

SIEMENS



Desigo CC

What's new in Version 3.0

Copyright Notice

Notice

Document information is subject to change without notice by Siemens Switzerland Ltd. Companies, names, and various data used in examples are fictitious unless otherwise noted. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Siemens Switzerland Ltd.

All software described in this document is furnished under a license agreement and may be used or copied only in accordance with license terms. For further information, contact your nearest Siemens representative.

© Siemens Switzerland Ltd, 2017

Credits

Desigo™, Desigo CC™, Cerberus DMS, Cerberus PRO, and Sinteso are registered trademarks of Siemens Switzerland Ltd. Other product or company names mentioned herein may be the trademarks of their respective owners.

Edition: 1 August 2017

Document ID: A6V11273574

About This Document

Purpose

This manual describes the enhancements users can expect in Desigo CC version 3.0 and gives the reader an overview of the new system characteristics compared to the previous version 2.1.

Target Audience

Sales Representatives are the first contact to the customer's buying center who establish the relationship. During pre-sales, they present the system to potential customers, focusing on unique selling propositions and benefits in order to acquire the project.

Sales Engineers provide pre- and post-sales technical advice and high-level support on product applications and solutions. They are often the key point of contact for clients, answering questions, providing technical advice and design solutions. They have extensive knowledge of the products as well as the application and network environments.

End Users are the customer representatives that use the software. They are interested in knowing what changes are available when deciding whether to upgrade their software, and interested in knowing what new features are available after an upgrade.

Liability Disclaimer

We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcome.

Table of Contents

What's New in Desigo CC Version 3.0	4
General Enhancements	5
Supporting Legacy Migration	5
Scripting and scripting libraries	6
Distributed system configurations	7
Long term storage and archiving.....	8
Support for validated environments.....	9
More and Enhanced Open Interfaces	10
Meter Management	11
Energy and Power Management.....	12
Energy & Power Reports	13
New Windows Versions.....	14
Enhanced Graphics.....	15
Engineering Efficiency.....	15
Online Help and Documentation	15
Further Enhancements	16
Building Automation Enhancements	17
Desigo System Enhancements.....	17
Desigo Room Automation.....	17
Apogee System Enhancements.....	18
Fire Safety Enhancements	19
Fire subsystems, EN	19
Fire subsystems, UL.....	20
Extended Support for Fire.....	20
Security Enhancements	22
Subsystems Supported	22
Extended Support for Security	23
Power Enhancements	24
Subsystems Supported	24

What's New in Desigo CC Version 3.0

Desigo CC V3.0 is more than just an update. In fact, this new version features new and powerful functionalities, available in user-friendly applications, thus providing an easy and complete control of your facility.

This document presents the new version 3.0 features compared to previous V2.1. Each feature is then briefly discussed to illustrate characteristics, advantages, customer value as well as application examples.

For complete information about Desigo CC V3.0, refer to the *System Description* document (A6V10415500) and the latest technical documentation available on the Desigo CC installation media.



NOTE:

The field systems supported by Desigo CC V3.0 and mentioned in this document may not be available in all regions.

General Enhancements



Supporting Legacy Migration

Characteristics

In addition to the already supported Apogee Insight migration, Desigo CC now facilitates migration from Desigo Insight, MM8000 and Siclimat-X installations. Existing customers can benefit immediately from a one-time, discounted offering. There are two discount policies that can be applied based on the type and version of the legacy product to be migrated.

Benefits

- Protect investment by migrating the latest technology
- Easy-to-use user interface and reporting, increases efficiency for operators
- Increased comfort, safety and security thanks to higher multidiscipline capabilities of Desigo CC
- Better response and greater accuracy when handling alarms under stressful conditions

Customer Value

Easy and gentle migration from Desigo Insight, Apogee Insight, Siclimat-X and MM8000 to state of the art technology with minimum effort



Scripting and scripting libraries

Characteristics

Desigo CC V3.0 provides a Script Editor to create sophisticated and powerful script programs based on Javascript language. Scripts can be executed on demand or automatically by the system based on trigger conditions. Mathematical, programmable and binary logic conditions

- Commanding of Desigo CC system objects
- Reading attributes of Desigo CC system objects
- Subscription to value changes
- Read/write text files and loading external DLLs
- Creation of libraries of predefined script algorithms

Benefits

Flexibility to program the behavior of the system to meet project specification requirements

Customer Value

Customize/extend the behavior of the system depending on specific needs and perform logic or mathematical functions at the management station.



