

DataBox

Energy management and control



Energy efficiency technology





Information is power



How can I manage my installation's consumption in a more efficient way?



How much energy am I consuming?



When am I consuming energy?



Where am I consuming energy?

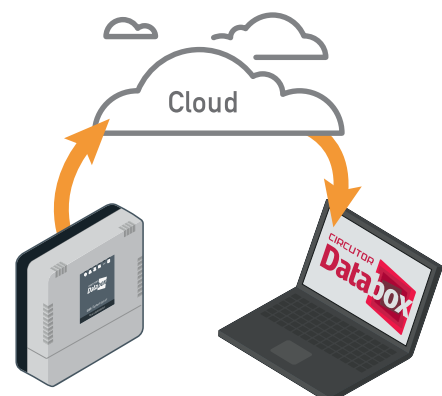


How can I make savings?



The **Circutor DataBox** platform was designed to answer all of these questions. It is a tool at the disposal of all users, regardless of their level of knowledge, which will enable them to view, analyse and store their installation's energy data, with all of the data provided in a structured and accessible way.

DataBox allows you to gather your installation's energy data in a structured and accessible way.



Energy Audits



Spanish ELECTRIC CODE RD 56/2016

Legal framework

The current Spanish RD 56/2016 makes it mandatory for corporate groups and large companies, those with more than 250 workers, or those with a turnover of more than 50 million euros, or those whose balance is above 43 million euros, to present an energy audit of their installations every 4 years to an administrative register. Failure to comply can involve a penalty of up to 60,000 euros.

Complying with the RD

Use an energy management system, it is the ideal framework for justifying compliance with the RD.

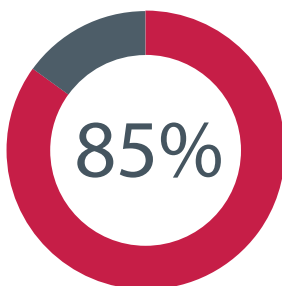
DataBox allows you to access all of the data used in the energy audits, with it remaining stored for the purpose of historical analysis, the traceability of energy behaviour and to make it available to the relevant authorities for inspection or any other requirement (Article 3, Sections 5 and 6 of RD 56/2016).

ISO 50001

DataBox allows you to implement an energy management system that is compatible with the ISO 50001 standard, establishing objectives, metrics and thus guaranteeing the results obtained and assessing the energy management.





HOW SHOULD THE ENERGY AUDIT BE CONDUCTED?

The data should cover



Total energy consumption

The data should be

-  Up-to-date operational data
-  Measured
-  Verifiable
-  Representative
-  Reliable

It must be possible to store the data for historical analyses and traceability of the energy behaviour



The audit must be included in the Spanish Ministry of Industry's Administrative Register of Energy Audits (RAAE)



