



## Solutions

# Home Automation

# Home Automation Solutions for



**Lighting control**

**Climate control**

**Blind and awning control**

**Alarms**

**Energy savings**

## ABOUT CARLO GAVAZZI

Carlo Gavazzi Automation is a multinational electronics group active in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Our history is full of firsts and our products are installed in a huge number of applications all over the world. With more than 80 years of successful operation, our experience is unparalleled.

We have our headquarters in Europe and numerous offices around the world. Our R&D competence centres and production sites are located in

Denmark, Italy, Lithuania, Malta and the People's Republic of China.

We operate worldwide through 22 our own sales companies and also selected representatives in more than 65 countries, from the United States in the West to the Pacific Rim in the East.

Our core competence in automation spans four product lines: Sensors, Switches, Controls and Fieldbuses.

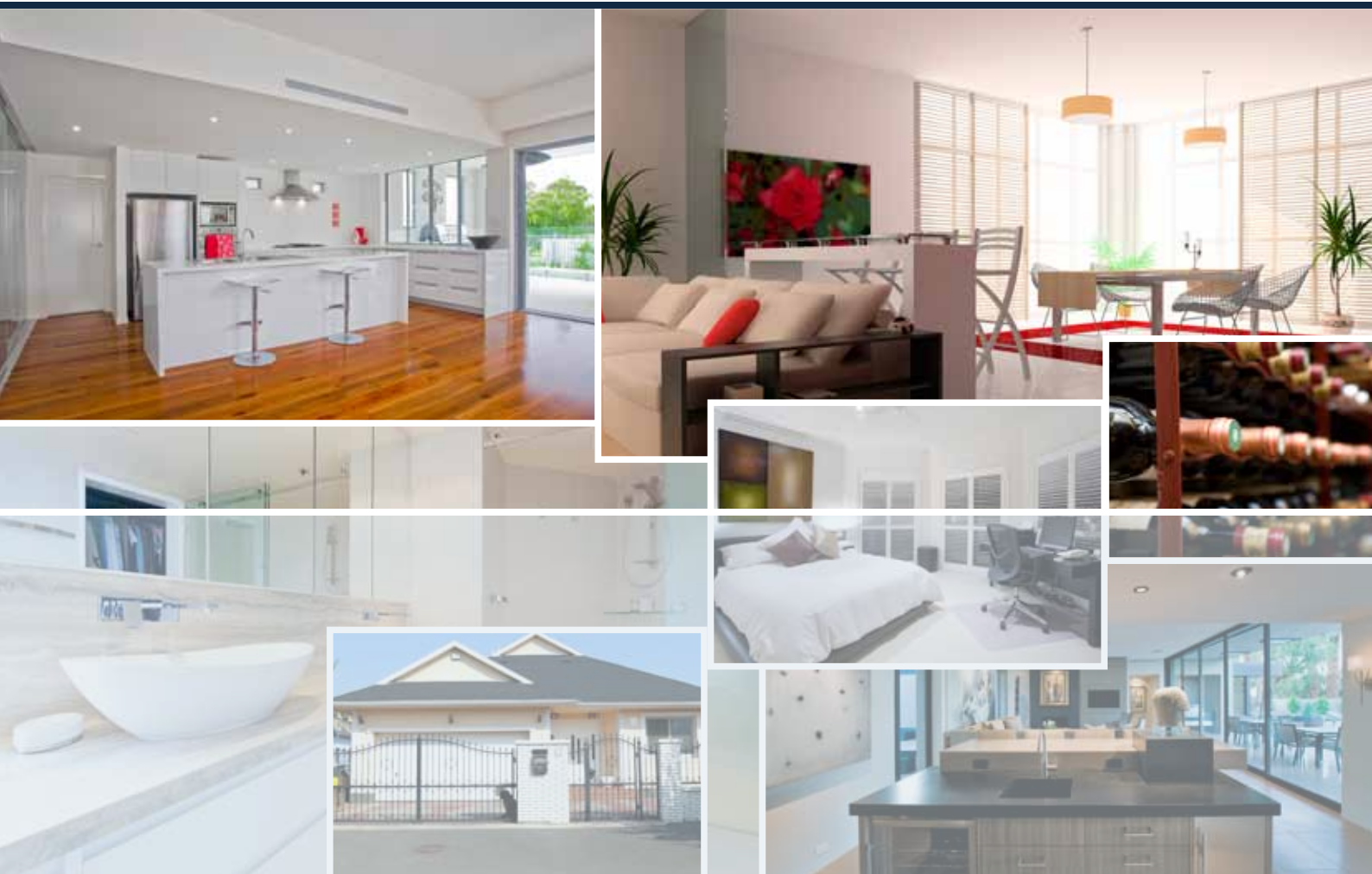
Our wide array of products includes sensors, monitoring relays, timers, solid-state relays, electronic motor controllers, energy management equipment and fieldbus systems.

We focus our expertise on offering state-of-the-art product solutions in selected market segments.

Our customers include original equipment manufacturers of packaging machines, plastic-injection moulding machines, food and beverage production machines, conveying and materials handling equipment, door and entrance control systems, lifts and escalators, as well as heating, ventilation and air-conditioning devices.

Our offer for the Home Automation consists of innovative solutions, designed to make a comfortable living environment, according to your mood and requirements as well as weather conditions.

Comfort, Security, Control, Flexibility and Ease are the synthesis of our commitment for an "intelligent" Home Automation system.



## DESIGNED TO MEET MARKET REQUIREMENTS

The new home automation system by Carlo Gavazzi is the evolution of the well-known smart-house system: it looks after your houses in the best possible way, making them comfortable for you and your loved ones. It combines this comfortable living with energy saving, using state-of-the-art technology to improve your well-being and to reduce your carbon footprint.

The complete range of products is designed in Italy.

The system is based on a centralised structure, where the controller is the “brain” that supervises all the domestic functions such as lights, temperatures, rollerblinds, shutters and intruder, gas

and water leaks alarms.

New modules and functionalities can be added at any time, making the home “alive” and letting you adapt it according to your wishes, which might change over time.

It also allows you to be aware of energy consumption, providing diagrams of current consumption as well as the logging of what has been consumed in the previous days, months or years. All this data is easily accessible using smart-phones, PCs or tablet PCs.

