Regin Systems

Energy-efficient solutions for Building Automation

≋REGIN

THE CHALLENGER IN BUILDING AUTOMATION

It is time to use energy more efficiently

Nearly 40% of the total energy consumption in Europe* is related to buildings. Two thirds of this is related to lighting, heating, cooling and hot water production for homes. Increasing energy costs, dwindling energy resources and growing emissions of carbon dioxide present major challenges. Buildings must be made more energy efficient. Regin is rising to the challenge.
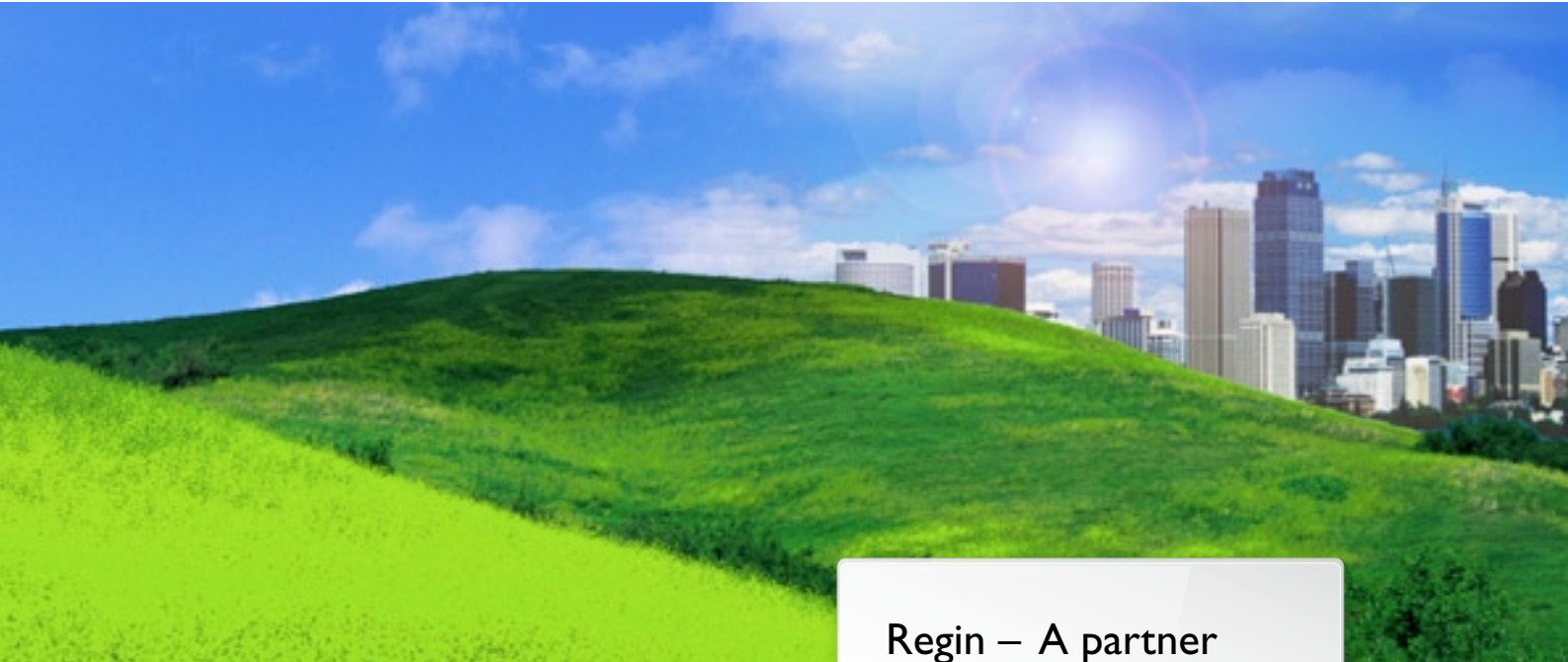
Solutions for improved energy efficiency

Energy efficiency in buildings is much about intelligent control. A well regulated system will reduce the energy use extensively while improving comfort. Ever since Regin opened for business in 1947 we have been developing systems for more efficient use of energy and improved comfort. Today we offer one of the industry's most comprehensive ranges of products and systems, combined with 60 years of experience of how to make properties more energy-efficient and environment-friendly.

Our concept, Regin System, offers overall solutions for controlling anything from individual zones to complete buildings across wide geographical areas. This includes the broadest concept on the market for building automation based on TCP/IP and the Internet.

* To avoid serious climate changes, emissions of carbon dioxide in the EU must be cut by 60-80% in the next 50 years. Therefore, in 2006, EU established a directive aimed at making buildings more energy efficient.

Regin – A partner with resources and experience

- Energy-efficient solutions since 1947

- Represented in more than forty countries

- Worldwide installation references

- System solutions – from control of a single unit to complex building automation systems

- Complete product and system range – from field equipment to SCADA systems

- Totally open systems enabling integration and communication with systems of other standards and brands

- The market's broadest concept for building automation based on TCP/IP and the Internet

- Modular and flexible design concept enabling easy and cost-effective system expansions

- Network of professional integrators performing installation, commissioning and maintenance

- No competition with our integrators

- Training and seminars at Regin Academy

- Support teams for technical assistance and back-up

RGCI ⭐
REGIN
GOLD
CERTIFIED
INTEGRATOR
≋REGIN

RCI
REGIN
CERTIFIED
INTEGRATOR
≋REGIN

The integrator is the key

A secure and cost-efficient installation is always based on the strength of the systems and the functionality of the individual products and components. Moreover, it´s also important that the products are installed and maintained by professional integrators. We have therefore created a network of competent and specialised integrators who provide a broad range of services – from planning and project management to programming, installation, maintenance and service.

Since we never work directly towards our end customers, we do not compete with our integrators.

Regin Systems

Regin Systems cover all types of applications, such as climate control units, heat pumps, boilers, district heating/cooling, etc. Alarms, access control and lighting management systems can be integrated with Regin Systems.
A Regin System provides a flexible installation which can be modified and extended cost-effectively as requirements change. New units can be added to existing systems and linked to older controllers and equipment. A Regin System can also be integrated with systems made by other manufacturers and following different standards.

Market-leading solutions in web-based building automation

Regin has developed the market's broadest concept for building automation based on TCP/IP and the Internet. Regin's Internet solutions enable you to control, regulate and monitor everything from individual units and functions to large building complexes.