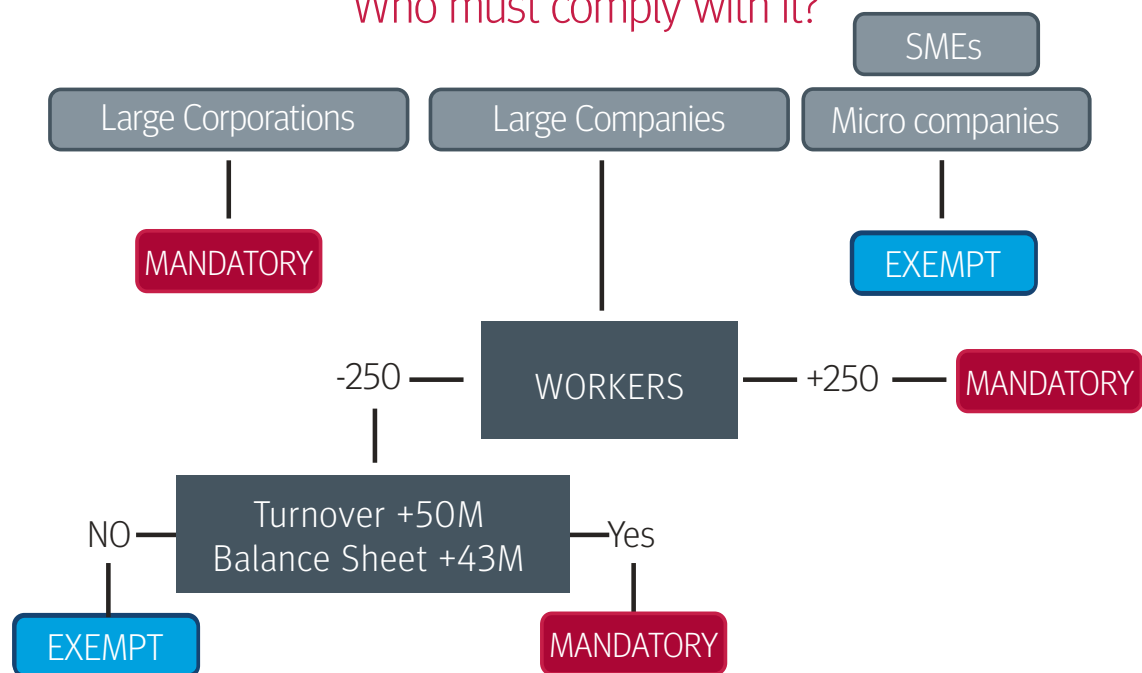
RAAE



Partial transposition of European Directive
2012/27/EU on energy efficiency.



Who must comply with it?



Are there penalties for failure to comply?

Failure to comply can involve penalties
of up to 60,000 euros
with regards to energy audits



Databox

DATABOX platform

WHAT ARE THE BENEFITS?

› Storage of the data will allow you to analyse them, assess progress in terms of objectives and detect anomalies or deviations.



Compare installations

- > Compare installations, areas and uses.
- > Compare offers from marketers.



Detect and prevent

- > Detect and identify unusual consumption.
- > Identify billing errors.
- > Detect potential savings (reactive and/or maximum demand penalty).
- > Alarms and events..



Report

- > Report consumption.
- > Compliance with the legislation on energy efficiency.
- > Check the return on investments.
- > Present information in a way that makes it easier to use.