Retrofit installations can also be made when using this new Carlo Gavazzi system, as it features a full range of wireless products that can be used when wiring is not possible or not desired.

The new web server complements traditional methods of managing

sophisticated home automation technologies. It is embedded into the SH2WEB controller and it is completely configurable so that you can select your own themes.

The webserver is also designed as webapp to be accessible via any smart-phone, tablet pc.

The intuitive, user-friendly interface allows the control of lights, rollerblinds, alarms, timers, temperatures and more, both remotely and on site, all from a multi-function device.

Furthermore, the webserver/webapp enable access to the datalogger where energy data, temperatures and other events are stored, in order to have a clear overview of which appliances are on and how much they are consuming.

# Home Automation

Bus intelligence made by experience



Scenarios

Scheduler

Simulated habitation

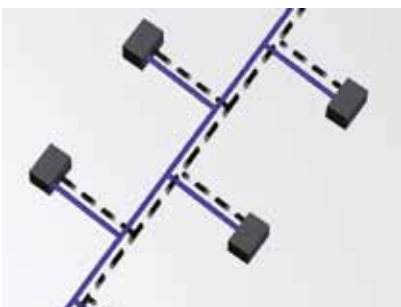
Automatic blinds

Climate control

Fan control

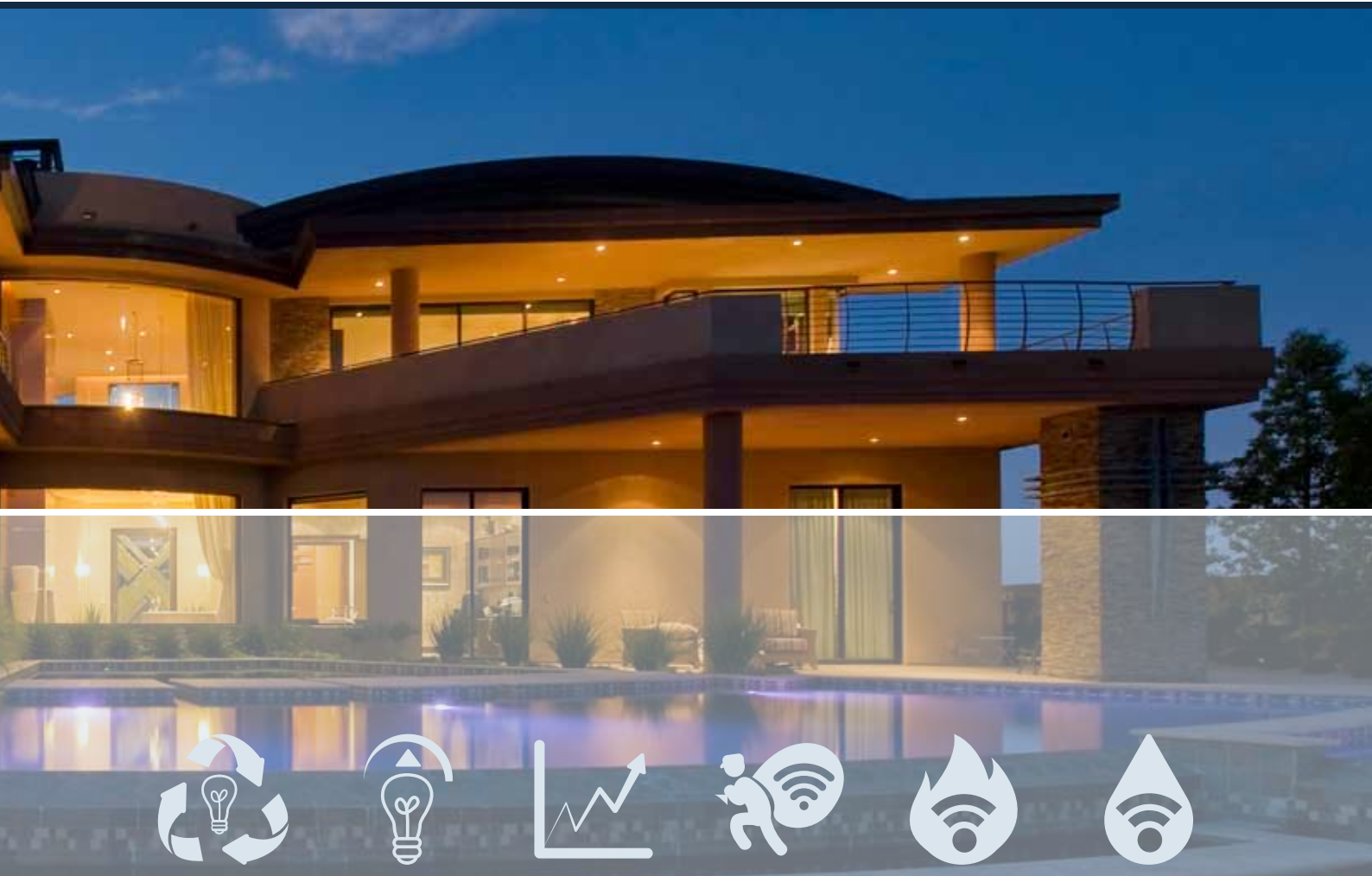
## Bus and power in the same cable

The bus and power wires follow the same logical path. The "switch wires" needed in conventional installations can be eliminated by use of de-central relays. The installation is fast and simple and last-minute changes are easily accommodated. No special cable or cable termination is required for the bus.



## Fast commissioning with no addressing

One of the most innovative features of this system is that no addressing of modules is needed. The installer only has to mount all the components, launch a network scan and the system will automatically find and recognize the connected devices, making the correct association or addressing. This will result in time and cost savings, besides providing an error-free configuration process.



**Energy efficient light management**



**Light control**



**Graphs**



**Intruder alarm**



**Smoke alarm**



**Water leakage alarm**

### Diagnostic function

Immediate trouble-shooting is assured as the system monitors all the connected devices and advises if one is faulty. The load of the bus is constantly monitored and any anomaly is at once detected and reported.

All the information about short-circuits, bus voltage and load, noise level and quality of the bus signals is logged in a file both locally and remotely accessible.

This can be checked anytime, providing effective time and money savings.



### Easy configuration software

The system configuration can be easily done by means of its wizard tools.

The user-friendly interface of this software guides the user in the creation of the pre-defined functions.