Distributed system configurations

Characteristics

Desigo CC V3.0 supports distribution over multiple servers. Servers are connected to each other so that a user can seamlessly navigate the system independently of the server they are connected to.

Three types of distributed deployment are supported:



- **Fully meshed:** each server is logically connected to all others. Clients can see all objects in all servers. Servers can be geographically distributed.



- **Segmented:** A specific fully meshed configuration where all systems run on the same server. Allows building of larger systems on one single server or segmentation of disciplines or subsystems.



- **Hierarchical:** front servers are logically connected to one head server. Clients connected to the head server can see all objects, clients connected to front servers can only see local objects. For campus or inherently hierarchical applications.

Benefits

- Very large systems can be covered by Desigo CC
- Systems can be easily separated by location or discipline
- For multidiscipline configuration in UL markets, the fire system can be installed on a UL listed computer, while other disciplines can be installed on regular hardware.
- Distributed configuration have higher robustness: failure of one server only affects a portion of the overall system.

When already existing systems are merged to one distributed system, then they will be automatically visible to each other.

Customer Value

Distributed configurations have higher robustness: failure of one server does not affect other system servers. It is also possible to seamlessly operate the management stations of multiple buildings while maintaining their independence in the case of future separation.



Long term storage and archiving

Characteristics

With Desigo CC V3.0, the capability of the historic database infrastructure has been substantially improved. It is now possible to configure multiple on-line storages.

Long-term storage provides extended and flexible online availability for the historic data collected by Desigo CC. Data is collected in different storages depending on the rate of change, segregation and online needs

- The single on-line storage of Desigo CC V2.1 will be extended with multiple flexible additional storage units, providing a virtually unlimited space for long term on-line data availability
 - Archiving, i.e. off-line data storage with on-demand re-mounting is provided as an option.

Benefits

- Historic data can be maintained online for very long time
- Storage can be optimally tuned for different recording frequencies
- Storage can be segregated by discipline/scope to cover specific requirements
- Seamless access to data: reporting, advanced reporting and log viewer searches work across storages
- Data archiving supported, provides a less expensive solution when long term on-line data availability is not required
- Systems can be engineered to ensure compliance with data privacy laws



Support for validated environments

Characteristics

Desigo CC V3.0 provides Pharma and Life Sciences customers with the ability to establish portions of their building automation system compliant to international regulations, such as US FDA 21CFR Part 11, GMP Annex 11 or similar.

Elements:

- Validated Objects - Engineer/configure, operate and monitor certain critical objects in a specific manner, compliant to the pharmaceutical regulatory requirements. Users can be required to re-enter passwords or enter comments before commanding or modifying a validated object.
- Audit Trail - Track the system and user activity of critical objects in an operating and engineering audit-trail that is retained and protected from tampering.
- Access Security – Restrict the ability of a set of users to make changes to critical objects without either identity confirmation or additional permissions.
- Reporting - The ability to retrieve data stored data in various graphical or tabular report formats.
- Long-term Archiving of data – Provide a means to export recorded trend and audit trail data while retaining data integrity and long term accessibility.