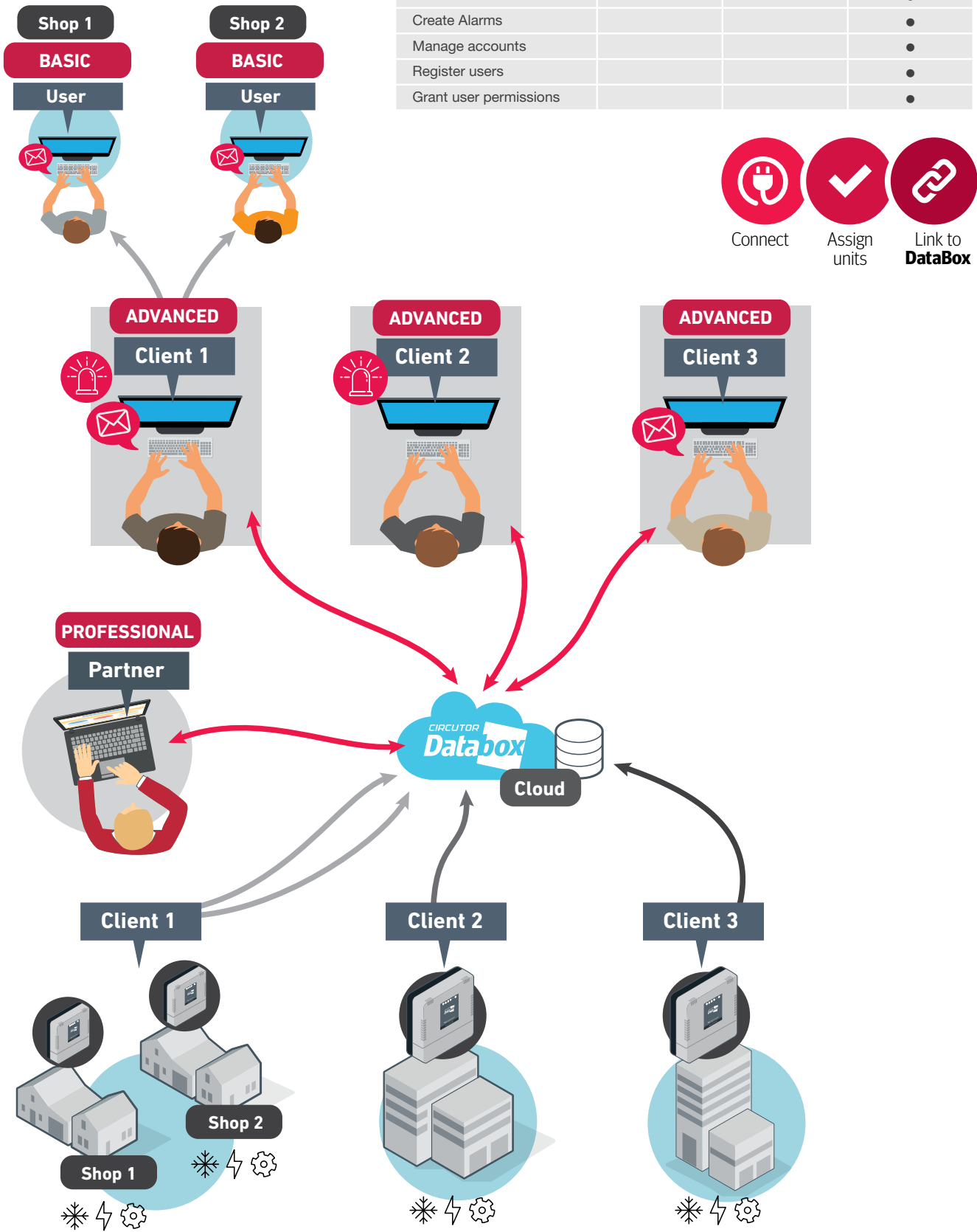
Rationalise consumption and processes

- > Quantify the savings of kW·h in €.
- > Simplify the electric energy management process and reduce the time taken to present reports.

Easy start-up

At times, the connection of the devices and transmitting all of the information can be a complicated task, which is why **DataBox** has an easy start-up process, it sends the information of the units with just a single click.

	BASIC	ADVANCED	PROFESSIONAL
View dashboard	•	•	•
Analyse dashboard	•	•	•
Alarm Management	•	•	•
Create Dashboards		•	•
Modify Dashboards		•	•
Register installations			•
Activate gateways			•
Create services			•
Create Alarms			•
Manage accounts			•
Register users			•
Grant user permissions			•





Take control from anywhere

The **Cloud Platform** is the part of the Databox system that fully manages the necessary parameters for an optimum energy audit.

Electric energy management is not just data measurement.

Electric energy management works best when it is combined with data logging, display and operation from wherever you are, which means that you will always be in control.

Certain aspects are detailed below.



> Once you have entered the application, you will find initial suggestions, which will help to make full use of the application, configuring them in the way that suits you best.

> Via a simple **Dashboard**, you can check the status of your installations. This option allows you to configure a main **Dashboard** so that it is the first thing that is displayed when you enter the platform.

> Via the **Widgets** inserted in your **Dashboard**, you can monitor, analyse and manage your installations. You also have the option of creating various **Dashboards** for managing different sites of the same installation. All of this in an easy and intuitive way.



