuration to provision the data to Building Operator
- Encrypted data transmission

Multi-sites
- Simple overview of all connected sites from one place

Smart Infrastructure intelligently connects energy systems, buildings and industries to adapt and evolve the way we live and work.

We work together with customers and partners to create an ecosystem that intuitively responds to the needs of people and helps customers to better use resources.

It helps our customers to thrive, communities to progress and supports sustainable development.

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