Process:

- Record changes in conditions – Monitor and record variability in temperature and humidity
- Track changes made to the system – Monitor and record changes made to validated objects, such as set points, trends, and schedules.
- Prevent unauthorized changes – Require proper authorization to change settings of validated objects.
- Report recorded data – Output into industry standard graphs and tables as required by internal and external audits
- Store and protect data – Keep years worth of recorded data safe, protected from alteration, and accessible to users

Benefits

- Reliable and safe environment, norms compliant
- All pharma features are provided with a single product
- No need to buy a dedicated system on top of the building management

Customer Value

Validation is made on the object level – it is not necessary to validate a complete Desigo CC installation, only validate what is required. With validation in Desigo CC, the customer can:

- Cover all building disciplines and sizes
- Record and track changes made to the system
- Prevent unauthorized changes
- Worldwide availability for multi-national enterprises



More and Enhanced Open Interfaces

Characteristics



BACnet Standard Revision

Desigo CC supports BACnet protocol Revision 1.13, certified by BACnet Testing Laboratory as BACnet Advanced Workstation Software (BTL B-AWS).

In Addition, on sites with Desigo Automation Systems, EDE Import capabilities have been extended to support hierarchical Views and Alias names. BACnet auto discovery provides support for complete acquisition of engineering data for all BACnet devices, including semantic aggregations and views.



IEC 61850

Desigo CC supports native IEC61850 communication for electrical substation automation systems, such as power meters, power quality meters and circuit breakers

Benefits

Desigo CC is an open platform supporting standard protocols such as BACnet, Modbus, IEC 61850 and OPC, all of which make it possible to connect and integrate 3rd party subsystems in a single management and control system. In addition, Desigo CC can exchange data with external hosts over the Web Service interface based on REST software architecture.

Customer Value

Desigo CC can easily interoperate with subsystems such as 3rd party fire panels (where allowed by code), security panels, automation controllers, meters and so on, equipped with a standard protocol.

This enables customers to preserve their existing investments over a long time, and to expand/update their system by adding new devices and subsystems.



Meter Management

Characteristics

This feature provides specialized engineering and management functionality for devices identified as meters, such as:

- Meter roll-over and exchange support
- Engineering Unit conversion
- Irregular meter reading detection
- Media and Media Group (Sub-Metering) classification
- Trended Object assignment

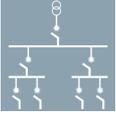
Benefits

Enhanced meter device event notification

Early detection of meter reading abnormalities

Increased granularity for reporting with Media and Media Group classification

Apply corrections to metering history



Energy and Power Management

Characteristics

Desigo CC V3.0 power management features allow an insight into electrical power distribution and an optimization of its operation. Supported by “Meter Management” and “Energy & Power Reports”, it provides extensive coverage of power management applications in buildings and supports comprehensive and modular multi-discipline system offerings.

Energy and Power Management in Desigo CC focuses on three elements – Integration, Transparency & Awareness and Optimization.

Integration allows the integration of building’s electrical system elements into the management system. This provides the ability to collect relevant data and to control elements of the electrical power system.

Transparency and awareness allows real time insight and historical reporting using specialized reports, as well as support for power quality fault notifications.

Optimization enables you to reduce the cost of energy and reduce CO2 footprint by maximizing the utilization of local electricity production and storage infrastructure.

Benefits

- Better energy transparency thanks to energy and power reports for future improvements and maintenance
- Ability to identify, localize and prevent potential electrical power abnormalities
- Identification of power quality issues
- Enhanced operation efficiency via an integrated “multi-discipline” system



Energy & Power Reports

Characteristics

A new reporting engine can access trend and event data from the database and provide operational workflows for report delivery for instance for energy, power, maintenance.

In this release, Desigo CC V3.0 provides energy and power reports, including easy-to-use report templates for:

- **Comparing Consumption Report** including comparison with history data
- **Consumption Report** used for determining the energy consumption per node and/or sub node for selected time period
- **Load Profile Report** used for determining the power demand over selectable time range.
- **Max Power Report** used for determining the size of power peaks and their occurrence time

Reports can be exported in a range of formats including:

- Microsoft Word .docx
- Microsoft Excel .xlsx
- Microsoft PowerPoint .pptx
- PDF
- OpenDocument Presentation
- OpenDocument Spreadsheet
- OpenDocument Text
- PostScript
- Spudsoft Excel

