THE WATeBOX ™, THERMAL SMARTGRID CONTROL MODULE

Designed as an Internet box, it downloads therms on a network of geothermal loops.

REGULATION, MODULATION, TRANSFERS … SHE KNOWS ANYTHING.

Qu'est-ce que la WATeBOX™?

If we consider that the geothermal water loop is the heart of the system, WATeBOX™ is the brain. It is responsible for continuously monitoring the available resources (water loop, roof solar capture, heat recovery of gray water, geothermal baskets, etc.) and comparing them, not only to the current instructions, but also, prepare the water loop for future needs (depending on the set point and climatic variations .

WATeBOX™ will communicate with other WATeBOX™ of the same network in order to pool available resources and improve consumption.

By pooling the resources and keeping the temperature of the geothermal loop into the ideal temperature range, the system contributes to improve the heat production efficiency of the heat pump (COP).


How does the WATeBOX™ work?

Like an Internet box that uses a fiber (or copper) network to download data, the WATeBOX™ will use a network of water loops to download (or unload) thermals (via the hydraulic kit).
Instead of broadcasting data downloaded from the Net on peripheral screens, the WATeBOX™ will distribute heat via peripheral diffusers (splits, ducts, hydraulic circuits, etc.).

Using IoT* technologies (SIGFOX) Each WATeBOX ™ is connected to all the sensors of the installation to which it is connected.

The box is constantly informed of the operating data of peripheral equipments. These equipments constitute as many sources of available heat to suply the water loop.
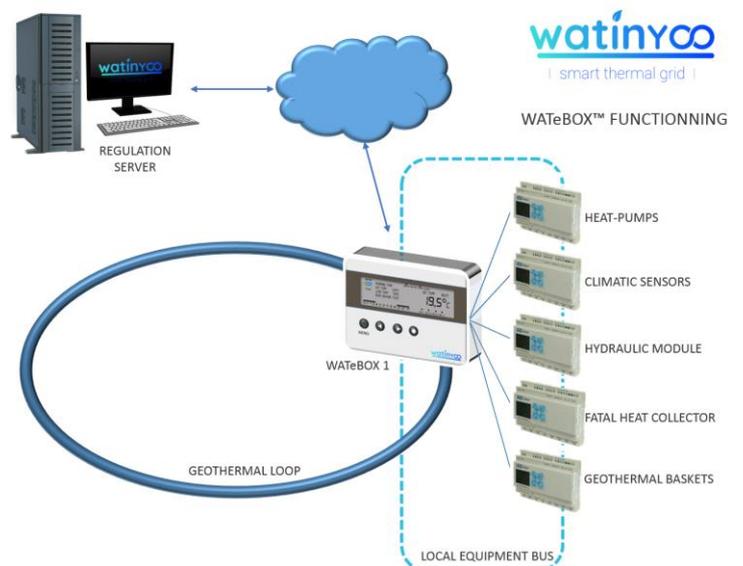
*IoT : Internet Connected Objects

WATeBOX™, SMARTGRID GEOTHERMIQUE & DOMOTIQUE

How WATeBOX ™ interact with each other?

By combining the complementary heat sources with the heat of the water loop via the hydraulic kit, the WATeBOX ™ contributes to regulating and maintaining the temperature of the network throughout the year.

It compares the values provided in real time by the sensors with the setpoint parameters. In addition, it integrates future meteorological data (over 5 days) and evaluates available resources on the same dates. In case of imbalance due to insufficient or excessive heat, the WATeBOX ™ will issue a network alert to request or offer additional thermals.

In case of deficit (or excess) of heat, the WATeBOX ™ will exchange, via the Cloud, with the other boxes of the same network in order to obtain the transfer of a supplement of heat, or, on the contrary, to evacuate towards a other subscriber the excessive heat available.

The WATeBOX ™ interact with each other via the Cloud with which they exchange data (statistics, faults, readings, etc.) to optimize the operation of the system and other systems connected to the same network.

In addition, the connection of WATeBOX ™ to the Cloud, allows the automatic updating of embedded software as well as remote access by technicians in case of maintenance.
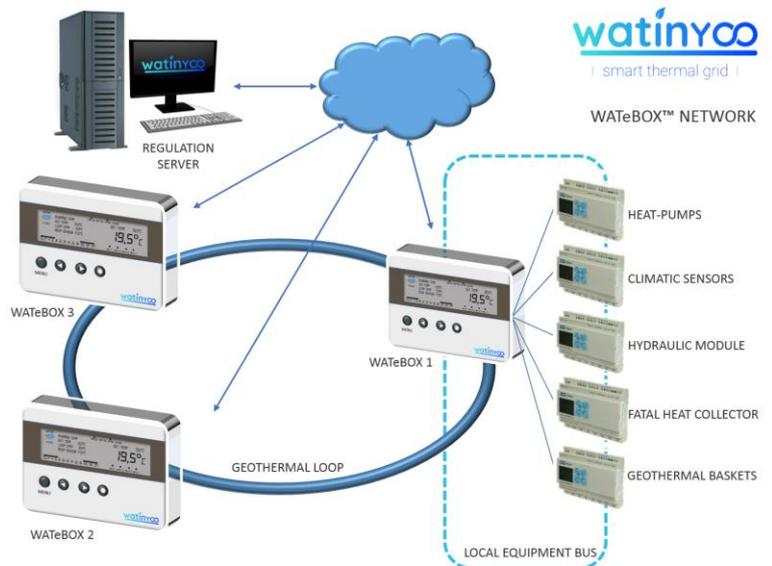
WATeBOX™ and home automation?

For more energy performance, the WATeBOX™ will soon include communication protocols (such as IO homecontrol®) to interact with other equipment (heat pumps, solar ocultation, shutters, VMC, roof windows, etc. .) having an impact on your thermal comfort.