Solutions include web-based technology for:
• EXO4 Web Server
• EXOflex Open Web
• Corrigo Web
• EXOcommunicator

A sustainable future for everyone

Our products and systems are installed in properties across the world. Property owners invest in Regin's modern and intelligent technology to save energy and make it easier for employees to work more efficiently. Furthermore, thanks to Regin, tenants live in more pleasant and comfortable buildings.
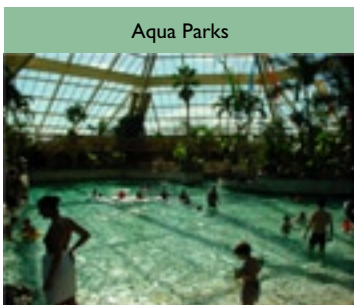
Museums	Hotels	Hospitals
The Movie Museum, China	*Zhanjiang, China*	*Adana State hospital, Turkey*

Aqua Parks	Shopping centres	Sport Centres
Aqua Mundo, Netherlands	*Panora shopping centre, Turkey*	*Läkerol Arena, Sweden*
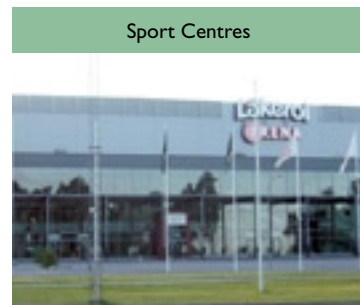
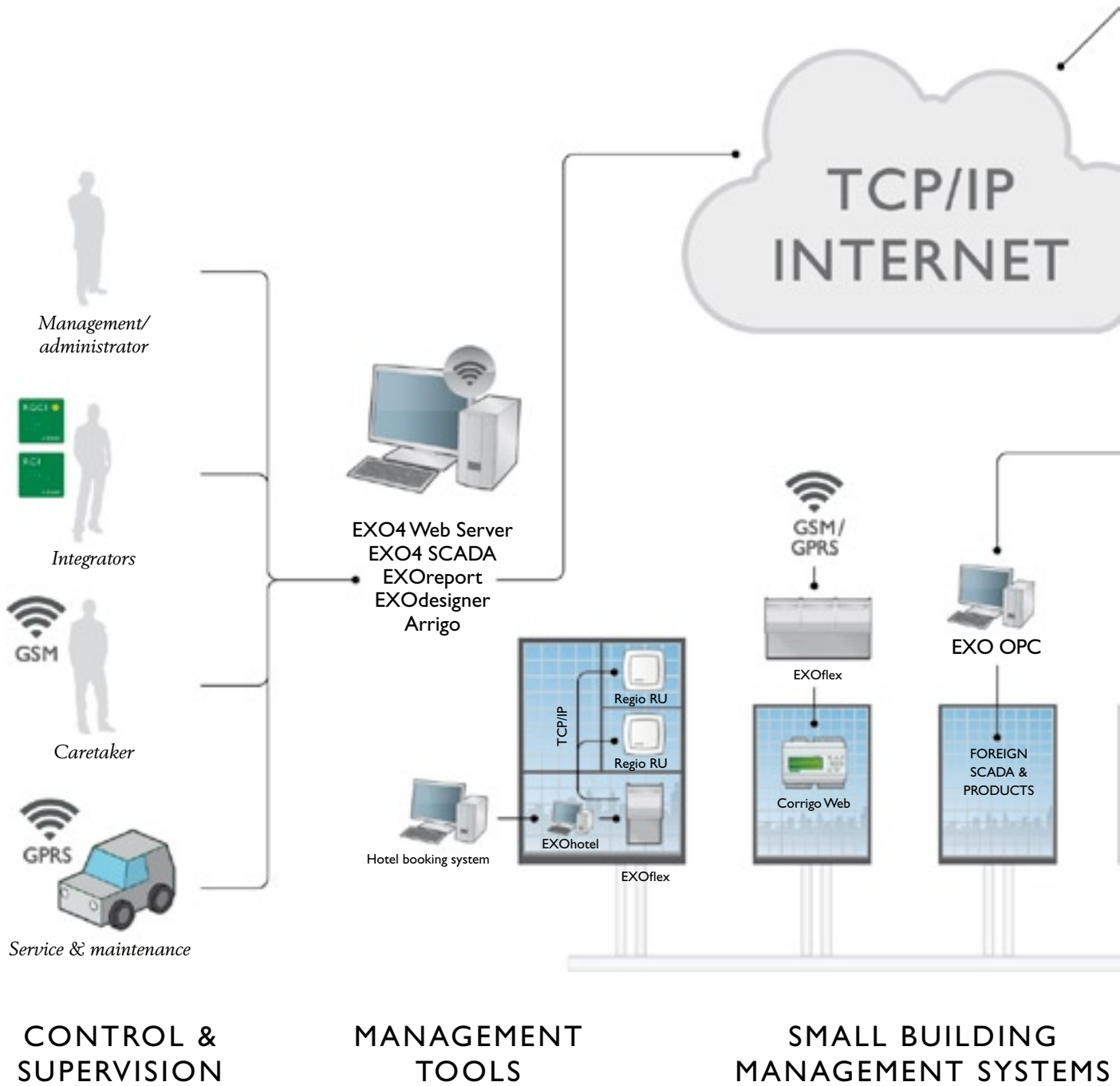*Please visit our website for more information, www.regin.se*