Customer Value

- Data stored locally
- Ready-to-use templates
- Flexible report customization



New Windows Versions

Characteristics:

The Desigo CC V3.0 Server, FEP, and Installed Clients run on:

Windows Versions

- Windows 7 Pro 64-bit
- Windows 10 Pro & Enterprise
- Windows Server 2012 R2 64-bit
- Windows Server 2016 64-bit

Web and Windows App Clients run with MS Internet Explorer IE 11

SQL Server versions: SQL server 2012, 2014 and 2016 Express, Standard and Enterprise

Benefits

End customer and engineer

- Increased cyber security thanks to up-to-date security patches
- Support of new operating systems and hardware



Characteristics

Enhanced Graphics

In Graphic Commands

It is possible to command Desigo CC objects directly from the graphics with no need to open other windows or panes.

The following commands are supported:

- Buttons (e.g. to exclude/isolate a fire zone)
- Slider (e.g. to change the set-point of a room)
- Text boxes (e.g. to change pre-sets of a video camera)
- Dropdown list (e.g. to change the energy profile of a room)
- Radio buttons (e.g. to switch on/off a fan)

In-graphic command capabilities allow enhancing standard graphic symbols in Desigo CC libraries. In Graphic commands can also be added on the fly to project graphics.

Customer Value

Faster access and execution of commands from graphics via a more intuitive interface.



Characteristics:

Engineering Efficiency

The Desigo CC V3.0 increases engineering efficiency by improving Installation, Engineering and Commissioning tasks

- Options to run a semi- or fully automatic installation
- Protection against overwrite of existing data in case of re-importing data
- Bulk configuration for mass changes

Benefits

- Reduce Engineering time and effort
- Enhanced User Experience



Characteristics:

Online Help and Documentation

Desigo CC V3.0 provides a new online help concept as well as a new online help delivery mechanism in a modern web-based online help and documentation system.

- Topics organized by workflows
- Simultaneous search content from multiple sources

Benefits

A more modern approach to documentation

- Easier access to information
- Better organization of information



Further Enhancements

Characteristics

Event Treatment

- Slim Summary Bar: when the Summary Bar is collapsed it will still show a compact version of the Event Category indicators
- 1-click treatment: based on the configuration of the client profile it will be possible to make the event commands (i.e. acknowledge, reset, silence, un-silence) accessible from the Event List with 1 click, that is, without the need to select the event first.
- Event Text as Event List column: event text information sent by the panel/controller will be displayed as individual column in the Event List (while in previous version can be shown on demand for one event at the time).
- Event time display in millisecond (switch in profile)
- Event list customization for UL profiles: With the exception of cause, path and source the event list can be customized

Remote Notifications (RENO)

RENO messages can be sent not only when a new event comes but also when the status of the event or the status of event source status changes.

- Possible selections are:
 - new event comes
 - event acknowledged
 - event reset
 - event source back to Normal
 - event closed (disappears from the Event List)

Graphics

AutoCAD import supports the possibility to select a sub-part of the CAD picture while the file is being imported in the Desigo CC graphic engine.

Web Services

A new set of Web Service interfaces will allow third party consumers to access the data from the Historical Database of Desigo CC.

Value Smoothing

Value Smoothing optimizes the communication traffic for polled drivers, such as S7 and Modbus. As a side effect it also optimizes the historization of polled value.

Building Automation Enhancements



Characteristics

System support of Desigo V6.1. Desigo CC V3.0 is compatible with:

- New expandable PX Compact controller (PXC24, PXC36) with Island bus
- PX controllers with FW \geq 2.37
- Embedded access to Desigo Control Point (e.g. PXG3.W200)

The newly added feature Graphics generator for the Desigo CAS library significantly reduces the engineering effort required for graphics creation.

Benefits

Investment protection for new jobs, extensions and migrations
Substantial reduction of engineering effort substantially for graphic creation.