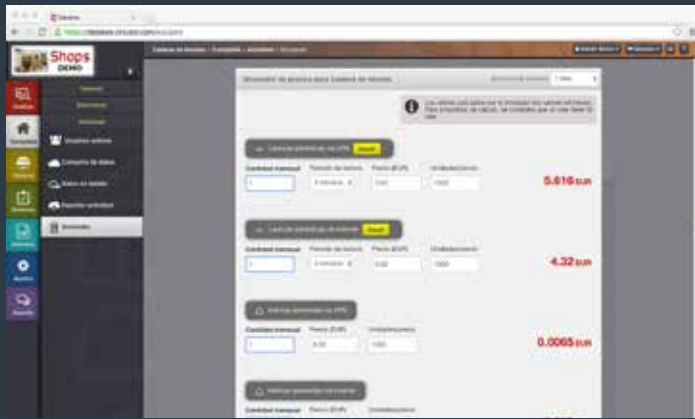
> The **Databox platform** is divided into 7 menus: **Analysis, Company, Units, Services, Reports, Settings and Support.**

> With all of the graphs, you can use the zoom function to view more detail, view the values for a specific period or time interval, compare data from different periods or with other services and download the graphs in PNG / JPG / PDF or SVG format (vector format).

The screenshot displays a table of energy data within the Databox dashboard. The table has multiple columns, including dates, times, and energy consumption values. It lists data for various installations, with some rows highlighted in red and others in green.

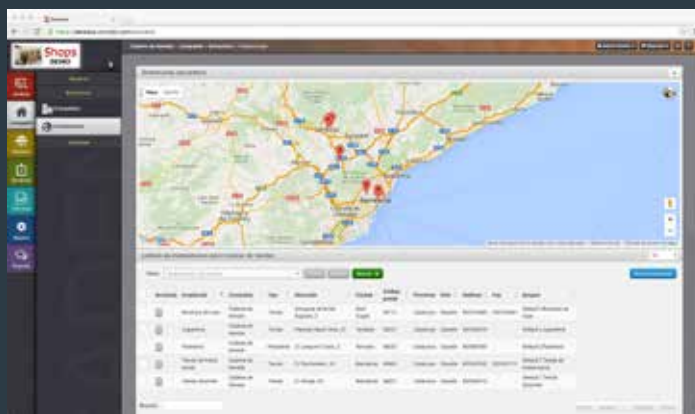
> The **Widgets** are ideal for making quick cost comparisons, for example, between various shops from the same group.

> You can control daily costs and create **alarm** alerts, for example, to warn you if the maximum demand is exceeded or of any other item that you would like to control.



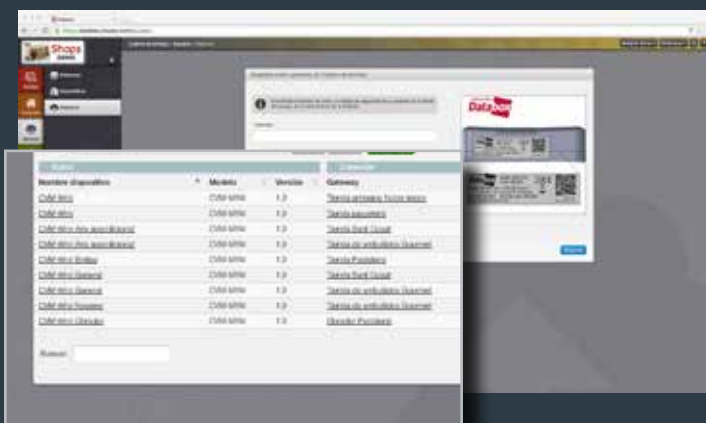
> User management system, intuitive via configuration of permissions.

> In the **Company** section, you will find the **cost simulation**. The values calculated by the simulator enable you to see what the exact cost of the management of your installation will be.



> The **geolocation** of the installations allows you to view the map where the installations are located in a practical way, enabling quick access to them.

> This allows you to control the installations associated to the user accounts with the Company list for Chain shops, whereby you can see the active users, data consumption, detailed data, export the activity from a specific period and simulate the costs. All of this can be found in the **Company** section.