Bus systems:
- *TCP/IP*
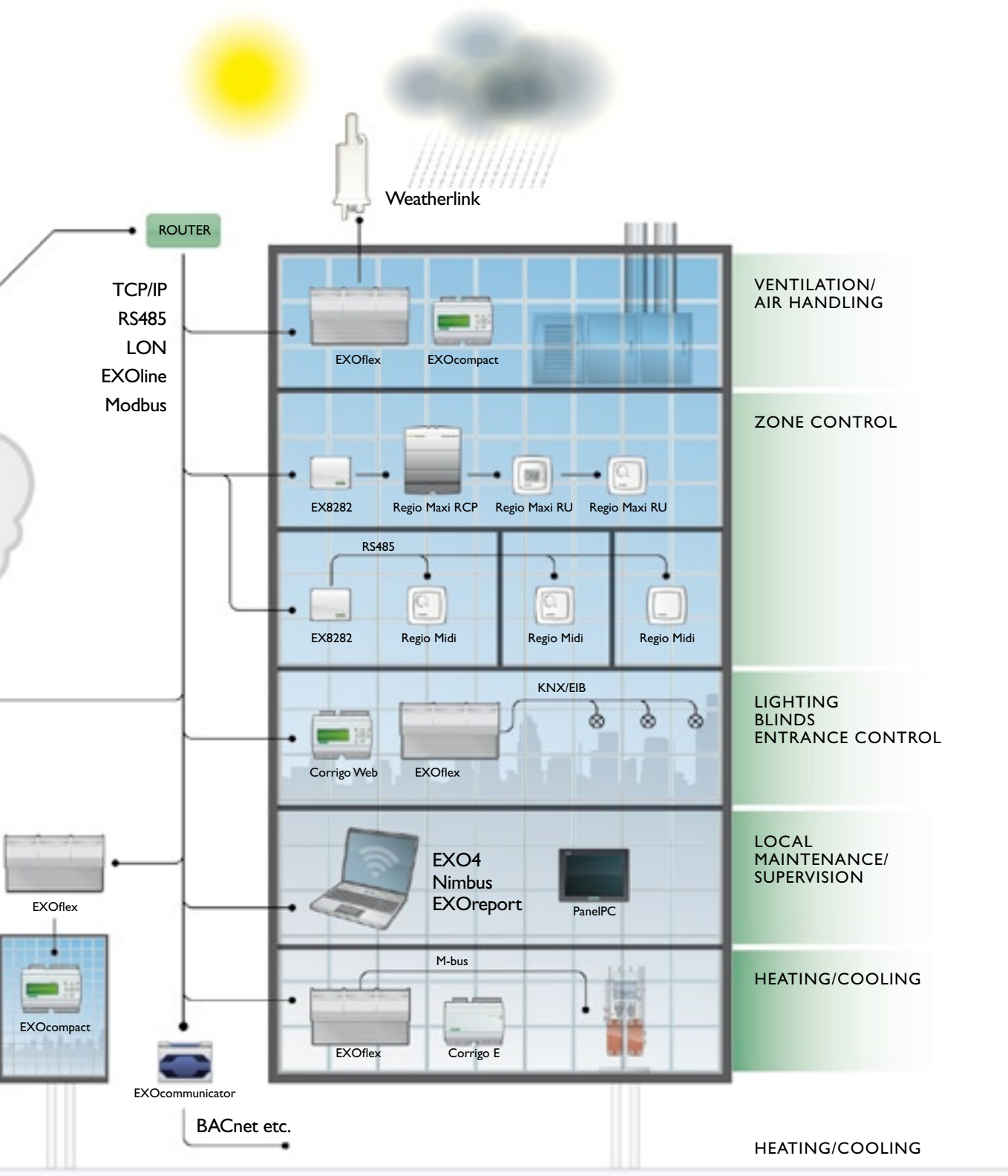- *BACnet*
- *LON*
- *KNX/EIB*
- *EXOline*
- *Modbus*
- *M-bus, SIOX*
- *N2 Bus*
- *S-bus*
- *Trend*
- *OPC*

Communication:
For communication between the system's units and modules and the SCADA system.
- *Telephone lines*
- *GSM*
- *TCP/IP*
- *LAN/WAN*
- *Internet*
- *Cable*
- *Satellite*
- *GPRS*

TCP/IP INTERNET

Management/ administrator

Integrators

GSM

Caretaker

GPRS

Service & maintenance

EXO4 Web Server
EXO4 SCADA
EXOreport
EXOdesigner
Arrigo

TCP/IP

Regio RU

Regio RU

EXOhotel

Hotel booking system

EXOflex

GSM/ GPRS

EXOflex

Corrigo Web

EXO OPC

FOREIGN SCADA & PRODUCTS

CONTROL &
SUPERVISION

MANAGEMENT
TOOLS

SMALL BUILDING
MANAGEMENT SYSTEMS

Weatherlink

ROUTER

TCP/IP
RS485
LON
EXOline
Modbus

**VENTILATION/
AIR HANDLING**

EXOflex   EXOcompact

ZONE CONTROL

EX8282   Regio Maxi RCP   Regio Maxi RU   Regio Maxi RU

RS485

EX8282   Regio Midi   Regio Midi   Regio Midi

KNX/EIB

**LIGHTING
BLINDS
ENTRANCE CONTROL**

Corrigo Web   EXOflex

**LOCAL
MAINTENANCE/
SUPERVISION**

EXO4
Nimbus
EXOreport

PanelPC

EXOflex

HEATING/COOLING

M-bus

EXOcompact

EXOflex   Corrigo E

EXOcommunicator

BACnet etc.

HEATING/COOLING

LARGE BUILDING
MANAGEMENT SYSTEMS

APPLICATIONS

EXOflex

For large building complexes

- Freely programmable
- Programming in EXOdesigner using high level language or function blocks
- Cost-efficient for requirements above 75 I/Os
- Modular design with a choice of PIFA-cards for adaption of I/Os, communication etc.
- Communication via TCP/IP, LON, EIB (KNX), Modbus, SIOX and M-bus
- Built-in web server as option

EXOcompact

For medium-sized properties or separate installations/units

- Freely programmable for heating, climate control and zone regulation
- Programming in EXOdesigner using high level language or function blocks
- Cost-efficient for up to 75 I/Os
- Communication via TCP/IP, M-bus, LON, Modbus, EXOline, etc.
- Can be controlled/regulated via the Internet-TCP/IP

Corrigo E

For small properties or separate installations/units

- Pre-programmed with default settings for heating, climate control, zone regulation and boiler control
- Maximum 28 I/Os
- Configured with Corrigo E tool
- Communication via TCP/IP, LON, Modbus, EXOline, etc.

Regio Maxi RCP

Freely programmable zone controllers with communication

- Total I/Os: 13
- Configured with Regio tool or EXOdesigner
- Communication via LON, Modbus or EXOline (TCP/IP or RS485)
- Monitoring and control via Internet

- Corrigo Web with integrated webserver and graphical interface. Direct access and control via the Internet.

Regio Midi

Pre-programmed room controllers with communication

- Up to 10 I/Os
- Configured with Regio tool
- Communication via EXOline (RS485) and Modbus

EXOcommunicator

Web server for smaller systems and also a gateway which enables links between EXOline and BACnet and other protocols.

Panel PC, smartphone etc.

Enable access to your system in any way you want.

External displays

The external displays are used for local display of alarms, changes to set-point values, etc.

Regin Software

EXO4
A complete and powerful SCADA system that provides complete control and supervision of the various functions of a property, as well as of the collected measurement data.

EXO4 has an OPC client that can connect to other brands of hardware (works from versions with M-key and up).

EXOdesigner
A software tool to build Regin systems with communication networks, configure controllers and create SCADA systems.

EXOreport
Supplementary programme for EXO4. Simplifies and automates the analysis and presentations of the collected measurements. Data can be processed in Microsoft Excel.

EXO4 Web Server
Gives access to the Regin system via Internet/ Intranet.

EXOopc Driver
Makes it possible to connect Regin controllers to other SCADA systems that support the OPC standard.

Arrigo
A powerful, web-based portal, which can be used for supervising operation, maintenance and administration of one or more properties.

EXOhotel
A supplementary programme based on the Fidelio protocol, which makes it possible to connect a hotel booking system with EXO4.

Weatherlink
System for controlling the heating and cooling of a property based on the outdoor temperature and weather forecasts that take the wind, sun, etc. into consideration.

Field equipment

A wide range of everything you need to build complete systems.

EXO4

SCADA for complete control

EXO4 is a powerful SCADA system giving you complete control and overview of one or many buildings. You can handle alarms and have direct access to all important parameters, functions, and data of e.g. energy consumption.