Customer Value

Continues the strong legacy of backwards compatibility and investment protection provided for the Desigo system



Characteristics

System support of Desigo V6.1. Desigo CC V3.0 is compatible with:

- New DXR2.E17Cx devices, equipped with Room Pressurization & Fume Hood Control applications
- Heat pump application type
- Scheduler/Calendar object types for DXR2/PXC3
- Multilanguage support for TRA and PX (only SDU library data)

Benefits

Full support of the Desigo Room automation in a single integrated Desigo CC operating environment.

Customer Value

Take advantage of all Desigo Room Automation features.



Apogee System Enhancements

Characteristics

The following building management subsystems are supported with Desigo CC V3.0:

- APOGEE BACnet FW revision 3.2.4 – 3.5
- APOGEE P2 FW 2.8 in PXC, MBC, and MEC controllers
- New FLN devices, including:
 - RDY2000BN thermostats
 - DXR with Chilled Beam applications
 - DXR with Heat Pump applications
 - DXR with Room Pressurization applications
 - DXR with Fume Hood applications

Other new features include:

- Cross-trunk is supported allowing sharing of point value information between BACnet and P2 networks
- 20 new Apogee P2 panel reports are included, providing Desigo CC versions of commonly used Apogee Insight reports.
- Max Flow values for PTECs and BTECs can be commanded within their full range.

Benefits

The full range of Apogee field panel controllers are supported by Desigo CC.

Customer Value

Continues the strong legacy of backwards compatibility and investment protection provided for the Apogee system

Fire Safety Enhancements



Characteristics

Fire subsystems, EN

Native support of fire safety subsystems

- Sinteso FS20 V5.2 and V6.0
- Increased number of supported devices (e.g. fire dampers)
- Support of AVC (alarm verification concept) with visualization of T1 (attendance check) and T2 (investigation time) timers (new)

Support of legacy fire safety subsystems

- Algorex/Synova via NK823x for C-bus and Cerloop (new) networks
- STT11/STT20 via NK823x in a Cerloop network (new)
- DF8000 I/O modules via NK823x I2C-bus (new)
- Consistency checks to ensure same configuration in Desigo CC and on fire control panels

3rd Party Fire integration

The integration of the following 3rd party systems is supported by specific extension modules:

- Aguilera AE/SA-Cx, fire detection system
- Advantronic AD300, fire detection system
- Fibrolaser III, linear heat detection system
- Sensitron Multiscan, gas detection system

Benefits

All Siemens fire systems of the last generation can be supervised with Desigo CC V3.0. With the newly supported subsystems Desigo CC V3.0 is also suitable to supervise legacy fire systems and an increasing number of 3rd party systems, enhancing them with the functionality available in Desigo CC.

Customer Value

Higher compatibility and more connectivity options for new and existing installations.



Fire subsystems, UL

Characteristics

Native support of fire safety subsystems

- Desigo Fire Safety Modular UL MP1.0 (new) Desigo Fire Safety UL MP2.2 (new)
- Fire Finder XLS MP12 (new) and MXL
- Up to 4 XNET networks connected on a single PC (new)
- Pseudo point control (new)
- Simplified user interface for fire operators (new)
- UL864 Listed for command & control
- ULC-S527/ULC-S559 Listed for command & control
- UL2572/ULC-S576 Listed for monitoring of MNS

Benefits

All Siemens fire systems of the last generation can be supervised with Desigo CC V3.0. With the newly supported subsystems Desigo CC V3.0 is also suitable to supervise legacy fire systems, enhancing them with the functionality available in Desigo CC.

Customer Value

Higher compatibility and more connectivity options for new and existing installations.



Extended Support for Fire

Characteristics

Desigo CC V3.0 provides additional functionalities to improve the coverage of standard and advanced projects with Fire.