At the same time, thanks to many basic functions, the most skilled user can also create customized applications.

Test modes are getting easier by the several debug features available.

# Home Automation

## Lighting control



**Glass touch switches**

**Glass touch switches for dimming control**

**Light switches**

**PIR detectors and lux meters**

**Dimmer modules**

**I/O modules**

Carlo Gavazzi offers integrated lighting automation and control. Lighting sets the perfect scene and creates the desired ambience for any occasion. Whether it is a movie night, an intimate dinner for two or a party with friends, lighting establishes the right mood.

The lights can create pre-programmed scenes to simulate the chosen lifestyle patterns. Dimmers do not just set the right atmosphere and create specific entertainment options, they can save money too. Most of the time we do not need to set our lights to full brightness to light a room, and if you dim your lights you are using less energy to run them. This is the aim of the new dimming technology by Carlo Gavazzi, in addition to the integration

of energy-saving alternatives such as LED lamps.

The garden lights can be turned on by a light level sensor, whereas the entrance lights can be activated by a movement sensor.

Occupancy sensing, which turns off lights when they are not needed,

makes Carlo Gavazzi solutions ideal also for special applications such as light management in corridors and staircases.

Comfort and energy saving at a single touch are assured, without sacrificing style or convenience.



# Climate control



**Glass touch switches for temperature**

**Temperature controls**

**Outdoor temperature sensors**

**Environmental sensors**

**Analogue I/O**

**Relay modules**

Carlo Gavazzi maintains your home at a comfortable level at all times, monitoring temperature and humidity levels automatically.

There is no need to get up or even be at home to adjust the temperature: with our Home Automation range of products you can control multiple

zones from one location and easily pre-set temperature set points.

You can keep your home at a more energy efficient temperature while you are out and programme it to automatically adjust to more comfortable levels by the time you get home.

Coming home early? Use your mobile phone or PC to control the climate remotely, even monitoring the wine cellar or greenhouse temperature and humidity level.

- Energy and money savings thanks to the demand-based energy use can be achieved via a timer program with a temperature profile or even via a presence signal.
- As the temperature variables of all the rooms are available centrally via the bus system, heating and cooling energy can be generated according to demand and with a high level of efficiency.



# Home Automation

## Blind and awning control



**Light switches,  
PIR and lux meter**

**Anemometers**

**Lux  
meters**

**DC up&down  
modules**

**AC up&down  
modules**

The installation of intelligent control technology in houses allows for the flexible control of blinds and shutters. In this way you can select various control options as:

- Classic control with conventional buttons and switches
- Control from remote PCs and smartphones
- Connection of multiple blinds/shutters to groups
- Realization of central functions such as "all up" buttons, "all blinds on the south side up" or similar

Thanks to full flexibility, it is possible to change switch assignment. Shutter-groups can be created at any time through our configuration software. Furthermore, automation can be specified to respond to a number of

different factors:

- Solar control, where the device operates automatically when a certain intensity of light is received by the sensor.
- Timers may be specified.
- An anemometer (wind speed sensor) is fitted so that the blind is

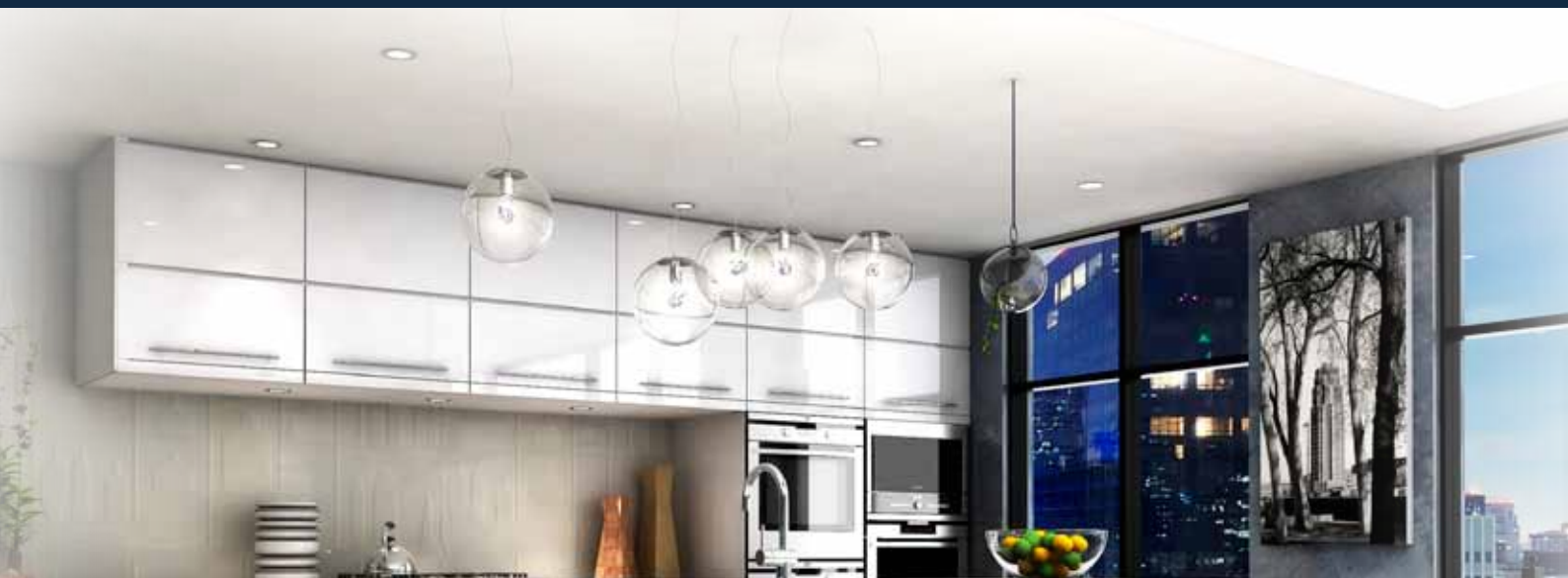
retracted in windy conditions.

- Rain sensors may be used in order not to wet the blinds or dirty the window glass.