Design tools

It is very easy to design user-friendly windows in EXO4 using built-in configuration tools. EXO4 includes Paint.Net, an advanced free third-party tool used for design of images. It comes with a large library of graphic symbols and SCADA pictures.

EXO4 also includes support for animated symbols and gives many possibilities to configure the SCADA design the way you like.

- Dynamic visualization of plants and processes
- Real-time curves and trends
- Time channel program
- Historical database
- Alarm and status supervision with 3 alarm priority levels
- Registration and handling of events
- Support for SQL
- Client-Server for large systems with many workstations
- Script language available
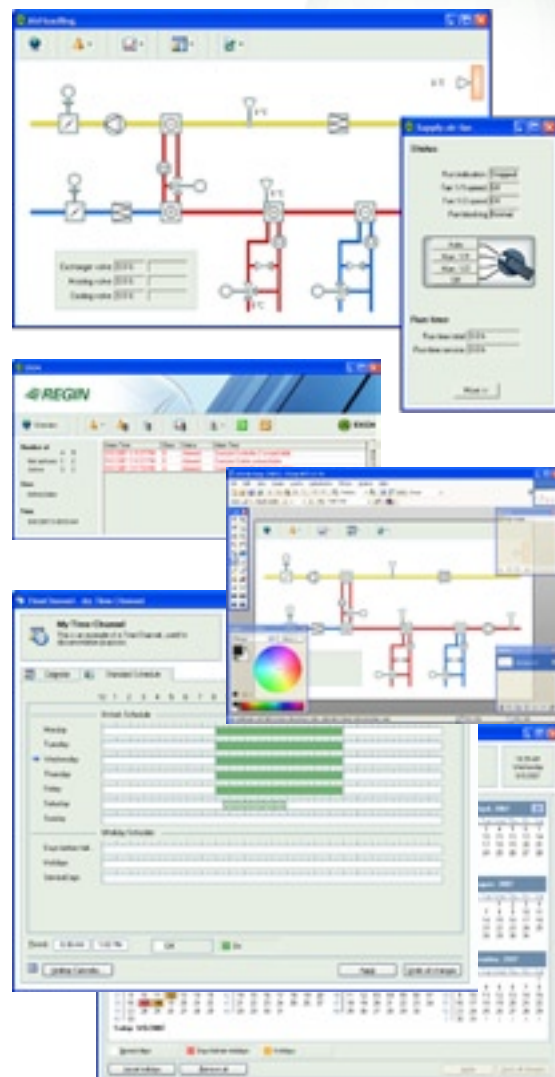
EXO4 with OPC Client

Connect controllers of different brands

EXO4 is provided with an OPC client enabling direct connection to different brands of hardware. This means you can integrate a variety of controllers into a Regin System without using SCADA software of other brands.

The EXO4 Client works from size M-key and up. The OPC drivers for other brands can be bought from many companies worldwide. Technically they are described as OPC Servers using DA 2.0.
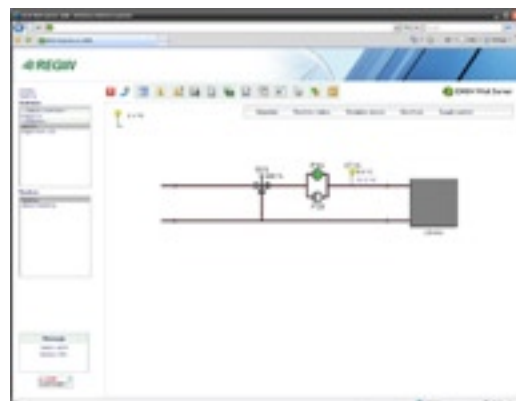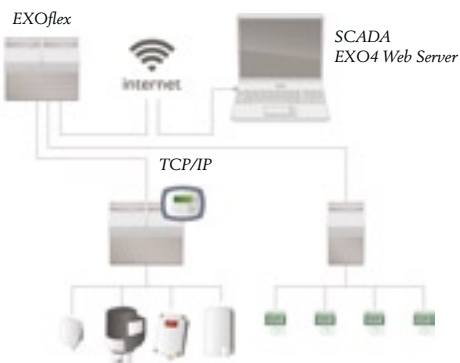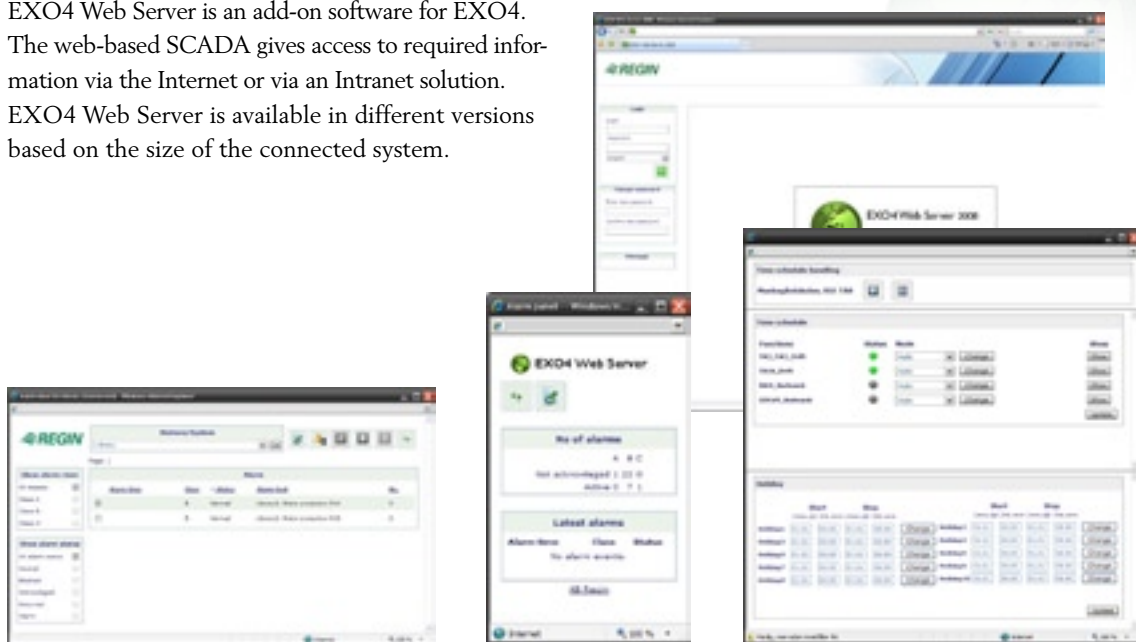

