

OMNIBUS³⁶⁰

BUILDING MANAGEMENT SYSTEM



Fully and profitably integrated air conditioning

Omnibus 360 is the evolution
of the management system
for EURAPO hydronic terminal units





At the basis of its design, the awareness that the highest standard of comfort can be achieved only by operating with top quality components, designed to be fully integrated with the intelligence managing all functions.

Omnibus 360 guarantees total synergy between terminal units and regulation devices, making the air conditioning systems more performing and extremely easy to use.

Total management and configuration freedom

Omnibus 360 can be used in residential and public buildings in order to fully manage the water terminal units, such as fan coils, cassettes, high pressure ducted units. It can be easily programmed and configured for every different type of system. There are two possible configurations:

Stand-alone configuration

The OPower main board is installed in the water terminal unit. It can be managed by a built-in console or a remote console.

Centralized configuration via SCADA Supervisor

The OPower main board is installed in the water terminal unit. It can be connected to a centralized supervision system beside (or to replace) the stand-alone configuration.



Features that make the difference

- **Elegant and ergonomic design**
- **LCD Display Console**
- **Touch screen Console**
- **Weekly programming**
- **Compatibility with brushless EST technology**
- **Flexible configuration**
- **Service tool available**
- **MODBUS RTU: free protocol**
- **Different levels of access to the building management system**

OPower

**AC Version
EC Version | EST**

OConsole

**Round Inside
Round IR
Round Analog
Round Cabin
Round Display
Round Touch**

OSuper

**Round Manager
Round Master
Round Net
Round Clima (APP)**

OService

**Start-up
Remote assistance
Service Tools**

OPower The technology

Technological intelligence at the heart of an advanced system

The mind of the system is located in the OPower card, an exceptionally versatile hardware installed on board of the water terminal units. OPower is able to receive and process a large amount of input and output data. It is equipped with a very performing microprocessor and 3 independent MODBUS lines. It can be easily programmed and configured according to the user requests and on the basis of the type of system where the unit is installed.



OPower can measure the following input values:

- room temperature;
- water temperature;
- air outlet temperature;
- Economy/Occupancy contact status;
- failure status;
- window contact status.

OPower can manage the following outputs:

- opening/closing of modulating water valves;
- fan operation in "thermostated" or "continuous" mode;
- integration of a radiant system with a hydronic terminal unit;
- control of a primary electric heater;
- activation of the water circulation pump;
- control of other OPower cards in slave mode.

Flexibility at the service of all-inclusive systems

The flexibility of Omnibus 360 is based on a specific combination of inputs and outputs. It not only ensures comfort and energy saving, but favours also all-inclusive system architectures: management of stand-alone units by use of analogue and digital consoles, centralized management of small systems with digital regulation and management of large remote systems according to advanced home automation criteria.



Management of EC brushless motors (EST technology)



A dedicated OPower card is designed for running EC brushless motors. By setting a specific voltage for each fan speed (Low-Med-High), it allows to modulate the fan in automatic (0-10V) or manual mode.