# Alarms



**Presence detectors**

**Smoke detectors**

**Water detectors**

**Wireless window sensors**

**Programmable keypad**

Carlo Gavazzi protects your home. A water leakage in your kitchen or laundry room can be immediately detected by a sensor at floor level and the water supply will be interrupted, preventing loss and damage. At the same time an SMS message will promptly inform you when you are away from home.

Smoke detectors at different locations in your house are the main elements in the fire alarm system, and can be combined with other functions, for example lights can be switched on and fans switched off in case of fire.

The intruder alarms can be programmed so that house lights flash when there is a security breach, as well as sounding the siren. Switching lights on and off in each room at two-second intervals is

psychologically distracting and makes it extremely difficult for an intruder to search for jewellery and information such as credit card details. It also draws attention to the house from outside, further deterring any intruder from their actions. The system can also play back loud music or alarm sounds



in each room, to further persuade the intruder to leave. Naturally, the police can be notified automatically, along with key-holders and other designated people.



# Home Automation

## Energy saving



**Relay modules with energy reading**

**Wireless relays with energy reading**

**Wireless modules**

**Dimmer modules with energy reading**

**Pulse counters**

**Energy analysers**

Incorporating a home automation system into a new or existing structure makes it easier to reduce energy consumption, also in combination with energy efficient lighting, Energy Star appliances and alternative energy sources.

Another effortless way to enhance the energy efficiency in your home is to take control of your energy consumption, by finding out exactly how much you are using.

Many electricity companies offer lower rates during off-peak hours, such as evenings and weekends. Using appliances such as washing machines, dryers, air conditioners and dishwashers during these hours can lead to substantial savings on your electricity bill.

- These real-time energy usage measurements will lead you to become more efficient with your energy consumption needs and will result in significant energy savings.
- The system reads and logs the energy consumption of the whole

- installation or of a single load.
- Data can be accessed anytime by means of a webserver/webapp and shown as instantaneous values, or in the form of graphs and/or diagrams.



# Scenarios



Touch screen 4"

Touch screen 7"

## Entertainment scenario

- TV and Home Theatre
- Music Surround
- Lights
- Heating or Air Conditioning
- Roller Blinds

## Holidays scenario

- Heating
- Alarms
- Roller Blinds
- Doors and Windows
- Automatic Irrigation
- Automatic turn on/off of lights

## Night & Day scenario

- Roller Blinds & Awnings
- Exterior Lighting
- Heating or Air Conditioning
- Automatic Irrigation (at the set time)



# Home Automation

## The controller



**Controller**

**Wired bus generator**

**Wireless bus generator**

**DALI bus generator**

**USB dongle modem accessory**

**Digital input module**

The Carlo Gavazzi smart-house system is based on a central CPU, the SH2WEB24, a Linux based embedded PC that manages all the smart functions.

It is programmed by means of powerful software, the SH tool.

The SH2WEB24 has Ethernet communication capability in order to be remotely controlled and monitored by smart-devices/PCs. It also acts as a datalogger, which can record any kind of value/event coming from the many buses it can be connected to (Wireless and Dupline buses, two RS485 ports).

The master unit is also provided with an sd-card and USB port, which allow

data uploading/downloading and system configurations.

Where wired Internet access is not available, Carlo Gavazzi provides a specific mobile modem to be added to the SH2WEB24.

This modem makes it possible to control any remote installation, whether it be a cabin in the mountains or a house at the seaside.

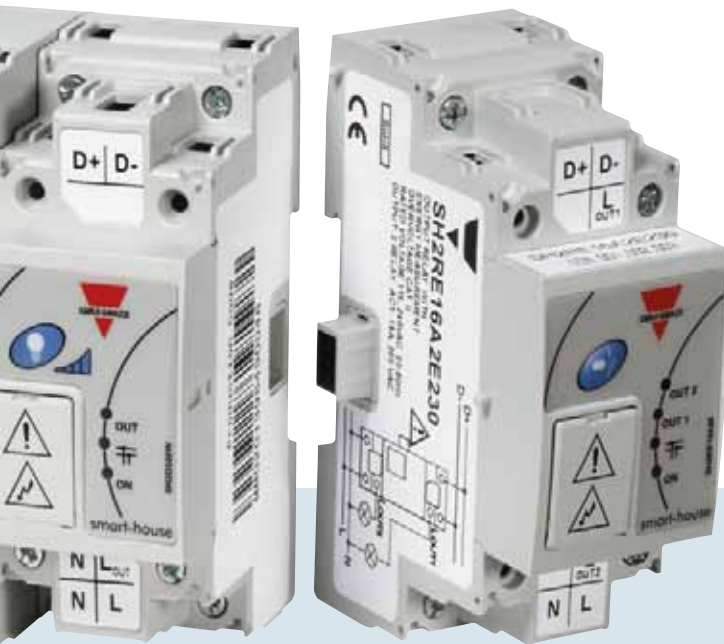
If the SH2WEB24 can be considered the "brain" of the smart-house system, the two bus generators are the pulsating "heart" that makes all the information flow.

They are connected to the SH2WEB24 via the high speed bus that is present both on the local bus and on the terminals at the bottom.

This means that the connection is very fast and easy in a cabinet, since the modules just have to be plugged together without any wiring.

At the same time it is very straightforward if the bus generators have to be mounted in different cabinets.

Up to 7 bus generators can be connected to one SH2WEB24.



**Solid state relay output module**



**Relay modules**



**Relay module with energy reading**



**Up/down modules for AC/DC motors**



**Dimmer module with energy reading**



**1-10 V Dimmer module**

**SH2MCG24 - the wired bus generator of smart Dupline®**

The SH2MCG24 module is the smart Dupline bus generator, which provides the dupline bus on the local bus and on the terminals at the top.

Thanks to this, the DIN-rail slave modules (dimmers, relays, rollerblind modules, etc...) can simply be plugged into the SH2MCG24, without the need for any wiring.

The decentral modules, such as light switches, PIR sensors and temperature display, are connected to the SH2MCG24 with the two wires coming out from the terminals at the top.

**SH2WBU230N - the wireless bus generator of WiDup**

The smart-house system also provides a solution where it is not possible to use existing wiring, especially during the renovation of buildings.

The SH2WBU230N is the wireless bus generator that can control wireless light

switches and output relay modules. The wireless bus is based on the standard IEEE 802.15.4 @2.4Ghz.

Up to 250 modules can be managed by one SH2WBU230N.