EXO4
with OPC Client

TCP/IP

Controllers of other brands…

EXOcompact   Corrigo E   EXOflex
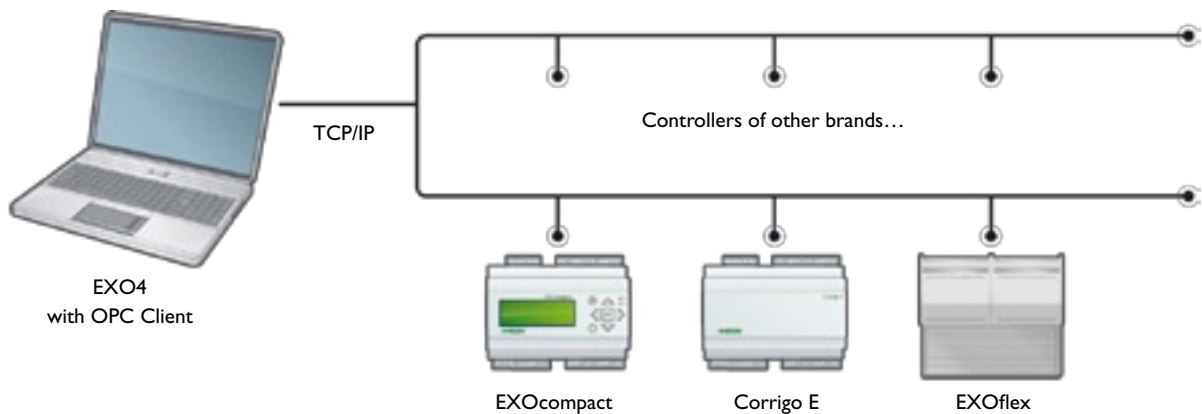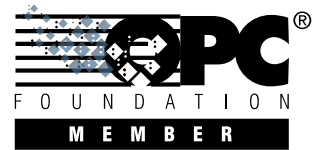
EXO4 Web Server

SCADA via the Internet

EXO4 Web Server is an add-on software for EXO4. The web-based SCADA gives access to required information via the Internet or via an Intranet solution. EXO4 Web Server is available in different versions based on the size of the connected system.

EXOreport

Keeps track of costs

EXOreport is an add-on program for EXO4 which simplifies the work with analysis of operation costs, energy consumption and helps you make diagrams, trend curves etc. in Microsoft Excel format.

With EXOreport you can get your monthly or weekly reports automatically printed and generated, for example the first day of every month at 6 o'clock in the morning.
You can also add all kinds of calculations, all available in Excel format – nice and easy!
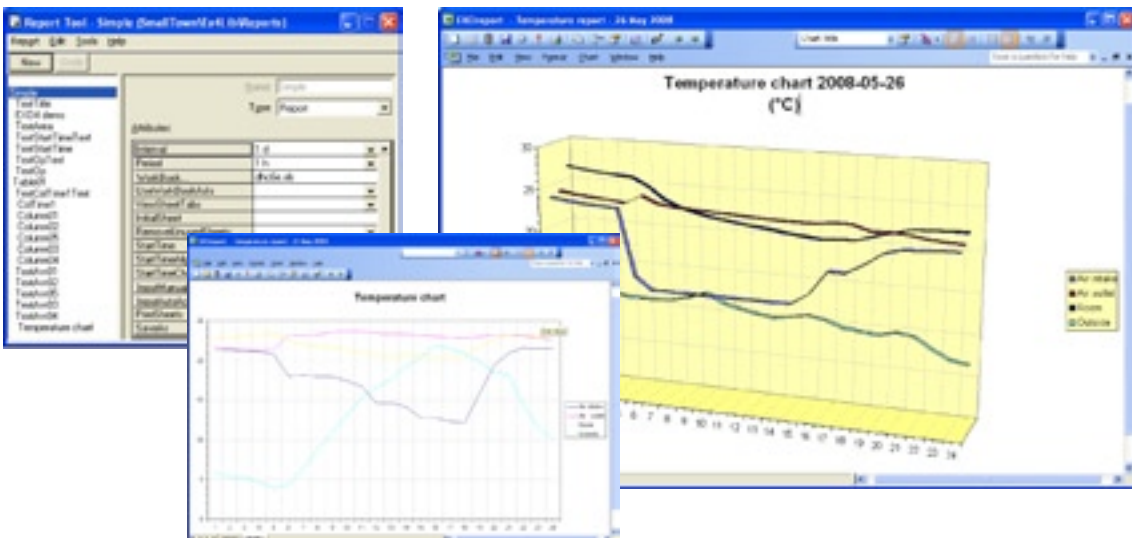
EXOdesigner

Software for system design

EXOdesigner is a software tool, primarily for integrators and consulting engineers, to design and compile Regin systems. Tools include functions such as designing communication networks, configuring controllers and SCADA.

The programming can be performed in two ways. The easiest and fastest is to use the ready-made program blocks for controlling pumps, fans and heating; handling of alarms and time channels, communication, etc. By combining these you quickly build full-scale applications.

The other way of programming the controllers is to use the high-level language EXOL with a number of commands and functions that facilitate the programming of automation applications.

By using the ready-made program blocks, and then customizing the programs with EXOL programming, maximum speed and flexibility in the development process is guaranteed.
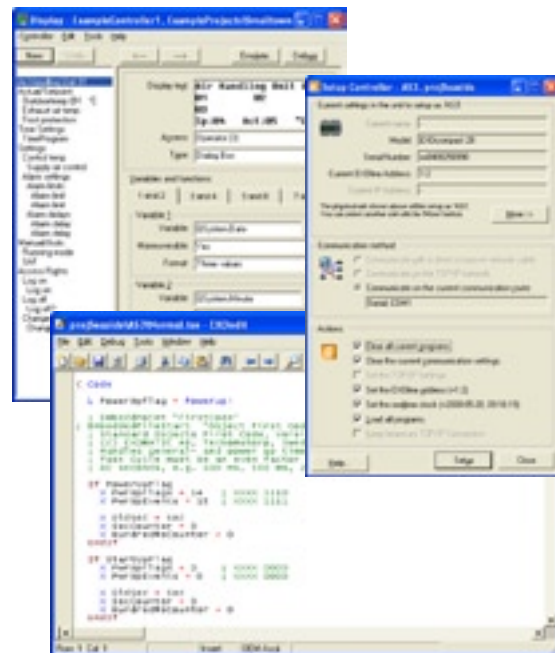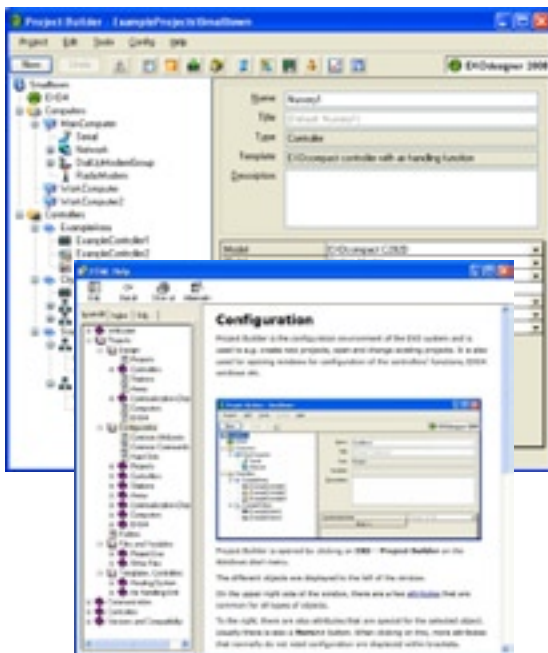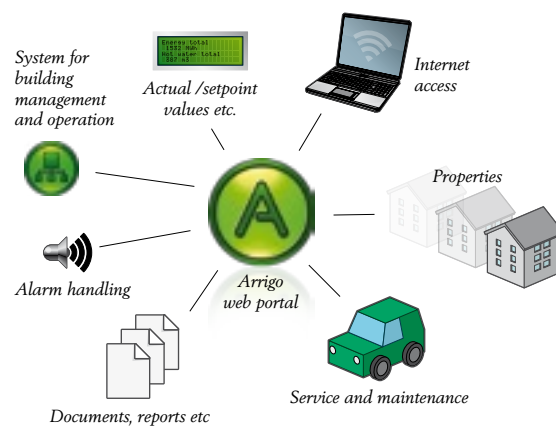
Arrigo