OConsole The managing consoles



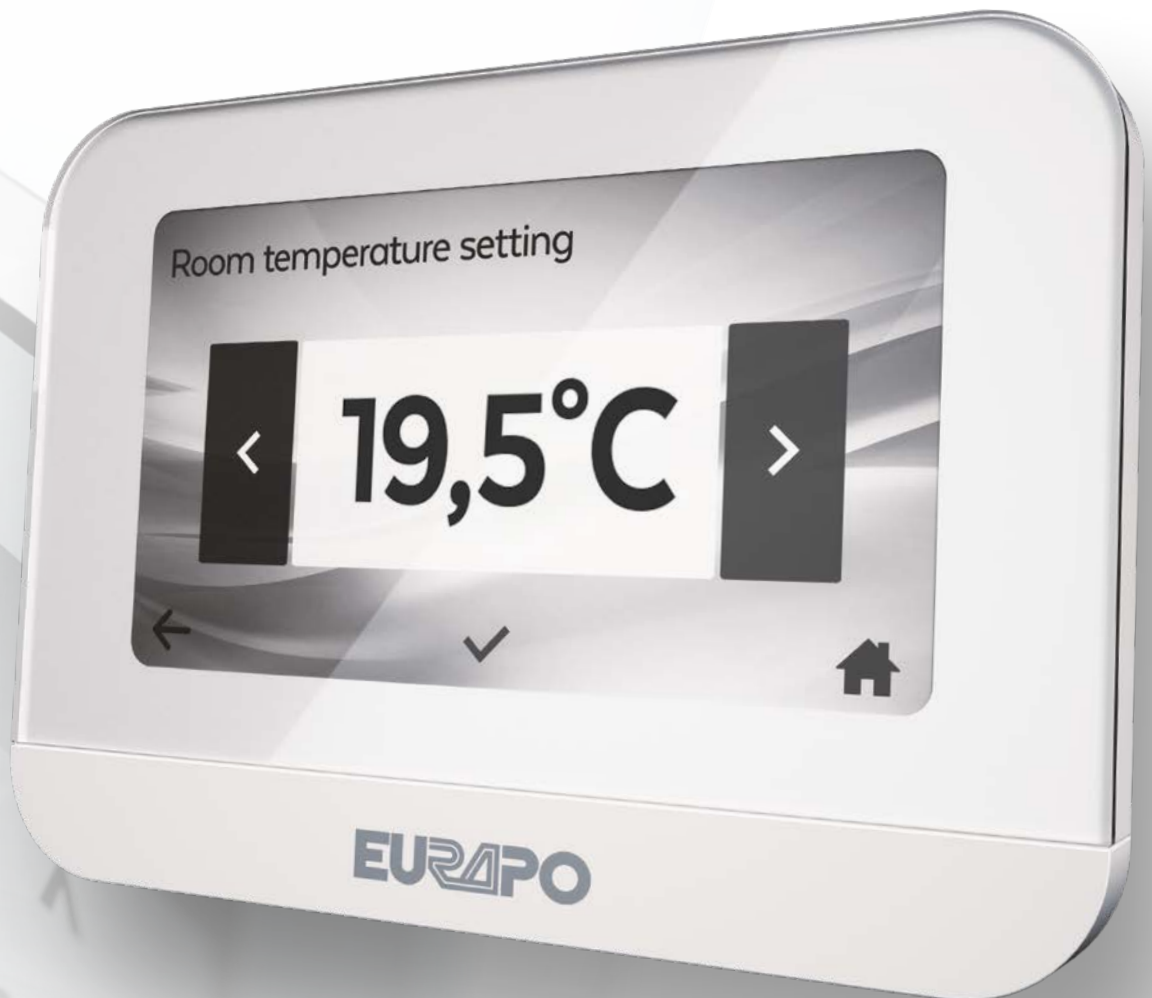
Round Display Digital console

Round Display is the remote interface in digital version. It permits to visualize and modify the setting of the main parameters of the system, thanks to the intuitive management of the functions and to the 3.5-inch backlit screen.

With Round Display it is possible to check Input and Output states of the OPower board, making it possible to diagnose any operating anomalies of the water terminal units without having to access them (which could be complicated, especially if the units are installed in a false ceilings).

Main control modes:

- Off / Economy / Comfort **status**;
- room temperature **setpoint** setting;
- cooling-heating-ventilation **operating mode**;
- low-medium-high-automatic **speed selection**.



Round Touch **Digital interface with touch display** **and weekly programming**

Round Touch is an advanced digital interface: compared to the Round Display version, the user experience is further enriched, thanks to the larger backlit screen (4.3 inches) and touch controls. It permits to visualize and modify the setting of the main parameters of the system and it offers all the functions already present in the Round Display console. In addition, Round Touch can set also daily and weekly programs.



OConsole

The managing consoles

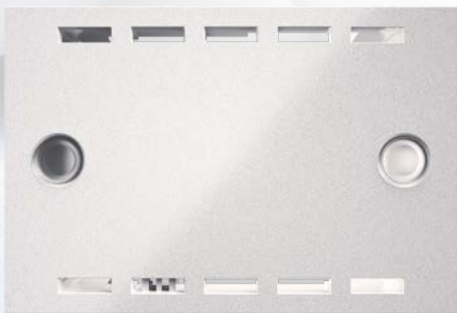


Round Inside Interface for built-in installation

Round inside is the basic interface for installation inside Eurapo fan coil units. It is characterized by an ergonomic design, with possibility to set the On/Off status, the room temperature, the fan speed and the Summer/Winter changeover.

Round IR Infrared console

Round IR is the infrared interface for installation inside the fan coil unit or on the wall. A remote infrared control with LCD display and buttons allows to set the main operating modes, including fan speed selection, Summer/Winter changeover and room temperature setpoint. An acoustic signal confirms the modification of the operating parameters.



Round Analog Interface for remote installation

Round Analog is the basic remote interface for wall installation, characterized by an elegant and essential design; it allows to set the On/Off status, the room temperature setpoint, the fan speed and the Summer/Winter changeover. In presence of Alarms, indication is given by simultaneous lighting of LEDs.



Round Cabin Simplified interface for remote installation

Round Cabin is a remote console for wall installation which gives the possibility to set the On/Off status and the room temperature setpoint. All the other functions (fan speed and Summer/Winter changeover) are managed automatically. It is particularly suitable for installations where a simplified user interface is required, such as naval cabins and hotel rooms.



O**Super** Supervision and control



Round Manager Supervisor for small systems

Round Manager is a supervisor for small systems with 4.3-inch screen and capacitive touch, with Wi-Fi connection which makes it cloud controllable. It manages up to 16 OPower cards connected to the MODBUS RTU serial bus. Additionally, each individual OPower card can be independently controlled by using one of the available OConsoles.

Round Manager offers the following user advanced functions and features, in addition to the typical functions of every OConsole:

- daily and weekly programming of all units connected to the same network;
- Wi-Fi connectivity;
- connection to a cloud server;
- remote management by a dedicated App.