The open-space operating distance is 700 metres.



# Home Automation

## Our product range

### Controllers

### Wired bus generators

### DALI bus generators



#### SH2WEB24

- Master unit: home automation functions and energy data logging configurable by software
- Two RS485 communication ports (Modbus)
- One Ethernet port
- Two multi purpose USB 2.0 ports
- Micro SD

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply



#### SH2MCG24

- Connection to SH2WEB24 via internal bus or terminals via the high speed bus
- Up to 7 SH2MCG24 can be connected on the same network, considering the sum of SH2MCG24, SH2WBU24 and SH2WBU230N

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply



#### SB2DALI230

- Interfaces the Dupline® bus to standard DALI lighting actuators
- Operates as DALI controller and power supply with possibility to connect up to 64 ballasts to the DALI bus output
- Can be linked to Dupline® at any point in the installation
- Multiple SB2DALI230 units can be connected to the same Dupline® bus

#### MAIN FEATURES

- Allows the powerful combination of Dupline® and DALI
- Compact dimension: 2-DIN module
- 230 VAC power supply

### USB dongle modem accessories

### Digital input modules 4 inputs

### Output modules solid state relay



#### SH2DSP24

- USB port to supply dongle modem HUAWEI MS2131 DLINK DWM 157"
- Support for wi-fi USB key
- Watchdog features to prevent common mobile network hassles

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- 24VDC supplied



#### SH2INDI424

- 4 digital inputs NPN, PNP, voltage free
- The 4 inputs can be configured as contact or counter
- LED indication for power supply, dupline bus, input activated
- Connection to other cabinet modules via local bus

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply



#### SH2SSTRI424

- 4 triac output
- Module load: 4 x 10 W
- LED-indications for supply, bus and outputs status
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply

# Our product range

Relay modules	Relay modules	Roller blind modules for AC/DC motor
---------------	---------------	--------------------------------------



### SH2RE16A4/SH2RE1A424

- 4 separate outputs relay
- LED-indications for supply, bus and outputs status
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- Bus supplied
- SH2RE16A4: bus supplied
- SH2RE1A424: DC power supply



### SH2RE16A2E230

- 2 outputs relay
- Energy reading
- LED-indications for supply, bus and outputs status
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- 230 V supplied



### SH2ROAC224 / SH2RODC224

- Up/down control of 2 AC / DC rollerblind motors
- LED indication for power supply, dupline bus, motor up, motor down
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply

Dimmer modules with energy reading	Dimmer modules up to 500 W	Dimmer modules 1-10 V
------------------------------------	----------------------------	-----------------------



### SH2D500WE230

- Universal dimmer switch for R, L, C up to 500 W and LED loads
- Integrated heat sink for temperature dissipation
- Energy reading
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- 230 V supplied



### SH2D500W1230

- Universal dimmer switch for R, L, C up to 500 W and LED loads
- Integrated heat sink for temperature dissipation
- Automatic load detection for L, R, C load
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- 230 V supplied



### SH2D10V424

- Switching and dimming adjustable ballasts 1 to 10 V
- 4 independent dimmable outputs
- LED-indications for supply, bus and outputs status
- Connection to other cabinet modules via local bus
- Push button for local on/off switching

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply

# Home Automation

## Our product range

### Smart-dupline energy meters



#### SH2EM16A230

- Direct connection: 16A
- Connection to other cabinet modules via local bus
- Energy measurement: kWh
- Instantaneous variables readout: A, V, W, Wdmd, VA,

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- 230/110 V supplied

### Transparent modules



#### SH1DUPFT

- Transparent dupline module
- The dupline bus is present on the top/bottom connectors and internal bus
- Connection to other cabinet modules via local bus

#### MAIN FEATURES

- Dimensions: 1-DIN module
- No supply is needed

### Decentral output modules



#### BDA-RE13A-U

- Small sized single relay output
- Load: 16 A/250 VAC
- Withstands 130 A inrush current

#### MAIN FEATURES

- Bus powered

### Decentral roller blind modules



#### SHDRODC230

- Up/down control of 1 AC rollerblind motor
- Up/down interlocking for motor
- AC power supply

#### MAIN FEATURES

- Design for mounting in eurobox
- Relay load 5 A

### Analogue input modules



#### SHPINV2T1P124 / SHPINT1P1 SHPINNI2 / SHPINV324

- Input modules for thermistor, resistor and voltage measuring
- Ranges: 10 K3 thermistor input, 1-11 K resistor input, 0-10 V input, pt1000/ni1000

#### MAIN FEATURES

- SHPINV324: three 0-10 V input
- SHPINV2T1P124: two voltage input, one thermistor and one resistor input
- SHPINT1P1: one thermistor and one resistor input
- Bus powered

### Analogue output module



#### SHPOUTV224

- Output modules with two 0-10 V outputs
- Small dimensions for decentralized installations

#### MAIN FEATURES

- DC power supply



## Our product range

### Light switch interfaces



#### **BDB-INCON4-U / BDB-IOCON4-U BDB-IOCP8x-U**

- Small-sized 4 or 8 I/O modules
- 4 or 8 contact inputs for push buttons

#### **MAIN FEATURES**

- Compact housing
- Bus powered

### Digital input modules



#### **BDD-INCON4-U**

- 4 contacts or NPN transistor inputs
- LED-indications for supply and bus status
- LED-indication for armed when using bus supply
- 3-wire system with bus and supply of module through external power supply

#### **MAIN FEATURES**

- Open PCB with terminal connection
- Bracket for DIN-rail mounting available

### Voltage input modules



#### **BDA-INVOL-U**

- Input voltage module for building automation
- 1 opto-isolated voltage input 90-265 VAC

#### **MAIN FEATURES**

- Compact housing
- Bus powered

### Light switches



#### **B4X-LS4-U / B5X-LS4-U**

- 4 individually programmable push button inputs
- 4 individually programmable LEDs for true response
- Bus powered, no external supply required

#### **MAIN FEATURES**

- B4X-LS4-U: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino
- B5X-LS4-U: Developed to fit into wall socket and frames from Elko, Gira and Jung

### Glass touch switches



#### **SHG060WLS4 / SHG060BLS4 SHG503WLS6 / SHG503BLS6**

- 4 or 6 individually programmable keys
- Black or white glass
- Backlight ON when the hand nears the glass
- Programmable buzzer when a key is pressed
- Integrated temperature sensor, range -9° to 50°C