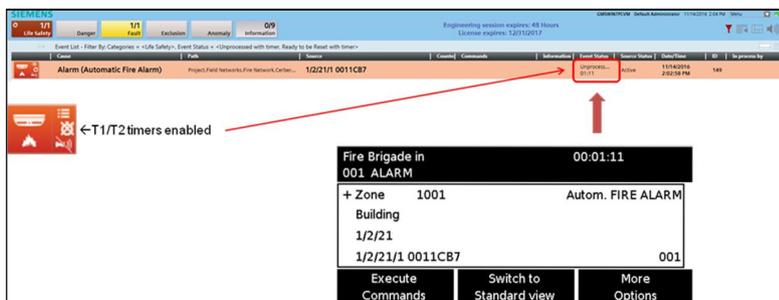
T1/T2 timers:

FS20 EN is having a so-called Alarm Verification Concept (AVC) and it consists of two timers;

- T1 or "attendance check": time to acknowledge the alarm
- T2 or "investigation time": time to verify if this is a real alarm or not

When T1/T2 is elapsed the fire brigade is automatically informed by the fire panel. Desigo CC visualizes the timer status in the Summary Bar and displays the timer countdown in the Event List (in column Event Status).

FS20 UL version is having additional timers that will be supported as well: MNS1 timer, MNS2 timer.



Pseudo Points control¹

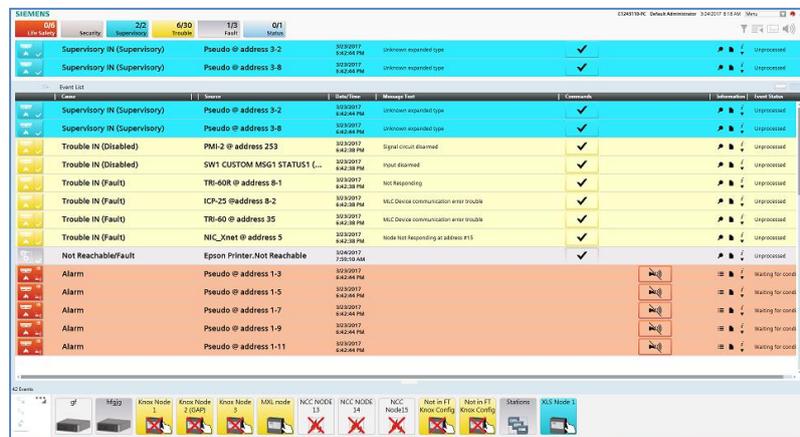
Pseudo Points for XLS and MXL panels can be commanded from Desigo CC UI (also from the new Macro Viewer Application)

Up to 4 XNET networks connected on a single PC¹

With Desigo CC V3.0 it is possible to mount and use up to 4 cards per PC with the beneficial result of reducing the need of buying additional UL/ULC compliant PCs.

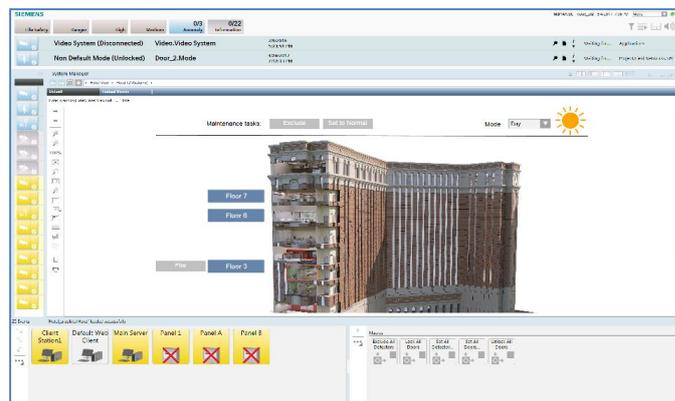
Node Map

A new application called Node Map provides an immediate and clear overview of the status of the system by displaying one big icon for each panel that has been imported into Desigo CC. Each panel icon informs about available alarms generated by that panel, status connectivity diagnostic, possibility to rename and group panels and request/transfer ownership (for UL). Node Map Application is automatically populated once the configuration file of the panel is imported into the Desigo CC database.



Macro Viewer

The new Macro Viewer Application simplifies the access to configured Desigo CC macros by displaying one big icon button for each of them (according to the security rights of the logged-in user). By clicking on the icon button the related macro will be executed.