Arrigo – the universal portal

Arrigo is a universal portal that ties together a property's technical and administrative systems. In principle, all of the data and functions concerning the property are accessible through direct links and search functions. From Arrigo, it is possible to connect directly to EXO4 (Regin's SCADA system) or other systems in a common interface. There is automatic access to alarm lists and error reports. It is possible to supervise the operation, read off the energy consumption, etc.

At the same time, Arrigo is a practical tool for planning, initialisation, as well as follow-up on service and maintenance.
Through Arrigo, it is also possible to access technical documentation, as-built documentation, inspection reports, energy declarations, etc.

System for building management and operation

Actual /setpoint values etc.

Internet access

Alarm handling

Arrigo web portal

Properties

Service and maintenance

Documents, reports etc

EXOhotel

Intelligent climate control for reduced energy consumption

EXOhotel is an EXO software, based on the Fidelio protocol, which makes it possible to connect a hotel booking system with EXO4.

EXOhotel helps you save energy and create a comfortable indoor climate.

When the guest checks in, the climate control in the room is activated and the temperature is adjusted to a comfortable level. When the guest checks out, the temperature is set to economy mode in order to save energy.

Since EXOhotel controls the temperature in each individual room, there is great potential for saving energy.
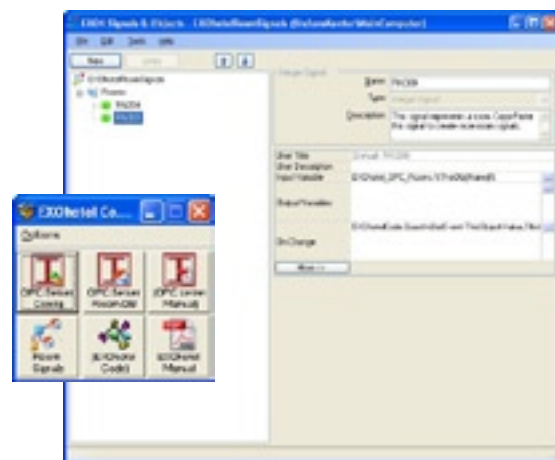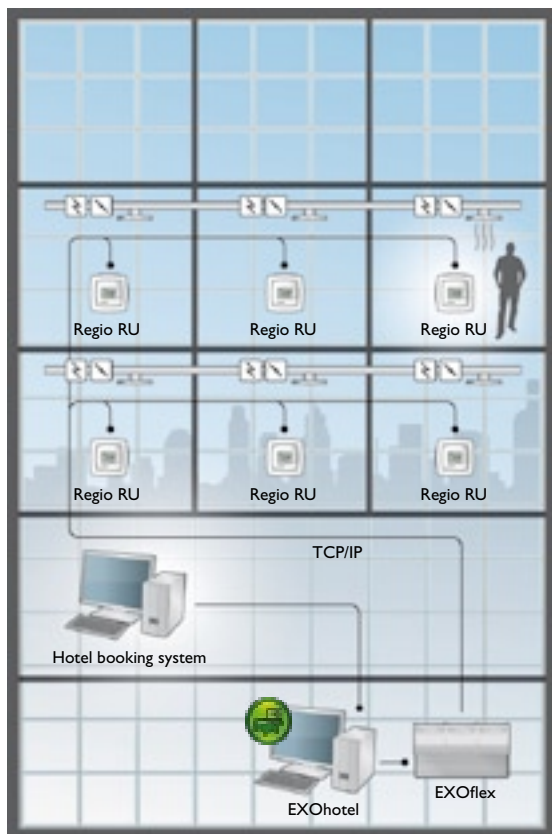
EXOhotel configuration tool

Weatherlink

Eco-drive your building

Eco-driving* a car means to change the way you are driving by looking further ahead and predicting what can happen. This can reduce your energy use by up to 25 %.

Although you are driving the same route to the same goal, you will reach it more economically, comfortably and with less effect on the environment.

Regin Weatherlink is our solution for Eco-driving buildings. The system is based on information on the thermal mass and construction of the building, as well as continuously updated local weather forecasts which take wind, sun, temperature etc. into account.

Using these parameters, the building's energy balance (called the equivalent temperature) can be calculated. The information is transferred to the control system and can be used for improving comfort and reducing energy consumption. Energy savings of 10 % are not unusual.

*) Several European countries have implemented, or will implement, successful Eco-driving programmes.

Weatherlink is a 3-years service agreement. A receiver is installed and you get yearly energy reports.

EXOflex

Freely programmable controllers for building automation without restrictions

The EXOflex controller is completely freely programmable. Its primary use is in systems with a large number of I/Os, and with high demands on communication and adaptability. The controller consists of processor housings available in 1 to 4 sections each equipped with a main processor. Programming is made with EXOdesigner or in free EXOL-code.
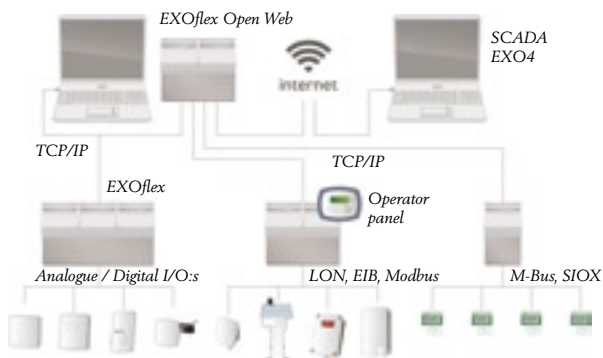
Every EXOflex controller is "tailored" to its application by a choice of PIFA- cards (Peripheral Interface Adapters). The cards are easily slotted into place in the housings and all connection ports are then accessible externally, offering easy connection of sensors, actuators, transmitters etc. The PIFA-cards enable communication via protocols and field buses like TCP/IP, LON, KNX/EIB, Modbus, SIOX and M-Bus. EXOflex also supports communication via radio, telephony, GSM, cable, satellite, etc.