#### **MAIN FEATURES**

- Power supply: 24 VDC
- Mounting: 503 box, Ø60 box

### Glass touch dimming



#### **SHG060BSLD / SHG060WSLD SHG503BSLD / SHG503WSLD**

- 4 dimmable outputs or on/off functions. The push buttons can be programmed to control up to
- The dimming level is changed by moving the finger over the slider
- Black or white glass
- Backlight ON when the hand nears the glass
- Programmable buzzer when a key is pressed

#### **MAIN FEATURES**

- Power supply: 24 VDC
- Mounting: 503 box, Ø60 box

# Home Automation

## Our product range

### Glass touch temperature



#### SHG060BSLT / SHG060WSLT SHG503BSLT / SHG503WSLT

- It can control one temperature function managing 3 setpoints with the slider and on/off functions
- Integrated temperature sensor, range -9° to 50°C
- White and black glass
- Backlight ON when the hand nears the glass
- Programmable buzzer when a key is pressed
- Shows current room temperature and a secondary temperature

#### MAIN FEATURES

- Power supply: 24 VDC
- Mounting: 503 box, Ø60 box

### 90° PIR detectors



#### B4X-PIR90-U / B5X-PIR90-U

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor applications
- Operating angle: 90°

#### MAIN FEATURES

- Bus powered
- Walk test: LED indication
- Programmable sensitivity

### 90° PIR + lux meters



#### SHA4XP90L / SHE5XP90L

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor applications
- Operating angle: 90°
- Lighting measuring range: 0 to 20 K lux

#### MAIN FEATURES

- Bus powered
- Walk test: LED indication
- Programmable sensitivity

### Light switches + 90° PIR + lux meter



#### SHA4XLS4P90L / SHE5XLS4P90L

- 4 individually programmable push button
- Integrated 90° PIR and luxmeter sensor
- Indoor applications

#### MAIN FEATURES

- SHA4XLS4P90L: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino
- SHE5XLS4P90L: Developed to fit into wall socket and frames from Elko, Gira and Jung

### 150° PIR detectors



#### SHE5XP150 / SHA4XP150

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor and outdoor applications
- Operating angle: 150°
- Operating distance: 8 m

#### MAIN FEATURES

- Bus powered
- SHA4XP150: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino
- SHE5XP150: Developed to fit into wall socket and frames from Elko, Gira and Jung

### 150° PIR + lux meters



#### SHA4XP150L / SHE5XP150L

- Integrated 150° PIR and luxmeter sensor
- Operating angle: 150°
- Operating distance: 8 m

#### MAIN FEATURES

- SHA4XP150L: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino
- SHE5XP150L: Developed to fit into wall socket and frames from Elko, Gira and Jung

# Our product range

## Light switches + temperature and humidity sensor



### SHA4XLS4TH / SHE5XLS4TH

- 4 individually programmable push button
- Integrated temperature and humidity sensor
- Temperature range: -40° to 60°C
- Humidity range: 5 to 95 %

#### MAIN FEATURES

- SHA4XLS4TH: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino
- SHE5XLS4TH: Developed to fit into wall socket and frames from Elko, Gira and Jung

## Temperature displays



### SHA4XTEMDIS / SHE5XTEMDIS

- Temperature controller with display
- Shows current room, outdoor and auxiliary temperature
- Turns on/off heating and cooling
- Energy Save through 3 different setpoints: comfort, activity, economy

#### MAIN FEATURES

- Bus powered
- SHA: Developed to fit into wall socket from Fuga, NICO and Bticino
- SHE: Developed to fit into wall socket from Elko, Gira and Jung

## 90° PIR lux meters



### BSD-PIR90-U / SHSDP90L

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor applications
- Operating distance: 12 m
- Operating angle: 90°

#### MAIN FEATURES

- Bus powered
- Walk test: LED indication
- Programmable sensitivity

## 90° PIR lux meters



### BSP-PIR90-U / BSP-PIR90A-U SHSPP90L / SHSPP90LA

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor and outdoor applications
- Operating distance: 0,5 - 15 m
- Operating angle: 90°

#### MAIN FEATURES

- Bus powered
- Programmable sensitivity

## 360° PIR lux meters



### SHSQP360L

- Passive infrared detector (PIR)
- Detects movement and presence
- Indoor applications
- Operating distance: ≤7.5 m
- Operating angle: 360°

#### MAIN FEATURES

- Bus powered
- Programmable sensitivity
- Lens: dual detecting zones

## Outdoor temperature sensors



### BSI-TEMANAx-U

- Temperature range: -40° to +60°C
- BSI-TEMANA-U is delivered with a M12 plug
- BSI-TEMANAB-U is delivered with 2 m cable

#### MAIN FEATURES

- Easily mountable
- Bus powered

# Home Automation

## Our product range

### Weather stations



#### SHOWEAGPS

- Light, wind, temperature measurement
- Ranges: 0 to 100K lux, 0 to 35 m/s, -40° to 80°C
- Rain sensor included

#### MAIN FEATURES

- Integrated GPS receiver
- Modbus RS485 protocol

### Anemometers



#### BSN-ANE-U

- Measuring range: 2 m/s to 25 m/s
- Built-in alarm output with programmable threshold

#### MAIN FEATURES

- Easily mountable
- Bus powered

### Lux meters for outdoor installation



#### BSH-LUX-U

- Lighting measuring range: 0 to 20K lux
- For indoor and outdoor installation
- Working temperature: -30° to +60°C

#### MAIN FEATURES

- Easily mountable
- Bus powered

### Smoke detectors



#### BSG-SMO-U / BSG-SMOA-U

- Detection of smouldering and flaming fires with smoke development
- Without radioactive sources
- Detection of up to 60 m<sup>2</sup>
- Transmission of alarms and Alive signal via bus

#### MAIN FEATURES

- Battery backup if the connection is interrupted
- Constant monitoring of sensor sensitivity
- Bus powered

### Water detectors



#### BSF-WAT-U

- Integrated water sensor input
- Water resistant PCB with screw terminals
- External input for Felson moisture cable

#### MAIN FEATURES

- Easily mountable with unique mounting bracket
- Constant monitoring of sensor sensitivity
- Bus powered