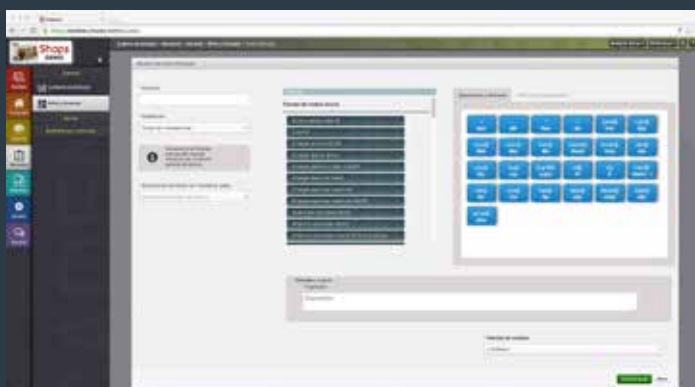


> The **Units** section includes the part on activating the **Gateways**.

A group of **Gateways** allows them to be grouped for subsequent processing in user groups.

> Another part in the **Units** section is the control of the devices associated to each **Gateway**, (for example, 1 CVM mini, assigned to the **Gateway** of installation no. 1, another CVM mini associated to the **Gateway** of installation no. 2, etc.).

It is in the > **Units** section that you will record and register the new **Gateway**.



> In **Settings**, you will find the **installation's attributes**, where you configure, for example, the m² of the surface area of the shop, the entry and exit times, the number of workers. In short, the basic indicators (KPIs) that will help you to outline the points to take into consideration in order to control the total costs and carry out analyses between installations, uses, etc.