Benefits

Simpler UI for Fire Operators to avoid the need of advanced training.

¹ Feature delivered together with the Fire UL package, dedicated communication will be created

Security Enhancements



Characteristics

Subsystems Supported

Desigo CC V3.0 provides native support for security sub-systems in their current released version. The following security subsystems are supported:

Video:

- Siveillance VMS200 embedded
- Siveillance VMS50 (new with 2017R2)
- Siveillance VMS100
- Siveillance VMS200
- Siveillance VMS300
- Milestone XProtect Essential+ (new with 2017R2)
- Milestone XProtect Express+ (new with 2017R2)
- Milestone XProtect Professional+ (new with 2017R2)
- Milestone XProtect Expert
- Milestone XProtect Corporate
- Newly supported: 2017 R2 (11.2a)

Access control:

- SiPass integrated 2.7 (new, with direct interface with SiPass removing the need of SX-API external gateway)
- SiPass integrated 2.65 is no longer supported in Desigo CC

Intrusion:

- SPC 3.6.5, 3.6.6 (via EDP or FlexC protocol)
- SPC 3.7.1 (new, via FlexC protocol)

Support of legacy security systems:

- Intrusion: Sintony via NK823x (new)

Benefits

Desigo CC V3.0 enables minimization of engineering as it natively integrates the latest versions of the most important physical security disciplines: access control, intrusion and video surveillance.

With the newly supported Sintony subsystem Desigo CC V3.0 is also suitable to supervise a legacy intrusion system, enhancing it with the functionality available in Desigo CC.

Customer Value

The entire physical security of a facility can now be supervised and controlled from a single operating station. This provides a global overview and control overall security issues. Suitable for high-risk security applications.

Examples

Banks, data centers, underground and railway stations, airports, shopping malls, pharmaceutical factories and facilities, industrial premises.



Extended Support for Security

Video

- New commands to export video clips (.mkv)
- OSD Enhancements to start recording and export clips from video display
- VMS Configuration Change Notification
- Increased system limits to support up to 1000 cameras

Access Control

- Support of new SiPass Web Service Interface for SiPass v2.7
- Auto discovery with View Structure and Function assignment
- New Access Control commands for Area and Door Control
- Card Holder Information in Event List (i.e. card-holder ID and name)
- SiPass Server Events from SiPass Audit Trail
- SiPass Web Service Interface
- Up to 5 SiPass Servers per driver
- Increased system limits to support up to 1000 doors

Intrusion

“Ready to Arm” workflow for SPC and Sintony: before re-arming again the SPC and Sintony panels it is now possible to check whether or not all contacts are “closed”. Desigo CC V3.0 offers a new feature to start a test before arming the panel in order to prevent the system generating unwanted visual and acoustic alarms. All “open” contacts will generate in the Event List an Information event so that the operators can see where to act (e.g. close the windows in the meeting room 304).

Benefits

Enhanced integrated support for security in the Desigo CC operating environment.

Power Enhancements

Subsystems Supported

Characteristics

Power management allows insight into electrical energy and power distribution as well as optimization of its operation. In combination with meter management and reports for energy and power, Desigo CC can offer a comprehensive and modular multi-discipline system.

- IEC 61850 protocol integration for power quality events capturing
- Generation of sub-meter hierarchy
- Illustration of electrical distribution
- Ability to generate customized energy and power applications via scripts

Benefits

- Clear and detailed transparency on electrical energy, power distribution and power quality events
- Simplified operation of sub-disciplines due to a harmonized single management-system
- Flexible offering as stand-alone or integrated system

Customer Value

Power systems of a facility can now be supervised and controlled from an integrated operating station.

Issued by
Siemens Switzerland Ltd
Building Technologies Division
International Headquarters
Gubelstrasse 22
CH-6301 Zug
Tel. +41 41-724 24 24
www.siemens.com/buildingtechnologies

© Siemens Switzerland Ltd, 2017
Technical specifications and availability subject to change without notice.