### Environmental sensors



#### SHSUXXXXD / SHSUXXXXL SHSUXXXX

- Room sensors for CO<sub>2</sub>, temperature and humidity measurement
- Available with display, RGB LED or neutral
- Temperature range: -20°C to +50°C
- Humidity range: 0 to 100 %RH
- CO<sub>2</sub> range: 0 to 2000 ppm

#### MAIN FEATURES

- Easily mountable
- Bus powered
- Low current consumption

## Our product range

### Environmental sensors



#### ESCO2THWxVDM

- Wall mounting
- CO<sub>2</sub> 2000 ppm or 5000 ppm
- 0 to 50°C, 0 to 100% RH
- LCD display
- Modbus communication and analog output

#### MAIN FEATURES

- Compact housing measuring 3 parameters
- Software for easy setting and monitoring

### Environmental sensors



#### ESTHW50x

- Wall mounting
- Temperature and humidity 2 in 1
- 0 to 50°C, 0 to 95% RH
- 0 to 10 V or 4-20 mA output
- Dimensions 85x85x30 mm only

#### MAIN FEATURES

- Compact housing measuring 2 parameters
- Simple to install and use

### Programmable alarm keypad



#### BACC-KEYPAD-DC-U

- Keypad for building access control and alarm control
- Indoor or outdoor applications
- 28 user-programmable codes
- Programmable LED indication
- Buzzer output

#### MAIN FEATURES

- DC power supply

### Wireless bus generators



#### SH2WBU230N

- Wireless transmission based on IEE 802.15.4, @ 2.4 GHz
- Maximum slave number: 250
- Up to 7 SH2WBU230N can be connected on the same network
- Connection to SH2WEB24 via internal bus or terminals via the high speed bus

#### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply

### Wireless light switches



#### SHE5XWLS4xFx

- Flat design: can be mounted everywhere
- 4 individually programmable push buttons
- Battery supplied
- Range up to 100m open space

#### MAIN FEATURES

- Temperature sensor
- It can be mounted in many 55x55 frames (see datasheet)

### Wireless window sensors



#### SHDWWISEN / SHDWWISENIN1

- Dimensions:
  - sensor: 60 x 30 x 15.5
  - magnet: 32 x 10.2 x 11.5
- Reed sensor
- Additional voltage free input
- 1 red LED / 1 blue LED for battery level indication
- Range up to 100 m in open air

#### MAIN FEATURES

- Wall mounting, crew and double side tape
- Battery supplied

# Home Automation

## Our product range

### Wireless relays with energy reading



#### SHJWRE10AE230 SHJWRE10AE115

- Smallest housing in the market
- Wireless transmission based on IEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Load: 10 A/250 VAC

#### MAIN FEATURES

- Energy reading
- Programmable routing function in two steps
- Mounting into eurobox

### Wireless relays with push buttons



#### SHJWRE10AEWLS230 SHJWRE10AEBLS230

- Two capacitive push buttons
- Wireless transmission based on IEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Load: 10 A/250 VAC

#### MAIN FEATURES

- Energy reading
- Programmable routing function in two steps
- To substitute Bticino switches

### Wireless dimmer with energy reading



#### SHJWD200WE230 SHJWD200WE115

- Smallest housing in the market
- Wireless transmission based on IEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Universal dimmer switch for R, L, C up to 200 W and LED loads

#### MAIN FEATURES

- Energy reading
- Programmable routing function in two steps
- Mounting into eurobox

### Wireless dimmer with push buttons



#### SHJWD200WEWLS230 SHJWD200WEBLS230

- Two capacitive push buttons
- Wireless transmission based on IEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Universal dimmer switch for R, L, C up to 200 W and LED loads

#### MAIN FEATURES

- Energy reading
- Programmable routing function in two steps
- To substitute Bticino switches

### Wireless energy meters



#### SHJWEM16A230 SHJWEM16A115

- Smallest housing in the market
- Wireless transmission based on IEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Energy measurement: kWh
- Instantaneous variables readout: A, V, W, Wdmd, VA,

#### MAIN FEATURES

- Programmable routing function in two steps
- Mounting into eurobox

### Touch screen/ data logger



#### BTM-T4-24 / BTM-T7-24

- 4" / 7" colour display
- Easy setup of graphic pages and functions with the powerful software Wizard
- Activation of internet links through touch buttons
- Support viewing from IP cameras

#### MAIN FEATURES

- Ethernet connection
- Wide screen display, 64 K colours
- USB port, SD memory, Modbus RTU serial port

### 1-phase energy analysers



#### EM111 / EM112

- Dimensions: 1 DIN module (2 DIN EM112); DIN-rail mounting
- Backlit touch LCD
- Measurement of voltage, current, power, power factor and frequency
- Bi-directional energy metering, 8 digits cl. B (EN50470)
- Measuring inputs: 115/230 VAC, 45 A (100 A EM112)

#### MAIN FEATURES

- Self-powered
- Modbus RS485 port
- Sealable terminal covers
- CE, MID

### 3-phase energy analysers



#### EM24

- Dimensions: 4 DIN modules; DIN-rail mounting
- LCD display with programming joystick and function selector
- Measurement of voltage, current, power, power factor and frequency. Metering from external pulse sources and 4-tariff management
- Bi-directional energy metering on 2 8-digit counters, cl. B (EN50470-3)
- Measuring inputs: 3x230 (400) VAC, 5 A (by CT) or 65 A (direct)

#### MAIN FEATURES

- 115-230 VAC power supply or self-powered
- 3 inputs for external gas/water metering
- Modbus RS485 port
- Sealable terminal covers
- CE, MID, cULus (5A version)

## OUR SALES NETWORK IN EUROPE

### AUSTRIA

Carlo Gavazzi GmbH  
Ketzergasse 374,  
A-1230 Wien  
Tel: +43 1 888 4112  
Fax: +43 1 889 10 53  
office@carlogavazzi.at

### BELGIUM

Carlo Gavazzi NV/SA  
Mechelsesteenweg 311,  
B-1800 Vilvoorde  
Tel: +32 2 257 4120  
Fax: +32 2 257 41 25  
sales@carlogavazzi.be