EXOflex Open Web

EXOflex Open Web gives real-time access and SCADA control via the Internet or a network-connected computer. It is freely programmable and the modular design offers the same high flexibility as the EXOflex. You can control operations, read values, check trend curves, and handle alarms as e-mails or SMS. The primary use is for control of a few buildings and applications like heating, ventilation and cooling. For larger systems where Internet access is required, we recommend PC based software EXO4 Web Server.

External displays are used for local reading and control of alarms, changes to set-point values, etc.

EXOflex Open Web

SCADA EXO4

internet

TCP/IP

EXOflex

TCP/IP

Operator panel

Analogue / Digital I/O:s

LON, EIB, Modbus

M-Bus, SIOX

Freely programmable controller for control, regulation, supervision, and communication

- For large buildings and integration of many buildings/installations
- For systems with a large number of I/Os (Cost-efficient for more than 75 I/Os)
- Easy to expand capacity and add functions
- Communication: EXOline TCP/IP, LON, KNX/ EIB, Modbus, SIOX, M-Bus
- PIFA cards for different applications

EXOcompact

Freely programmable controllers

EXOcompact is perfect for stand-alone applications e.g. zone control, control of heating and air handling units as for system integration.
The controller features a new type of processor offering very fast control operations. It is available with or without display, and in three sizes with 8,15 or 28 I/Os.

Programming is performed in EXOdesigner. The controllers communicate via RS485, EXOline or Modbus. Communication via LON and TCP/IP is optional. Another option is dual ports enabling expansion of I/Os and communication with energy meters, PLCs etc. With two ports EXOcompact also supports communication via TCP/IP, RS485 and PSTN (public switched telephone network).

EXOcompact is prepared for fast connection to the independent display and configuration units like ED9200, ED9100, E-DSP and Regin Panel PC.
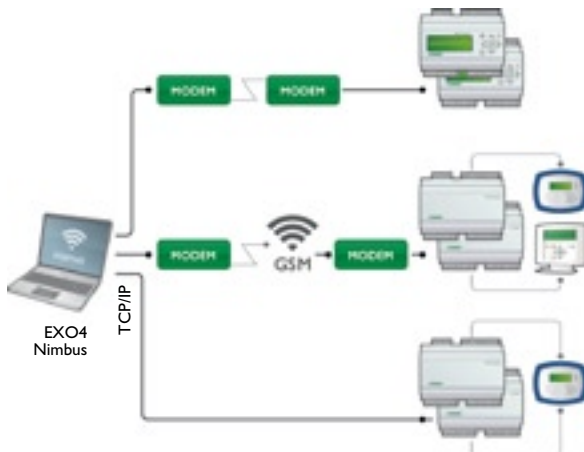
Freely programmable controllers

- Freely programmable with fixed I/O configuration
- For control of heating centrals, ventilators etc
- 8, 15 or 28 I/Os, with or without internal display
- Complement to EXOflex in large automation systems
- Communication via RS485 (EXOline, Modbus) or dial-up connection (phone or GSM dial-up).
  TCP/IP and LON optional
- Programming is performed in EXOdesigner
- Dual ports as option
- Possible to expand I/O using 2 ports and expansion units based on EXOcompact without display
- 24V AC or DC

Corrigo E

E tool©

Pre-programmed controllers

The Second Generation of Corrigo E is smart, powerful and ready to operate alone or integrated in a system.

Three applications in one controller

Corrigo E comes with pre-programmed ready-to-use applications for Air handling, Heating and domestic hot water control and Boiler control.

Corrigo Web with TCP/IP

Corrigo Web, with integrated web server and a port for TCP/IP communication is the ideal web solution for small to mid-sized systems. Corrigo Web enables control, supervision and follow-up of status, events, trends and alarms via the Internet, local networks or integrated SCADA systems.

Speaks many languages

Corrigo E communicates in more than twenty languages (on the display or via the Internet). The pre-set language can at any time be changed.

E tool©

Corrigo E is delivered with the software E tool which is used to configure and adjust the pre-installed applications and settings. You can conveniently prepare the settings in your office, and then load the settings into the controller during installation. You can copy settings from one controller to another. E tool© can be downloaded free of charge from our website.

Integration with other systems

The basic Corrigo E models are equipped with an RS485 port for bus communication via EXOline or Modbus. This enables Corrigo E to be directly integrated with EXO4, Regin's powerful SCADA system. Corrigo E can also be integrated with foreign SCADA systems via Regin's OPC driver or with BACnet, Johnson, Trend and other foreign protocols via Regin's EXOcommunicator. Corrigo E is also available with a port for LON communication.

With Regin Panel PC connected to Corrigo Web, the installation can be handled directly on site

Corrigo Web

- Pre-programmed controller for air handling, heating or boiler control with 8, 15 or 28 I/Os
- Standard: RS485 port for EXOline or Modbus connection. Optional: ports for TCP/IP or LON
- With or without internal display. Separate display terminals optional
- Corrigo E tool© for configuration, reading and service
- Multi-language support
- 24V AC or DC

Regio

Regio has a modern design which enhances the indoor environment.

Regio tool©

The ultimate zone control system

Regio controls heating, cooling, ventilation, lighting, humidity, CO_2 and blinds in rooms and zones. The Regio line* includes Regio Maxi and Regio Midi featuring communication with central SCADA-systems. Optional Regin devices such as window contact, movement detectors, carbon dioxide transmitters etc., offer numerous possibilities to create optimal comfort in every individual room and low energy consumption.

Regio Maxi
### Freely programmable zone controllers
The powerful Regio Maxi is based on a freely programmable control unit, RCP, connectable to most bus systems, office networks or the Internet. Every room can be controlled from a PC with a web browser. The RCP can be equipped with room units, enabling individual reading and setting in the rooms.

Regio Midi
Pre-programmed room controllers with communication
Regio Midi can work stand-alone or be integrated in a central system via EXOline or Modbus with RS485.

Regio tool©
The applications are pre-programmed but can be configured for specific applications using the Regio tool© software. You prepare the settings on your PC and then load them into the controllers on site. In the same easy way you can copy settings from one controller and download them to another. For service and error detection purposes you connect the PC and get a clear overview of the settings and status.
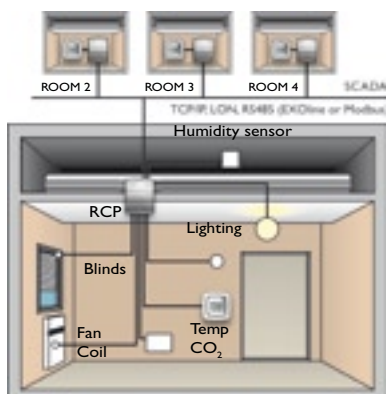
The standard mounting for RCP is on a wall or wallbox or with an additional mounting kit, on a DIN-rail.