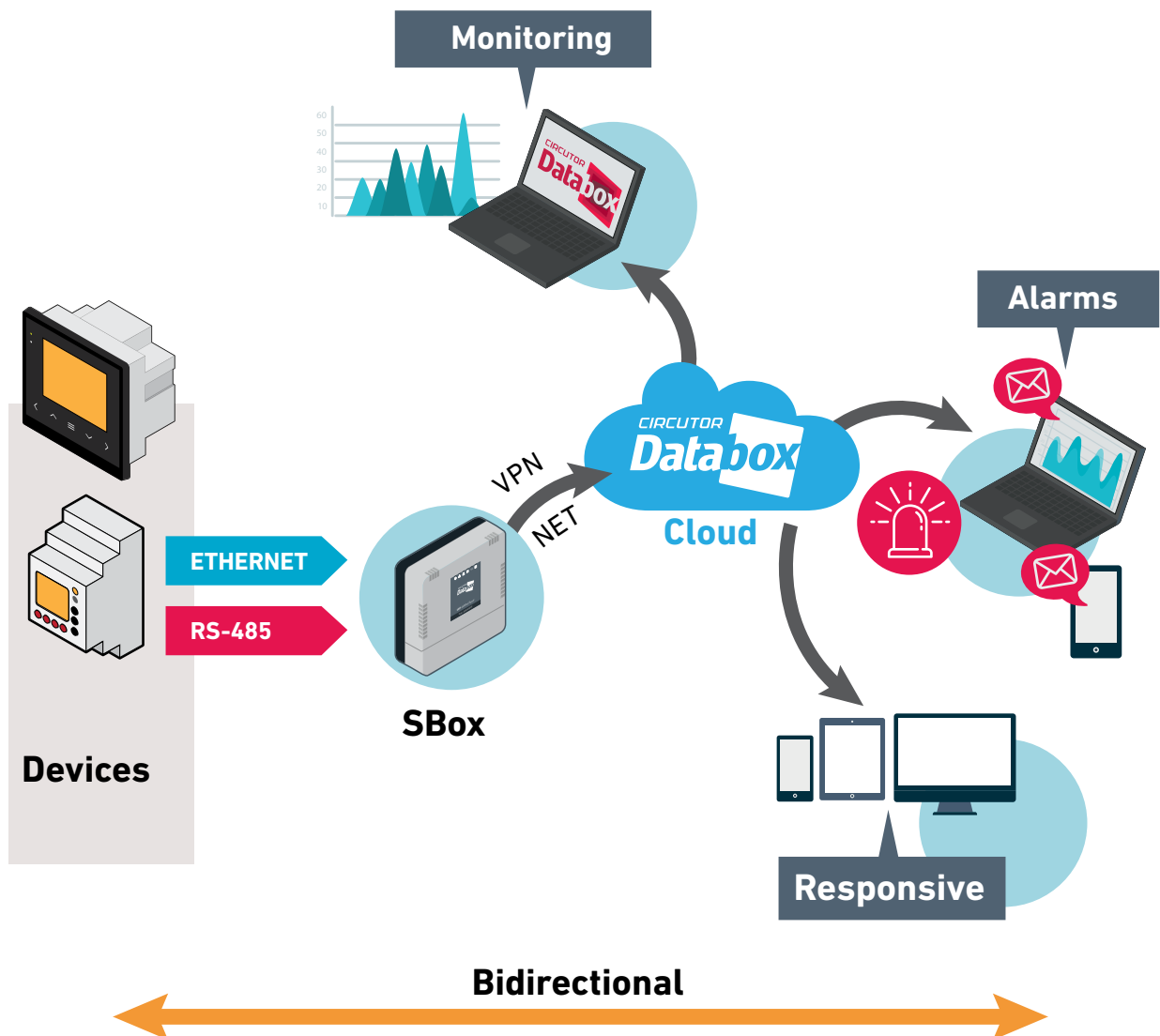
SBox

SBox VPN or SBox NET. It is a *datalogger* or *gateway* designed to connect all of your installation's devices and sensors in order to facilitate electric energy management together with the **Circutor DataBox platform**.



Circutor DataBox. Cloud Platform.

It is the energy management software that allows you to know and manage your energy consumption from anywhere and at any time. The 3G or Ethernet connection communications and their online configuration are established via **DataBox server (DBS)**.



Universal communication

We believe in open protocols. That is why **DataBox** can be connected to any MODBUS device, allowing it to remotely access the information of any device. You will find dozens of pre-configured devices, and if not, you can register a new device very easily, just by loading the device's memory map in an Excel file.

The Cloud platform

It is the main part of the Circutor DataBox system.

Full control over the data gathered via the **Gateway SBox** is dependent upon it.

The main features of the web platform are:

- > Collection, storage, processing and monitoring software.
- > Software in the cloud with backup and redundancy.
- > Scalable in an unlimited way.
- > Multi-device and multi-manufacturer.
- > Responsive.
- > Multi-user.
- > Customisable.
- > Representation on the dashboard.
- > Alarm in real time.
- > Geolocation of the installations.
- > Reports.
- > Device management.
- > Remote configuration.
- > User profiles.
- > Data analysis and KPI calculations.
- > Remote actuation (linked/forced).
- > Complete logging of the data.
- > Alarm system in real time.
- > Messaging via e-mail with alarm events.
- > Connection with other SCADA and BMS systems.
- > Reduction in the time taken to present reports.
- > Emergencies are reduced to a minimum.

Applications

Databox is ideal for controlling different types of consumption that occur in the different branches of any business, for example, supermarkets, a hotel chain, in industries, etc. Its range of application is very wide and it is the ideal system for an exhaustive control of the energy measurements, for the optimum results that are presented in an energy audit.



Gateway SBox

SBox VPN	SBox NET
SIM included	SIM Not included
Plug & Play	Configuration of the user network
3G communication	
Outside antenna (optional)	
12 Vdc output	
Relay output	
Simultaneous RS485 and Ethernet	
Circutor unit drivers	
Generic MODBUS drivers	

Technical features

Electrical features	Power supply voltage	85–265 Vac
	12 Vdc outputs	Number of outputs Maximum power
Relay outputs	Number of outputs	1
	Maximum power	1 W
Communications	Number of outputs	1
	Coverage	2G / 3G depending on model
	Internal antenna	Yes
	External antenna connection	Yes
	Network interface	Ethernet
Memory	RS-485	Yes
	SIM for data	Included
	Maximum volume of stored data	400,000

DataBOX

Energy management and control

+ information: comunicacion@circutor.com

www.circutor.com



CIRCUTOR, SA - Vial Sant Jordi, s/n
08232 Viladecavalls (Barcelona) España
Tel. (+34) **93 745 29 00** - Fax: (+34) **93 745 29 14**
central@circutor.com