### DENMARK

Carlo Gavazzi Handel A/S  
Over Hadstenvej 40,  
DK-8370 Hadsten  
Tel: +45 89 60 6100  
Fax: +45 86 98 15 30  
handel@gavazzi.dk

### FINLAND

Carlo Gavazzi OY AB  
Petaksentie 2-4,  
FI-00630 Helsinki  
Tel: +358 9 756 2000  
Fax: +358 9 756 20010  
myynti@gavazzi.fi

### FRANCE

Carlo Gavazzi Sarl  
Zac de Paris Nord II, 69, rue de la Belle Etoile,  
F-95956 Roissy CDG Cedex  
Tel: +33 1 49 38 98 60  
Fax: +33 1 48 63 27 43  
french.team@carlogavazzi.fr

### GERMANY

Carlo Gavazzi GmbH  
Pfnorstr. 10-14  
D-64293 Darmstadt  
Tel: +49 6151 81000  
Fax: +49 6151 81 00 40  
info@gavazzi.de

### GREAT BRITAIN

Carlo Gavazzi UK Ltd  
4.4 Frimley Business Park,  
Frimley, Camberley, Surrey GU16 7SG  
Tel: +44 1 276 854 110  
Fax: +44 1 276 682 140  
sales@carlogavazzi.co.uk

### ITALY

Carlo Gavazzi SpA  
Via Milano 13,  
I-20020 Lainate  
Tel: +39 02 931 761  
Fax: +39 02 931 763 01  
info@gavazziacbu.it

### NETHERLANDS

Carlo Gavazzi BV  
Wijkermeerweg 23,  
NL-1948 NT Beverwijk  
Tel: +31 251 22 9345  
Fax: +31 251 22 60 55  
info@carlogavazzi.nl

### NORWAY

Carlo Gavazzi AS  
Melkeveien 13,  
N-3919 Porsgrunn  
Tel: +47 35 93 0800  
Fax: +47 35 93 08 01  
post@gavazzi.no

### PORTUGAL

Carlo Gavazzi Lda  
Rua dos Jerónimos 38-B,  
P-1400-212 Lisboa  
Tel: +351 21 361 7060  
Fax: +351 21 362 13 73  
carlogavazzi@carlogavazzi.pt

### SPAIN

Carlo Gavazzi SA  
Avda. Iparragirre, 80-82,  
E-48940 Leioa (Bizkaia)  
Tel: +34 94 480 4037  
Fax: +34 94 431 6081  
gavazzi@gavazzi.es

### SWEDEN

Carlo Gavazzi AB  
V:a Kyrkogatan 1,  
S-652 24 Karlstad  
Tel: +46 54 85 1125  
Fax: +46 54 85 11 77  
info@carlogavazzi.se

### SWITZERLAND

Carlo Gavazzi AG  
Verkauf Schweiz/Vente Suisse  
Sumpfstrasse 3,  
CH-6312 Steinhausen  
Tel: +41 41 747 4535  
Fax: +41 41 740 45 40  
info@carlogavazzi.ch

## OUR SALES NETWORK IN THE AMERICAS

### USA

Carlo Gavazzi Inc.  
750 Hastings Lane,  
Buffalo Grove, IL 60089, USA  
Tel: +1 847 465 6100  
Fax: +1 847 465 7373  
sales@carlogavazzi.com

### CANADA

Carlo Gavazzi Inc.  
2660 Meadowvale Boulevard,  
Mississauga, ON L5N 6M6, Canada  
Tel: +1 905 542 0979  
Fax: +1 905 542 22 48  
gavazzi@carlogavazzi.com

### MEXICO

Carlo Gavazzi Mexico S.A. de C.V.  
Calle La Montaña no. 28, Fracc. Los Pastores  
Nauclan de Juárez, EDOMEX CP 53340  
Tel & Fax: +52.55.5373.7042  
mexicosales@carlogavazzi.com

### BRAZIL

Carlo Gavazzi Automação Ltda.Av.  
Francisco Matarazzo, 1752  
Conj 2108 - Barra Funda - São Paulo/SP  
Tel: +55 11 3052 0832  
Fax: +55 11 3057 1753  
info@carlogavazzi.com.br

## OUR SALES NETWORK IN ASIA AND PACIFIC

### SINGAPORE

Carlo Gavazzi Automation Singapore Pte. Ltd.  
61 Tai Seng Avenue #05-06  
Print Media Hub @ Paya Lebar iPark  
Singapore 534167  
Tel: +65 67 466 990  
Fax: +65 67 461 980  
info@carlogavazzi.com.sg

### MALAYSIA

Carlo Gavazzi Automation (M) SDN. BHD.  
D12-06-G, Block D12,  
Pusat Perdagangan Dana 1,  
Jalan PJU 1A/46, 47301 Petaling Jaya,  
Selangor, Malaysia.  
Tel: +60 3 7842 7299  
Fax: +60 3 7842 7399  
sales@gavazzi-asia.com

### CHINA

Carlo Gavazzi Automation  
(China) Co. Ltd.  
Unit 2308, 23/F.,  
News Building, Block 1, 1002  
Middle Shennan Zhong Road,  
Shenzhen, China  
Tel: +86 755 83699500  
Fax: +86 755 83699300  
sales@carlogavazzi.cn

### HONG KONG

Carlo Gavazzi Automation  
Hong Kong Ltd.  
Unit 3 12/F Crown Industrial Bldg.,  
106 How Ming St., Kwun Tong,  
Kowloon, Hong Kong  
Tel: +852 23041228  
Fax: +852 23443689

## OUR COMPETENCE CENTRES AND PRODUCTION SITES

### DENMARK

Carlo Gavazzi Industri A/S  
Hadsten

### MALTA

Carlo Gavazzi Ltd  
Zejtun

### ITALY

Carlo Gavazzi Controls SpA  
Belluno

### LITHUANIA

Uab Carlo Gavazzi Industri Kaunas  
Kaunas

### CHINA

Carlo Gavazzi Automation (Kunshan) Co., Ltd.  
Kunshan

## HEADQUARTERS

Carlo Gavazzi Automation SpA  
Via Milano, 13  
I-20020 - Lainate (MI) - ITALY  
Tel: +39 02 931 761  
info@gavazziautomation.com



**CARLO GAVAZZI**  
Automation Components

*Energy to Components!*

[www.gavazziautomation.com](http://www.gavazziautomation.com)