ROOM 2   ROOM 3   ROOM 4   SCADA

TCP/IP, LON, RS485 (EXOline or Modbus)

Humidity sensor

RCP

Lighting

Blinds

Fan Coil

Temp CO_2

- Control and monitoring of room temperature, air quality, humidity, lighting, blinds
- Pre-configured for immediate operation
- Communication via EXOline TCP/IP or RS485, Modbus RS485 and LON
- Software tools for easy configuration
- Comprehensive product portfolio

)Besides Regio Midi and Regio Maxi, the Regio line also includes Regio Mini, a series of pre-programmed room controllers for stand-alone applications.
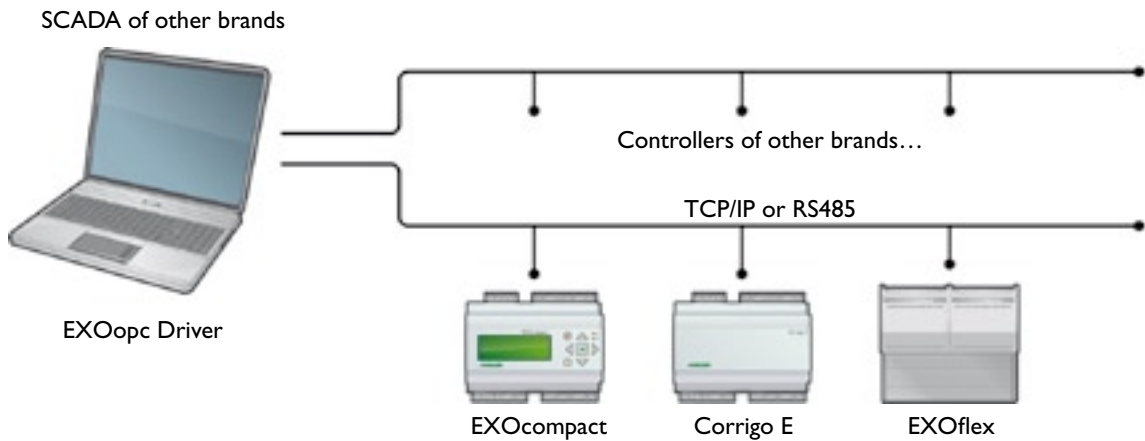
EXOopc Driver

Enables communication with other systems

EXOopc Driver makes it possible to connect EXO controllers to any software supporting the OPC standard. This means that most of the SCADA software available on the market today can be used with our controllers.

The possibility of communication with various OPC clients/servers can easily be controlled by using Matrikon OPC Sniffer (www.matrikon.com).

The programming of the system is made with EXOdesigner. It can be prepared in advance on a PC and the program can then be loaded into the system at installation. All data is then available using the OPC interface.

SCADA of other brands

Controllers of other brands…

TCP/IP or RS485

EXOopc Driver

EXOcompact   Corrigo E   EXOflex

EXOcommunicator

EXOcommunicator is configured with a web interface

Gateway to BACnet and local web server

EXOcommunicator is a combined web server and protocol gateway for small systems.

As a gateway EXOcommunicator can link EXOline to bus systems with BACnet protocols (BACnet/MSTP , BACnet/IP and BACnet/Ethernet) and other protocols such as N2 - System91 from Johnson Controls, S-bus from SAIA and Trend.

Three Ethernet ports (1xWAN and 2xLAN) enable several protocols to be handled simultaneously. Another two serial ports (RS232) are used for communication with controllers e.g. EXOcompact.

Web server

EXOcommunicator can also work as a local web server for up to 2500 connected points. The web server provides alarm information and real-time reports with values from selected points.

The trend interface is a useful tool for inspection of historical data logs on the server.
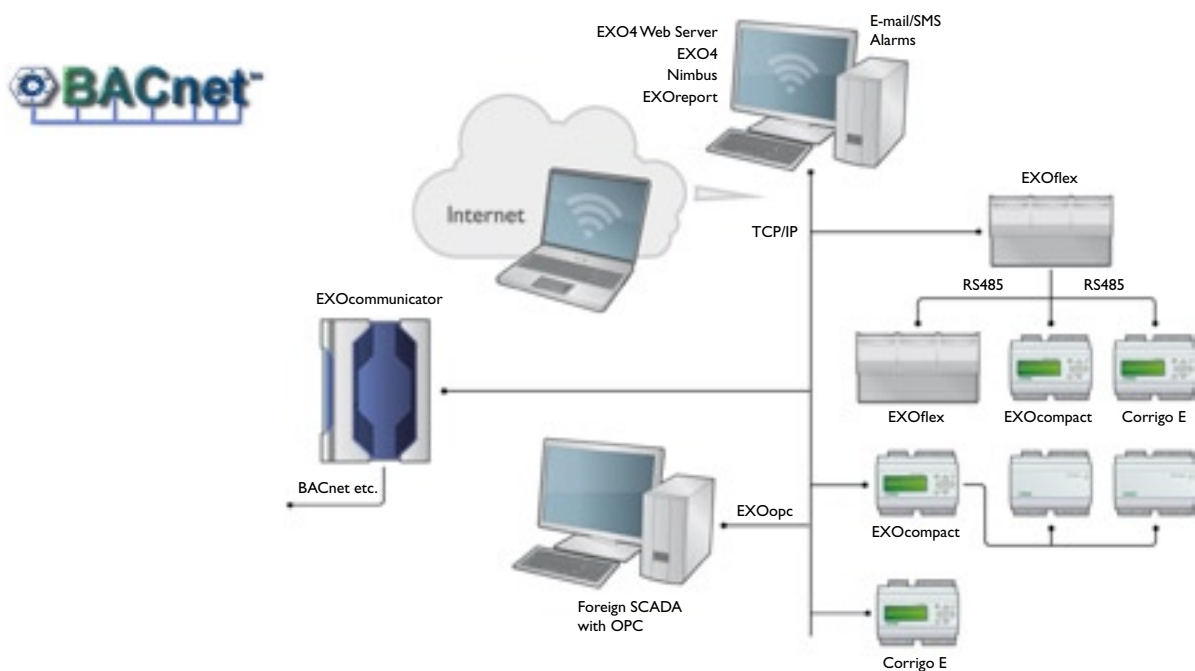
) EXOcommunicator uses the same programming environment as EXOflex Open Web, but is more powerful.

≋REGIN

AB Regin

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