Round Master Supervisor for medium-size systems

Round Master is a supervisor for medium-size systems with a 7-inch screen and capacitive touch. It allows to manage up to 100 OPower cards connected to the network via the MODBUS RTU serial bus. Additionally, each individual card can be independently controlled by using one of the available OConsoles. With Round Master it is possible to configure complex scenarios and set up seasonal system programming.

Round Master has been developed in the Eurapo laboratories to ensure top comfort. Thanks to an intuitive interface, it guarantees an extreme ease of use.

By virtue of latest generation technologies, it is possible to manage by one control panel the operation of fan coil units and to integrate and interact with other devices of the HVAC system at the same time:

- cooling and heating unit (chiller/boiler);
- circulating pumps of the HVAC system;
- modulating valves (for radiant systems);
- thermal zone valves;
- hydronic terminal units.

Also for Round Master a dedicated App is available.



OSuper Supervision and control

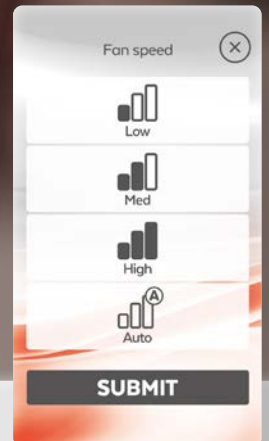
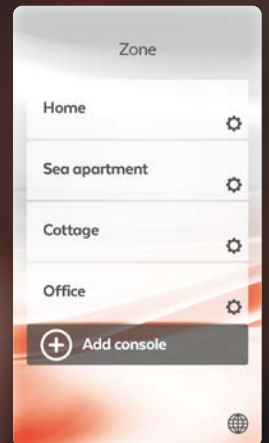
Round Net **Web server**

Round Net is an embedded system complete with web server, designed by Eurapo to connect and manage water terminal units via MODBUS network, ensuring a very high level of control.

Thanks to its powerful latest generation processor and the high performance of the components, it is possible to achieve high computing power and to manage large networks, controlling up to 250 OPower cards. It is possible to connect Round Net by internet, using a common web browser.

The system architecture provides different access profiles (user, service and administrator). The body has useful air intakes, which make it suitable for installation in technical rooms or thermal power plants. Round Net offers the same functionalities as the Round Master supervisor, including the possibility to connect remotely by App.





Round Clima **Mobile application**

Round Clima is the mobile application that extends the possibility to manage the supervision system by remote, via smartphone or tablet. It is compatible with Android and iOS operating systems. It is available only in presence of one of the OSuper devices: Round Manager, Round Master and Round Net.

OService



OService brings together a series of support services dedicated exclusively to Round Master and Round Net supervisors.

Service Tools

Diagnostic tools for analyzing the functioning of the plant or of the single unit, particularly useful for performing the following checks:

- **addressing test** to check if the correct modbus address has been assigned to each OPower card;
- **identity test** to check if the OPower cards communicate correctly with the supervisor;
- **start-up test** to check the correct operation of the installed units (setpoint reached and time taken to reach it).

For each test a final report summarizing the results is available.



Start-up

For the first start-up of one Omnibus 360 supervision system, Eurapo provides a specialized technician on request, who provides on-line assistance for the configuration and operation of the system.

Remote support

Remote web technical support for the installation of additional upgrade packages and for the resolution of any network configuration problems. To take advantage of the service, it is essential that the devices are connected to an internet accessible network.

Advantages

Omnibus 360 **Innovation that benefits the user**

The high level of technological innovation of Omnibus 360 is a real benefit for the user.

Possibility to easily install and coordinate multiple terminal units

Three wires are sufficient to connect one OPower card (master) to a slave card. There is no need of special programs to install the web server.

Adaptability to the most varied management needs

The system allows both total centralization and maximum degree of customization of each terminal unit. It can be integrated with advanced home automation solutions with different entry levels and it can be combined with many local control options corresponding to the different uses of the building spaces.

Constant monitoring

A check sensor installed on request allows to constantly check the correct operation of all the water terminal units. Faults or anomalies are detected and reported on the consoles.

Accurate diagnostics

Advanced diagnostic tools allow targeted assistance and maintenance operations, reducing management costs.

360-degree energy saving

- supervision and control of units equipped with EC brushless motors and inverters (EST technology);
- deactivation/suspension of all outputs in case of open doors and/or windows;
- ECONOMY function;
- Possibility to limit the setpoint temperature range;
- programmed reduction of the setpoint values.

The range

AC Version



Omnibus 360 card for asynchronous motors (built-in the unit).

EC Version | EST



Omnibus 360 for EC brushless motors (built-in the unit).

Round Inside



Console for installation on board of the fan coil unit.

Round IR



Console with infrared sensor for installation on the wall or on the fan coil unit.

Round Analog



Analogue remote console for wall installation.

Round Cabin



Simplified interface for wall installation.

Round Display



Digital console for wall installation.

Round Touch



Digital interface with touch display and weekly programming.

Round Manager



Supervisor for small systems, with Wi-Fi connection and dedicated App.

Round Master



Supervisor for intermediate systems, with network interface and dedicated App.

Round Net



Web server supervisor for larger systems, with network interface and dedicated App.

Round Clima



Mobile application for smartphone and tablet.

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